



Port of
LONG BEACH
THE PORT OF CHOICE



ENGINEERING DESIGN DIVISION

GUIDELINES FOR PROFESSIONAL CONSULTING SERVICES



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1 INTRODUCTION

A. POLB Engineering Bureau

The Port of Long Beach (POLB) Engineering Bureau (the Bureau) has primary responsibility for the delivery of capital improvement projects. The Bureau includes six Divisions: Construction Management, Engineering Design, Maintenance, Program Management, Project Controls, and Survey. The six divisions work together to proactively design, build, and maintain state of the art infrastructure and assets to support safe, reliable, and efficient goods movement in an environmentally and fiscally responsible way.

B. POLB Engineering Design Division

Engineering Design Division (EDD) delivers engineering design services for the Port's infrastructure and assets through collaboration and innovative technology, setting a standard of excellence for now and into the future.

C. Guidelines Purpose and Organization

The Guidelines for Professional Consulting Services (Guidelines) is issued to provide the Consultant with a clear understanding of the POLB's interpretation of specific language that may be used in the contract Scope of Work. The Scope of Work is defined in the Request for Statement of Qualifications (RSOQ) or Request for Proposals (RFP), including all exhibits and attachments thereto, and further described in the attachment to the Contract for Engineering Services, or otherwise communicated through other official correspondence between the POLB and the Consultant, and provides guidance with respect to requirements that relate to processes, deliverables or submittals. The Guidelines establish the expectations for how the Consultant will conduct business with POLB.

The version of the Guidelines applicable to a project will be the one in effect at the time of contract execution. If a revision occurs during the life of the project, the updated version will only apply upon mutual written agreement between the Consultant and POLB. The Guidelines are designed to encompass a broad range of services, though most contracts will include only specific elements or sections. To clarify what elements apply to a particular contract, please refer to the applicable contract documents.

The Guideline is organized to provide the Consultant with a ready reference regarding POLB's expectation for the conditions of professional consulting services. Each of the sections contains complementary material designed to answer specific questions and provides related material to assist the Consultant in meeting expectations. The Consultant shall perform Work in accordance with the

Guidelines. It is the Consultant's responsibility to fully comprehend the material in the Guideline, follow the processes and procedures outlined, and ask questions if something needs clarification.

D. Information and Work Product

All designs, sketches, drawings, specifications, data, and other information, in whatever form or medium, compiled or prepared by the Consultant in performing the services, or furnished to the Consultant by the POLB, shall be the property of the POLB. The POLB shall have the unrestricted right to use or disseminate this information without payment of further compensation to the Consultant. The Consultant may retain copies of its work product for its own records.

2 DEFINITIONS

Whenever in the Agreement, or elsewhere in the Attachments or Amendments to the Agreement, the following words and defined terms are used, the meaning will be as follows, applicable to both the singular and plural forms thereof:

<i>Agreement</i>	The fully executed Contract for Professional Consulting Services entered into between POLB and the Consultant for the completion of the Work. The Agreement includes all Attachments and Amendments to the Agreement, and represents the entire integrated agreement between POLB and the Consultant. It supersedes all prior discussions, negotiations, representations, or agreements pertaining to the Work, whether written or oral. The term "Agreement" is also referred to as "Contract."
<i>Alternatives / Feasibility Study</i>	A preliminary study generally conducted as the first element of the Work. The Feasibility Study investigates critical issues to determine if the Project is possible as defined, defines constraints and opportunities, develops a Budget Estimate, develops a Preliminary Schedule for major activities, and develops a graphical layout of the concept of the Project. Alternative Studies may be required to present at least 2 or 3 alternatives that evaluate cost, schedule, operations impact, and other variables that can define the scope of the project. These services are also referred to as Schematic Design and Pre-Design services.
<i>Amendment</i>	A written document entered into between POLB and the Consultant on or after the date of the execution of the Agreement which authorizes and directs any one or any combination of the following: an addition, deletion, or revision in the Work; an adjustment in the Contract Time or Contract Amount; or other change as may be required.
<i>As-Bid Drawings</i>	The complete set of conformed drawings as issued shortly after bids are received, incorporating all changes up to the date of bid opening via addenda.
<i>As-Built Drawings</i>	Project Drawings modified by the Consultant after completion of the Construction to incorporate all changes issued by amendment or changes in actual construction that are different from the original as-bid drawings using the Contractor's redline drawings and other documents.
<i>Assumptions</i>	The representation of an unknown element or quantity as a fact, by estimating or choosing a set of conditions or a likely value, for the purpose of achieving a related solution.

<i>Base Map</i>	A map with fundamental information that allows the Consultant to locate and orient the project. Generally, it is a background map used to create new plan construction drawings. This map can be obtained in digital format upon request.
<i>Basis of Design Document</i>	A document that describes the basis for the design of the Project including, but not limited to, the following: a description and the objectives of the Project, scope of work, design approach, permits, codes, standards, assumptions, design criteria, existing conditions, research sources, schedule, and budget.
<i>Betterments</i>	An improvement that adds to the value of the facility or property at a cost, but which is not required or normally provided for the utility or functionality of the facility or property.
<i>Bid Addendum</i>	The Addenda or Addendum consists of the written or the graphic instruments issued by the Port prior to opening of Bids, which clarify, correct or change the Contract Documents.
<i>Bid Clarification</i>	A response to a question from the prospective bidders on an item or items in the Construction Bid Package that has been identified as unclear to the potential bidders, prior to the bid opening. Responses will be provided via PlanetBids in writing and is not a change to the Construction Bid Package during the Bid period.
<i>Bid Documents</i>	A compilation of documents, the Drawings, Technical Specifications, and Appendices which include: Front End forms to be used in connection with the construction contract; the Notice Inviting Bids; the Instructions to Bidders; proposal and bid forms; and the General and Special Conditions.
<i>Bid Phase Support</i>	Assistance provided by the Consultant to POLB during the bidding phase of a construction Project.
<i>Budget</i>	A Work Breakdown Structure (WBS) based estimated cost of the Project. Budget includes all cost elements required for completion of the Project, including the following: investigations, payments to regulatory bodies or agencies, environmental assessment and remediation, right-of-way or property costs, permits, design, other professional services, laboratory testing, construction, Construction Management, inspection, contract management, Construction Support Services, Project Close-out services, and contingency.

<i>CADD Manual/CADD Standards</i>	EDD's drafting and computer-aided design drafting manual are available from POLB's Internet page or can be provided upon request. Deliverables may consist of but not limited to: DWG, DTM, or other CADD related file format.
<i>Cash Flow</i>	The expected or actual flow of money for an activity over time, including both expenditures and revenue, broken down based on the WBS.
<i>Chief Harbor Engineer</i>	The Chief Harbor Engineer of the Harbor Department, City of Long Beach, and such agents as are authorized to act on their behalf.
<i>City</i>	The City of Long Beach or its designated representatives, which include the various departments and divisions of the City. For the POLB and contracts subject to these Guidelines, the term "City" is also sometimes referred to and may be also designated as "POLB" or "Owner."
<i>Clarification</i>	A modified description of the Work that clarifies a previous description. A Clarification is intended to provide increased understanding of the Work or other element of the Project without making any change in the Work.
<i>Client</i>	Generally, that entity that has caused POLB to initiate the Project and which stands to directly benefit from the Project and the Work. Many times, this entity is also referred to as the Tenant or Customer.
<i>City Inspector</i>	The individual designated by the City of Long Beach Department of Community Development Building & Safety Bureau to inspect construction activities for conformance with the Permitted Project Drawings and applicable codes and standards. Additionally, for buildings or facilities within the City of Los Angeles, individual designated by the City of Los Angeles to inspect the construction conformance with City of Los Angeles approved construction documents, codes, standards, and regulations.
<i>Codes</i>	A statement of principles or rules that are published by a recognized professional body for the purpose of achieving standardization within an area or areas of engineering expertise. Codes may have the force of law.
<i>Communication Plan</i>	The method and procedures for documenting, transmitting, and storing communication items of significance to the Project including: minutes of meetings, correspondence, submittals, background data, site

investigations, communications with utility owners, responses to regulatory agency questions and comments, responses to questions of bidders, and other material as may be applicable to the Project. The Communication Plan is a component of the Project Management Plan.

***Conditional
Award Date***

Date the Board of Harbor Commissioners (BHC) authorizes the conditional award of a contract to a Contractor or Consultant.

Conformed Set

This refers to the finalized set of drawings, specifications, and other contract documents that incorporate all Bid Documents and changes made during the bidding phase. These documents reflect any clarifications, addenda, or revisions issued after the initial bid set, ensuring that the construction team works with the most up-to-date and agreed-upon design.

***Constructability
Review***

A structured, independent (out-of-office) review that shall include a review of Specifications including General and Special Conditions, Drawings, technical specifications, systems, details, and procedures to ensure that the Project can be constructed as designed within the specified construction Schedule and Budget. Details shall be examined for clarity and application. EDD shall provide the results of the Constructability Review to the Director of Construction Management prior to the 100% Design submittal.

***Construction
Contractor***

The individual, partnership, firm, corporation, joint venture, or other business entity with which the POLB has entered into an Agreement to provide construction services. The term "Construction Contractor" is also sometimes referred to and may also be designated as "Contractor," and includes the Contractor and all of its representatives and Subcontractors.

***Construction
Management***

Services provided by the POLB's Construction Management Division during pre-construction, construction, and post construction phases. Services include the following: administrative supervision of construction; constructability review of Drawings and Specifications; monitoring and verification of the construction Contractor's safety and quality control programs; tracking of Contractor submittals; RFI and other issues requiring clarification during construction; verification of construction materials and quantities as appropriate when given the measurement and payment conditions in the Specification; approval recommendation of progress payments; coordination of all participants of the project; coordination and review of schedule, anticipation and negotiation of change orders and claims, and coordination of physical interferences with other POLB or third-party projects. Construction

Management may also include construction inspection. Construction Management provided by POLB or its designated agent does not relieve the Contractor from responsibility for the timeliness, safety, quality, or completeness of construction.

Construction Management Software

A web-based construction management tool used to manage and process documentation and contract administration (i.e., Oracle Unifier). The Consultant shall utilize this software to provide responses to RFIs and for submittal reviews. Training can be provided by the Construction Management Division if necessary.

Construction Packaging Plan

A plan that compiles the various elements of the Project or Program into discrete and separate construction packages to provide a mechanism for preparing documents for the construction bid process. This method may be utilized for grant-funded projects or projects encompassing multiple jurisdictions.

Construction Phasing Plan

A plan that identifies the phasing for the construction of a Project or Program, or elements thereof, indicating which portions of the Project or Program are constructed in which locations and in what order. The intent of the Construction Phasing Plan is to coordinate construction activities in a manner that will facilitate construction and maintain operations of existing facilities or services to the greatest extent possible. Construction phasing plans are required in the Drawings when tenants or other stakeholder's operations are impacted.

Construction Support Services

A service provided by the Consultant during a construction contract to assist EDD staff with the administration and technical support required by the construction of the Project. Services may include construction administration such as meetings and coordination; responses to RFIs and other issues requiring clarification during construction; review/approval of construction submittals; site visits to address construction issues; structural observations if required; review of Contractor redlines on a monthly basis.

Consultant

The individual, partnership, firm, corporation, joint venture, or other business entity with which the City has entered into an Agreement to provide professional services. The term "Consultant" means and includes the Consultant and all of its representatives and subconsultants.

Consultant's Fee Schedule

A listing of fees for all services in the Contract, including all job classifications to be utilized, rates for each classification, and, as

applicable, multipliers that may include overhead, profit, and other factors, as well as markups for subconsultants.

***Consultant
Performance
Evaluations***

An evaluation that is performed by the DM to provide feedback to the Consultant. This evaluation may be performed at each submittal of the design phase or after completion of project close-out.

***Construction
Contract
Documents***

The documents (including all Addenda issued during the bidding period) which represent the basis for construction and which incorporate the Specifications, Drawings, the Notice Inviting Bids, the Contractor's bid documents (including insurance, bonds, bid forms, etc.) and the construction contract executed in a manner satisfactory to POLB. The term Contract Documents are also sometimes referred to and may be also designated as the Conformed Set.

Contract

The term "Contract" is also referred to and designated as "Agreement." See Agreement herein for definition.

***Contract
Administrator***

A professional responsible for administering, managing, and overseeing the execution and use of a contract to ensure compliance with its terms, conditions, and obligations. Roles include, but not limited to, processing invoices, monitoring insurance status, and compliance with Small Business Enterprise (SBE) requirements.

***Contract
Amount***

The total compensation to be paid according to the terms of the Agreement by the City to the Consultant for the Work. The Contract Amount can only be changed by an Amendment to the Agreement.

***Contract
Manager***

A professional responsible for overseeing the entire lifecycle of contracts, from the procurement, negotiation and execution, amendment to compliance and closure. Their role ensures that agreements are legally sound, financially viable, and aligned with the organization's strategic goals. DM performs this role often times.

Contract Time

The period of time provided in the Agreement for the completion of the Work. Contract Time may be changed only by an Amendment to the Agreement. Contract time may also be referred to as "Contract Term."

***Cost-Direct
Cost***

A cost of direct service to the project or work that is directly attributable to the work. Direct Costs are commonly composed of raw labor.

<i>Cost -Indirect Cost</i>	An Indirect Cost is a cost of doing business that is not directly attributable to the service provided or the work acquired, but is necessary for the conduct of the work. Indirect Costs may typically be for general and administrative purposes such as invoicing. Indirect Costs shall not be invoiced to the POLB.
<i>Cost -Other Direct</i>	Third-party costs incurred and actually paid by the Consultant to the direct benefit of the Project. Other Direct Costs may be for items such as reproduction by a third party, or travel expenses. No markup is allowed on Other Direct Costs.
<i>Data Transfer Tools and Methods</i>	Data Transfer Tools refer to the secure methods and platforms approved by the POLB for sharing digital files and project-related information. For general communication, please utilize secure email systems such as Outlook in conjunction with Microsoft Teams. For large data files, including submittals or other project documents, use Port-sanctioned secure FTP services or designated digital transfer tools. Always confirm the appropriate tool with the DM to ensure compliance with POLB security protocols.
<i>Day</i>	The term Day shall mean a calendar day unless otherwise specifically designated.
<i>Deferred Approval</i>	A method of specifying elements of the project in a Design/Bid/Build contract wherein the Designer/Contractor is solely responsible for both the design and construction of the specified elements of the project. In this capacity, the contract holder is required to tailor design and construction alternatives to meet facility requirements and/or performance criteria that achieve the owner's concept of the engineering, performance, architectural, and operational goals of the elements to complete the overall project.
<i>Design 30% Design</i>	The point in development of the Construction Documents when the Consultant represents to POLB that the Construction Documents are 30% complete and provide POLB with the 30% submittal documents as further defined in this document. These services are also referred to as Pre-Design services. The termination of this phase is also referred to as the end of the Preliminary Design phase.
<i>Design 50% Design</i>	The point in development of the Construction Documents when the Consultant represents to POLB that the Construction Documents are 50% complete and provides POLB with the 50% submittal documents as further defined in this document.

<i>Design 100% Design</i>	The point in development of the Construction Documents when the Consultant presents to POLB that the Construction Documents are 100% complete and provides POLB with the 100% submittal documents as further defined in this document.
<i>Design Final Design</i>	The stage in document development when the design shall be 100% complete and all Construction Documents shall be 100% complete and all POLB and permit or regulatory agency comments are resolved and, where applicable, incorporated into Construction Documents as further defined in this document.
<i>Design/Build</i>	A method of contracting a project wherein the Designer/Contractor is solely responsible for both the design and construction of the project or elements of the project. In this capacity, the contract holder is required to tailor design and construction alternatives to meet facility requirements or performance criteria that achieve the owner's concept of the engineering, performance, architectural, and operational goals of the project.
<i>Design Criteria</i>	A set of standards, values, and parameters upon which a design is based.
<i>Design Development Factor</i>	It is a metric or consideration used during the design process to account for various influences that may affect the evolution of a project or for underdeveloped scope as shown in the project budget anatomy chart (see Attachment I). It can refer to adjustments or scaling factors applied to initial design concepts to accommodate uncertainties, performance requirements, or evolving project scope.
<i>Design Exception (DE)</i>	A formal request to deviate from POLB's Design Criteria that must be approved by the Director of Engineering Design Division.
<i>Design Management Plan</i>	A document prepared by the Consultant that provides the necessary documentation for design input into the Project Management Plan. This may include scope narrative, organization chart, design schedule, deliverables list, design approach, and other information as required by the Project Manager per the Project Delivery Manual.
<i>Design Milestones</i>	Specifically identified points in the development of the Work. Generally, the point in the development of the Work when the progress of the Work is evaluated or a specified activity takes place. Design Milestones include, but are not limited to, Alternatives/Feasibility Study

(Pre-Design), 30% Design (Pre-Design or Preliminary Design), 50% Design, 100% Design, and Final Design.

Design Quality Management Plan (DQMP)

A Design Quality Management Plan (DQMP) is a plan prepared by the Consultant that outlines the processes, standards, and controls used to ensure high-quality design outcomes in a project. It serves as a framework for managing design quality, minimizing errors, and ensuring compliance with project requirements and industry standards. DQMP is tailored to the unique needs of that particular design assignment.

Digital Survey Data

Existing condition survey data and design survey data on electronic media that will be used by the surveyor to lay out new construction. This will be intelligent data based on the coordinate control of the current project.

Disadvantaged Business Enterprise (DBE)

A small business that is owned and controlled by a minority or woman and has been certified by the California Unified Certification Program as described in 49CFR26.

Drawings

The graphic presentation of the Work, or parts thereof, which indicates the size, form, location, and arrangement of the various elements of the Work. "Drawings" are also sometimes generally referred to and may also be designated as "Plans."

Earned Value System

A system that calculates the value of Work completed by multiplying the measured percent of actual completion of a Work element times the budgeted cost for the Work element.

Environmental

Relating to the circumstances and conditions, including the complex of physical, chemical, biological, and human factors (such as climate, soil, traffic, and living organisms) that act upon or are a part of an ecological community and influence the wellbeing of that ecological community.

Envision®

Envision® is a sustainability framework developed by the Institute for Sustainable Infrastructure (ISI) to guide and evaluate the sustainability, resiliency, and overall positive impact of infrastructure projects. It provides a holistic approach to assessing projects based on environmental, social, and economic benefits throughout their lifecycle.

Estimate -

The Consultant's best WBS-based estimate of the cost to construct the Project. The Bid Estimate shall be submitted at Final Design and shall

<i>Bid Estimate</i>	correspond to AACE Estimate Class 1. At the time of bid, POLB refers to this engineer's estimate as the "Engineer's Opinion of Probable Construction Cost (EOPCC)".
<i>Estimate - Preliminary Cost Estimate</i>	The Consultant's preliminary estimate of the construction cost to be used for the development of the Preliminary Budget. The Preliminary Cost Estimate may be required at the end of Alternative Studies, if applicable, or at the beginning of the Project. The Preliminary Cost Estimate shall correspond to AACE Estimate Class 4. The structure of the cost estimate should match the anticipated bid item list for the project as best known at the time.
<i>Estimate - Baseline Cost Estimate</i>	The Consultant's best WBS-based estimate of the Fair Market Value of the construction cost to be used for the development of the Baseline Budget. The Baseline Cost Estimate may be required at the 30% Design submittal or when the Baseline Budget is being requested. The Baseline Cost Estimate shall correspond to AACE Estimate Class 3. The structure of the cost estimate should match the anticipated bid item list for the project.
<i>Existing Conditions</i>	Conditions that exist at the time of the start of the project or at any time during the project, including both physical and environmental conditions, which may affect the design or construction of the project.
<i>Fair Market Value</i>	The purchase value of an item to a buyer based on the existing general market conditions without regard to special circumstances of individual sellers of that item.
<i>File Management System (FMS)</i>	The software system utilized by POLB for storage and retrieval of drawings and other engineering-related data is ProjectWise. Design submittals shall also be added to PortDocs for use by other Divisions.
<i>General Conditions</i>	That section of the Specifications that defines the contractual terms and conditions of the construction of the Project. POLB provides this document.
<i>Grant Preparation Assistance</i>	Services provided by the Consultant to assist POLB in obtaining state or federal grants for the Program or Project. Services may include providing exhibits, cost estimates, construction durations, and other technical feedback needed to support this effort.

<i>Hazardous Material Abatement</i>	Hazardous Material Abatement is the proper removal of any Asbestos-Containing Material (ACM), materials coated with lead-based paint, and fluorescent light fixture ballast that may contain Polychlorinated Biphenyls (PCBs) prior to any renovation or demolition work. Hazardous Material Abatement work must be performed in accordance with the latest requirements set forth by the State of California, Cal-OSHA, Title 8; California Code of Regulations, Section 1529; as well as all other applicable Federal and State regulations, local codes, and ordinances.
<i>Hazardous Substance</i>	Any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical, or biological properties that are described as hazardous by any Federal, California, Long Beach, or Los Angeles City or County law, code, or regulation. "Hazardous" is also sometimes referred to and may also be designated as "Hazardous Substances," "Hazardous Materials," or "Hazardous Waste."
<i>Incidental Work</i>	Any Work, materials, or equipment, other than that specifically defined in the scope of work, which is reasonably required to produce the intended result.
<i>Laboratory</i>	The laboratories designated by the POLB, including either private or public laboratories, which are authorized by the POLB or permitting agency to test elements of the construction of the Project, soils, or materials. If project requires water line inspection, laboratory services must also be approved by Long Beach Utilities (LBU).
<i>LEED®</i>	Leadership in Energy and Environmental Design, a "green" building rating system developed, registered, and promulgated by the United States Green Building Council.
<i>Meta-data</i>	Additional information on the subject data such as field book information, utility drawings, and/or hard copy drawings.
<i>Operator</i>	The Operator is an entity that moves cargo on a pier or POLB terminal. The Operator may either be a POLB Tenant or be hired to perform services for the Tenant.
<i>Outline Specification</i>	A list of specification sections that are anticipated for the Project. The list shall be provided as a draft Master Table of Contents.

<i>Permit Processing Support</i>	Services provided by the Consultant to assist POLB in obtaining all necessary regulatory permits related to the Project, including preparation and submission of applications through final issuance of permits.
<i>PlanetBids</i>	The Port uses a web-based procurement system hosted by PlanetBids – PB System – provided at no cost to all interested businesses. PB System allows interested suppliers, contractors, and service providers to register online and to receive email notifications of solicitations for goods and services pertinent to their business. Some procurement opportunities also allow vendors to download bid and contract documents, receive addenda, submit electronic bids, and view bid results through the PB System.
<i>POLB</i>	The City of Long Beach Harbor Department acting by and through the Board of Harbor Commissioners. The term "POLB" also includes all of the Harbor Department's officers and other authorized representatives. The term "POLB" is also sometimes referred to and may also be designated as "City."
<i>POLB Construction Inspector</i>	A POLB employee designated to inspect construction activities for conformance with the Project Contract Documents and applicable codes and standards.
<i>POLB Construction Manager (POLB CM)</i>	That individual who is designated by the POLB to oversee the Contractor's Work in constructing the project. For construction management consulting contracts, POLB's Director of Construction Management or their designee will be the Contract Manager for administration of the contract.
<i>POLB Design Manager (POLB DM)</i>	That individual who is designated by POLB's Design Division to oversee the Consultant's work required to complete a Project or Program. For design services consulting contracts, POLB's Division Director or their designee will be the designated Contract Manager for administration of the Consultant's contract.
<i>POLB Program Manager (POLB PM)</i>	The individual designated by the Program Management Division to lead and manage program/project management services.
<i>Pre-Design Services</i>	A service provided by the Consultant prior to initiation of formal design, which shall consist of those services necessary to assist POLB in establishing the Scope of Work, Schedule, and Budget for the Project.

Pre-Design Services terminates with the 30% design submittal or the approval for authorization of spending for formal design to begin. The end of Pre-Design Services is also referred as the end of the Preliminary Design Phase.

<i>Program</i>	The aggregate of several Projects which are considered to be interrelated logically, physically, geographically, financially or functionally, and are considered as a whole rather than separately.
<i>Program / Project Management System</i>	A web-based program/project management tool used to manage and process documentation and contract administration (i.e. Oracle Unifier). The Consultant shall utilize this software to receive work authorizations and submit invoices as required. Training can be provided if necessary.
<i>Project</i>	The product that is achieved as a result of the completed Work. A Project may stand alone or be a part of a larger Program.
<i>Project Engineer</i>	The individual designated by the Consultant to be in responsible charge of the technical engineering of the Work, including the preparation of design calculations and the engineering layout of the Work.
<i>Project Management Plan</i>	A document that describes the plan for achieving the objectives and essential elements of the Project including, but not limited to: a description of the Project defining the scope, schedule, budget, and cash flow; the contracting plan; the method of coordination that will be required to accomplish the Project and the assignment of responsibility for completion of the elements of the Project. POLB PM leads the development of this document, but requires input from the Consultant.
<i>Project System</i>	An operational system incorporated into the Project including, but not limited to: mechanical, electrical, computer, communications, signaling, rail track, water, storm water, and sewer.
<i>Provide</i>	The all-inclusive actions required to perform Work in a manner acceptable to POLB.
<i>Punch List</i>	A list of items to be completed or corrected after the project is formally delivered substantially complete to make the physical and administrative aspects of the construction of the Project comply with the Contract Documents.
<i>Quality Assurance</i>	The process of monitoring the implementation of the Quality Control Plan for the purpose of assuring Quality in the finished product. A senior-level individual not directly connected to the Project shall

provide Quality Assurance. A report of the findings of this Quality Assurance effort shall be provided to the POLB at submittal of final design. Quality Assurance is considered to provide a standard level of professional service.

Quality Assurance Manager

A professional responsible for developing, implementing, and overseeing quality assurance processes to ensure that deliverables, services, or projects meet established standards, regulatory requirements, and customer expectations. Their primary focus is on preventing defects through systematic planning, process control, and continuous improvement.

Quality Control Plan

A plan that describes the Consultant's methods and procedures for controlling the quality of the Work. The Quality Control Plan shall provide for Quality Assurance. A Quality Control Plan is considered to provide a standard level of professional service and should be demonstrated by the Consultant's standard in-house quality control procedures.

Quality Control Review

A professional review of the Construction Documents performed to ensure that: the Construction Documents accurately reflect the Project Scope of Work; the Basis of Design has been clearly documented and conforms to the design concept and intent; and the design calculations have been correctly completed. Senior level design professionals, independent from the design team, shall conduct the Quality Control Review.

Records Center

POLB's main repository and ultimate manager of data.

Re-Construction

Construction work that modifies or reconstructs a facility or structure that is already in existence, utilizing part of the existing facility or structure in the construction of the alternative or modified facility or structure.

Re-Design

Design work that develops an alternative or modification to a design that has been previously completed. Elements of the previous design are generally re-utilized in the re-design effort.

Relocation

The physical removal of material, equipment, and/or facilities from one location to another location for the purpose of maintaining the operation or use of the material, equipment, and/or facilities for same purposes as from the original site without benefit of betterments.

<i>Research Sources</i>	Repositories of information pertaining to POLB, POLB facilities, or facilities that serve POLB or are on POLB property. The information stored in Research Sources shall be fully investigated by the Consultant and used to prevent unforeseen discovery of materials, equipment, or other facilities that affect the project.
<i>Retention</i>	A portion of a progress payment withheld pending a particular deliverable or milestone. POLB, at the discretion of the POLB DM, may retain a portion of any progress payment under the Agreement.
<i>Risk Management Plan</i>	A written plan that identifies project risks, as far as can be known, assesses the project impact of those risks, assigns responsibility and ownership of identified risks, and develops mitigations in accordance with POLB's Risk Assessment Manual.
<i>Schedule</i>	A Schedule of the Work that, at a minimum, contains those elements of POLB generic Work Breakdown Structure which are applicable to the Project, and defines all critical milestones.
<i>Schematic Design (SD)</i>	Schematic Design is the initial phase of the design process in architecture and engineering. It focuses on conceptualizing the project's overall structure, layout, and functionality before detailed design work begins and develops alternatives.
<i>Scope of Work</i>	A narrative description of the elements of Work that define the project to be completed by the Consultant.
<i>Small Business Enterprise (SBE)</i>	An SBE is a business that is independently owned and operated, and conforms to certain size criteria that are based on a firm's annual receipts earned in its primary field, number of employees, and type of work. POLB has adopted the U.S. Small Business Administration (SBA) standards. Visit the regional SBA website for more information: www.sba.gov/ca/la Refer to POLB website for complete standards at www.polb.com/sbe .
<i>Small Business Enterprise Program</i>	POLB's established program for encouraging participation of Small Business Enterprise (SBE) and Very Small Business Enterprise (VSBE) entities in contracting opportunities at POLB. Refer to POLB website for more information at www.polb.com/sbe .

<i>Special Conditions</i>	That portion of the Specifications which amends or supplements the General Conditions in a manner specific to the Project.
<i>Specification</i>	A document which contains or refers to the bidding requirements, forms to be used in connection with the construction contract, Notice Inviting Bids, Instructions to Bidders, Title Sheet, Signature Page, Stamp Pages, Master Table of Contents, Bid Proposal Package, Schedule of Bid Items, General and Special Conditions, appendices, Technical Specifications, and all other Contract Documents existing as of the day of first publication of the advertisement for bids.
<i>Specification Template</i>	A specification template on file with POLB, which shall be used as a guide to content of Specifications. Please check with DM for availability for the specific sections.
<i>Stamp</i>	The stamp of a Professional Engineer, Architect, or Landscape Architect currently registered in the State of California who is qualified and regularly and customarily engages in the technical discipline of the Work, which is approved by the stamp. May also be referred to as "Seal."
<i>Stamped</i>	The impression or inked mark of the Stamp including the original signature of the individual registered by the Stamp. May also be referred to as "Signed and Stamped as Signed."
<i>Standards</i>	A statement of principles or rules that are published by a recognized professional body for the purpose of achieving standardization within an area or areas of professional expertise. Standards may have the force of law.
<i>Study</i>	An investigation that shall result in the acquisition of knowledge through the analysis of a proposed Project or issue. At the completion of the Study, the Consultant shall provide POLB with a written report.
<i>Subconsultant</i>	A Subconsultant is an individual or a business entity which has a direct contract with the Prime Consultant to perform a portion of the Work. The term "Subconsultant" means and includes the Subconsultant and the Subconsultant's authorized representatives.
<i>Substantial Completion</i>	Substantial Completion is the stage in the progress of the Work when the Work is sufficiently complete in accordance with the Contract Documents as determined by the Board on advice of the Engineer so that the City can occupy or utilize the Work for its intended purpose, as

evidenced by the City's issuance of a written notice of the date of Substantial Completion of the Work.

<i>Supplier</i>	A vendor, purveyor, distributor, or otherwise described business or individual which supplies or provides material or equipment used in the performance of the Work.
<i>Technical Specifications</i>	Written technical requirements of the Project design that may include, but are not limited to, descriptions of materials, equipment, construction systems, standards, quality of workmanship, measurement for payment, method of payment, and other requirements which govern the quality and performance of the construction of the Project.
<i>Tenant</i>	The business entity that holds a lease or other prescribed rights with POLB for the use of POLB Property.
<i>Timely</i>	The need for special attention to assure a short duration for an element of Work. A Timely response provides the requested information within a time frame that allows the application of the information without adversely affecting the Work schedule.
<i>Tunnel</i>	An underground passageway 30-inches in diameter or greater, excavated below the earth's surface, that provides a subterranean route along which people, equipment, or substances can move; other than passageways excavated by mine or quarry operators in connection with such operations. For the purpose of safety orders, "tunnels" include shafts, raises, underground chambers, and premises appurtenant thereto.
<i>Utility Conflict Matrix</i>	A deliverable required at each design milestone that delineates each utility impacted and identifies the type, ownership, size, status, and disposition of each utility impacted.
<i>Utility Relocation Plan</i>	A plan for the relocation of utilities, as required, for the successful completion of the constructed Project that includes text and Drawings which: identify all utilities; identify the point of contact at each utility; and show both the existing and new location for the utility. Also included is a Cost Estimate and Schedule for each relocation with the name, address, and telephone number of the appropriate contact person.

Value Engineering (VE)

Value Engineering (VE) is a formal, structured review of the Project concept and intent, as well as the Scope of Work and Basis of Design, to examine cost effective design and construction options, energy efficiency options, and options with decreased lifecycle cost. A report of the results of the VE review shall be submitted to POLB within a time frame specified by POLB's Contract Representative shall include both a description of possible changes to the design and the life-cycle cost savings of the associated change. VE need not be completed using personnel certified as Value Engineers or Certified Value Specialists, provided a standard professional VE analysis format is followed as defined in the VE Plan.

Value Engineering Plan

A plan that describes the Consultant's methods and procedures for conducting structured VE by senior level personnel that are independent of the Consultant's design team and that include all design disciplines that are required by the Project.

Very Small Business Enterprise (VSBE)

An SBE that meets the maximum annual gross revenues consistent with the State of California' Department of General Services' "micro-business" designation. Refer to POLB web site for full details at www.polb.com/sbe.

Waste Management Plan (WMP)

A written plan to track the amount of construction and/or demolition debris diverted or disposed during the life of a construction project. This has to be reviewed and approved by the City of Long Beach Department of Community Development Building & Safety Bureau (See L.B.M.C. Chapter 18.67).

Wharf Footage Mark (WFM) and Row/Bent Number

Wharf and Pile location identification number placed on the plan by the designer, based on wharf stationing and pile location, to be installed by the Contractor. See Wharf Design Criteria Guide for details.

Work

Work shall mean those activities undertaken by a Consultant to provide a completed product that fully and completely defines the Project and is the result of furnishing all labor, materials, equipment, and incidentals necessary to the successful completion of the product which are required by or reasonably inferable from the Agreement, including all materials and equipment to be used to provide the product, as well as all other obligations imposed on the Consultant by the Agreement.

***Work
Authorization
(WA)***

A written document issued by the Port establishing the authorized amount of funds and the date of commencement of the Consultant's work or task/s. The Work Authorization functions as the Notice to Proceed for the consultant to perform consulting services.

***Work
Breakdown
Structure
(WBS)***

A grouping of defined project elements, which organizes and defines the scope of work for a project. Each descending level of the WBS represents an increasingly detailed definition of a project element. POLB has a defined generic WBS from which a project-specific WBS shall be developed.

3 GENERAL

A General

- 1) The Consultant shall design and provide each design phase or milestone submittal in accordance with this Guideline and the applicable POLB Standards and Manuals.
- 2) The Consultant shall be responsible for assuring that the Consultant's Sub-consultants follow this Guideline.
- 3) The Consultant shall perform the Work with the understanding that the Budget and Schedule must be maintained. In the event that it becomes apparent to the Consultant that the Budget or Schedule cannot be met, the Consultant shall notify the DM immediately and in writing of the specific areas of variance, amount of variance, and alternative strategies to mitigate the variance.
- 4) POLB has the right to request from the Consultant, at any time during the progress of the Work, an intermediate Work product demonstrating the actual status of the Work such as a draft report, draft specifications, draft cost estimate, or a progress print or computer file of a single sheet or multiple sheets or the entire Drawing set which represents the Work completed as of the date of the request.
- 5) Failure to ascertain existing site conditions which were visible or which could have been determined from existing plans on investigation will be considered a design deficiency and the cost of making any necessary design corrections or modifications will be the sole responsibility of the Consultant.
- 6) Unless otherwise specified, the Consultant will provide all equipment, materials, and incidentals to perform its work.
- 7) The Consultant shall identify any materials or items that, because of long lead-time for manufacture or delivery, must be pre-ordered to maintain the Project construction Schedule. If pre-ordering is necessary, the Consultant shall prepare a table listing pre-ordered items, the purchase date, the expected waiting period, and the required delivery date and penalty costs if cancelled. A minimum of eight (8) weeks prior to date of necessary order placement, the Consultant shall provide complete, final Specifications and Drawings appropriate for the separate bidding of pre-order materials in accordance with POLB standards.
- 8) The Consultant shall identify any erection and/or lifting requirements necessary for the successful construction or completion of the Work and shall provide clear direction and instructions as to the appropriate erection and/or lifting procedure, including location of lifting points and type of lifting device.

- 9) The Consultant shall identify the Contractor staging area, Contractor work area limits, and Contractor's access and egress routes to the Work area in the Construction Documents. Also, the Consultant shall coordinate Work areas and routes with POLB's tenants and others affected. Construction sequences (Construction Phasing Plan) shall be included in the plans and shall be determined jointly by POLB and the Consultant. It is POLB's responsibility to coordinate with tenants to ascertain availability of potential construction staging areas.
- 10) The Consultant shall identify any preliminary design and/or construction using a tunnel or directional drilling, 30-inch diameter or greater in size, and provide to POLB a tunnel classification from Cal/OSHA prior to bidding (see California Code of Regulations, Title 8, Section 8422, "Tunnel Classifications").
- 11) POLB has very limited charter authority for design/build project delivery and limits the use of design/build elements in conventional design/bid/build contracts. Acceptable methods for achieving design/build for certain elements of a design/bid/build contract are through deferred approvals requiring the Contractor to be responsible for obtaining plan check approval as required from the permitting agency. Acceptable elements that can be specified as deferred approvals in POLB contracts are limited to the items below.
 - a) Shoring and any associated groundwater work associated with shoring
 - b) Falsework
 - c) Forms
 - d) Staylathing
 - e) Traffic Plans
 - f) Concrete Mixes
 - g) Pile Handling Methods
 - h) Modular Buildings
 - i) Ship Loaders
 - j) Container Cranes

The Consultant shall identify any exceptions to this policy in writing to POLB's DM, who may, after consulting with the Director of Engineering Design, approve such exceptions.

B Economy in Design and Construction

- 1) In the design of all projects, it is POLB's objective to obtain quality facilities that are functionally adequate; economical in design, construction, operation, and maintenance; and of durability consistent with the intended use. Although due consideration shall be given to appearance, structures shall not entail frills and embellishments and shall not be conceived on the basis of unnecessarily complicated and costly construction systems, materials, or equipment.
- 2) The Consultant shall assure compatibility of the new structure with the architectural character of POLB or terminal. For people-oriented facilities such as a gate house or administration building, the Consultant shall ensure the design is smoothly integrated into the overall terminal design, taking into consideration all engineering disciplines involved, including landscape architecture and interior design. An integrated design achieves harmony of site, landscaping, building design, and functional requirements.

C Codes and Standards

- 1) The Consultant shall design and conduct Work in compliance with all applicable Federal, State and local laws, codes, and regulations.
- 2) The Consultant shall design the Work in accordance with current POLB design criteria and current applicable codes, standards, and regulations. It is the Consultant's sole responsibility to determine the applicable and appropriate codes and standards that apply to the Work.
- 3) The Consultant shall contact applicable government agencies to verify the applicability of codes, standards, and regulations to the Project, and obtain written agreement from such agencies identifying applicable codes prior to start of design. If the Consultant does not have written verification from the applicable and appropriate agencies of the codes and standards that apply to the project, and the agencies subsequently require the use of a different code or standard, the cost of changing the design shall be the sole responsibility of the Consultant.

D Sustainable Design Guidelines

- 1) POLB is committed to sustainable development, and the Consultant is directed to incorporate measures that support those principles into the project designs to the maximum extent possible.
- 2) All buildings constructed by POLB are to be designed to achieve a minimum LEED® rating of Silver. Where feasible and economically achievable, the Consultant, in consultation with POLB's DM, should design office-type buildings,

administration buildings, fire stations, and others as appropriate, for the Gold LEED® rating.

- 3) All other infrastructure constructed by POLB are to be designed to achieve a minimum Envision® rating of Silver. Where feasible and economically achievable, the Consultant, in consultation with POLB's DM, should design infrastructure projects for the Envision® Gold rating.
- 4) Whenever feasible, the Consultant shall provide for the reasonable reuse of recyclable construction materials within the context of the Project. A Waste Management Plan (WMP) may be required by the City of Long Beach (COLB) Development Services (See L.B.M.C. Chapter 18.97).
- 5) Whenever possible, the Consultant shall design POLB facilities to allow for future potential modifications.
- 6) Whenever and wherever possible, the Consultant shall design POLB facilities to allow for future deconstruction and re-use of materials rather than conventional demolition.

4 PROJECT ADMINISTRATION, MANAGEMENT, AND COORDINATION

The Consultant shall perform and provide Project Administration, Management, and Coordination services and should include the following requirements:

A Design Management Plan

The Consultant shall prepare a Design Management Plan (DMP) to properly and efficiently manage the design project. The Consultant will be required to provide at a minimum the following feedback for implementation into the DMP:

- 1) A description of the Consultant's project team and organization including the relationship with any sub-consultants. The identification of all discipline leaders and Project Manager including addresses, work and cellular telephone numbers, and e-mail addresses for all key team members;
- 2) Project organization chart. Key engineering personnel shall be identified and made available to complete the work. If for reasons beyond the firm's control a substitution of key engineer personnel is necessary, the firm shall obtain POLB's approval for the substitution. The Consultant must demonstrate commitment of local personnel to the project. The Consultant shall identify certified Envision[®] Sustainability Professional(s) (ENV SP), working on the project for the length of the project.
- 3) A roles and responsibilities matrix that identifies and describes the roles and the responsibilities of each key team members for the project including the Principal in Charge, Project Manager, Quality Assurance Manager, and discipline leaders;
- 4) Consultant's project approach, goals, and objectives.
- 5) The method to be used by the Consultant for budget and schedule control.
 - a) A Preliminary construction cost estimate that aligns directly with the anticipated bid item list for the project;
 - b) A WBS-based cost (money) resource loaded Schedule for the design defining all significant milestones.
 - c) A WBS defining the individual responsible for each task.
- 6) The method to be used by the Consultant for measuring actual progress of the Work (e.g., earned value system) in comparison to the schedule and expended budget.
- 7) The Consultant's Design Quality Management Plan (DQMP);
- 8) The Consultant's Communication Plan;

4 PROJECT ADMINISTRATION, MANAGEMENT, AND COORDINATION

- 9) The Consultant's Value Engineering Plan;
- 10) The Consultant's Waste Management Plan (L.B.M.C. Chapter 18.67);
- 11) A list of submittals/deliverables by the Consultant to POLB;
- 12) A list of Work products to be submitted by the Consultant to POLB (deliverables or submittals) including the date to be submitted and indicating the time allowed for review of each submittal;
- 13) Project Standards, Assumptions, and Design Criteria for design and drafting;
- 14) Change Management Plan that describes how the Consultant will manage change of scope or other cost and/or schedule impacts;
- 15) The Consultant shall provide all project management records, research materials, planning and engineering feasibility analyses, and cost estimating services as required in support of the project, and this information shall become the sole property of POLB.

B Coordination and Meetings

- 1) The Consultant's PM shall meet with POLB's DM as required to coordinate the progress of the Work and to discuss Project status including: the progress of the Work; the Schedule for the Work; the current cost of the Work; the estimated cost to complete the Work, and critical issues including any anticipated changes to the Scope of Work, Schedule, or Cost Estimate.
- 2) The Consultants shall participate in the following meetings as required:
 - a) Project Kick-off Meeting
 - b) Design Progress Meetings
 - c) Sustainability Envision® Pre-Assessment Checklist Meetings during Pre-Design, 50% and 100% milestones
 - d) Miscellaneous Meetings (Coordination with POLB staff, Design Review Meetings, Risk Assessment Meetings, stakeholders, and/or other permitting agencies where necessary)
- 3) The Consultant shall be responsible for preparation and distribution of meeting agenda and minutes for all Project related meetings attended by the Consultant and shall manage action items in a timely fashion. Responsibility for each action item shall be assigned.
- 4) POLB has the right to rely on the Consultant and the Consultant's experience to properly estimate and include in the Consultant's cost proposal for the Work, the

4 PROJECT ADMINISTRATION, MANAGEMENT, AND COORDINATION

number of meetings, the entities with which meetings will be required, and the appropriate level of effort for the successful completion of this Project.

- 5) Meetings may include, but are not limited to, communication with the following: parties or entities as necessary to research the site conditions or validate design conditions: State or Federal agencies or representatives; various departments of the COLB, the City of Los Angeles, and the County of Los Angeles; various agencies such as Caltrans, ACTA, or others; POLB tenants; a POLB related business; adjacent property owners and/or businesses; community and/or special interest groups; various parties for informational meetings, survey coordination meetings, and base map coordination meetings; terminal security services; utility services, including gas, water, sewer, telephone, data, and electrical services; any of the various railroad companies; railroad operators; and other engineers and Contractors working in the project area.

C Progress Report/Monthly Status Report

- 1) The Consultant's PM shall provide to POLB's DM a Monthly Status Report. The monthly Status Report should be included with each monthly invoice.

D Cost Proposal

A cost proposal shall be submitted in Microsoft Excel format, where the Consultant shall identify a total estimated cost for the scope of services. The Consultant shall provide a total cost proposal with a not-to-exceed amount to cover the entire scope of services with a breakdown of estimated hours and cost for each task defined. Additional tasks and sub-tasks may be added at the proposer's discretion to demonstrate the Consultant's complete interpretation of the scope of services necessary for the Project. Please see and utilize **Attachment D Sample Fee Breakdown** for development of fees.

E Project Schedule

The selected Consultant shall submit an updated Project Design Schedule in a format acceptable to POLB fifteen (15) calendar days following the Notice to Proceed (NTP) with the execution of Work Authorization (WA). POLB will provide the key milestones dates to follow. Provide a complete design schedule and a separate construction schedule identifying all the tasks specified in the WBS and highlighting milestones including submittal dates and construction milestones. Design schedule shall show the anticipated time for the design, development and preparation of the PS&E package for bids of the entire project duration. The design schedule and the construction schedule are to be done in the latest version of Microsoft Project, or alternate. Software approved by POLB DM, and is to be based on working days with additional reference provided for calendar days.

Consultant shall develop and maintain a design schedule that details the design

4 PROJECT ADMINISTRATION, MANAGEMENT, AND COORDINATION

effort and the scope of work per the project or task. It will show relevant interface activities including critical path elements and major milestones. The schedule will be updated continuously and will be submitted to the POLB DM on a monthly basis and as requested. The schedule will reflect calendars, activity coding structure, resources, cost assignment as requested by POLB. The Consultant shall include the following elements in the Schedule:

- 1) Work items of agencies and other third parties that may affect or be affected by design activities
- 2) Design Schedule identifies logical constraints and interrelationships between disciplines and phases of execution. It will be resource-loaded to support project manpower and cost histograms & curves.
- 3) Activities in the schedule shall have logic ties (relationships) without the use of "negative lag."
- 4) Use of "constraints" on activities shall be kept to a minimum and approved by the POLB Project Controls.
- 5) A complete detailed baseline schedule shall be completed, submitted, and approved by POLB within fifteen (15) calendar days of contract award. The baseline schedule should not be revised unless revision is formally approved by POLB, and should be shown as a bar below the current bars on all schedules.
- 6) All activities in the schedule shall have a "Predecessor," with the exception of the first activity.
- 7) All activities in the schedule shall have a "Successor," with the exception of the last activity.
- 8) The consultant shall incorporate the coding structure provided by POLB
- 9) The schedule progress shall be "Physical Percent Complete." Remaining duration should not be linked to percent complete.
- 10) XER Primavera schedule back-up file shall be issued on a monthly basis (as established by POLB).
- 11) A report containing activity notes shall be generated on a monthly basis or as requested and issued in a PDF format.
- 12) CPM schedule shall include near-critical path activities (two weeks of float or less), and be issued (in the approved format by POLB).

13) Monthly schedule updates will be part of the Progress Report.

F Stakeholder Outreach

POLB PM and POLB DM will be generally leading the coordination of stakeholders for the project. The Consultant shall provide the necessary support to complete this task.

G Grant Support

One or more federal, state, or local grants may be used to fund all or a portion of POLB projects. Grant conditions, which vary by funding source and type, can affect project cost capture requirements.

Grant agreements between POLB and the granting agency will define grant eligible costs, billing requirements such as restricted uses of grant funds, invoicing format financial & progress reporting, deadlines for construction completion, and final costs.

Under guidance of POLB DM, the Consultant shall provide necessary engineering design support for the preparation of permit application or administrating and implementing the grant requirements. The engineering expertise required to provide exhibits, cost estimates, construction durations, and other technical feedback needed to support the Port Planning Division.

H CADD Support

The Consultant shall provide required CADD support services per these guidelines.

I Subsurface Utility Engineering Support

The Consultant shall provide necessary subsurface utility engineering support services as required per these guidelines.

J Supplemental Environmental Document Support

The Consultant shall provide necessary supplemental environmental document support services as required per these guidelines.

K Quality Management/Quality Control/Quality Assurance

Consultant shall perform necessary quality management including QA/QC and Independent Review (IDR) to ensure that all project submittals including reports, PS&E package, and other pertinent engineering supporting documents are complete, accurate, conforming to the industry standards, and meeting professional engineering practices per these guidelines.

L Right of Way Assistance

The engineering expertise required to provide technical information for development of Certificate of Sufficiency (COS) forms and/or Access Agreements as needed.

5 DESIGN PHASES/MILESTONES

POLB generally divides Projects into distinct phases including: Preliminary Design includes both Schematic (Basis of Design and Alternative Studies) and 30% Design (Pre-Design Services); 50% Design Services; 100% Design Services; Final Design Services; Final Signed PS&E Package; Bid Support Services; Construction Support Services; and Project Close-out Support Services. Project phases are further broken down into specific milestones and deliverables. POLB divides Design Services into Phases according to the typical way projects proceed. The initial investigation into a potential project is called a Schematic Design and is intended to determine if the proposed project is feasible based on an overview of existing conditions and the intent of the project. This initial work is intended to identify major problems. If the Schematic Design indicates the proposed project has merit and may achieve the desired intent, a second, more detailed investigation is conducted to investigate more specifically all aspects of the project in a more detailed and comprehensive manner. This second-level investigation is called 30% Design (Pre-Design Services) and is intended to provide comprehensive information on constraints and benefits. If the proposed project is acceptable based on the proposed scope, budget, and schedule, detail design (50% Design, 100% Design, and Final Design) is undertaken. If the DM directs the Consultant to skip any of the design phases, the design submittal at the following phase should include all the elements identified in the prior phases per these guidelines. Following the Final Design, the Consultant's services are required to assist with Bid Phase, Construction Phase, and Project Close-out Phase support services.

The Consultant's Work may include a single phase or multiple phases. The progress of Work shall be defined by completion of the contracted phase(s) or milestone(s). The completion of a phase of Work shall be determined by POLB acceptance of the deliverable products and/or services that the Consultant produces and provides POLB as evidence of completion of a phase of Work.

At completion of each Phase, the Consultant shall provide the deliverables and/or services identified for the applicable phase.

A Schematic Design (SD)

The intent of the Schematic Design Phase is to reasonably determine, based on existing known information, whether a proposed Project appears feasible from an engineering, economic, environmental, and community perspective. A Schematic Design Phase may or may not be required for every project.

- 1) A Schematic Design shall produce a Schematic Design Report that includes the following:
 - a) An Executive Summary that includes elements from each major section of the Report.
 - b) Layouts: a graphical representation (layout drawing) with a POLB background that depicts each major element of the Project and alternative layouts that might be considered;

- c) Project Constraints and Assumptions: a list of Project constraints and assumptions including a discussion of existing conditions;
- d) Alternatives: If alternatives can be identified, at least two (2), and not more than five (5), alternative concepts shall be developed that satisfy the intent of the Project. Each alternative provided to POLB shall include simple line drawings in plan and elevation, overlaid on POLB facility drawings indicating major elements of the Project including:
 - (1) Location, size, and geometry;
 - (2) Rights-of-way, property or lease lines and easements;
 - (3) Project constraints including regulatory permitting, financial, physical, environmental, permitting, and infrastructure constraints);
 - (4) Existing utilities and services with those requiring relocation clearly identified;
 - (5) Project-related utilities and services;
 - (6) Access including both ingress and egress;
 - (7) Traffic concerns;
 - (8) Opinion of probable construction cost comparison of alternatives; and
 - (9) Comparison of estimated Schedule for alternatives.
 - (10) An Alternatives Analysis Report, including analyses and recommendations to POLB. A presentation by the Consultant of the findings and conclusions may be required.
- e) Preliminary Utility Conflict Matrix identifying utility type, ownership, size, material, status (e.g., active, idle, or abandoned), disposition (e.g., relocate, protect in place, or removal), and nature of conflict (e.g., conflict with proposed improvements or no conflict);
- f) Utility pothole plan showing the locations of proposed potholes to verify the utility conflicts.\;
- g) Preliminary Schedule: a preliminary Schedule, including Schedules for all alternatives;

- h) Budget Estimate: a Budget Estimate (Rough Order of Magnitude), including comparative Budget Estimates for any alternatives; and
 - i) Conclusions and Recommendations: a presentation of the Schematic Design analyses and recommendations to POLB management.
- 2) Investigation, Verification, and Identification of Existing Conditions and Existing Utilities
 - a) Investigation of Documents and Information:
 - (1) POLB shall supply base maps available from GIS data sources. It is the Consultant's responsibility to verify POLB base maps including researching in POLB's Record Center. Single copies of pertinent POLB drawings may be ordered from POLB at no cost.
 - (2) The Consultant shall review POLB files and other information sources to locate, gather, and review previous work and studies that relate to the Project Site including surveys, geotechnical, soils, utilities (including potholing information), and existing facility drawings. To assist in this research effort, POLB has prepared documents entitled: Utility Potholing Documentation and Utility Notification Letter Template found in Attachments.
 - (3) The Consultant shall verify information obtained from existing drawings, including drawings marked "As-Built."
 - b) The Consultant shall evaluate whether existing survey information is valid for design. If additional survey information is desired, the Consultant shall so indicate and request that POLB DM fill out a Survey Service Request to obtain the desired survey information.
 - c) The Consultant shall thoroughly research available information and data relative to site conditions so that unexpected interference will not occur during the construction of the facility. In many cases, comparisons between drawings are required.

For building projects, the following additional services shall be provided:

- 1) Drawings as required by **Attachment B**.
- 2) Programming/Planning/Space Planning will be early part of SD Phase at POLB and per these guidelines. The Consultant will have the primary responsibility to ensure that all components of the Programming/Planning/Space Planning are carried out in a timely manner, and that a well-defined program, budget criteria and project

schedule are established. Programming/Planning phase that will provide a basis and framework for the entire project to ensure that all future design phases meet the following criteria:

- a) Establish project specific protocols and conduct appropriate staff interviews and surveys to determine the specific list of all program elements, space allocation areas, and prepare block diagram layouts of all required adjacencies for review and approval by POLB.
- b) Prepare and conduct periodic design meetings with POLB staff as well as presentations to POLB staff and the Board of Harbor Commissioners (BHC) as determined by POLB.
- c) Provide a Project Program, which will include a list of current and proposed project functions and specific space allocation and adjacency requirements for use by the Consultant.
- d) Programming/Space planning needs are established, and all current and future needs are determined. Include the following at a minimum:
 - (1) Building space: Gross building size, building efficiency, floor size.
 - (2) Parking: Total parking spaces, number of public spaces, number of staff spaces, code requirements, accessibility, carpool spaces, compact car spaces, Electric Vehicle (EV) charging spaces.
 - (3) Site: Site coverage, future expansion potential, site landscaping and aesthetic treatments, site access (vehicular and public transit) etc.
 - (4) Where applicable: ADA Path of Travel, Fire Access, Infrastructure Tie-ins, Utility Hookups, Restricted Areas, Traffic Impact Study.
 - (5) Security Systems: Overall site security, internal building security, parking lot security, use of lighting, use of electronic versus staffed surveillance, building and site access control points, landscaping, and building elements.
 - (6) Code and Statute Compliance: Compliance source and authority for any exemption or variance, certification in writing that the final design plans submitted comply with and have obtained the approval of all appropriate jurisdictional agencies, and that all permits can be obtained by appropriate Contractors.
 - (7) Green Building/Energy Conservation/Management: Green Building design systems and equipment, use of passive systems, smart building

control systems. Life Cycle and Value Engineering comparison of initial systems costs, operating costs, and quantification of savings over time.

- (8) Plan and Vertical Irregularity Analysis: Impact of the proposed building configuration and character on structural systems, wind and seismic resistance.
 - (9) HAZMAT Requirements: Summation of the investigations conducted and a description of the results or actions that have been initiated, completed, or need to be addressed.
 - (10) Environmental Documentation Considerations and Concerns: Discussion of any items identified in the project Environmental Documents impacting development of the site and/or building.
 - (11) Mitigation Requirements: Discussion of considerations given and actions taken to resolve all Environmental Document issues including all project related mitigation requirements.
 - (12) System Requirements: A summary/overview of the identified system requirements. The standards applied to the project and a description of the materials used and the material standards applied to the project.
 - (13) Operation and Maintenance: Report on the integration of operating and maintenance considerations into the building and site design and the standards applied.
 - (14) Value Engineering: A summary of all value engineering activities or options. Results and recommendations including the overall life cycle cost analysis and total savings identified.
 - (15) Construction Budget/Cost Analysis: Summary comparison of the construction cost estimate for the design presented in the present design phase documents with the original project budget and identifies reasons for any variance.
 - (16) Summary: Summary of the Program analyses developed by each discipline that covers site analysis as described in 2).
- e) Site Analysis requirements:
- (1) Provide a narrative analysis that documents codes and standards used and any discrepancies/deviations to be considered during the design.

- (2) General Site Information: Location, description, history, surrounding development, and future development.
- (3) Site Topography: Discussion of the site topography and its impact on or incorporation into the design of the site, building and improvements, including the site hydrology and drainage and flood plain considerations. Identify the site location on regional and local area maps indicating major features and/or roadways.
- (4) Site Geology: Discussion of the site geology, site soils and site geotechnical characteristics as they relate to and impact upon development of the site and building design.
- (5) Site Seismic Analysis: Describe the sites seismic history, current condition, seismic design category classification and any special seismic measures required in the project design.
- (6) Site Hazmat Issues: Summarize the research process applied to identify the site's HAZMAT history and conditions including the primary information sources. Identify any findings that may impact the project design.
- (7) Site Weather Analysis: If required by POLB DM, present a climatic and weather history of the site by month for the last 10-years that will include, but not be limited to:
 - (a) Area Temperatures: High, low, average, extremes and wind chill factors.
 - (b) Humidity: High, low, average and extremes for both wet and dry bulb.
 - (c) Solar Design Considerations: Site latitude, hours of daylight and sun angles, green building design.
 - (d) Area Rainfall: Low, high, average and extreme runoff/flooding design considerations.
 - (e) Wind Conditions: Wind rose, prevailing directions, low, high and average velocities and extremes impacting the building and site design.
 - (f) Fog Conditions: Density and/or degree of visibility reduction, frequency, and temperatures.

- (g) Barometric Values/Information.
 - (8) Utilities: If required by POLB DM, provide location and availability of all existing utilities and services to serve the site. Include telecommunications, power, water, gas/other fuels, sewer and security (fire, law enforcement).
 - (9) Land Use Zoning: Description of current use of the property, surrounding property uses, current city zoning requirements and restrictions.
 - (10) Environmental Documents Impact Assessment: Summary discussion of the Environmental Documents (if available) identifying any findings impacting the project design i.e., increased traffic accessing the site. Traffic circulation impact on-site off-site parking restriction, emergency/fire sites access routes.
 - (11) Off-Site Services and/or Requirements: Identification of any activities necessary to provide utility services or access to the site, street/road development, utility system extension, expansion of any existing infrastructure, including a discussion of the project schedule and cost implications.
- f) Design options and alternatives are explored and evaluated to determine preferred design methods and decision-making process. For substantial projects (with budgets over \$10,000,000), a minimum of three unique design solutions that satisfy all of the major design criteria, illustrate general scope, scale, relationship, character and cost of the programmed facility requirements, shall be prepared by the Consultant.
 - g) Design decisions and implementation schemes shall be logical, practical, coherent and cost effective.
 - h) Appropriate cost estimates and project budgets are established, evaluated and updated throughout the design and construction process to ensure that the project remains within the original budget.
 - i) Project progresses in a professional and timely manner to meet POLB goals and schedule.
 - j) Guidelines for all documentation are established, and a complete record of the entire design process is maintained and periodically updated throughout the project.

- k) POLB utilizes the LEED rating system for buildings and ENVISION® for horizontal infrastructure. Refer to the Sustainability Program Implementation Process Flow Chart for specific project guidance. For Building projects, at a minimum, LEED Silver shall be achieved unless appropriate justification is provided to POLB DM.
- 3) Schematic Design (SD) phase that meets the following criteria:
- 4) Drawings as required by **Attachment B**.
- a) Provide an exploration of space planning options and major building system designs that will maximize the criteria established by the Programming/Planning phase.
 - b) Establish a minimum of three (3) unique design solutions that satisfy all of the major design criteria, illustrate general scope, scale, relationship, character, and cost of the programmed facility requirements.
 - c) When project is over \$10,000,000 in construction value prepare Life Cycle and Value Engineering comparisons for major systems and components.
 - d) Prepare LEED Certification Action Plan.
 - e) Commit to a design that supports human health and wellness.
 - f) Summary Program Verification Report: A comparison of the level of compliance the proposed design solutions have with the programmed needs and applicable codes for the project. The Summary Program Verification Report should include the following:
 - (1) Program Requirements: Tabular-listing comparing the approved program requirements with the present design phase solutions. Any deviations from the approved program must be stated and reasons provided for the deviations.
 - (2) Summary List of Applicable Codes, Regulations, and Standards: List all known regulation requirements that apply to the project and all agencies that must be consulted including, but not limited, to those listed below. Certify that the SD Documents comply with and have been reviewed and approved by all concerned jurisdictional agencies. Provide a rationale and the source of any approval for deviations from established codes, regulations, and standards.

- (a) Codes: California Building Code, California Fire Code, California Plumbing Code, California Mechanical Code and California Electrical Code
- (b) Regulations/Ordinances: ADA, Title 24, CAL OSHA, local zoning.
- (c) Applicable Governmental Requirements/Reviews: COLB, Long Beach Fire Department, POLB, and Caltrans or other agencies if applicable.
- (d) For projects located within the City of Los Angeles (COLA), the current codes that have been adopted by the COLA include the following: COLA Building Code, COLA Plumbing Code, COLA Mechanical Code, COLA Electrical Code, COLA Fire Code, Title 24 Energy and Disabled Access Codes
- (e) Design Manuals and Standards: Public Works, Flood Control, POLB's Design Criteria and Standard Plans, and any other appropriate POLB Manuals or Standards.
- (f) Established Industry Standards: CSI (Construction Specifications Institute), UL (Underwriters Laboratories), ANSI (American National Standards Institute), NEMA (National Electrical Manufacturers Association).

B 30% Design Services (Pre-Design Services)

The intent of Pre-Design Services is to investigate the Project site and develop a 30% Design that may be used to Baseline the project. All existing information concerning the site is accumulated and information that is necessary for design that is not available or needs to be updated is identified. Site investigations including potholing and environmental testing shall be performed as early as possible during this phase. California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) will be certified at this stage.

At the completion of 30% Design, the Consultant shall provide POLB the following products and/or services:

- 1) A Basis of Design document, updated to the current design phase;
- 2) Preliminary architectural or engineering drawings and/or sketches that satisfy the intent of the Project as described in the Scope of Work and which define the Project including plan(s) and elevation(s) of major components, civil site plans, and the structural system. Include one digital copy of all drawings so POLB can verify compliance with POLB as needed upon version of POLB's CADD Standards Manual. Refer to **Attachment A** for additional drawing requirements;

- 3) Specification's outline, consisting of preliminary Master Table of Contents (MTOC) listing of technical specifications, as necessary to define the Project;
- 4) Space usage by general type, size, location, and function using units identifying major dimensions and square footage;
- 5) Schematic descriptions and one-line system diagrams defining the types and preliminary sizes of major utility services;
- 6) Field Investigation of Site:
 - a) The Consultant shall provide field assessments to discover, verify, and document existing conditions and features that may affect the Work and that are visible/invisible or accessible from the ground surface, including but not limited to: above and below ground utilities, potholing, ground penetrating radar, rights-of-way, property boundaries, roadways, railways, easements, facilities, structures, obstructions to construction, drainage from on or off site sources, regulatory boundaries, and local datum.
 - b) The Consultant shall make such field measurements and investigations as necessary to properly validate drawings or map information.
 - c) The Consultant shall closely coordinate with POLB DM for the site access to perform the field investigation.
- 7) Geotechnical and Soils Investigations:
 - a) The Consultant shall provide a base map showing the location of drilling and sampling activity including the type of activity, the measurements taken, and the coordinates of the drilling or sampling activity.
- 8) Utilities
 - a) POLB PM will be directly involved with the third-party/POLB owned utility coordination effort to help the utility understand POLB's priorities. However, the Consultant and POLB DM shall provide technical support services to ensure the necessary coordination for the timely relocation or reconstruction of existing utilities or new utility installation by others including the conflict matrix and necessary review.
 - b) The Consultant shall ensure that interferences between existing utilities and any utility requirements of the Project are resolved without loss of function, through coordination with utilities and entities that may have data or information on existing conditions, including potential obstructions. The Consultant shall obtain any required approval, where necessary, to construct

adjacent to and/or over/under existing utilities/facilities and coordinate Project design to avoid damages.

- c) Where utility relocation or reconstruction will be done by a third party and not by POLB Contractor, the Consultant shall coordinate with the PM to ensure the third party develops a schedule such that the construction by the work will not adversely affect POLB or POLB Contractor. With respect to this provision utilities include, but are not limited to: Southern California Edison; Long Beach Utilities (Water, Gas and Sewer); Los Angeles County Sanitation Districts; COLA Department of Water and Power; Verizon; Occidental Petroleum Corporation (OXY); Tidelands Oil Production Company (TOPKO). This also includes private oil companies: British Petroleum; Shell; THUMS; PetroDiamond; Aera Energy; Chemoil; Valero Refinery; Tesoro Refinery; Southern California Gas Co.; Equilon; and the Burlington Northern/Santa Fe Railroad; Union Pacific Railroad; Pacific Harbor Lines along with others.
 - d) The Consultant shall design any utilities or facilities necessary to support the Project to meet POLB's insurance and Risk Management requirements. POLB's DM will coordinate with POLB's insurer as required.
 - e) The Consultant shall provide engineering services to identify and coordinate the removal or re-routing of utilities located outside the Project area that are affected by the Project. Removal and re-routing of utilities shall conform to POLB standards and standards of the agencies or utility companies' who owns them. Any proposed deviations from the standards requires submittal of Design Exception Form (see **Attachment E**) and approval by the Engineering Design Division Director.
 - f) The Consultant shall investigate, quantify, contact, and verify with the applicable utility that there is sufficient availability of additional utility capacity as may be required for the Project.
 - g) The Consultant shall maintain a written log of all contacts with utility companies and include such log in the regular Status Report.
 - h) POLB's policy is to remove any abandoned utilities. Abandonments of utilities in place are discouraged unless the third party can provide justification. Proposed abandonment of utilities requires submittal of Abandonment Request Form (see <https://polb.com/download/170/reference-materials/21888/pipeline-abandonment-policy-exception-request-form.pdf>) and approval by the Engineering Design Division Director, Director of Environmental Planning Division, and Chief Harbor Engineer.
- 9) Developed site plan;

- 10) Preliminary utility relocation plan;
- 11) Updated Utility Conflict Matrix;
- 12) Documentation of site conditions;
- 13) Preliminary storm water drainage and grading plan;
- 14) Geotechnical design report providing design recommendations;
- 15) Geotechnical data report providing documentation of data and field testing or historical field data used;
- 16) Preliminary structural calculations of foundation system;
- 17) Any temporary service requirements for maintaining POLB tenant operation(s) during construction. An implementation plan shall be drafted describing when and how to initiate and maintain any such temporary service;
- 18) A presentation of 30% Design Phase analyses and recommendations through participation in the 30% Design Review Meeting.
- 19) All submittal documents will be reviewed via Bluebeam. Consultant is expected to be able to track all comments and export onto the CRRL form with appropriate fields filled out.
- 20) Provide input as required for the submittal of the Harbor Development Permit (HDP) and address any questions from the Environmental Planning Division.
- 21) Provide necessary engineering support services to complete CEQA/NEPA certification.
- 22) Provide input to the Risk Registry and participate in the 30% Risk Assessment meeting.
- 23) Provide input and participate in the 30% Sustainability Assessment meeting.

For building projects, the following additional services shall be provided:

- 1) 30% Design Services/Design Development (DD) phase that meets the following criteria:
 - a) Develop and refine the selected design(s) previously explored in the SD phase.

- b) Provide the most practical, sustainable, and efficient overall building design, including space planning options and major building system designs that will maximize the criteria.
 - c) Define specific systems, equipment, and design elements that fix and describe the size, character, and cost of the entire project.
 - d) Prepare Life Cycle and Value Engineering comparisons for major systems and components. Include Peer Review and documentation of comments and resolution of comments.
- 2) Design Development:
- a) Drawings as required by **Attachment B**.
 - b) Detailed Design Analysis Report: The Consultant's lead members shall prepare a detailed design analysis by discipline, which will include, but not limited, to the following:
 - (1) General Report Requirements
 - (a) Program Analyses: Statement of overall understanding of those project elements and requirements impacting each discipline's design.
 - (b) Program Verification: Discussion of the effects and results of the analyses made to confirm the reasonableness of the program requirements.
 - (c) Codes or Standards of Specific Application: Listing of all codes and/or standards applicable to the project for this discipline by title, chapter, section, paragraphs, and version.
 - (d) Site Considerations: Listing of site issues specific to each individual discipline.
 - (e) Design Analyses: Discuss and include all calculations, illustrations, and any specifications used to develop and validate the alternatives considered, recommended, and approved for use on the project. As required, these shall be supplemented with drawings.
 - (f) Design Criteria Applied: Project complies with existing applicable POLB standards for configurations, materials, equipment, and controls where applicable.

- (g) Develop System Alternatives and Diagrams: As determined by POLB, each Discipline shall provide an appropriate number of unique designs that meet the functional design requirements to be prepared and evaluated for all major related systems and elements of the project.
- (h) Comparison of the Alternatives: A description and analyses of how the proposed site and building configuration and orientation functionally support the building program and operations, discussions will include, but not be limited to, as appropriate:
 - (i) Concept discussion and analysis.
 - (ii) Description of system types and system configurations.
 - (iii) Advantages and disadvantages of each concept.
 - (iv) Impact of infrastructure conditions on potential future sites or building development.
 - (v) Special requirements, conditions, and considerations.
 - (vi) Potential impact on other project elements or disciplines.
- (i) Value Engineering (VE) and Life Cycle Cost Analysis: For all Construction Specifications Institute (CSI) Divisions specified by POLB DM, that represent a substantial percentage of the total estimated construction cost.
 - (i) Identification of initial investment cost.
 - (ii) Estimate of the useful life of systems and/or components.
 - (iii) Estimates of applicable annual costs for energy, operations, maintenance, services, replacement, and spare parts.
 - (iv) Life Cycle comparison of total initial cost(s) and annual operation(s) and maintenance cost(s).
- (j) Analysis of Materials and Equipment:
 - (i) Lead times/availability.
 - (ii) Maintenance and operating characteristics.

- (iii) Compatibility with current POLB materials and equipment standards.
 - (k) Recommended Solutions: Provide recommended solutions and/or selections with the rationale for any deviations or changes from the original program.
- c) Civil Report Requirements: As required, the Civil Reports shall contain all of the requirements in General Report Requirements and the following:
 - (1) Program Analyses: Analyses of parking spaced required, average and peak site occupancy, site and building development constraints.
 - (2) Site Considerations:
 - (a) Surrounding Port Area: Impact of vehicle and pedestrian circulation on surrounding areas and development, street parking, site parking, lighting spill, building shading and view impacts.
 - (b) Utility Requirements: Availability and capacity of utilities, location of site connections, and the need to relocate any existing utilities.
 - (3) Design Criteria Applied:
 - (a) Site Circulation Traffic: Access, vehicle, pedestrian, disabled, public transit, emergency equipment, parking, signalization.
 - (b) Security: Guard shack, fencing, bollards, CCTV.
 - (c) Grading: Soil and slope stability and existing landfills.
 - (d) HAZMAT
 - (e) Geotechnical considerations including design and liquefaction.
 - (f) Drainage: NPDES, SWPPP, and BMP requirements, hydrological study, storm drains, structures, and site water retention.
 - (g) Site structures and features.
 - (h) Paving.
 - (i) Landscaping and Irrigation.

- (j) Site Utilities: Water (domestic, fire, irrigation), gas and other fuels, communications (phone, data, security), power, and sanitary sewer.
- (4) Develop System Alternatives and Diagrams: As required by POLB DM, for each Civil issue representing a substantial percentage of the total estimated civil site construction cost, including, but not limited to: concrete versus asphalt paving, water retention basins versus dry wells, area drains versus trench drains at driveways.
- d) Architectural Report Requirements: As required, the Architectural Report shall contain all of the requirements in General Report Requirements and the following:
 - (1) Program Analysis: Analysis of building size, adjacencies, operating functional needs, minimum clearances, site constraints, security needs, types of space, energy conservation, building orientation, plan and vertical irregularity.
 - (2) Site Considerations: Including land use plan and percentages for each type of use and layout of the infrastructure system.
 - (3) Design Criteria Applied:
 - (a) Building Footprint and Floor Plan: Square feet per floor, building efficiency ratios, tenant usable space per floor, comparison of programmed space to designed space. Aesthetic design related space losses.
 - (b) Relationships and Adjacencies: Of functional areas, public and staff/secured circulation, public versus staff ingress and egress, life safety provisions.
 - (c) Green Building Requirements: Unless exempted, all new municipal buildings in the COLB shall fully comply with the COLB "Green Building Policy for Municipal Buildings."
 - (d) Massing and Stacking Analysis: Include site and building mass/block modeling and/or CADD generated fly-by simulations as appropriate and as directed by POLB DM.
 - (e) Building Envelope and Fenestration: Rhythms and patterns, irregular (curved/angled) building shapes, modules, material colors, reflectance, energy efficiency, maintenance, durability,

- standard versus non-standard, special order and imported materials.
- (f) Scale and Relationship: Of project elements to the site and surrounding developments.
 - (g) Vertical/Horizontal Circulation: Code analysis of elevator, stair, and corridor exiting requirements. Use of elevators, escalators and dumb-waiter systems, amount of building space dedicated to staff and public circulation corridors, fire corridors, and assembly areas.
 - (h) Interior Environment and Treatment: Use of materials, textures, finishes and colors to delineate and define spaces and create appropriate environments for the proposed uses, as well as providing sound and light control and attenuation.
 - (i) ADA and Title 24 Accessibility Requirements: Adherence to and considerations for accessibility design.
 - (j) Flexibility and Adaptability: Of the design for future expansion of buildings or changes in functions to include additional staffing and functions as well as reorganizing functions.
- (4) Develop System Alternatives and Diagrams: As required by POLB DM, for each major architectural element that represents a substantial percentage of the construction cost, including, but not limited to: building configurations, site massing, building character and design, visual statements, exterior treatments, use of materials, integration and use of existing site features.
- e) Structural Report Requirements: As required, the Structural Report shall contain all of the requirements in General Report Requirements and the following:
- (1) Program Analysis: Of floor loading, building heights, soil conditions, seismic considerations, column spacing/clear heights, vertical transportation.
 - (2) Site Considerations: Discussion and interpretation of soils and geotechnical materials, but not limited to:
 - (a) Seismic History & Liquefaction Analysis
 - (b) Geotechnical Data

- (c) Site Stability
 - (d) Soil Materials
 - (e) Specifications
- (3) Design Criteria Applied: Which also complies with existing applicable POLB standards and guidelines for configurations, materials, equipment, and controls where applicable:
 - (a) Seismicity & Liquefaction Analysis
 - (b) Live Loads (Floor and Roof)
 - (c) Risk Category and Importance Factor
 - (d) Structural System
 - (e) Schematic Foundation Plan and description of systems
 - (f) Schematic Floor and Roof Framing Plans and description of systems
 - (g) Schematic Lateral Load Resisting System: Elevations, sections, and description of systems
 - (h) Impact of Building Envelope and shape on the performance of the system
 - (i) Supporting Calculations
- (4) Develop System Alternatives and Diagrams: As required by POLB DM, for each major structural element that represents a substantial percentage of the construction cost, including, but not limited to: cast-in-place concrete versus pre-cast concrete, structural steel frame versus reinforced concrete structural members, piles versus caissons.
- f) Mechanical Report Requirements: As required, the Mechanical Report shall contain all of the requirements in General Report Requirements and the following:
 - (1) Program Analysis: Statement of overall understanding of those project elements and requirements impacting mechanical engineering, i.e., building population heat generation equipment, temperature, humidity ranges, noise attenuation.

- (2) Site Considerations: Building orientation, solar greenhouse effect and configuration air quality.
- (3) Design Criteria Applied:
 - (a) Occupancy Type, Density, and Schedule
 - (b) Temperature, Humidity, and Air Movement
 - (c) Indoor Air Quality: Ventilation and Filtration
 - (d) California Title 24 Energy Standards Compliance
 - (e) Energy Conservation and Green Building Requirements
 - (f) Facilities Environmental Resource Management
 - (g) Load Calculations: By seasons, hourly heating/cooling, load profile for the peak calendar days.
- (4) Develop System Alternatives and Diagrams: As required by POLB DM, prepare unique mechanical system alternatives that functionally meet the requirements of each major mechanical system and element, which represents a substantial percentage of the construction cost. This includes, but is not limited to, building orientation impact, co-generation, shading devices, building HVAC systems, building envelope materials, thermal energy storage, and energy conservation programs. All energy simulation analysis shall be processed with a trace energy simulation program that is approved by POLB DM.
- g) Plumbing Report Requirements: As required, the Plumbing Report shall contain all of the requirements in General Report Requirements and the following:
 - (1) Program Analysis: Statement of overall understanding of those project elements and requirements impacting the project plumbing design, i.e., building occupancy availability, capacity of utilities infrastructure, and site constraints.
 - (2) Site Considerations:
 - (a) Availability and capacity of utilities and infrastructure.
 - (b) Consideration for future site development.

- (3) Design Criteria Applied: Which also comply with existing applicable POLB standards and guidelines for configurations, materials, equipment, and controls where applicable:
 - (a) Performance and Operational Requirements
 - (b) Facility Population, operation, and projected growth
 - (c) Water Analysis of appropriate sources and supplies
 - (d) Load Analysis
 - (e) Resource Conservation
 - (4) Develop System Alternatives and Diagrams: As required by POLB DM, prepare unique plumbing design alternatives that functionally meet the requirements of each major plumbing system and element, which represents a substantial percentage of the construction cost. This includes, but is not limited to, sewer systems (sanitary and storm water), potable water distribution, and water conservation fixtures. Describe system types and configurations with sufficient data to provide to the respective utility company for analysis and preliminary operating and installation cost estimates.
- h) Fire Protection Report Requirements: As required, the Fire Protection Report shall contain all of the requirements in General Report Requirements and the following:
- (1) Program Analysis: Statement of overall understanding of those project elements and requirements impacting fire protection, including type of construction, building occupancy, availability and capacity of infrastructure, constraints, and specifically addressing adequacy of water supply and fire water flow to the site.
 - (2) Site Considerations:
 - (a) Availability and capacity of infrastructure.
 - (b) Disposition and building massing.
 - (c) Considerations for future site development.
 - (3) Design Criteria Applied: Which also comply with existing applicable POLB standards and guidelines for configurations, materials, equipment, and controls where applicable:

- (a) Performance and Operational Requirements
 - (b) Facility Population, operation, and projected growth
 - (c) Water Analysis
 - (d) Fire Water Flows
 - (e) Load Analysis
- (4) Develop System Alternatives and Diagrams: As required by the POLB DM, prepare unique fire protection design alternatives that functionally meet the requirements of the fire safety systems and elements, which represents a substantial percentage of the construction cost. This includes, but is not limited to, wet standpipe versus dry standpipe systems and fire water storage reservoir, unless a specific fire protection system design is directed by the jurisdictional agency.
- i) Electrical Report Requirements: As required, the Electrical Report shall contain all of the requirements in General Report Requirements and the following:
 - (1) Program Analysis: Statement of overall understanding of those project elements and requirements impacting electrical engineering, including building size, lighting levels, special motorized equipment, communications, security, and other low voltage systems as UPS requirements.
 - (2) Site Considerations:
 - (a) Availability and capacity of infrastructure.
 - (b) Disposition and building massing.
 - (c) Considerations for future site development.
 - (3) Design Criteria Applied: Which also comply with existing applicable POLB standards and guidelines for configurations, materials, equipment, and controls where applicable:
 - (a) Service Type (size and voltage)
 - (b) Performance and Operational Requirements
 - (c) System Growth allowance
 - (d) Energy Conservation

- (e) Interior Environment
 - (f) Emergency Back-up Systems: For security systems, computers and communication systems, exit lighting, water, and power.
- (4) Develop System Alternatives and Diagrams: As required by POLB DM, prepare unique electrical system design alternatives that functionally meet the requirements of the electrical systems and elements, which represent a substantial percentage of the construction cost. This includes, but is not limited to, lighting, power distribution, emergency power (capacity and distribution), energy conservation, special systems, communications, electronics, security and other low voltage requirements, elevators, escalators, dumbwaiters, data processing/computers, and building environmental automation systems.
- j) Landscape and Irrigation Report Requirements: As required, the Landscape and Irrigation Report shall contain all of the requirements in General Report Requirements and the following:
 - (1) Program Analysis: Statement of overall understanding of those project elements and requirements impacting landscaping design, including water/energy conservation, maintenance, project budget, site constraints, and building development constraints.
 - (2) Site Considerations:
 - (a) Soils Conditions.
 - (b) Coverage: Statutory requirements, density.
 - (c) Site/Facility Orientation: Solar/climatic, entrance.
 - (d) Site Art: Use of site art monuments.
 - (e) Occupant/Visitor use of landscape features, i.e., dining options, park/campus features.
 - (3) Design Criteria Applied: Which also comply with existing applicable POLB standards and guidelines for configurations, materials, equipment, and controls where applicable:
 - (a) Use of species indigenous to the area
 - (b) Available static water pressure and pressure loss
 - (c) Use of landscape elements for passive energy conservation

- (d) Minimizing ongoing maintenance cost, i.e., plant replacement, water use, staff labor, mowing, pruning, clean up.
- (4) Develop System Alternatives and Diagrams: As required by POLB DM, prepare unique landscaping and irrigation design alternatives that functionally meet the requirements of the landscaping and irrigation systems and elements, which represents a substantial percentage of the construction cost. This includes, but is not limited to, plant groups and types, recycled irrigation water, and automated irrigation systems.

C 50% Design Services

At the completion of 50% Design, the Consultant shall provide POLB with the following products and/or services:

- 1) An updated Basis of Design document to include all design elements required to fully define the design.
- 2) The 30% Design comment log with all comments and responses to POLB comments, 30% Design submittal, including highlighted or annotated drawings and specifications, to indicate disposition of comments. Bluebeam design review session shall be kept and maintained for reviewers' reference.
- 3) Drawings shall include design elements required to fully define the design, including significant details. Include one digital copy of Drawings for POLB's verification of compliance with POLB's CADD Standards Manual. Refer to **Attachment A** for additional drawing requirements.
- 4) The Specifications shall include 50% MTOC, Special Conditions, Technical Specifications, and Base Bid Form.
- 5) A list of the submittals designated by the Consultant in the Specifications. The submittal list shall reference:
 - a) Where called for in the Specification;
 - b) When required from the construction Contractor;
 - c) When final approval is required to meet the overall Project Schedule;
 - d) and whether the submittal relates to a permit or regulatory requirement or a quality control check.
- 6) A list of all permits that the Contractor will be required to obtain to complete the construction of the Project.

- 7) A preliminary list of sole source items and justification for sole source.
- 8) Updated Utility Conflict Matrix.
- 9) Updated geotechnical design report including the updated data report
- 10) Calculations in separate bound volumes by disciplines including all supporting data, rationale (system and equipment selection, engineering considerations and life cycle cost), and calculations, including, but not limited to:
 - a) Civil
 - (1) Water
 - (a) The water-flow rate required and the sizes, material, and class of all pipes, reservoirs, and pumps for all water systems. Also provide typical pump and system curves.
 - (b) If determined by POLB DM, a hydraulic model of the system shall be generated using POLB's current model software for the proposed improvements within the surrounding area
 - (c) Irrigation piping, pressure, and flows.
 - (d) Fire flow test and calculations are required.
 - (2) Sewer
 - (a) The quantity of sewage and the sizes, material, and class of all pipes, reservoirs, and pumps for all sewer systems to be coordinated. Also provide typical pump and system curves.
 - (b) Verification of all design flow and sizing of all Sewage Treatment System units.
 - (3) Paving and Grading:
 - (a) Pavement design including types of pavements and paving sections, including concrete runways.
 - (b) Grading and drainage including earthwork calculation.
 - (c) Indication that the site has a balanced cut/fill or the quantity of borrow/disposal.

- (d) Retaining wall design to comply with the latest edition of Uniform Building Code (UBC).
- (4) Storm Drain
 - (a) If determined necessary by POLB DM, a hydrological analysis based on current POLB's Design criteria may be required for the existing condition, prior to Project, and after Project.
 - (b) If determined necessary by POLB DM, a hydraulic analysis based on current POLB's Design criteria may be required for the existing condition, prior to Project, and after Project.
 - (c) If determined necessary by POLB DM and as a result of the hydraulic analysis a pump station is required, Consultant shall prepare all necessary calculations including pump curves, drawings and details.
- (5) Rail:
 - (a) Layouts and sections
 - (b) Controls
- (6) Gas and Fuel Tanks and Lines
 - (a) Communications and Signal:
 - (b) Fire Alarm,
 - (c) Telephone,
 - (d) Microwave,
 - (e) Verification of compatibility of communication and signal systems.
- b) Structural
 - (1) Structural calculations verifying the framing system, and all major structural elements for all loads including wind, seismic, bearing, etc.
 - (2) Updated structural calculations for foundation systems.
- c) Mechanical
 - (1) Building or room heat gain and loss.

- (2) Pressure drops for pump and compressor selection.
- (3) Duct, equipment and other external losses for fan selection.
- (4) Water capacity of pipe and equipment and pressures used for system design and for expansion tank selection.
- (5) Expansion and contraction of piping with stresses at loops and anchor points.
- (6) Coefficient of Velocity (Cv) value selection for all control valves.
- (7) For direct expansion refrigeration systems, information for pressure drops and velocities of gas and liquid (including velocity to return oil for gas and suction risers), at zero degrees F.
- (8) Water heaters - capacity and make up requirements.
- (9) Heat exchanger - temperature, flow, capacity, and heat rejection rate.
- (10) Fluid velocity in pipes and ducts.
- e) Electrical
 - (1) Preliminary connected and demand load tabulations.
 - (2) Lighting calculations showing design and calculated foot-candles to justify quantity, type, and layout of fixtures.
- f) Fire Protection
 - (1) Total sprinkler system demand based upon discharge density, area of sprinkler operation and outside hose allowances.
 - (2) Fire pump size and pressure calculation.
 - (3) Foam application rate.
 - (4) Rate of application of CO₂ and any other approved cleaning agent.
 - (5) Smoke control system pressure difference, airflow, and response time.
 - (6) Fire flows and pressures.

- 6) Wharf Footage Mark (WFM) and Row/Bent Number to be installed by Contractor per plans and specification, if applicable. A Design/Structural Group plan review is required. POLB DM will assist in determining this information.
- 7) A Transmittal for Review and Comment form.
- 8) Design documents that identify the complete scope of construction activities including recommendations on construction phasing.
- 9) Specifications/Drawings which describe/show limits of clearance for all construction scaffolding or falsework.
- 10) Systems required by the Project shown and developed to the 50% level, and complete preliminary sizing for major systems.
- 12) Identification of any access space as required for maintenance as well as any clearance space as required to meet code and safety regulations.
- 13) Drawings shall show critical dimensions and elevations that define the size, shape, and location of all Project elements.
- 14) A site plan fully developed documenting Project elements such any access routes, operation areas, security gates, fenced construction areas, material storage areas, construction parking, construction phasing, and lay-down areas.
- 15) List of items to be pre-ordered by POLB (it is POLB's preference to have the Contractor provide all items whenever possible).
- 16) A presentation of 50% Design analyses and recommendations through participation in the 50% Design Review; Submittal of complete investigation of all engineering parameters of the Work such that the results of the 50% Design fully and completely define the scope, schedule, and Budget for the Work.
- 17) Provide input to the updated Risk Registry and participate in the 50% Risk Assessment meeting.
- 18) Provide input and participate in the 50% Sustainability Assessment meeting.
- 19) Provide input and participate in the 50% Constructability Meeting.

For building projects, the following additional deliverables shall be provided:

- 1) 50% Construction Documents (CD):
 - a) In the CD Phase, the Consultant shall prepare the final detailed construction drawings and specifications that will be used to obtain all the necessary

approvals from the appropriate Governmental Agencies and bids for construction from the Contractor to construct the project.

- b) Drawings as required by **Attachment B**.
- c) Updated Summary Verification Report
- d) Updated Detailed Design Analysis Reports by Discipline

D 100% Design Services

The 100% Design Submittal represents the Consultant's completed effort on the Work. There are no outstanding design items or issues at this submittal. POLB will use the 100% Design Submittal for submittal to permit or regulatory agencies.

At the completion of 100% Design, the Consultant shall provide POLB with the following products and/or services.

- 1) All information required by earlier design submittals finalized, complete, and re-submitted.
- 2) An updated, 100% complete Basis of Design Document.
- 3) The 50% Design comment log, with all comments and responses on the 50% Design submittal, including highlighted or annotated drawings and specifications, to indicate disposition of comments. Bluebeam design review session shall be kept and maintained for reviewers' reference.
- 4) 100% complete construction Drawings, and other data required to fully and comprehensively define the elements of the Project (submit electronic files native and published files such as PDF format). Refer to **Attachment A** for additional drawing requirements.
- 5) 100% Compliance with POLB's CADD Standards Manual for the Project.
- 6) At least two (2) weeks prior to the 100% design submittal, assist the DM to fill out and submit the Project Specification Worksheet (PSW) to the Specifications Team of the Engineering Design Division in order for the Specifications Team to generate the Front End Specifications for the 100% design submittal. See Section 14 Specifications of this document for additional information and requirements.
- 7) 100% Complete Specifications including the Front End documents provided by POLB (Title page, MTOC, NIB, ITB, Bid Proposal Package, and General Conditions) plus the Special Conditions, Technical Specifications, and Schedule of Bid Items (Base Bid Form), with all blanks filled in, (submit as PDF for review via Bluebeam).

- 8) Final list of sole source items including justification of sole source items.
- 9) Final Utility Conflict Matrix.
- 10) Final Geotechnical design report including data
- 11) A list of all Contractor submittals designated by the Consultant in the Specifications and shall reference:
 - a) Where it was called for in the Specification.
 - b) When it was required from the construction Contractor.
 - c) When final approval is required to meet the overall Project Schedule.
 - d) Whether the submittal relates to a permit or regulatory requirement or a quality control check.
- 12) A list of all permits that the Contractor will be required to obtain to complete the construction of the Project.
- 13) All approved calculations in separate bound volumes by disciplines including all supporting data, rationale (system and equipment selection, engineering considerations and life cycle cost) and calculations.
 - a) Storm Drain
 - (1) Quantity of storm flow, velocities, sizes, material, class and "D" load design.
 - b) Communications and Signal:
 - (1) Fire Alarm.
 - (2) Telephone.
 - (3) Microwave.
 - (4) Verification of compatibility of communication and signal systems.
 - c) Irrigation System
 - (1) Pressure and flow at valve at highest elevation.
 - (2) Pressure and flow at valve at lowest elevation.

- (3) Valve with highest gallons per minute (GPM) and gallons per hour (GPH).
 - (4) Valve with lowest GPM and GPH.
 - (5) Calculation sheet indicating valve sequence number, total GPM/GPH, elevation of valve, water meter, and highest irrigation head or emitter, total friction loss through all irrigation equipment and piping, operating PSI of irrigation head or emitter, and residual PSI.
- d) Structural
 - (1) Analysis and design of all structural elements for all loads, including wind and seismic.
 - (2) Anchorage for Mechanical, Electrical and Non-structural elements.
- e) Mechanical
 - (1) Room by room heat load calculations.
 - (2) Final steam, hot water, chilled water, gas, oil, etc., distribution and flow balance.
 - (3) Updated flow diagram to reflect final loads, equipment capacity and pressure requirements.
 - (4) Gas and Fuel pump data.
- f) Electrical
 - (1) Load tabulation of connected and demand loads.
 - (2) Voltage drop calculations for conductors.
 - (3) Voltage drop calculations for starting large motors.
 - (4) Short circuit calculations.
 - (5) Lighting calculations.
 - (6) Coordinated time-current characteristic curves of protective devices. Final device settings and time-current characteristic curves shall be provided during construction when exact devices are known.

- (7) Tension and sag calculations for pole line conductors, messengers, and guys.
- g) Fire Protection
 - (1) Complete hydraulic calculation of sprinkler system to verify adequacy of available water supply.
 - (2) Fire permit for all building and water service work.
- 13) Traffic control plans.
- 14) Waste Management Plan (WMP), if applicable.
- 15) Wharf Footage Mark (WFM) and Row/Bent Number to be installed by Contractor per plans and specification, if applicable.
- 16) A Transmittal for Review and Comment form.
- 17) Building or "B" Permit Application documents and a Project Location sheet as required for Building Permit application submission. Submittal for plan check review by Long Beach Development Services and any other agency review/approval, if required.
- 18) Final plan for temporary utility services during construction.
- 19) Final list of all items to be pre-ordered by POLB.
- 20) Conduct meeting with CM from Construction Management Division and DM to review bid items and measurement/payment information.
- 21) POLB DM will conduct a project presentation meeting with Chief Harbor Engineer and Director of Engineering Design Division and Director of Project Management. Consultant shall support documentation and information as required for the presentation.
- 22) Review of the design with the appropriate permit or regulatory officials as may be necessary and response to code review comments;
- 23) A presentation of 100% Design to POLB through participation in the 100% Design Review.
- 20) Provide input to the updated Risk Registry and participate in the 100% Risk Assessment meeting.
- 21) Provide input and participate in the 100% Sustainability Assessment meeting.

- 24) Provide input and participate in the 100% Constructability Review Meeting.

For building projects, the following additional deliverables shall be provided:

- 1) 100% Construction Documents (CD):
 - a) Drawings as required by **Attachment B**.
 - b) Updated Summary Verification Report
 - c) Updated Detailed Design Analysis Reports by Discipline

E Final Design Services

At the completion of Final Design, the Consultant shall provide POLB with the following products and/or services:

- 1) The 100% Design response comment log, with all comments and responses on the 100% Design submittal, including highlighted or annotated drawings and specifications, to indicate disposition of comments. Bluebeam design review session shall be kept and maintained for reviewers' reference.
- 2) A presentation of Final Design analyses and recommendations through participation in the Final Design Review.
- 3) Provide input to the updated Risk Registry and participate in the Final Design Risk Assessment meeting.
- 4) Provide input and participate in the Final Design Sustainability Assessment meeting.
- 5) Provide input and participate in the Final Design Constructability Meeting.
- 6) Address comments from Chief Harbor Engineer, Director of Engineering Design Division, and Director of Program Management Division.
- 7) One set of reproducible original Final Design Drawings incorporating all agency plan-check comments and appropriately stamped by the responsible party for each discipline represented on each Drawing; the final stamped and wet signed Basis of Design Report including a final detailed stamped and wet signed Engineer's Opinion of Probable Construction Costs, stamped and wet signed Calculations. One electronic copy of all drawings in the agreed upon POLB CADD Standards Manual. Refer to **Attachment A** for additional drawing requirements.
- 8) The Consultant shall provide, at Final Design, a complete set of .DWG files to allow the survey crew to appropriately lay out the consultant's design for construction, plus:

- a) An ASCII File containing: Point Number, Northing, Easting, Elevation, and Description of all curve Beginnings (BCs), Endings (ECs), Points of Intersection (PIs), as well as all horizontal alignment Angle Points and Structural Points essential for survey lay out. Numbers to be shown to two decimal places.
- b) CAD files conforming to POLB CADD Standards Manual:
 - (1) 2D or 3D CADD and other files (using POLB CADD Standard Manual) with the following criteria:
 - (a) 1 to 1 ratio in master units.
 - (b) Scale 1" = N' (i.e., 1" = 40').
 - (c) Origin to be set at 0,0 (2D), or 0,0,0 (3D), no adjustment to origin.
 - (d) Datum to be stated.
 - (e) Adhere to POLB's CADD Standard Manual.

For building projects, the following additional deliverables shall be provided:

- 1) Final Construction Documents (CD):
 - a) Drawings as required by **Attachment B**.
 - b) Final Summary Verification Report
 - a) Final Detailed Design Analysis Reports by Discipline

F Final Signed PS&E Submittals

After the completion of Final Design, the Consultant shall provide POLB with the package ready to advertise for bid and shall include the following products and/or services:

- 1) The Final Design response comment log, with all comments and responses on the Final Design submittal, including highlighted or annotated drawings and specifications, to indicate disposition of comments. Bluebeam design review session shall be kept and maintained for reviewers' reference.
- 2) The Consultant shall incorporate and update the final comments if there are any and re-submit one set of reproducible original Final Signed Design Drawings appropriately stamped by the responsible party for each discipline represented on each Drawing.

- 3) The Consultant shall incorporate and update with the final comments (if any), and shall re-submit the stamped (Stamp Page) the final Specification package including all Technical Specifications, Special Conditions, Double Alpha Appendices, and Base Bid Form and the Final Front End specifications provided by the Specifications Team of EDD, which include Title Sheet, Signature and Stamp pages, MTOC, NIB, ITB, BPP, and GC and the Single Alpha Appendices. All specification documents shall be ready for submittal and approval by CAO. The Consultant shall address any comments made by the CAO. All specification documents prepared by the Consultant shall be submitted in both PDF and native Microsoft Word and Excel formats, where applicable.
- 4) The Consultant shall incorporate and update the final comments if there are any and re-submit the wet signed Engineer's Opinion of Probable Construction Costs.
- 5) The Bid Package, which consists of the Final Design Documents, shall be submitted to the POLB DM after:
 - a) The Consultant has reviewed, addressed, and incorporated all comments from the Final Design review. No comments should be left unaddressed.
 - b) The Consultant has provided a complete "red lined" file comparing the Final Specifications with the appropriate version of POLB's Specifications template, if a template is applicable. All changes must be accepted and track changes turned off prior to submitting to the POLB DM for transmittal to the Specifications group.
 - c) The Consultant has reviewed, approved, and stamped (the Stamp Page) the final Specification package including all Technical Specifications, Special Conditions, Double Alpha Appendices, and Base Bid Form and the Final Front End specifications provided by the Specifications group of EDD, which include Title Sheet, Signature and Stamp pages, MTOC, NIB, ITB, BPP, and GC and the Single Alpha Appendices. All specification documents shall be ready for submittal and approval by CAO. The Consultant shall address any comments made by the CAO. All specification documents prepared by the Consultant shall be submitted in both PDF and native Microsoft Word and Excel formats, where applicable.
 - d) The Specification Stamp Page has been properly completed. The Consultant shall provide all discipline stamps on the Stamp Page. Electronic stamps and signatures are acceptable. POLB DM and PM sign the Signature Page prior to EDD Director signature.
 - e) The Consultant has compiled all available Project background materials, data, geotechnical or soils information, and documents identified in the Specification.
 - f) The Consultant has provided the EOPCC and corresponding construction duration schedule. This EOPCC will be used for Authority to Advertise to be approved by the BHC. No further changes should be made to the EOPCC unless required by addenda during Bid Support phase.

G Bid Phase Support Services

During Bid Phase Support, the Consultant shall provide POLB with the following products and/or services:

- 1) Provide timely responses to POLB DM for any design-related questions posted by potential bidders.
- 2) Attend weekly coordination meetings to discuss Contractor questions submitted through PlanetBids.
- 3) Prepare Bid Addenda documents and a revised Cost Estimate and/or Bid Estimate, as necessary, at the direction of POLB DM. Any changes to the bid item list shall be communicated to the POLB DM for updates through PlanetBids.
- 4) Bid Question responses shall be prepared by the Consultant with the intent to only restate, in a potentially more understandable manner, but not to modify in any way, the requirements of the Bid Documents. Any questions that can only be answered through a revision of the Bid Documents must be processed as an addendum before the question is answered.
- 5) Bid Addenda shall be written in accordance with the following:
 - a) Modifications to the Technical Specifications, Special Conditions, Double Alpha Appendices, Drawings, and any Bid Items shall be prepared by the Consultant in "Tracked Changes" red-line, as requested by POLB DM. POLB DM will use such documents to compile the formal addendum. Modifications to any other bid documents shall be handled by POLB Specifications Team. The intent is that these modifications be incorporated into the original bid documents upon which bidders shall prepare their bids.
 - b) Material to be added shall be indicated through Tracked Changes by inserting red underline text.
 - c) Material to be deleted shall be indicated through Tracked Changes by red strike through type.
 - d) The location of the changes on each page is also indicated by a vertical bar in the left-hand margin, and the addendum number is indicated at the bottom of the page.
 - e) The replacement numbering system for Drawings shall be:
 - (1) If a drawing is to be revised, the replacement drawing shall have the area of revision clouded and have a revision delta symbol made using numerals in an equilateral triangle. The revision delta, revision numeral,

date, by whom, and revision description were Consultant stamp/signature (if applicable), and EDD Director date/signature shall be included in the top right-hand revision block of the border. The number of the drawing shall not change, for example: Replace Drawing No. 10-06789-00-C-GP-PP-S-057 with the attached revised Drawing No. 10-06789-00-C-GP-PP-S-057 indicated by Delta No xx revision.

- (2) If a supplementary sheet is to be added to the drawings, the added drawing shall be appropriately numbered as Sheet 057A of 123, 057B of 123, etc., and Drawing Number HD 10-06789-00-C-GP-PP-S-057A, etc., using the most applicable original sheet number adjacent or preceding.
- f) If it is necessary to issue two (2) or more addenda affecting the same page or pages that were revised by a previous addendum, the affected page or pages shall be modified to incorporate changes from all previous addenda before indicating the current changes.
- g) The Bid Addenda cover letter is prepared by the Specifications Team. The Consultant shall review the draft cover letter prior to circulation for approval by all Division Directors and by the CHE.
- 7) Attend the pre-bid conference and/or site visit, if applicable.
- 8) If requested by POLB DM, provide input to updated Risk Registry and participate in Bid Phase Risk Assessment.
- 9) POLB Specifications Group provides the formal Bid Analysis. The Consultant shall review each bidder's bid item breakdown and provide POLB DM with a comparative analysis of the bid tabulation versus the EOPCC.

H Construction Support Services

- 1) Pre-Construction Support:
 - a) Attend pre-construction meetings and be prepared to answer Contractor questions concerning design.
 - b) Review Conformed Drawings and Specifications compiled by POLB DM and confirm all documents are complete and accurate. POLB DM produces a PDF of the conformed drawings and specifications after the construction contract has been executed. The Consultant shall review the draft conformed drawings and specifications prior to establishing the final conformed drawings and specifications. POLB DM will transmit the PDF of the final conformed drawings and specifications to POLB CM. POLB CM will distribute hard copies as needed to the Contractor at the pre-construction meeting.
- 2) Submittals including shop drawings and samples Review Services:

- a) Timely review and approval of submittals and shop drawings. Submittals are required to be completed within seven (7) working days of assignment from the date the Consultant received the submittals from POLB CM through Unifier. Every effort should be made by the Consultant to avoid rejection of a submittal. The Consultant shall request meeting/s with the POLB CM and the Contractor, if required, to review a submittal that may be rejected. Submittal is considered complete once it has been sent to the POLB CM through Unifier.
- 3) Office Consultation Services:
 - a) Timely preparation in POLB format of any change order documents including: Request for Proposal, Design, Drawings, Sketches, Cost Estimates, and Supporting Information. Revisions required for change orders shall be processed as Design-Directed Changes (DDC) and shall include formal revision clouds and delta associated with the DDC number. When requested by POLB DM, the Consultant shall present POLB with an analysis of the contractor's quotation within two (2) working days following their receipt.
 - b) The Consultant shall provide written responses to construction Contractor RFC or RFI within three (3) working days from the date of receipt, unless otherwise agreed upon by all parties.
 - c) Timely coordination with regulatory agencies such as the COLB, the COLA, the Army Corps of Engineers, and other agencies as necessary to respond to permit conditions and requirements.
 - d) Timely response to design issues.
 - e) Timely review of the Construction Documents to assist in resolution of conflicts raised by the construction Contractor. The Consultant shall be responsible for all redesign work necessary for correcting design errors in the Work of the Consultant at no additional cost to POLB.
 - f) Where redesign changes the data in CADD format as established the POLB CADD Standards Manual, new files are to be provided at the time of redesign for inclusion in a Change Order.
 - g) Timely technical support as requested by POLB DM in support of the negotiation or evaluation of: Contractor's proposals regarding change orders, change order documentation or backup, determination of changed site conditions, providing an acceptable changed design for the changed site condition, and claims.
- 4) Site Visitation Services:

- a) Attend weekly construction coordination meetings if so requested. A minimum of one weekly construction coordination meeting with staff and the Contractor is anticipated. A minimum of one weekly construction coordination meeting with internal staff only is anticipated.
 - b) Attend pre-activity meetings for critical work as required.
 - c) Attend coordination meetings as required to resolve critical issues during Construction.
 - d) Timely observations and assessments of specific aspects of the design as requested.
 - e) Observation of the testing and startup of any Project Systems and verification of the performance of same.
 - f) The purpose of these visits will be to ascertain the adequacy of the design in achieving project objectives, early identification and correction of design deficiencies, and compliance of the work with the construction contract documents.
- 5) Final Punch List Services:
- a) Timely final observations, assessments, and development of a Punch List to ensure successful completion of all aspects of the Project design.

I Project Closeout Services

- 1) Provide archive quality "As-Built" Drawings and Specifications of the constructed Project in accordance with POLB CADD Standards Manual, including a digital copy of all Drawings and Specifications.
- 2) As-Built drawings shall include all changed conditions resulting from RFIs and/or DDCs. Consultants shall not copy and paste the RFIs directly into the as-built drawing, only the modifications associated with the RFI should be modified accordingly in the drawings.
- 3) The Contractor shall maintain for the duration of the construction, a set of redline "As-Built" drawings at the job-site. The Contractor may elect to provide redlines in Bluebeam. Upon completion of the construction phase, the POLB CM will forward the "As-Built" drawings to the Consultant. Within thirty (30) calendar days after receiving the Contractor's "redlines" from the CM, the Consultant shall provide POLB a final Record Drawing set along with final record Specifications, incorporating job-site conditions and Contractor redlines in "As-Built" drawings also referred to as Record Drawings.

- 4) The Consultant shall address any comments made by POLB DM during review of final as-builts submittal. The Consultant shall include the "As-Built" text box on each sheet. The Consultant shall submit one (1) full-size vellum set of final as-builts after all comments from POLB DM have been addressed and the native CAD files. The POLB DM may elect to bypass the vellum set with electronic PDF. The EDD Director and CHE provide final signature of cover page only.
- 5) The Consultant shall participate in a Lessons Learned Workshop, organized by POLB PM, to capture lessons learned from the project.
- 6) Deficiencies during Warranty Period: During the warranty compliance period, the Consultant may be retained by POLB to provide additional design services reasonably determined by the POLB PM or CM for Warranty Compliance, as necessary to resolve problems arising out of deficiencies identified during and after construction.

6 CONTRACT MANAGEMENT AND ADMINISTRATION

POLB will enter into negotiations with the Consultant for the project after being selected. The contract negotiated is expected to include elements of time and materials with a not to exceed amount. The contract will be based on scope of services, level of effort and the fee schedule negotiated. The Consultant will be required to submit evidence of a Long Beach business license if awarded the Contract. The Consultant shall follow the following sections and other POLB requirements to administer and manage the contract.

A POLB Administrative Support:

- 1) POLB DM shall manage preparation of a consultant's Professional Consulting Services contract specifying the Scope of Services; verification of insurance provisions; review of invoices; and processing of amendments.
- 2) POLB DM shall manage preparation of advertisement for construction, addenda preparation and distribution, construction bid opening, verification of bonds and insurance, preparation of award and Notice to Proceed documents, preparation of all change orders, assembly of contract documents including addenda and change order documents, payment of construction Contractor payments, and contract close-out.

B Release of Information:

- 1) The Consultant shall give no information concerning the Project to anyone other than to POLB personnel or to a permit agency representative as required by the permit process; or as directed by POLB DM. The Consultant shall not release any information pertinent to the Project for publication, public speeches, or in any other manner without first obtaining a written release from POLB.

C Out-of-Scope Items:

- 1) Should the Consultant feel that POLB is requiring the Consultant to provide Work that is not within the Scope of work as defined in the Agreement, the Consultant must notify POLB DM immediately and in writing and describe the work and the additional cost and/or schedule impact. Consultant must define change management process in Change Management Plan.
- 2) It is the Consultant's sole responsibility to assure that no additional services beyond the Scope of Work as defined in the Agreement shall commence, without written work authorization of POLB DM.
- 3) No Work defined in the Scope of Work of the Agreement shall be delayed unless so directed by POLB DM in writing.
- 4) No work shall be performed by the Consultant beyond the terms of the agreement.

- 5) Retroactive requests for additional fees not previously authorized in writing by POLB DM shall neither be considered nor approved.

D Project Fees and Payment

- 1) Payment: The Consultant shall be paid by POLB for completed Work as follows:

- a) POLB shall only pay for work performed unless advance payment is authorized by an agreement and approved by POLB DM.
- b) POLB shall only process invoices that conform to POLB standard invoice format.
- c) The Consultant's hourly rates, as defined by the Agreement, shall be applicable throughout the term of the Agreement. The rates shown in the Agreement are inclusive of direct salaries, payroll additives, general and special overhead including all benefits, insurance, and inflation for the life of the Project, and fee or profit.
- d) For approved multi-year Contracts, the Consultant's Fee Schedule shall reflect fees for all years of the Contract. Consultant shall only bill to the classifications approved in the Contract. It is encouraged to keep the same rates for the first three (3) years of a Contract. If escalation of rates is approved by POLB DM escalation shall not exceed 3% per year unless negotiated with POLB DM.
- e) Changes in classification must be requested formally in writing to POLB DM. Proof of change in classification, such as promotions, must be documented and attached as proof with the classification change request.
- f) The Agreement does not provide any minimum guaranteed amount of payment to the Consultant.

- 2) Invoice:

- a) The Consultant shall provide a monthly invoice (only one original required) for the period from the first day of the month through and including the last day of the month. The monthly invoice shall be due by the tenth day of the following month. Monthly invoices shall be submitted electronically to POLB DM. Electronic submittal of invoices per the instructions noted in 2) s) is encouraged, below, but not required unless directed by POLB DM.
- b) Monthly progress summaries or progress report are required to be submitted with each monthly invoice. The monthly progress summary should identify

work progressed and/or completed and should be consistent with the invoiced amount.

- c) All expenses for which reimbursement is being claimed shall be supported by proper documentation whenever possible. Paid hotel bills and transportation ticket stubs are required supporting documentation for such expenses. Uber/Lyft or other paid taxi service shall require printouts showing route and mileage traveled.
- d) Detailed copies of receipts, showing itemization of costs incurred, are required for all other expenses whenever possible.
- e) Credit card statements are not acceptable as documentation.
- f) Foreign travel receipts must show U.S. dollar amounts or the conversion rates at time of travel.
- g) All invoices shall include a summary sheet that follows POLB standard invoice format (see **Attachment J**), and shall include POLB name of the Project, the name of POLB DM, POLB current billing period, the total billings to date, the total amount authorized for the contract, percent of contract funds expended, percent of work completed as measured by an earned value system supplied by the Consultant and approved by POLB DM, the Work Order number, the Munis Project String and Phase, Munis Object code, Munis Unit code, and the Contract number. Grant funds, if applicable, must be specifically itemized, identified, and documented with appropriate backup.
- h) Unless project is subject to Federal DBE requirements, Consultant shall either submit POLB form SBE-3C Monthly Utilization Report (MUR) with each monthly invoice, or update SBE/VSBE utilization in PlanetBids by each monthly invoice submission date, to demonstrate satisfactory progress with the Consultant's SBE/VSBE Commitment Plan.
- i) If a project is subject to Federal DBE requirements, the applicable Federal form shall be submitted monthly. DBE progress should be documented in the Consultant's progress summary.
- j) Invoices shall be subtotaled by Task Number and Munis Project String and Phase Codes.
- k) The Consultant's invoices shall include copies of Subconsultant invoices and complete backup for both the Consultant's invoice and the Subconsultant's invoice.

- l) Non-labor expenses shall be itemized, totaled separately (for the current design period and total billings to date) and shall be supported by the original bills, invoices, expense accounts, or other supporting data.
- m) Backup for invoicing shall consist of itemization of labor by individual, materials, services and expenses broken down by Work Order and Project Detail Code. The Consultant shall make available upon POLB request copies of individual's time cards and/or other more detailed invoice backup information.
- n) Subconsultant invoices included as part of Consultant's invoice shall conform to the same requirements, in the same manner, as required of the Consultant. Prevailing wages, if applicable, shall be clearly detailed and itemized.
- o) Aligned Billing Periods: Billing dates should be consistent between the Prime Consultant and all Subconsultants included in the invoice package.
- p) Missed Billing: If any charges were missed from a previously paid billing period, a separate invoice should be issued, clearly indicating the dates of that prior billing period. The accompanying status report should explain why the charges were not included in the original invoice. The subsequent invoice should also reference the original invoice number and include a distinguishing letter suffix (e.g., if the original invoice number is 12345, the new invoice should be labeled 12345-A).
- q) Current Period Reimbursables Only: Reimbursable expenses must be limited to those incurred during the current billing period only. Expenses from prior periods should not be included in the current invoice. Instead, they must be submitted on a separate invoice that follows the same guidelines as outlined for missed billing charges in item 2, including reference to the original invoice number and a distinguishing letter suffix (e.g., 12345-A), along with a status report explaining the delay.
- r) The Consultant shall receive Work Authorizations and submit monthly invoices as specified or as directed by POLB DM utilizing the Port's Program/Project Management System (PPMS), Oracle Unifier.

Before any training or access is allowed, and not later than seven (7) working days following Contract execution, the Consultant shall submit to the POLB DM a Port of Long Beach (POLB) Unifier New User Request Form for each intended user. For each user, the POLB DM will create a user ID with the appropriate access rights, and provide a temporary password to each user in a secured manner.

6 CONTRACT MANAGEMENT AND ADMINISTRATION

The POLB DM will provide training and support services to the Consultant at the beginning of the contract term. The training sessions will be held via a Microsoft Teams meeting.

Each authorized users shall attend a training session scheduled by the POLB. Training must be completed within the first month of the contract term. Follow-up training may be requested after on an as-needed basis.

The Consultant shall provide the information technology (IT) equipment and communications services required to utilize the Port's system PPMS. The IT equipment shall meet the user software and hardware requirements below with internet access. Acquisition, configuration, maintenance and support of the Consultant's computer hardware and software are the Consultant's responsibility.

Following are the minimum user software and hardware workstation requirements:

Browser	Latest version of, Firefox 91+, Chrome 96.x+, Microsoft Edge 95+, Firefox Quantum, Safari 13.x+
Operating System	Windows 10 64 bit, Mac OS X 10.15 (Catalina), iOS 14.x (iPad and iPhone)
Java	JRE: 1.8.0_271 or JRE 1.8.0_281
Display	1920 x 1080
CPU	2.3 Ghz or Higher
Connection	1.5Mbps / 768 Kbs (recommended minimum download / upload)
RAM	4GB minimum (8GB or more recommended)

It is the Consultant's responsibility to maintain the IT equipment to ensure compatibility with the PPMS. Failure of Consultant's IT equipment to connect to or to remain compatible with the PPMS will not excuse any of the requirements for a Consultant to timely submit or process any documentation required by the Contract Documents.

6 CONTRACT MANAGEMENT AND ADMINISTRATION

The PPMS training and software access and use are provided at no cost to the Consultant. Consultant is responsible for all hardware and associated costs for operation.

Regarding use of the PPMS system (Application) and related documents generated out of the PPMS System (Documentation), the Consultant shall not:

- (1) Use any reverse compilation, de-compilation or disassembly techniques or other methods to determine any source code, design structure, concepts and construction method of the Application or replicate the functionality of the Application for any purpose or create derivative works based on the Application for any purpose.
- (2) Remove proprietary notices, labels, or marks in or on the Application or Documentation
- (3) Reproduce, distribute, transfer, publicly display, resell, lease, sublicense or loan the Application or Documentation to other party
- (4) Use the Application or Documentation for purpose other than to support Consultant's performance of this Work
- (5) Make copy of the Documentation without POLB's express prior written consent
- (6) Make copy of the Application
- (7) Allow multiple individuals to utilize the same username and password or otherwise circumvent the intended purpose of the Named User license structure.

3) Fees:

a) Labor-Related Costs

- (1) Labor-related costs will be handled using fully loaded billing rates by labor category.
- (2) Billing rates shall include direct labor costs (averages or ranges by grade), payroll additives, overhead (including general and administrative expense), and profit.
- (3) POLB DM may request the Consultant to provide an independent audit of overhead conducted in accordance with generally accepted

6 CONTRACT MANAGEMENT AND ADMINISTRATION

accounting practice and Government auditing standards issued by the Comptroller General of the United States. The information provided shall be sufficient for POLB to verify that items included in the overhead rate are not billed as Other Direct Costs (ODC).

- (4) Overhead costs shall not be billed to POLB for administrative or support services provided by POLB or others.
- (5) Administrative Labor for the preparation of Consultant's invoices shall not be billed to POLB.
- (6) Prevailing wages, if applicable, shall be clearly stated in the hourly rate fees. Multiplier rates, if any, shall be clearly identified and appropriate back-up provided to POLB DM. Multiplier rate for prevailing wages cannot use the same multiplier rate as office labor. The Consultant and all Subconsultants shall comply with all applicable statutes and regulations for prevailing wages when applicable.

b) Subconsultant Markup

- (1) POLB recognizes the additional risk and liability borne by the Consultant when accomplishing a portion of the Work through Subconsultants. In recognition of this risk, POLB will allow the Consultant a markup on Subconsultant labor costs. This markup shall not exceed 5%, with the actual markup to be agreed upon by POLB DM and the Consultant based on factors such as the size of Consultant's contract, type of work to be subcontracted, level of risk to be assumed, amount of subcontracted work relative to full contract value, and actual costs to administer the subcontract.
- (2) Markup is allowed only on the labor of the first-tier subconsultants.

c) Other Direct Costs (ODCs)

All allowed ODCs shall be approved by POLB DM and included in the Contract fee schedule of the Agreement. Guidelines for allowed ODCs are as follows:

- (1) ODCs shall be reimbursed at cost (0% markup).
- (2) For ODCs related to travel, see "Travel Expenses" below.
- (3) ODCs shall not include charges for computer use, including: CADD; reproduction; any form of administrative cost; or the cost of telephone or use. Software purchases and/or software maintenance shall also not be included as ODCs.

- (4) If the Consultant has standard rates for ODCs, the Consultant shall show POLB DM the basis for establishing the standard rates.
 - (5) ODCs for purchase of any materials or equipment identified as necessary for the contract shall be reimbursed at cost plus 5% (5% markup). Consultant shall identify any such materials or equipment needed at time of contract negotiation.
- d) Travel Expenses
- (1) Allowable Expenses
 - (a) Reimbursement will be made for items of expense which are clearly incident to the business trip. These include travel transportation costs, meals, baggage transfers, business related telephone expenses, and parking fees.
 - (b) Other expenses such as typing or reproduction services will be reimbursed if clearly shown to be reasonably and properly business related.
 - (c) All allowable expenses submitted through invoicing shall include legible and clear receipts identifying the expense description, cost, tips if applicable, and date/time.
 - (2) Travel from other Offices
 - (a) If, to complete the Work, the Consultant requires assistance from personnel that work for the Consultant, or are working under Subcontract to the Consultant, and are located at other than the office location where the Work is accomplished, there shall be no compensation for travel associated with work done by personnel located away from the worksite location, unless specifically agreed upon by POLB DM and Consultant during Contract negotiations.
 - (3) Travel by Airplane
 - (a) If airline or other form of transportation is approved by POLB DM in advance, where various classes of travel are available, only "economy" or "coach" class expenses will be allowed on domestic flights unless approved in writing beforehand; for international flights "business" class will be allowed.

- (b) If an airline receipt for a higher-class ticket is submitted, the reimbursement will not exceed the "coach" or "economy" class rate for domestic flights, or the "business" rate for international flights.
 - (c) Additional damage/travel insurance waiver fees are not reimbursable.
- (4) Travel by Alternate Transportation
 - (a) If taxi or other form of ground transportation is approved by POLB in advance and is deemed necessary, expenses can be submitted provided proper documentation is provided and tips shall not exceed 15%.
 - (b) A rental car shall not be allowed.
- (5) Hotel Expenses
 - (a) In the selection of hotels and hotel rooms, POLB will only pay reasonable costs, considering suitability and convenience to the work at hand.
 - (b) Individuals/travelers who share their hotel rooms with one or more members of their family will be reimbursed at the single occupancy rate for that room.
 - i. If individual/traveler indicates on their expense report that there is no difference in the single and double occupancy rates, it must be supported by a statement from the hotel;
 - ii. If no such supporting statement is provided, a standard 10% of the double room rate will be reimbursed by the traveler for family members.
 - (c) Valet and laundry expenses will not be allowed except when warranted by the duration of the trip, traveling conditions, or other special circumstances. Such expenses will be allowed only when the stay exceeds one week (seven (7) calendar days).
- (6) Meals
 - (a) POLB will reimburse each project team member for meals only, when necessary, project-related, in reasonable amounts, not to exceed \$64 per individual per day, including gratuities, and only for the meals of project team members. Maximum gratuity is 15%. A

legible itemized receipt is required, and tip must be identified and reduced to 15% if it exceeds the maximum of 15%. Project team members are individuals that have been identified on the project roster or organization chart and approved by POLB DM.

(b) No reimbursement for alcoholic beverages will be accepted.

(7) Mileage Reimbursement Policy

(a) Local mileage charges shall be paid only if prior approval is received from POLB DM and, if approved, shall be equivalent to the City employee reimbursement rate policy reflecting the standard mileage rates for that year.

(b) Mileage shall be reimbursed at the Standard Mileage Rate as established by the Internal Revenue Service. This rate is updated yearly and can be found online at <http://www.irs.gov/Tax-Professionals/Standard-Mileage-Rates>.

(c) Mileage may be reimbursed for project specific activities that occur away from the Consultant's place of Project business and to meetings set by POLB DM.

(d) If the primary business location for an individual is in a field office away from the Consultant's primary office location, mileage will not be paid for travel to the field office but may be paid from the field office to meetings set by POLB DM.

(8) Exceptions to any of these policies may only be made with prior written approval from POLB DM.

E Key Personnel

During negotiations with a firm, POLB will designate positions in the firm's proposed staffing plan as "Key Personnel." These personnel are considered essential to the services being performed. If, for any reason, substitution of a key person becomes necessary, the firm shall provide advanced written notification of the substitution to the Director of Engineering Design Division.

Such written notification shall include the proposed successor's name and resume of their qualifications. POLB shall have the right to approve or reject the proposed successor. The firm must not reassign or replace key personnel without written consent. If the request for substitution is approved, the firm shall ensure a minimum of four weeks of overlap to transition personnel. The labor cost for the replacement during the four-week transition period is the firm's responsibility.

7 BASIS OF DESIGN

A. Basis of Design Document

- 1) The Consultant shall provide a Basis of Design document which shall be initiated at the beginning of Preliminary design, be kept current throughout design, and shall include but not be limited to:
 - a) Description of the Project;
 - b) Executive Summary;
 - c) List of legal, regulatory, and permit requirements;
 - d) List of applicable codes and standards to be used in design;
 - e) List of design assumptions and criteria;
 - f) Definition of the datum used on the Project;
 - g) List of other projects at POLB or elsewhere that may affect the Work and a description of the potential interface(s) between such other projects and the Work;
 - h) Description of site-related field investigations conducted and research completed;
 - i) The Work Breakdown Structure (WBS) based Scope of Work;
 - j) The WBS based cost loaded, Schedule for the Work;
 - k) A WBS based Consultant's opinion of probable construction costs and construction duration for the Project;
 - l) A Construction Packaging Plan establishing composition of Project elements into Construction Bid Packages and defining the relationships between packages and;
 - m) A Construction Phasing Plan.
 - n) LEED or Envision target goal and brief description of justification.
- 2) Basis of Design is a living document which Consultant shall update at each submittal stage.

- 3) The document, in its final form, shall be submitted with the final set of plans and specifications.

8 CONSULTANT'S OPINION OF PROBABLE CONSTRUCTION COSTS

A. Consultant's Opinion of Probable Construction Costs and Duration

- 1) At the completion of each design phase or milestone, the Consultant shall provide an opinion of the probable construction costs and construction duration for the Project.
- 2) The Consultant's Engineer's Opinion of Probable Construction Costs (EOPCC) should reflect the fair and reasonable cost of completing the specified scope. It should prioritize accuracy, comprehensiveness, and risk management over simply targeting the lowest bid or the median bid. The EOPCC serves as a benchmark to compare contractor bids. It helps identify bids that are unusually low or high, indicating potential bid issues with understanding the project scope, pricing strategy, reflecting the current bidding environment, or a combination of these factors.
- 3) At Schematic/Schematic Design and 30% Design (Pre-Design or Preliminary Design), the Consultant's opinion of probable construction costs shall contain a reasonable unit-cost breakdown consistent with POLB Work Breakdown Structure.
- 4) At 50%, 100%, and Final Design, the Consultant's opinion of probable construction costs shall be consistent with the following:
 - a) The Consultant shall provide a list of bid items, quantities, unit prices, and the breakdown of all lump sum items, organized by Technical Specification section and POLB Work Breakdown Structure. Origin of unit prices shall be referenced.
 - b) The Consultant shall provide details of any assumptions, basis of estimate, productivity rates, and crew sizes used in developing the EOPCC.
 - c) The Consultant shall provide a supplier estimate for all major equipment.
 - d) The Consultant shall provide a subtotal for each Technical Specification section and Schedule of Value activity.
 - e) The Consultant's opinion of probable construction costs line items shall identify where measurement and payment of each item is covered within the Technical Specification.
- 5) At Final Design, the Consultant shall provide both an opinion of probable construction costs and a Schedule of Bid Items.
- 6) Opinion of probable construction costs shall be based on the current, local bid climate and conditions. The cost estimate should reflect costs at the mid-point of

8 CONSULTANT'S OPINION OF PROBABLE CONSTRUCTION COSTS

construction. Escalation guidance is provided by POLB DM and available documents (refer to PDM Engineering Bureau Estimating Guidelines).

- 7) Opinion of probable construction costs shall exclude contingency costs associated with construction risks. Those contingency costs are developed through the risk assessment process and tracked as separate contingency costs.
- 8) Design development factor is intended to capture the project scope not yet well defined or developed, i.e., project definition. In addition to project definition, other items that are included in the design development factor are project complexity, specialized construction requirements, reliability of estimate data, estimating techniques employed, and market and pricing conditions.
- 9) The Consultant's opinion of probable construction costs shall include appropriate design development factor, based roughly upon the design development factor matrix (see Table 8-1, Design Development Factor Matrix). Design development factors may be varied with justification, based upon the complexities associated with any individual project.

Table 8-1
Design Development Factor Matrix

Development Category	Low	High
Project Phase		
Schematic and Pre-Design (Design @ 30%)¹	10-20%	20-40%
50% Design (Design @ 30 to 50%)²	5-15%	15-30%
100% Design (Design @ 50 to 100%)³	0-5%	7-15%
Construction (Design at Final through construction)³	0% ⁴	0% ⁴

¹ American Association of Cost Estimators (AACE) Recommended Practices 56R-08 (2012) "Cost Estimate Classification System – As Applied for the Building and Construction Industries" - Estimate Class 4 or 5

² AACE Estimate - Class 2 or 3

³ AACE Estimate - Class 1

⁴ There should be no undeveloped or unknown scope at this stage in the design process.

9 ENVIRONMENTAL ASSESSMENT AND PROTECTION

A. General

- 1) Consultants are responsible to have appropriate environmental engineering expertise on their teams for POLB design, design review, and cost estimating projects and/or contracts based on the type of project. This expertise can be provided via a sub-consultant or by the prime consultant. Consultants are responsible to conduct investigation of any soil, groundwater, buildings to be modified, and demolition materials that will be encountered, managed, or in any other way dealt with in the project scope. Consultants are responsible to design and specify in the contract documents requirements for assessment, abatement, handling, and disposition of contaminated or hazardous materials in accordance with local, State, and Federal regulations as well as POLB standards provided by POLB Environmental Planning Division. Consultants shall not assume that any of these services will be provided by POLB unless specifically instructed by POLB DM of the project.
- 2) The Consultant shall advise POLB concerning all other environmental constraints to the Project design or construction discovered during Project development.
- 3) The Consultant shall not specify the use of materials that are currently considered hazardous, or contaminants (such as lead-based paint), or which, based on current codes and regulations, are likely to be so designated in the future.
- 4) The Consultant shall immediately report the presence of discovered or suspected contaminated or hazardous materials to POLB DM.
- 5) The Consultant shall be required to obtain permits as required for any investigations. Permit fees paid by the consultant with POLB's approval in advance shall be submitted to POLB DM for payment by POLB.

B. Hazardous Materials

- 1) Lead-Based Paint
 - a) Cal-OSHA does not generally consider intact painted building materials to be hazardous waste and the general practice is to handle and dispose of construction debris as non-hazardous waste provided the paints are securely adhered to substrates following demolition. Any paint surfaces that become removed from the building material substrate must be handled and disposed of as hazardous waste.
- 2) Asbestos
 - a) Asbestos Notification

- (1) Asbestos-containing construction materials (ACCM) have been identified in certain buildings in the Harbor District. California regulations require written notice to contractors/vendors who work in POLB buildings containing ACCM. Such notice is provided to all consultants and contractors working under contract to POLB. A copy of the Asbestos Notification Letter is available from POLB upon request.

10 SURVEY AND BASE MAPPING

- A. Survey services shall be provided by POLB, unless stated otherwise.
- B. When making survey requests to the Survey Division, the following process shall be followed:
 - 1) Obtain preliminary Base Map from POLB DM.
 - 2) Visit site and visually inspect to confirm completeness of Base Map.
 - 3) Note gross missing features and features that appear to be improperly located or identified.
 - 4) Make and report corrections to the location of missing or improperly located features.
 - 5) Mark specific areas on blue map where high degree, (i.e., 0.01') of accuracy is required.
 - 6) Mark areas of plot plan needing additional survey.
 - 7) Return to Surveys Division and check meta-data to determine whether accuracy of plotted data meets job requirements.
 - 8) Through POLB DM, submit a Survey Service Request form with the plot attached at least two (2) weeks in advance of needing the survey initiated.
 - 9) Final Base Map will be provided in digital form in CADD file format based on POLB's CADD Standards Manual at a scale of 1-inch equals forty (40) feet.
- C. Contact POLB DM for the appropriate mapping system.
- D. Subsidence
 - 1) POLB is located over the Wilmington Oil Field. Approximately 70,000 barrels of oil are extracted each day. To counteract subsidence and increase oil production, water is injected back into the oil field.
 - 2) The oil operation activities cause constant and significant ground movement, both vertical and horizontal. The impact of this movement must be evaluated for each and every engineering project.
 - 3) Vertical and horizontal datum must be carefully selected. Historical data from drawings, surveys, reports, and the like must be reconciled to the chosen project data. Failure to do so may result in costly changes and delays during construction.

POLB DM to coordinate with Survey Division for advice on datum selection and reconciliation.

11 STUDIES AND REPORTS

A General

- 1) A Study is an investigation that shall result in the acquisition of knowledge through the analysis of a proposed Project or issue. At the completion of the Study, the Consultant shall provide a written report that includes at least the following elements:
 - a) Executive Summary that includes elements from each major section of the Study Report as defined in B & G.
 - b) The intent of the study, including, if applicable, a description of alternatives being evaluated;
 - c) The applicable codes, standards, design criteria, conditions, permits, and/or assumptions;
 - d) The analysis methodology;
 - e) The results;
 - f) An analysis of the results;
 - g) Conclusion and recommendation; and
 - h) An appendix including all back-up information.

B. Feasibility Study

The intent of a Feasibility Study is to reasonably determine, based on existing known information, whether a proposed Project appears feasible from an engineering, economic, environmental, and community perspective. A Feasibility Study shall produce a Feasibility Study Report that includes the following:

- 1) An Executive Summary that includes elements from each major section of the Report.
- 2) Layouts: a graphical representation (layout drawing) with a POLB background that depicts each major element of the Project and alternative layouts that might be considered;
- 3) Project Constraints and Assumptions: a list of Project constraints and assumptions including a discussion of existing conditions;

- 4) Alternatives: a clear, concise description of each alternative being considered and its relative advantages and disadvantages;
- 5) Preliminary Schedule: a preliminary Schedule, including Schedules for all alternatives;
- 6) Budget Estimate: a Budget Estimate, including comparative Budget Estimates for any alternatives; and
- 7) Conclusions and Recommendations: a presentation of the Study analyses and recommendations.

12 PERMIT, CEQA, AND NEPA ASSISTANCE

- A. With respect to permit applications including the COLB or COLA "B" or Building Permit, or POLA Application for Port Permit (APP), or Caltrans encroachment permit, CEQA, and NEPA documents prepared on behalf of POLB, Consultant shall provide the following activities or deliverables:
- 1) Prepare Drawings (generally design Drawings or mapping exhibits);
 - 2) Prepare or review of the description of the Project;
 - 3) Quantities of materials and work elements;
 - 4) Other items as may be required by the permit, CEQA and NEPA requirements, which the Consultant might reasonably be expected to provide (for example calculations);
 - 5) Attend agency meetings;
 - 6) Complete preparation of permit applications;
 - 7) Attendance at permit submittal meeting with the appropriate agencies;
 - 8) Answer questions posed by POLB's Environmental Planning Division, Long Beach Development Services Department; the Long Beach Bureau of Engineering, or the Long Beach Public Works Department, or the appropriate COLA departments or commissions, or the appropriate POLA department or divisions; or the appropriate Caltrans staff or other agencies staff; and
 - 9) Make corrections or additions to permit application package as required to satisfy POLB's Environmental Planning Division, Long Beach Community Development Department, the Long Beach Bureau of Engineering, or the Long Beach Public Works Department, or appropriate COLA departments or commissions, or the appropriate POLA departments or divisions, or the appropriate POLA departments or divisions; or the appropriate Caltrans staff or other agencies staff.
- B. The Consultant shall provide the appropriate number of copies of material produced or compiled by the Consultant for transmittal in support of permit applications.

Note: POLB pays Project Permit fees (e.g., Plan Check Fees).

13 QUALITY MANAGEMENT

A. General

Consultant shall perform necessary QA/QC and IDR are required to ensure that all project submittals including reports, PS&E package, and other pertinent engineering supporting documents are complete, accurate, conforming to standards, and meeting professional engineering practices. QA/QC and IDR services are considered to be included in the Consultants' fee schedule. QA/QC and IDR shall include as a minimum the following items:

- 1) The Consultant shall provide POLB with a Design Quality Management Plan (DQMP) including the quality control and quality assurance processes and procedures. Section 2 of the Port Quality Management System (QMS) ("Sec. 26 References") provides guidelines for the QMP.
- 2) The Consultant is responsible for QC and QA of all Work including Work by subconsultants performed under the contract.
- 3) The Consultant shall perform independent Quality Control Reviews of the Work at each Design Milestone (SD, 30%, 50%, 100%, and Final).
- 4) The Consultants' IDR shall be conducted by senior level professionals with the appropriate experience for each discipline of work. It is acceptable for the Consultant to provide an independent third-party reviewer (subconsultant), under their contract, to perform the QC Reviews but they shall not have other Project-related responsibilities.
- 5) Results of an independent review shall be documented in accordance with the QMS Section 3 or the Consultants Quality Management Plan and provided to POLB PM.
- 6) The Consultant shall provide POLB with the quality records, as requested for each discipline of work clearly demonstrating that the applicable QC procedures were conducted prior to the submittal.
- 7) The Consultants' QA Manager or Principal in Charge (PIC) shall verify that the QC processes and procedures are in compliance with the QMP and shall provide a Certification of Compliance Statement with signatures by the QAM or PIC and the Consultants' Project Manager with each milestone submittal.
- 8) The Consultant shall provide to POLB Quality Manager or POLB DM with the following items upon request:
 - a) The quality records of the internal QC Reviews;
 - b) The quality records of the IDR;

- c) The original copies of the quality records or a colored scanned copy in the pdf file format;
- d) The resolved Review Comments from the prior Milestone submittal clearly showing the disposition of all comments and;
- e) Evidence of the QA inspections and findings, including subconsultants.

POLB may conduct an independent (in-house or third-party) QA reviews of any or all design submittals. If the result of any review of a design submittal conducted by POLB indicates there are unacceptable issues with quality or completeness, POLB DM may reject the submittal or require additional submittals and reviews, at the Consultant's expense, to confirm that POLB DM's expectations for quality and completeness are met. Consultant shall also address all comments resulting from such reviews at their own expense.

B. Design Review

- 1) Design reviews are performed at the Schematic Design (SD), 30%, 50%, 100% and Final design stages. The 100% design review is intended for the last review that provides new comments. The Final Design Review is intended as a final close-out of 100% comments. New comments at Final Design Review should only be provided on new or changed scope. POLB's DM may elect to perform a "spec read," which is a detailed, page-by-page review of the final plans and specifications as the last check on the documents before bidding. Any deviation from this schedule must be approved by the Director of Engineering Design Division.
- 2) POLB DM will use the Bluebeam Studio Session, consultant shall organize and set up the Studio session and address comments via Bluebeam Studio session. When required by POLB DM, consultant shall provide the comment resolution report.
- 3) For each design review submittal, the Consultant shall provide one set of reproducible media hard copy and electronic and the appropriate number of Drawing prints, Specifications, and all other material required by this Guideline or the Contract. Electronic CADD files of the final drawing set must also be submitted using POLB sanctioned data transfer tools. The Consultant shall provide POLB DM with sufficient numbers of Drawings and Specifications for Review and Comment forms for distribution of the review sets.
- 4) POLB will require a minimum of ten (10) working days for review of submittal documents at each design review. The Consultant shall continue with design during the SD, 30%, 50%, 100%, and Final Design reviews when directed by POLB's DM.
- 5) The Consultant shall provide a written response to all review comments a minimum of five (5) working days prior to the scheduled design review meeting. This comment log, in the form of an MS-Excel spreadsheet and exported via Bluebeam

Session, must show the disposition of all comments and should include, at a minimum, the comment, drawing or specification reference, originator of the comment, and detailed response to the comment. The comment log may also reference highlights or annotations to the original documents (drawing and specifications). The SD, 30%, 50%, 100%, and Final Design reviews by POLB are not to be acknowledged by the Consultant through re-submittal of a new set of Drawing prints or Specifications. POLB's DM shall make the final decision regarding whether the Consultant shall incorporate such review comments in the Construction Documents.

- 6) EDD, Security Division, and Tenant Services Division shall review all traffic management design plans and proposed detours.
- 7) In the case of the 100% Design review submittal, comments are to be acknowledged by the Consultant after the permit review comments are received from the respective permit or regulatory review agencies. Both POLB and agency comments are then evaluated and incorporated into the Final Design and Construction Documents as determined by the Consultant and POLB. Plan Check comments received directly by the Consultant from the permitting or regulatory agencies shall be provided in the original form by the Consultant to POLB's DM.

C. Value Engineering

Consultant may have to perform the VE when the POLB DM decides to have one for the project and/or if the project construction value is over \$10,000,000. VE is a systematic approach to improving the value of a project, product, or process by analyzing its functions and identifying ways to reduce costs while maintaining or enhancing performance and quality. It involves:

- i. Function Analysis: Determining the essential functions of a product or service.
- ii. Cost Evaluation: Assessing costs associated with each function.
- iii. Alternative Solutions: Exploring alternative ways to achieve the same functions more efficiently.
- iv. Implementation: Proposing changes that can lead to cost savings and improved value.

The goal of value engineering is to maximize value of the project by optimizing the balance between function, cost, and quality.

14 SPECIFICATIONS

The Consultant shall prepare the Special Conditions, Technical Specifications, Schedule of Bid Items (using the Base Bid Form), and the Double Alpha Appendices. The Consultant shall assist the POLB DM to prepare and submit a Project Specification Worksheet to the EDD Specs Team a minimum of two (2) weeks prior to the 100% design submittal. The EDD Specs Team (Specs Team) will prepare the Front-End specifications, which include official Title Page, General Conditions, Notice of Inviting Bids, Instructions to Bidders, Bid Proposal Package, and the Master Table of Contents (which includes Consultant's provided list of Technical Specifications used). The Specs Team will also develop and provide the Single Alpha Appendices. The Consultant shall be responsible for compiling all of the specifications package together for review of the 100% design, final design submittals and bid advertisement.

- A. POLB may use Formal or Informal Specification format mainly based on the size of the projects; a formal spec for projects in excess of \$200,000 in estimated cost, and an informal spec for projects less than \$200,000 in estimated cost. The Formal Specification format is widely used for most of the projects. This format utilizes General Conditions, Special Conditions, and the Construction Specification Institute (CSI) 2016 MasterFormat for the Technical Specifications. The Informal Specifications are normally prepared using Contract Provisions (CPs) and CSI based format.
- B. The appropriate format will be determined by POLB's DM at the initiation of the Project.
- C. The Consultant is advised that POLB has three (3) sets of Special Conditions, one is used for on-call construction contracts, one for the construction projects, and the last are for projects that have grant funding. The POLB DM will provide the applicable template for the Consultant's use. There is only one (1) General Conditions, which is used for all formal specification projects.
- D. POLB DM will provide both a Project Title (same as a Specification Title), Drawing Number, and a Specification Number (HD-SXXXX format). These assigned numbers and titles must be consistent on the plans and specification documents.
- E. The Consultant shall prepare the Specifications using POLB's specification templates, when available. POLB DM will provide electronic copies of Division 01 Technical Specifications templates and other available templates or samples when requested by the Consultant. If no POLB specification template or sample is available for a particular Section, the Consultant is responsible for developing the relevant specifications for the project in alignment with POLB's standard technical specifications formatting and standardized naming/numbering.
- F. The Specifications shall include all applicable technical divisions. POLB Specification templates have instruction language that indicates how the Section can be edited by the Consultant as appropriate for the project. Language that is not indicated for modifications should not be edited unless specifically approved by POLB DM. The

Consultant is not permitted to make changes to the templates unless proper justification is developed and submitted to the POLB DM and Specs Team for review and approval. Any specifications that include changes to the template language that are submitted without approval will be the cause for rejection and the Consultant shall submit updated specifications at no additional cost to POLB.

- G. The following documents constitute the full specification package (Volumes 1 and 2) submittal:

Volume 1:

- 1) Title Sheet: This document is the cover sheet indicating the specification number, drawing number, name of project, location of project, and advertisement month and year. The Consultant shall not edit this document. The Specs Team will initially provide this document to POLB DM at 100% submittal, but may re-issue at any time prior to advertisement if any changes occur.
- 2) Specification Signature Sheet: The Specs Team will initially provide this document to POLB DM at 100% submittal. POLB DM and PM shall sign the Signature Sheet after completion of Final Submittal. The Specs Team will send the Signature Sheet to the EDD Director and CHE for signatures after obtaining City Attorney approval.
- 3) Specification Stamp Page: This document follows the Signature Sheet. The Specs Team will initially provide this document to POLB DM at 100% submittal. The Consultant is responsible for communicating all relevant information such as company name and address to POLB DM for inclusion onto the Specification Stamp Page. All applicable disciplines shall be added to the Specification Stamp Page. The Consultant shall use electronic stamp/signatures on the native Microsoft Word file and submit both the native Word file and a PDF to POLB DM with the Final Submittal. POLB DM shall e-mail the completed PDF file to the Specs Team for inclusion in the bid document package.
- 4) Master Table of Contents (MTOC): Overall index listing all Volume 1 and Volume 2 specifications. The Consultant is required to submit a technical specifications outline for review at 30% submittal. The Specs Team will provide this document to POLB DM at 100% submittal, but may re-issue at any time prior to advertisement if any changes occur. Consultant shall provide comments and updates to the Specs Team for implementing during the various design milestones, if any changes are made to the package.
- 5) Notice Inviting Bids (NIB): Front end document that includes bid information, bid due date, licensing requirements, Prebid meeting requirements, site visit requirements, and other information needed to advertise the project. This document is used to advertise the project in the newspaper and online sources. The Specs Team will provide this document to POLB DM at 100% submittal, but

may re-issue at any time prior to advertisement if any changes occur. The Consultant shall not edit this document, but shall provide comments to the Specs Team after the 100% Design review.

- 6) Instructions to Bidders (ITB): Front end document directed toward bidders that instructs bidders on preparing bids on the project. The Specs Team will provide this document to POLB DM at 100% submittal, but may re-issue at any time prior to advertisement if any changes occur. The Consultant shall not edit this document, but shall provide comments to the Specs Team after the 100% Design review.
- 7) Bid Proposal Package (BPP): Front end document directed toward bidders that constitutes the forms that need to be submitted by bidders for their bid to be considered. The Specs Team will provide this document to POLB DM at 100% submittal, but may re-issue at any time prior to advertisement if any changes occur. The Consultant shall not edit this document, with the exception of the CR2 form, which the Consultant shall participate in the determination of the specific Contractor experience requirements to be eligible to bid on the project.
- 8) Schedule of Bid Items: Provides list of bid items for which the Contractor shall provide pricing and use as the basis for the payment. Each bid item shall include a unit for quantity (e.g., tons, square feet, lump sum, hours, each, etc.) and include the estimated quantity of the item needed. Each item in the Schedule of Bid Items must be clearly identified in the Technical Specifications and include the Measurement and Payment language in Part 4 of the applicable Technical Specification Section, which is listed on the Schedule of Bid Items as Reference. The Consultant is responsible for maintaining and editing the Schedule of Bid Items in a Base Bid Form (Excel spreadsheet) template provided by POLB DM. After Final review, the Base Bid Form must be provided in its original, unadulterated format, with all necessary cells filled in. The Base Bid Form is not a specification document; the form is used as a vehicle to upload the Schedule of Bid Items into the PlanetBids Line Items tab for bidding purposes.
- 9) General Conditions (GC): Front end document that includes all general provisions and requirements of the contract. The General Conditions are consistent for all projects and all types of projects, and will not be changed. The Consultant shall not edit this document. Any deviations to the GC are communicated in the Special Conditions. The Specs group will initially provide this document to POLB DM at 100% submittal, but may re-issue at any time prior to bid if any changes are made by the City Attorney and/or POLB.
- 10) Special Conditions (SC): Front end document that specifies any modifications to the GC and other Contract Documents as well as additional project-specific provisions and requirements of the contract. It includes the amount of time allowed to build the project, any liquidated damages associated with milestones, license requirements, and environmental and other constraints. Grant requirements, if

applicable, are provided in this document. POLB DM will provide the latest template of this document, for the Consultant to complete. Any deviations from the template must be approved by the Specs Team. POLB DM may re-issue an updated SC template at any time prior to advertisement if any changes are made by the City Attorney and/or POLB.

Volume 2:

- 1) Technical Specifications (TS): Volume 2 document that provides all technical details needed for the Contractor to build the project including materials to be used, how to build it, and how the measurement and payment will be made. The Consultant shall be responsible for developing all technical specifications including POLB-provided standard measurement and payment (M & P) language. Templates will be provided for some Sections of the TS, and samples may be provided for other Sections. The POLB DM will provide guidance for naming and numbering conventions for each TS Section, based on 2016 MasterFormat and POLB standards. The Consultant shall schedule an M & P and bid item review meeting with POLB CM and PM starting at 100% submittal. Each item on the Schedule of Bid Items must be clearly spelled out in a Part 4 of an applicable TS Section, which is listed as the Reference for that bid item on the Schedule of Bid Items.
 - 2) Appendices (Single Alpha): Documents that provide reference information such as sample forms and instructions, for Contractor's use during construction. The Consultant shall not edit these documents. The single-alpha appendices will be provided for reference upon request, and will be incorporated by Specs Team into the specifications package for bid advertisement.
 - 3) Appendices (Double Alpha): Project-specific documents that provide reference information such as relevant permits, tenant agreements, reports, and reference information needed to understand the work. The Consultant shall be responsible to compile these documents collaborating with POLB DM. Grant requirement forms, if applicable, shall be provided in the double alpha appendices.
- H. The Consultant shall manage and coordinate all activities related to the preparation and the review of the Specifications including electronic files, reproduction of hard copies if requested, review distribution, compilation of comments, editing, proof reading, and updating as necessary. POLB PM and DM shall provide a list of reviewing staff. The Consultant shall create a Bluebeam Review Studio Session for electronic review of the full contract document package.
- I. At the end of the Bid and Award Phase, the POLB Specs Team will prepare the conformed set of plans and specifications. The Consultant team shall review the conformed set of plans and specifications to ensure accuracy. Contractor's submittals required by the Specifications will be limited to those items which are necessary to validate conformance

with permit requirements or conditions, or as determined by the Consultant to be necessary to ensure quality of construction in conformance with the design.

- J. Consultant shall submit copies of the Final Specifications in electronic format as specified by POLB DM unless requested otherwise.
- K. The Consultant shall Stamp and Sign on the Stamped Page of the final as-built record copy of the Specification, including a Stamp by the individual responsible for each professional discipline, consistent with the Drawing Stamps.
- L. See **Attachment C** for the required percentage of completeness of Specifications at each deliverable milestone.

15 DRAFTING

- A. At issuance of the Consultant NTP, the Consultant shall obtain the most recent version of POLB's CADD Standards Manual, and shall provide drafting services and drawings consistent with these drafting standards.
- B. POLB's CADD Standards Manual will be provided to the Consultant to review and follow.
- C. POLB has the right to rely on the Consultant and the Consultant's experience to properly estimate, and include in the Consultant's fee for the Work, the appropriate number of Drawings and the appropriate level of drafting effort required for the successful completion of a Project.
- D. POLB DM will assign a Drawing title and Drawing Identification Number to the Project for tracking in ProjectWise.
- E. At each submittal prior to Final Design, the Consultant shall identify the submittal level on the Drawings on the outside of, and centered on, the right border line per POLB's CADD Standards (SD, 30%, 50%, 100%, and Final Submittal). The Final Design shall have the words "FOR CONSTRUCTION" on the outside of, and centered on, the right border using the tag attribute "Submittal Milestone."
- F. All Drawings shall have a scale bar so that scale is verifiable as Drawings are reduced, duplicated, or enlarged.
- G. Consultant shall develop and include in each Drawing set a legend of abbreviations, symbols, and line design consistent with POLB drafting standards. This legend shall include information for Drawings prepared by Consultant and Consultant's subconsultants. Abbreviations shall be only those that occur on the Drawings.
- H. Any hatching or shading shall be of a size appropriate to reduction to half-size printing while maintaining clarity and distinctive pattern.
- I. All final and as-built Drawings shall be properly stamped and signed by the appropriate discipline(s).
- J. Electronic Stamps and electronic signatures on individual Drawings are acceptable.
- K. POLB will provide CADD standard configuration files and template files matching POLB's current CADD Standards. Consultant may use these files to assist with the adherence of the standards, but additional configuration may be required by POLB's DM as required.
- L. Reuse of existing Drawings in the preparation of Construction Documents is acceptable only if the Drawing clarity is maintained and detail is adequate for scanning by POLB Records Center.

- M. The Consultant shall meet with POLB DM to discuss any drafting concerns or issues, including any deviation from POLB's CADD Standards.
- N. Drafting deviations shall not occur unless prior authorization is received in writing.
- O. The Consultant shall manage and coordinate all activities related to preparation and reproduction of the Drawings, including coordination with all members of the Design Team.
- P. The Consultant shall provide POLB with full-size archival Drawings as defined in the CADD Standards Manual, as required by POLB DM.
- Q. The Consultant shall provide POLB with one (1) copy of the "As-Bid" digital files in POLB's CADD file format conforming to POLB CADD Standards upon completion of design. Upon acceptance of construction contract provide one (1) copy of the "Conformed Set" digital files in the same format. The As-Built drawings shall include all external-reference drawings attached to the final drawing files. Drawing file names, layering, colors, and line styles shall correspond to POLB's CADD Standards Manual.
- R. Consultant is to supply POLB with CADD file formats based on POLB's CADD Standards Manual for individual plan sheets as needed.
- S. When elevations are used in Drawings, a Vertical Datum must be stated on the Project Location and Index sheet using the following format: VERTICAL DATUM: LBHD BM XXXX ELEVATION (XX.XX) FT., ADJUSTED MM/YYYY NGVD 1929 MLLW. Include descriptions of all project benchmarks referenced.
- T. When stationing or coordinates are used in the Drawings, a Horizontal Datum and EPOCH (the horizontal adjustment and control points) must be stated on the Project Location and Index sheet using the following format:
 - 1) Refer to POLB DM for the appropriate format.
 - 2) Project Grid established where grid coordinate XX + XXN, XX + XXE = NAD 83, CCS Zone 5, EPOCH XXXX, coordinates of N XXXXXXXX.XX, E XXXXXXXX.XX and grid bearing of East equals NAD 83 Bearing of ___degrees___'___"___.; or show all State Plane coordinates in U.S. Survey feet.
- U. When stationing or coordinates are used in the Drawings, a Drawing sheet providing survey control must be provided. This Drawing sheet shall show at least two monuments and provide a description, including their character coordinates, in the project datum (if coordinates are used in the Drawings) and their stations and outs (if stations and outs are used in the Drawings). This Drawing sheet shall also restate the horizontal datum in the above format. Additional information may be added to this sheet such as coordinates and stations for points where no monuments exist or future monuments are to be set, equations to other data, curve data, and vertical control.

- V. Drawings must reference the survey field book number(s) and page(s) that established both the horizontal and vertical control used in preliminary surveys for the design of the project. While we recommend that only one datum be used in a project, if more than one datum is used this must be clearly stated in the Drawings, and the data must be illustrated.
- W. As-Built drawings must be submitted in both hard copy vellum (2 copies) and digital for in a POLB-approved CADD version drawing format no later than 90 calendar days after the completion of construction. Consultant must use seed files provided by POLB, based on POLB's CADD Standards Manual.
- X. Drawings must reference all surveys used for design.
- Y. CADD files and drawings must be submitted to include links to externally referenced files.
- Z. Electronic Stamps and electronic signatures on individual Drawings are acceptable.

16 SOFTWARE

A. Software

- 1) The Consultant shall use POLB's current approved versions of the following software, as appropriate, to produce any report, spreadsheet, presentation, schedule, PC databases, Specifications, or Drawings which POLB requests in electronic file format that include, but not limited to:
 - a) Microsoft Word 2016 or later version
 - b) Microsoft Excel 2016 or later version
 - c) Microsoft PowerPoint 2016 or later version
 - d) Microsoft Access 2016 or later version
 - e) Microsoft Project 2016 or later version
 - f) SewerGEMS 2024
 - g) WaterGEMS 2024
 - h) Portable Document Format (PDF), searchable, and compatible with Adobe Acrobat Reader (final/record documents) and Bluebeam (design review comments/markups)
 - i) Primavera Project Management Professional (P6) 8.3 or later version
 - j) Autodesk AutoCAD Civil 3D 2025 or latest version identified in POLB CADD Standards Manual
 - k) Other engineering design software requirements may be addressed in the applicable POLB design criteria; refer to the Reference section of this Guidelines document for related design publications. While POLB makes every effort to keep its publications current, consultants should confirm with the POLB DM whether software tools referenced in older publications remain valid.
- 2) For any requested material, the Consultant will submit all digital files (e.g., PDFs and native file formats) produced during the course of the Work including reports, spreadsheets, presentations, schedules, databases, Specifications, or Drawings using POLB approved data transfer tools as requested by POLB's DM.

17 ARCHITECTURAL DESIGN SERVICES

A Architectural and Building Project Requirements

- 1) All buildings designed and constructed for POLB shall conform to the requirements stipulated per these guidelines.
- 2) All building design must also comply with the COLB Green Building Policy for Municipal Buildings.
- 3) Color & Finish Material Submittals:
 - a) The Consultant shall specify Color and Finish Materials sample boards, manufacturer brochures and data, which respond to the Color, and Finish Material Schedules for the Contractor to submit for review and approval. The Consultant shall specify in the bid documents that these Schedules are normally submitted by the Contractor to the CM for review and approval within three (3) months following commencement of construction or as otherwise required by the construction contract documents.
 - b) The Consultant shall assist the POLB DM and CM with the review and approval of Color and Finish Schedules with POLB, Tenant (as necessary) and other agencies.

B Pre-Fabricated Building Design

- 1) The Consultant is responsible for the following:
 - a) Determine the Scope of Work including a description of the users' needs.
 - b) Identify building use features and operational requirements including:
 - (1) Total square footage required,
 - (2) Square footage of all building spaces,
 - (3) Ramps and stairways,
 - (4) Ingress and egress including handicap access,
 - (5) Utility requirements,
 - (6) Location of downspouts, overhangs, and gutters,
 - (7) Air conditioning and insulation,
 - (8) Overhead cranes or other special equipment, and
 - (9) Restroom, break room, or other personnel requirements.

- c) Select a building type and contact pre-fabricated building manufacturers for specifications and design criteria.
- d) Identify building use or uses, provide building planning, and specify areas for storage, office space, warehousing and other uses.
- e) Conduct a CBC Code review relative to the building type.
- f) Prepare and review with POLB and ultimate user, a Schematic building plan and site plot plan design including the following:
 - (1) Building footprint location on property site plan,
 - (2) Site grading and drainage design,
 - (3) Slope protection design as required,
 - (4) Facility signage design, and
 - (5) Vehicle and pedestrian circulation, landscaping, and handicap access provisions.
- g) Prepare a utility site plan including identification of the source of utilities and location of existing utilities, including:
 - (1) Obtain permits for all utilities including: water, gas, telephone, electric, sewer, and drainage.
 - (2) Relocation of utility interferences either underground or overhead. Consultant shall pothole underground existing utilities, as needed, to assist in the determination of their location.
 - (3) Location and details for fire hydrants.
- h) Design foundation and floor slab including:
 - (1) Preparing a soils report.
 - (2) Conducting a code analysis as it pertains to foundation or foundation-related design criteria including: floor loading, handicap access, utility requirements and access, and vehicle access.
 - (3) Obtaining required foundation permits.
 - (4) Completing the structural design of the floor slab including slab-to-building connections, anchor bolts, and footing details.

- (5) Designing site drainage to provide for building drainage (roof and floor), site catch basins, and floor drains.
- i) Conduct a preliminary Plan Check with the COLB Community Development Department to identify general code compliance.
- j) Prepare site Drawings per **Attachment B – Building Drawings**.
- k) Prepare pre-fabricated building outline performance specifications including:
 - (1) Building materials,
 - (2) Building systems (doors, windows, roof, etc.),
 - (3) Structural system and criteria,
 - (4) Plumbing systems and criteria,
 - (5) Mechanical systems and criteria,
 - (6) Electrical systems and criteria,
 - (7) Insulation requirements for roof and walls,
 - (8) Window glazing,
 - (9) Exterior and interior color, and
 - (10) Exterior and interior finishes.
- 2) Contractor's Design-Build/Deferred Approval Responsibilities:
 - a) Verify the CBC Code analysis for the building.
 - b) Develop detailed Design/Build schedule.
 - c) Conduct a safety plan check.
 - d) Determine specific building dimensions.
 - e) Define specific building materials.
 - f) Building insulation.
 - g) Design fire protection, including sprinklers.

- h) Determine appropriate code requirements for pre-fabricated building including: seismic, fire, NEC, and California Building Code.
- i) Use POLB-supplied electronic formatted Schematic Drawings and outline Specification to develop CADD construction Drawings and final Specification.
- j) Provide POLB DM with a complete set of Construction Documents.
- k) Provide POLB DM with a complete Basis of Design report.
- l) Submit Drawings and other required documents, including calculations, to COLB Community Development Department for Plan Check.
- m) Develop and submit shop drawings and submittals for POLB review.
- n) Obtain necessary construction permits.
- o) Coordinate with the building user and POLB DM regarding construction phasing requirements and user operations requirements during construction.
- p) Provide POLB DM with complete "As-Built" Drawings and Specifications per these guidelines.

18 COORDINATION WITH OTHERS

- A. The Consultant is advised that POLB facilities and terminals are generally in operation during design and construction. The Consultant shall investigate the use of the terminal by the Operator and the Tenant, and provide engineering services and prepare the Construction Documents with appropriate phasing to maintain operations throughout construction with a minimum impact to POLB tenants, other existing construction projects, and to POLB operations.
- B. The Consultant shall, by coordination with POLB's DM and others, become familiar with other contracts which have been awarded, or are about to be awarded, for other construction work in the same or immediate area or which may otherwise affect the Work. The Consultant shall coordinate the design of the Work required by the Project with the established Schedules for completion and phasing of other identified projects. This coordinated design by the Consultant shall eliminate or minimize interferences that may occur in construction work areas, staging areas, traffic access, truck or train haul routes, parking, utility requirements for construction, or other similar situations or conditions.
- C. Access to POLB Property:
 - 1) Prior to going on POLB property, the Consultant shall coordinate with POLB PM, Real Estate Representative, and Terminal Services Representative, as identified by POLB DM.
 - 2) Access to restricted Marine terminals requires a Transportation Workers Identification Credential (TWIC) card. Consultant shall be solely responsible for obtaining and paying for such credential. POLB will not pay for Consultant's TWIC certification.
- D. Access to Other Property:
 - 1) Access to Private Property shall be avoided unless the appropriate rights are obtained prior to entry and approved by POLB DM. Consultant shall develop exhibits and scope descriptions as needed to coordinate with POLB DM and Real Estate Division.
 - 2) Access to the POLA or COLA Property shall be avoided unless the appropriate rights are obtained prior to entry and approved by POLB DM. Consultant shall develop exhibits and scope descriptions as needed to coordinate with POLB DM and Real Estate Division.

19 INSURANCE

As a condition precedent to the effectiveness of the contract, Consultant shall procure and maintain in full force and effect during the term of the contract the types and levels of insurance provided in the solicitation.

The required insurance and the documents provided as evidence thereof shall be in the name of Consultant as indicated on the contract.

Package policies which contain more than a single coverage type and share primary per occurrence and/or aggregate limits are not permitted.

Coverage which requires the City to tender a claim or suit to its own insurer(s), or make its own insurance available is not permitted.

If policies are written with aggregate limits, the aggregate limit shall be at least twice the occurrence limits or as specified in the solicitation.

Excess or umbrella policies, if used, shall be the following form and shall provide coverage that is equal to or broader than the underlying coverage.

The full policy limits and scope of coverage shall apply to the additional insureds required by the solicitation even if they exceed minimum insurance requirements specified in the solicitation.

At the direction of the Port, the Consultant, its Risk Manager or insurance professional, and the Consultant's insurance broker shall participate in a mandatory conference with the Port's Risk Management Division within fifteen (15) calendar days after the Consultant is notified of conditional award by the Port. The purpose of this mandatory conference will be to discuss the insurance and form requirements contained in the Contract. Failure to participate in this mandatory conference may result in the Contract being awarded to the next qualified Consultant.

20 SBE/VSBE REQUIREMENTS

POLB has established a Small Business Enterprises (SBE)/Very Small Business Enterprises (VSBE) Program to encourage small business participation on Professional Services contracts.

A SBE/VSBE and DBE Program Applicability

The project funding source effects the consultant selection procedures, consultant contract format, construction bidding procedures, construction specifications, and construction contract format. Most projects in POLB are funded with funds generated by the Harbor Department. These are subject to POLB's SBE Program. Projects funded by the Federal Highway Administration through Caltrans are subject to the DBE Program. They are exempt from POLB's SBE Program. See the Caltrans Local Assistance Procedures Manual for a complete description of contract requirements (www.dot.ca.gov). Some Projects funded by the U.S. Department of Homeland Security, U.S Department of Transportation, Maritime Administration (MARAD), other federal agencies, as well as some State and Local Agency Grants from Federal sources, are subject to the DBE Program and exempt from POLB's SBE Program.

B SBE & VSBE Program Requirements

For projects subject to SBE and VSBE Ordinance requirements, the Consultant shall submit any and all required documentation to demonstrate ability and intent to meet the combined SBE/VSBE goal established. Complete SBE/VSBE requirements are included in the request for statement of qualifications, or request for proposals and on POLB's web site at <https://polb.com/business/business-opportunities#sbe-vsbe-program-overview>.

- 1) SBE and VSBE Eligibility
 - a) SBE eligibility is determined by utilizing federal U.S. Small Business Administration (SBA) size standards and/or by the standards set by the State of California's Department of General Services (DGS).
 - b) The SBA size standards are based on the North American Industrial Classification System (NAICS) codes. To identify the NAICS code(s) that a business may qualify under, log on to www.sba.gov.
 - c) DGS has established a separate set of SBE eligibility standards and classification codes. Log on to www.dgs.ca.gov for complete DGS certification information.
 - d) VSBE and/or Micro-business eligibility is determined by utilizing the criteria set by the DGS "micro-business" designation: Contractors, consultants, and vendors with gross annual receipts, averaged over the past three tax years, of

\$5 million or less, or small business manufacturers with 25 or fewer employees.

2) SBE Certification

- a) All businesses wishing to receive SBE and VSBE status on a Port contract are required to be certified by either the Port or by the DGS.
- b) To access POLB's Vendor Portal, visit the Port's website:
<https://polb.com/business/business-opportunities#business-opportunities-overview> and click on POLB Vendor Portal under the Navigation Menu.
- c) To access the DGS procurement system, businesses may log on to:
www.dgs.ca.gov.
- d) Port-issued SBE certifications are generally valid for three (3) years. However, the Port may ask an SBE/VSBE to update its SBE qualifying information at any time. The Port does not issue separate VSBE certifications. VSBE status is designated in a vendor's procurement system account.

3) Pre-Contract Award Compliance with SBE/VSBE Program Requirements

- a) Prime Consultants responding to this Request for Proposal (RFP) are required to submit an SBE/VSBE Commitment Plan for Professional Services Contracts (POLB Form SBE-2P) with their Proposal. The Commitment Plan (CP) shall identify the proposed SBE/VSBE firms (prime consultant, sub-consultants, vendors and suppliers), their physical location and contact information, a description of services that matches their certification(s), and their proposed level of participation at a minimum. The completed CP shall demonstrate the consultant's ability and intent to meet the combined SBE/VSBE participation goal by stating a value in the percentage (%) fields based on the proposed amount and submit with the main proposal.
- b) Firms listed on the CP must be SBE certified in the Port's online procurement system and/or by the DGS by the required submittal due date.
- c) The level of SBE/VSBE Commitment will be verified by Port staff and factored into the scoring criteria used during the evaluations of the proposals.

The contract specific SBE/VSBE participation goal for the awarded contract may be revised during contract negotiations. The negotiated consultant contract will specify the type and amount of work to be performed by specific SBE/VSBE firms. If additional SBE/VSBE sub-consultants, vendors, or suppliers are added to the selected consultant's team during negotiations, they must also be certified by the DGS or in the Port's online procurement system for

their participation to be credited. If the Port and the selected firm are unable to negotiate the established level of SBE/VSBE participation, the Port reserves the right to end negotiations and enter into negotiations with the next highest-ranked consultant.

4) Post-Contract Award Compliance with SBE/VSBE Program Requirements

In the execution of its duties the Consultant shall submit invoices to demonstrate sub-consultant compliance with the requirements of POLB's Small Business Enterprise Program. The Consultant shall report the dollar value of payments to small businesses on a monthly basis and at project close-out. The reporting may be accomplished electronically through the Port's designated system or by submitting a completed SBE/VSBE Monthly Utilization Report for Professional Service Contracts (POLB Form SBE-3P) with every invoice. The Port will instruct the Contractor which method to utilize. The reported data will be reviewed for accuracy and completeness. Any SBE/VSBE substitutions will need to be pre-approved by the Port.

Additional information regarding the Port's SBE/VSBE Program may be found on the Port's SBE website at www.polb.com/sbe.

Prior to construction, preferably at the 100% design submittal stage, the Consultant will need to assist POLB in determining SBE and VSBE construction contract goals by filling out SBE-1 form with the Statement of Work (SOW) breakdown (see **Attachment K**). This form will be used by the SBE group to determine Contractor SBE/VSBE goals.

21 DBE REQUIREMENTS

For a project receiving any portion of its funding from the Federal Government, there may be special requirements. The Consultant is required to fill out the appropriate forms in order to determine the Contractor DBE goals, when applicable. The POLB DM can provide detail information on the DBE requirement upon request.

22 PROJECT LABOR AGREEMENT

Some construction projects can be subject to the requirements of a Project Labor Agreement (PLA). Please check with POLB DM.

23 LABOR COMPLIANCE

A Prevailing Wage Requirements

Contracts awarded to consulting firms may have scope that is considered a public work project as defined by California Labor Code Section 1720 et seq. The Consultant receiving award of the contract and Sub-consultants, of any tier, shall pay not less than the prevailing wage rates to all workers performing covered work and shall post a copy of said determination of prevailing rate of per diem wages at the job site. The rate schedules are available on the internet at <http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm>, and are on file in the office of the Director of Construction Management. Additional information can be found on the Department of Industrial Relations' website below:

<https://www.dir.ca.gov/public-works/publicworks.html>

The Consultant and Sub-consultant(s) shall comply with all applicable statutes and regulations, including, but not limited to, the payment of not less than the general prevailing rate of per diem wages (Labor Code § 1771), forfeiture of penalties for paying less than the prevailing wage rates (Labor Code § 1775), employment of apprentices (Labor Code § 1777.5), and overtime requirements (Labor Code §§ 1810 - 1815).

B Senate Bill 854 Requirements

POLB public works projects are subject to compliance monitoring and enforcement by the Department of Industrial Relations (DIR), as per Senate Bill 854. No Consultant or Sub-consultant performing covered work under Labor Code 1720, et. seq., may be listed on a bid proposal for a public works project unless registered with the DIR pursuant to Labor Code Section 1725.5 (with limited exceptions from this requirement for bid purposes only under Labor Code Section 1771.1(a)). No Consultant or Sub-consultant may be awarded a contract for public work on a public works project unless registered with the DIR pursuant to Labor Code Section 1725.5.

In addition to providing Certified Payroll Records (CPRs) and labor compliance documentation to the POLB, Consultants and Sub-consultants must furnish electronic CPRs to the Labor Commissioner's Office.

24 TRANSPORTATION WORKERS IDENTIFICATION CREDENTIAL (TWIC)

All work performed on active marine terminals is subject to the requirements of the United States Department of Homeland Security, Transportation Security Administration, Transportation Worker Identification Credential (TWIC) Program. The Consultant shall be responsible for complying with all applicable laws and regulations in relation to the Maritime Transportation Security Act (Act), including any changes to the Act that may become applicable during the contract term. The Consultant shall be responsible for any and all costs of compliance with these regulations, including background investigations, obtaining cards and other security instruments and/or replacing service-related personnel and vendors who cannot qualify for TWIC clearance. Replacement of personnel and vendors must be approved by POLB DM. The Consultant shall also be responsible for ensuring that their Subconsultants comply with these regulations.

Any costs associated with the TWIC program shall be included in the consultant and Subconsultant rates. For additional information regarding the TWIC program, the consultant is directed to the TWIC website located at the web link: <https://www.tsa.gov/for-industry/twic>

25 SERVICES PROVIDED BY POLB

POLB project team will provide the project information including background information, requirements, and schedule milestones as necessary. Specific tasks for POLB during the Project may include:

- A. Provide a preliminary Scope of Work which will include a list of current and proposed project functions to the Consultant. In addition, POLB DM may choose to provide certain specific space allocation requirements.
- B. Provide information on the proposed project site, which may include soils reports, preliminary base maps, and a survey of existing conditions including any available underground utilities and piping.
- C. Survey services shall be provided by POLB, unless stated otherwise.
- D. During the Bidding and Construction Phases and unless otherwise directed, POLB CM will be responsible for the oversight, scheduling, preparing minutes for all meetings involving the Tenant, General Contractor (Contractor), the Consultant, and following up on all meeting minute action items and their resolution.
- E. Provide access to requested information and resources to the Consultant.
- F. Provide access to the proposed project site to the Consultant.

26 REFERENCES

Documents that supplement these Guidelines will be available in POLB's Internet Home Page shown below. Please check the link below. The list in the website gets updated as required, and this section may not have been updated.

<https://polb.com/business/business-opportunities/#rfp-rfq-resources>

Construction Management CMD Procedures Manual - 2017

Contract for Consulting Services - Design (Sample)

Design CADD Standards Manual Version 2.0 (AutoCAD Civil 3D) – DRAFT

Design CADD Standard Workspace Version 2.0 (AutoCAD Civil 3D from POLB Dropbox)

Design CADD Standards Workspace – Legacy Link

Design Criteria Manual - 2014

Design Electrical Criteria - 2017

Design Electrical Standard Plans - 2016

Design Port Wide Ground Motion Study Update Report - 2020

Design Railroad Criteria - 2011

Design Railroad Standard Plans - 2013

Design SCADA Standards – 2023

Design Standard Plans – 2014

Design Standard Plans - Addendum 1 - 2024

Design Stormwater Manual – 2023

Design Sustainable Landscapes - 2024

Design Wharf Criteria - 2021

Green Building Policy

Hazard Vulnerability Assessment and Adaptation Plan – HVAAP Lite -2023

Sustainability Flow Chart – 2021

Engineering Bureau Project Delivery Manual – 2025

Quality Management System - Program Management – 2013

Project Delivery Risk Assessment Manual

27 ATTACHMENTS

Attachment A – Drawings

Attachment B – Building Drawings

Attachment C – Specifications

Attachment D – Sample Fee Breakdown

Attachment E – POLB Design Standards Exception Request Form

Attachment F – Utility Potholing Documentation

Attachment G – Utility Notification Letter Template

Attachment H - Utility Information Form

Attachment I – Project Budget Anatomy Chart

Attachment J – POLB Engineering Design Standard Invoice Format

Attachment K – SBE-1 SBE/VSBE Goal Request Form

Attachment A

Drawings

Attachment A – Required Drawings for Projects

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.1	General Drawings						
1.1.1	Title Sheet: As required for the overall Drawing Set, the first sheet of Drawings shall contain the following						
1.1.1.1	Project location and vicinity map	50%	100%				
1.1.1.2	List of all drawings organized by discipline	25%	50%	75%	100%		
1.1.1.3	Master list of symbols, legends and abbreviations	50%	75%	100%			
1.1.1.4	List of current applicable Federal, State and City of Long Beach adopted building, fire, safety, electrical, plumbing, mechanical and energy codes	50%	75%	100%			
1.1.1.5	Project directory listing all architectural, engineering and consulting firms. Provide legal name of each firm, state license number with renewal date, address, phone and fax number, e-mail and website data, and key responsible architect, engineer, consultant or project manager of each firm	50%	75%	100%			
1.1.1.6	Project data listing the legal description, proposed site use(s), construction type, overall site sq. ft., number of parking spaces required and provided, project address, horizontal and vertical datum information, and overall scope of work	50%	75%	100%			
1.1.1.7	North arrow, scale and dimensions on every drawing sheet that contains a plan, elevation, side or perspective view illustration - as applicable	100%					

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.1.2	Site Constraints:						
1.1.2.1	Work Area and Project Boundary Plan	25%	50%	90%	100%		
1.1.2.2	Construction Access Plan	25%	50%	90%	100%		
1.1.2.3	Laydown Area Plan	25%	50%	90%	100%		
1.1.2.4	Fire Access Plan - Access and special parking locations for fire department; Location of all fire department equipment, hook-ups, fire hydrants, fire department connections, alarm monitors.	25%	50%	90%	100%		
1.1.2.5	Project Phasing Plan - Clear definition of all work to be completed in each phase of the project; Indication of fencing and other security measures regarding vehicle and pedestrian access during each phase of the project	25%	50%	90%	100%		
1.1.3	Coordinate Control:						
1.1.3.1	Coordinate Control Plan	25%	50%	75%	100%		
1.1.3.2	Monument Preservation Plan	25%	50%	75%	100%		
1.1.4	Erosion Control:						
1.1.4.1	Erosion Control Site Plan		50%	75%	100%		
1.1.4.2	Erosion Control Notes		50%	75%	100%		
1.1.4.3	Erosion Control Details		50%	75%	100%		
1.1.5	Site Investigations:						
1.1.5.1	Potholing Plans	50%	90%	100%			
1.1.5.2	Potholing Coordinates	50%	90%	100%			

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.1.5.3	Slot Trench Plans	50%	90%	100%			
1.1.5.4	Slot Trench Coordinates	50%	90%	100%			
1.1.5.5	Environmental Soil Characterization Plans	50%	90%	100%			
1.1.5.6	Environmental Soil Characterization Coordinates	50%	90%	100%			
1.1.5.7	Geotechnical Borings/CPT Plans	50%	90%	100%			
1.1.5.8	Geotechnical Borings/CPT Profiles	50%	90%	100%			
1.1.5.9	Geotechnical Borings/CPT Coordinates	50%	90%	100%			
1.2.1	Civil Demolition and Remediation Plans (if applicable):						
1.2.1.1	Demolition site plan	25%	50%	90%	100%		
1.2.1.2	Demolition notes	25%	50%	90%	100%		
1.2.1.3	Above ground demolition plans - All existing buildings or structures to be remediated or removed	25%	50%	90%	100%		
1.2.1.4	Below ground demolition plans - All existing utilities or structures to be remediated or removed; boundary of all existing areas of soil to be remediated	25%	50%	90%	100%		
1.2.1.5	Demolition details	25%	50%	90%	100%		
1.2.1.6	Demolition coordinates	25%	50%	90%	100%		
1.3	Civil Drawings: as required, the Civil Drawings shall contain all of the requirements in Section 1.1 "General Requirements" of these documents, and the following:						
1.3.1	Civil Site Plan:						
1.3.1.1	Site legal description – meets, bounds, and section. as provided by the POLB	50%	90%	100%			
1.3.1.2	Existing topography – based upon current surveyed conditions	50%	90%	100%			
1.3.1.3	Grades – drainage flow lines (existing and final)	50%	90%	100%			
1.3.1.4	Roads, walks, paving, curbs, buildings and other structures (existing and final)	50%	90%	100%			

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.3.1.5	Parking areas and circulation patterns, dimensions of parking spaces and overall parking lot dimensions	50%	90%	100%			
1.3.1.6	Paving materials and thickness (existing and final)	50%	90%	100%			
1.3.1.7	On-site and off-site locations and sources of all utilities (existing and final)	50%	90%	100%			
1.3.1.8	Special requirements (security, access for the disabled, traffic.)	50%	90%	100%			
1.3.1.9	Dimensions of on-site and off-site improvements	25%	50%	90%	100%		
1.3.2	Civil Dredge/Excavation/Fill:						
1.3.2.1	Dredge/Rock Dike/Surcharge Site Plan	25%	50%	90%	100%		
1.3.2.2	Dredge/Rock Dike/Surcharge Notes	25%	50%	90%	100%		
1.3.2.3	Dredge Plan	25%	50%	90%	100%		
1.3.2.4	Dredge Cross Sections	25%	50%	90%	100%		
1.3.2.5	Dredge Details	25%	50%	90%	100%		
1.3.2.6	Rock Dike and Fill Plan	25%	50%	90%	100%		
1.3.2.7	Rock Dike, Surcharge, and Settlement Monitoring Plan	25%	50%	90%	100%		
1.3.2.8	Rock Dike, Fill, and Surcharge Cross Sections	25%	50%	90%	100%		
1.3.2.9	Fill and Surcharge Settlement Monitoring Sections and Details	25%	50%	90%	100%		
1.3.3	Civil Grading Plan:						
1.3.3.1	Grading Site Plan	25%	50%	90%	100%		
1.3.3.2	Grading Notes	25%	50%	90%	100%		
1.3.3.3	Grading Sections and Details	25%	50%	90%	100%		
1.3.4	Storm Drain:						
1.3.4.1	Storm Drain Site Plan	25%	50%	90%	100%		
1.3.4.2	Storm Drain Notes	25%	50%	90%	100%		
1.3.4.3	Storm Drain Plan	25%	50%	90%	100%		
1.3.4.4	Storm Drain Profiles	25%	50%	90%	100%		
1.3.4.5	Storm Drain Sections and Details	25%	50%	90%	100%		
1.3.5	Sewer:						
1.3.5.1	Sewer Site Plan	25%	50%	90%	100%		
1.3.5.2	Sewer Notes	25%	50%	90%	100%		
1.3.5.3	Sewer Plan	25%	50%	90%	100%		
1.3.5.4	Sewer Profiles	25%	50%	90%	100%		
1.3.5.5	Sewer Sections and Details	25%	50%	90%	100%		

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.3.6	Water:						
1.3.6.1	Water Site Plan	25%	50%	90%	100%		
1.3.6.2	Water Notes	25%	50%	90%	100%		
1.3.6.3	Water Plan	25%	50%	90%	100%		
1.3.6.4	Water Profiles	25%	50%	90%	100%		
1.3.6.5	Water Sections and Details	25%	50%	90%	100%		
1.3.7	Dry Utility:						
1.3.7.1	Dry Utility Site Plan	25%	50%	90%	100%		
1.3.7.2	Dry Utility Notes	25%	50%	90%	100%		
1.3.7.3	Dry Utility Plan	25%	50%	90%	100%		
1.3.7.4	Dry Utility Profile	25%	50%	90%	100%		
1.3.7.5	Dry Utility Sections and Details	25%	50%	90%	100%		
1.3.8	Utility:						
1.3.8.1	Utility Site Plan	25%	50%	90%	100%		
1.3.8.2	Utility Notes	25%	50%	90%	100%		
1.3.8.3	Utility Plan	25%	50%	90%	100%		
1.3.9	Railroad:						
1.3.9.1	Track Site Plan	25%	50%	90%	100%		
1.3.9.2	Track Notes	25%	50%	90%	100%		
1.3.9.3	Track Plan	25%	50%	90%	100%		
1.3.9.4	Track Schematic	25%	50%	90%	100%		
1.3.9.5	Track Profiles	25%	50%	90%	100%		
1.3.9.6	Track Geometry Data	25%	50%	90%	100%		
1.3.9.7	Track Turnout Data	25%	50%	90%	100%		
1.3.9.8	Track Sections and Details	25%	50%	90%	100%		
1.3.9.9	At-Grade Crossing Plan	25%	50%	90%	100%		
1.3.9.10	At-Grade Crossing Sections and Details	25%	50%	90%	100%		
1.3.10	Railroad Signalization:						
1.3.10.1	General and Site-Specific Information	25%	50%	90%	100%		
1.3.10.2	Circuit Plan Symbols and Signage	25%	50%	90%	100%		
1.3.10.3	Vital Relay Symbols	25%	50%	90%	100%		
1.3.10.4	Track Wire Installation	25%	50%	90%	100%		
1.3.10.5	Crossing Gate Sections and Details	25%	50%	90%	100%		
1.3.10.6	Crossing Gate Junction Point	25%	50%	90%	100%		
1.3.10.7	Grounding Details	25%	50%	90%	100%		
1.3.10.8	Crossing Circuit Plan	25%	50%	90%	100%		
1.3.10.9	Crossing Circuits	25%	50%	90%	100%		
1.3.10.10	Gate Circuit Plan	25%	50%	90%	100%		
1.3.10.11	Data Recorder Circuit Plan	25%	50%	90%	100%		
1.3.10.12	Power and Battery Circuits	25%	50%	90%	100%		
1.3.10.13	Rack Layout Plans	25%	50%	90%	100%		
1.3.10.14	House Layout Plans	25%	50%	90%	100%		

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.3.10.15	House Floor Plans	25%	50%	90%	100%		
1.3.10.16	Cable Plan	25%	50%	90%	100%		
1.3.11	Roadway:						
1.3.11.1	Roadway Site Plan	25%	50%	90%	100%		
1.3.11.2	Roadway Notes	25%	50%	90%	100%		
1.3.11.3	Roadway Plan	25%	50%	90%	100%		
1.3.11.4	Roadway Profiles	25%	50%	90%	100%		
1.3.11.5	Roadway Sections and Details	25%	50%	90%	100%		
1.3.11.6	Intersection Sections and Details	25%	50%	90%	100%		
1.3.11.7	Parking Lot Sections and Details	25%	50%	90%	100%		
1.3.12	Striping and Fencing:						
1.3.12.1	Striping and Fencing Site Plan		25%	90%	100%		
1.3.12.2	Striping and Fencing Notes		25%	90%	100%		
1.3.12.3	Striping and Fencing Plan		25%	90%	100%		
1.3.12.4	Striping and Fencing Sections and Details		25%	90%	100%		
1.3.13	Paving:						
1.3.13.1	Paving Site Plan		25%	90%	100%		
1.3.13.2	Paving Notes		25%	90%	100%		
1.3.13.3	Pavement Plan		25%	90%	100%		
1.3.13.4	Pavement Sections and Details		25%	90%	100%		
1.3.14	Signage:						
1.3.14.1	Signing Site Plan		25%	90%	100%		
1.3.14.2	Signing Notes		25%	90%	100%		
1.3.14.3	Signing Plan		25%	90%	100%		
1.3.14.4	Signing Details		25%	90%	100%		
1.3.15	Traffic Control:						
1.3.15.1	Traffic Control Site Plan		25%	90%	100%		
1.3.15.2	Traffic Control Notes		25%	90%	100%		
1.3.15.3	Traffic Control Plan		25%	90%	100%		
1.3.15.4	Traffic Control Details		25%	90%	100%		
1.3.15.5	Detour Plan		25%	90%	100%		
1.3.15.6	Detour Details		25%	90%	100%		
1.3.16	Traffic Signal:						
1.3.16.1	Traffic Signal Site Plan		25%	90%	100%		
1.3.16.2	Traffic Signal Notes		25%	90%	100%		
1.3.16.3	Traffic Signal Plan		25%	90%	100%		
1.3.16.4	Traffic Signal Details		25%	90%	100%		
1.3.17	Landscape and Irrigation:						
1.3.17.1	Landscape Site Plan	25%	50%	90%	100%		
1.3.17.2	Landscape Notes		25%	90%	100%		
1.3.17.3	Planting Plan		25%	90%	100%		

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.3.17.4	Planting Details		25%	90%	100%		
1.3.17.5	Irrigation Legend		25%	90%	100%		
1.3.17.6	Irrigation Notes		25%	90%	100%		
1.3.17.7	Irrigation Calculations		25%	90%	100%		
1.3.17.8	Irrigation Plan		25%	90%	100%		
1.3.17.9	Irrigation Details		25%	90%	100%		
1.3.18	Standard Urban Stormwater Mitigation Plan (SUSMP) Report:						
1.3.18.1	Stamped/signed report documenting requirements of Stormwater Design Manual	25%	50%	90%	100%		
1.3.19	Track Calculations:						
1.3.19.1	Calculations demonstrating horizontal and vertical alignment conformance to POLB Railroad Design Criteria	25%	50%	100%			
1.3.20	Roadway Calculations:						
1.3.20.1	Calculations demonstrating horizontal and vertical alignment conformance to POLB Design Criteria	25%	50%	100%			
1.3.21	Earthwork Grading Calculations:						
1.3.21.1	Calculations demonstrating volumetric grading quantities for both cut and fill	25%	50%	100%			
1.3.21.2	Calculations demonstrating volumetric grading quantities of non-hazardous, re-use, Cal Haz, and stained/odorous waste	25%	50%	100%			
1.3.22	Protective Structures for Utilities Calculations:						
1.3.22.1	Design Criteria including list of current applicable Federal, State and City of Long Beach adopted building and seismic codes	25%	50%	100%			
1.3.22.2	List of minimum strength standards for all concrete, masonry, structural and reinforcing steel, and any other materials used for structural support	50%	100%				
1.3.22.3	Detailed listing of all loads and load combinations used	25%	50%	100%			

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.3.22.4	Detailed structural analysis methodology for gravity design including service analysis approach, material properties, design loads, foundation springs, and load combinations	25%	50%	100%			
1.4	Architectural Drawings (if applicable): See Appendix B – Building Drawings						
1.5	Structural Drawings: as required, the Structural Drawings shall contain all of the requirements in Section 1.1 “General Requirements” of these documents, and the following:						
1.5.1	Wharf Plan:						
1.5.1.1	Wharf Site Plan	50%	75%	90%	100%		
1.5.1.2	Wharf Notes	50%	75%	90%	100%		
1.5.1.3	Wharf Deck Plan	50%	75%	90%	100%		
1.5.1.4	Pile Layout Plan	50%	75%	90%	100%		
1.5.1.5	Wharf Typical Section	50%	75%	90%	100%		
1.5.1.6	Pile Reinforcement Details		50%	90%	100%		
1.5.1.7	Pile Connection Details		50%	90%	100%		
1.5.1.8	Slope Indicator and Jet Pipe Details		50%	90%	100%		
1.5.1.9	Longitudinal Girder/Slab Details		50%	90%	100%		
1.5.1.10	Transverse Girder/Slab Details		50%	90%	100%		
1.5.1.11	Wharf Deck Top Reinforcement Plan		50%	90%	100%		
1.5.1.12	Wharf Deck Bottom Reinforcement Plan		50%	90%	100%		
1.5.1.13	Wharf Deck Sections and Details		50%	90%	100%		
1.5.1.14	Outer Deck Plan		50%	90%	100%		
1.5.1.15	Outer Deck Sections and Details		50%	90%	100%		
1.5.1.16	Bollard Seat and Fender Backing		50%	90%	100%		
1.5.1.17	Bollard Details		50%	90%	100%		
1.5.1.18	Fender System		50%	90%	100%		
1.5.1.19	Safety Ladder Details		50%	90%	100%		
1.5.1.20	Utility Receptacle Details		50%	90%	100%		
1.5.1.21	Shore Power Vault Details		50%	90%	100%		
1.5.1.22	Transverse Utility Trench Details		50%	90%	100%		
1.5.1.23	Crane Power Trench Details		50%	90%	100%		

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.5.1.24	Crane Rail Details		50%	90%	100%		
1.5.1.25	Stowage Pin Socket Details		50%	90%	100%		
1.5.1.26	Crane Stop Details		50%	90%	100%		
1.5.1.27	Expansion Joint Details		50%	90%	100%		
1.5.1.28	Cutoff Wall Details		50%	90%	100%		
1.5.1.29	Approach Slab Details		50%	90%	100%		
1.5.2	Wharf Backlands Plan:						
1.5.2.1	Wharf Backlands Site Plan	25%	50%	90%	100%		
1.5.2.2	Wharf Backlands Notes	25%	50%	90%	100%		
1.5.2.3	Wharf Backlands Plan	25%	50%	90%	100%		
1.5.2.4	Light Pole Foundation Details	25%	50%	90%	100%		
1.5.2.5	RTG or RMG Runway Details	25%	50%	90%	100%		
1.5.2.6	Cable Drum Pit Details	25%	50%	90%	100%		
1.5.2.7	Substation Foundation Details	25%	50%	90%	100%		
1.5.3	Retaining Wall Plan:						
1.5.3.1	Retaining Wall Site Plan	25%	50%	90%	100%		
1.5.3.2	Retaining Wall Notes	25%	50%	90%	100%		
1.5.3.3	Retaining Wall Plan	25%	50%	90%	100%		
1.5.3.4	Retaining Wall Profile	25%	50%	90%	100%		
1.5.3.5	Retaining Wall Sections and Details	25%	50%	90%	100%		
1.5.4	Wharf Structural Calculations:						
1.5.4.1	Design Criteria including list of current applicable Federal, State and City of Long Beach adopted building and seismic codes and certification of compliance; include criteria for pile installation and seismic design criteria conforming to POLB Wharf Design Criteria latest version	25%	50%	100%			
1.5.4.2	List of minimum strength standards for all concrete, masonry, structural and reinforcing steel, and any other materials used for structural support	50%	100%				
1.5.4.3	Detailed listing of all loads and load combinations used	25%	50%	100%			
1.5.4.4	Detailed structural analysis methodology for gravity design including service analysis approach, material properties, design loads, pile springs, and load combinations	25%	50%	100%			
1.5.4.5	Concrete deck design including outslab and bollard block design	25%	50%	100%			

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.5.4.6	Concrete girder design, if applicable, including crane girders, power trench, and transverse utility trench	25%	50%	100%			
1.5.4.7	Pile gravity design	25%	50%	100%			
1.5.4.8	Seismic analysis and design using capacity pushover models, p-y and t-z springs, seismic mass, and hinge definition	25%	50%	100%			
1.5.4.9	Seismic analysis and design using demand models and analysis method used	25%	50%	100%			
1.5.4.10	Capacity protection design calculations	25%	50%	100%			
1.5.4.11	Shear key design at expansion joints	25%	50%	100%			
1.5.4.12	Power vault, cutoff wall, approach slab, expansion joint plate, stowage pin support, crane stop, and other miscellaneous wharf component calculations	25%	50%	100%			
1.5.4.13	Berthing and mooring analysis report indicating design vessel size/s and operational restrictions if any	25%	50%	100%			
1.5.5	Backlands Structural Calculations:						
1.5.5.1	Design Criteria including list of current applicable Federal, State and City of Long Beach adopted building and seismic codes and certification of compliance	25%	50%	100%			
1.5.5.2	List of minimum strength standards for all concrete, masonry, structural and reinforcing steel, and any other materials used for structural support	50%	100%				
1.5.5.3	Detailed listing of all loads and load combinations used	25%	50%	100%			
1.5.5.4	Detailed structural analysis methodology for gravity design including service analysis approach, material properties, design loads, foundation springs, and load combinations	25%	50%	100%			

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.5.5.5	Detailed structural analysis methodology for seismic and wind design including service analysis approach, material properties, design loads, foundation springs, and load combinations	25%	50%	100%			
1.5.5.6	RTG or RMG runway foundation calculations		25%	50%	75%	100%	
1.5.5.7	High Mast Light pole and/or other lighting foundation calculations		25%	50%	75%	100%	
1.5.5.8	Equipment foundation calculations		25%	50%	75%	100%	
1.5.5.9	Equipment anchorage calculations		25%	50%	75%	100%	
1.5.5.10	Stormwater trench calculations		25%	50%	75%	100%	
1.5.5.11	Stormwater manhole lid calculations		25%	50%	75%	100%	
1.5.6	Retaining Wall Structural Calculations:						
1.5.6.1	Design Criteria including list of current applicable Federal, State and City of Long Beach adopted building and seismic codes and certification of compliance	25%	50%	100%			
1.5.6.2	List of minimum strength standards for all concrete, masonry, structural and reinforcing steel, and any other materials used for structural support	50%	100%				
1.5.6.3	Detailed listing of all loads and load combinations used	25%	50%	100%			
1.5.6.4	Detailed structural analysis methodology for retaining wall design including service analysis approach for both gravity and seismic/wind design, material properties, design loads, foundation springs, and load combinations	25%	50%	100%			
1.5.6.5	Retaining wall and foundation strength calculations including live load surcharge, hydrostatic loading, seismic loading, sliding verification, and stability verification		25%	50%	75%	100%	
1.5.7	Geotechnical Design Report:						

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.5.7.1	Stamped/signed report conforming to POLB Portwide Ground Motion Report and Wharf Design Criteria, latest versions	50%	90%	100%			
1.5.7.2	Wharf Pile design recommendations	50%	90%	100%			
1.5.7.3	Other foundation and/or retaining wall design recommendations	50%	90%	100%			
1.5.7.4	Rock dike slope and/or bulkhead stability analysis	50%	90%	100%			
1.5.7.5	Dredging recommendations	50%	90%	100%			
1.5.7.6	Fill surcharge recommendations including fill consolidation recommendations	50%	90%	100%			
1.5.7.7	Settlement monitoring recommendations	50%	90%	100%			
1.5.8	Geotechnical Data Report:						
1.5.8.1	Stamped/signed report issued for bid package inclusion documenting all soil testing and data compiled including borings and CPTs	50%	90%	100%			
1.6	Mechanical Drawings (if applicable): See Appendix B – Building Drawings						
1.7	Plumbing Drawings (if applicable): See Appendix B – Building Drawings						
1.8	Fire Protection Drawings (if applicable): See Appendix B – Building Drawings						
1.9	Electrical Drawings: as required, the Electrical Drawings shall contain all of the requirements in Section 1.1 "General Requirements" of these documents, and the following:						
1.9.1	Electrical Site Plan:						
1.9.1.1	Electrical Site Plan	25%	50%	90%	100%		
1.9.1.2	Electrical Site Plan Notes	25%	50%	90%	100%		
1.9.1.3	Electrical Site Plan Legend and Abbreviations	25%	50%	90%	100%		

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E Package ²
1.9.2	Power Plan:						
1.9.2.1	Electrical Single Line Diagrams	50%	75%	100%			
1.9.2.2	Electrical Feeder and Manhole Schedules	25%	50%	90%	100%		
1.9.2.3	Electrical Load Summary	25%	50%	90%	100%		
1.9.2.4	Electrical Ductbank and Manhole Plans	25%	50%	90%	100%		
1.9.2.5	Electrical Grounding Plans	25%	50%	90%	100%		
1.9.2.6	Electrical Substation Plans	25%	50%	90%	100%		
1.9.2.7	Electrical Switchgear Plans	25%	50%	90%	100%		
1.9.2.8	Electrical Shore Power Outlet Plans	25%	50%	90%	100%		
1.9.2.9	Electrical Equipment Elevations	25%	50%	90%	100%		
1.9.2.10	Electrical Shore Power Outlet Box Wiring Schematic	25%	50%	90%	100%		
1.9.2.11	Electrical Sections and Details	25%	50%	90%	100%		
1.9.3	Lighting Plan:						
1.9.3.1	Electrical Lighting Site Plan	25%	50%	90%	100%		
1.9.3.2	Electrical Lighting Notes	25%	50%	90%	100%		
1.9.3.3	Electrical Lighting Plan	25%	50%	90%	100%		
1.9.3.4	Electrical Lighting Sections and Details	25%	50%	90%	100%		
1.9.4	Lighting Calculations:						
1.9.4.1	Stamped/signed calculations report conforming to POLB Design Criteria requirements	25%	50%	100%			

Footnotes:¹ All drawings, calculations and reports shall be at 100% at Final design. Plan check approval should be in place prior to submitting Final design where practical.

² All drawings and calculations shall be stamped/signed by a California PE or SE at Final Signed PS&E Package stage. Reports requiring stamp/signature shall also be signed.

Attachment B

Building Drawings

Attachment B – Required Drawings for Building Projects

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.1	General Drawings						
1.1.1	Title Sheet: As required for the overall Drawing Set, the first sheet of Drawings shall contain the following						
1.1.1.1	Project location and vicinity map	50%	100%				
1.1.1.2	List of all drawings organized by discipline	25%	50%	75%	100%		
1.1.1.3	Master list of symbols, legends and abbreviations	50%	75%	100%			
1.1.1.4	List of current applicable Federal, State and City of Long Beach adopted building, fire, safety, electrical, plumbing, mechanical and energy codes	50%	75%	100%			
1.1.1.5	Project directory listing all architectural, engineering and consulting firms. Provide legal name of each firm, state license number with renewal date, address, phone and fax number, e-mail and website data, and key responsible architect, engineer, consultant or project manager of each firm	50%	75%	100%			

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.1.1.6	Project data listing the legal description, proposed building use(s), construction type, overall site and building sq. ft., number of stories and maximum height, number of parking spaces required and provided, and overall scope of work	50%	75%	100%			
1.1.1.7	North arrow, scale and dimensions on every drawing sheet that contains a plan, elevation, side or perspective view illustration - as applicable	100%					
1.1.2	Reference Plans: For each appropriate discipline the first sheet of Drawings shall contain the following:						
1.1.2.1	Index listing of drawings		25%	75%	100%		
1.1.2.2	List of symbols, legends and abbreviations		25%	75%	100%		
1.1.2.3	Vicinity map and building location	75%	100%				
1.1.2.4	Certification of compliance with all current applicable Federal, State and City of Long Beach adopted civil, building, fire, safety, electrical, plumbing, mechanical and title 24 energy codes		25%	75%	100%		
1.1.2.5	Program compliance and verification analysis, tabulations and notes for the building and site		25%	75%	100%		
1.1.2.6	General Notes (applicable notes by discipline)		25%	75%	100%		
1.1.2.7	Fire department notes (as required for discipline)	25%	50%	75%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.1.2.8	Schedules – applicable lists of equipment and/or materials		25%	75%	100%		
1.2	Civil Drawings: as required, the Civil Drawings shall contain all of the requirements in Section 1.1 “General Requirements” of these documents, and the following:						
1.2.1	Civil Site Plan:						
1.2.1.1	Site legal description – meets, bounds, and section. as provided by the POLB	25%	90%	100%			
1.2.1.2	Existing topography – based upon current surveyed conditions	25%	90%	100%			
1.2.1.3	Grades – drainage flow lines (existing and final)	25%	90%	100%			
1.2.1.4	Roads, walks, paving, curbs, buildings and other structures (existing and final)	25%	90%	100%			
1.2.1.5	Parking areas and circulation patterns, dimensions of parking spaces and overall parking lot dimensions	25%	90%	100%			
1.2.1.6	Paving materials and thickness (existing and final)	25%	90%	100%			
1.2.1.7	On-site and off-site locations and sources of all utilities (existing and final)	25%	90%	100%			
1.2.1.8	Special requirements (security, access for the disabled, traffic.)	25%	90%	100%			
1.2.1.9	Dimensions of on-site and off-site improvements	25%	90%	100%			
1.2.1.10	Locations of Soils Investigation test borings	50%	90%	100%			
1.2.2	Civil Demolition and Remediation Plans (if applicable):						
1.2.2.1	All existing buildings or structures to be remediated or removed	50%	90%	100%			
1.2.2.2	Boundary of all existing areas of soil to be remediated	50%	90%	100%			

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.2.3	Phasing Plan (if applicable):						
1.2.3.1	Clear definition of all work to be completed in each phase of the project	50%	90%	100%			
1.2.3.2	Indication of fencing and other security measures regarding vehicle and pedestrian access during each phase of the project	50%	90%	100%			
1.2.4	Site Fire Protection and Fire Access Plan (if applicable):						
1.2.4.1	Access and special parking locations for fire department	50%	75%	100%			
1.2.4.2	Location of all fire department equipment, hook-ups, fire hydrants, fire department connections, alarm monitors.	50%	75%	100%			
1.3	Architectural Drawings: as required, the Architectural Drawings shall contain all of the requirements in Section 1.1 "General Requirements" of these documents, and the following:						
1.3.1	Site Plan:						
1.3.1.1	Background Site Plan	50%	90%	100%			
1.3.1.2	Limits of contract area	50%	100%				
1.3.1.3	Dimensions to property lines for all existing and proposed buildings and major site improvements with dimensions referencing to centerlines of adjacent (or internal) public streets	50%	90%	100%			
1.3.1.4	Site access, circulation and pedestrian safety	50%	90%	100%			
1.3.1.5	Parking and delivery areas (paved and hardscaped)	50%	90%	100%			
1.3.1.6	Landscape and planter areas		50%	75%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.3.1.7	On-site locations and sources of all utilities (i.e. sub-station, generators, water and sewer mains, telephone cable boxes.)	50%	90%	100%			
1.3.1.8	Walls, fences, gates, trash and generator enclosures and guard stations	50%	100%				
1.3.1.9	Locations of all flagpoles pole lights, monument signs.		50%	75%	100%		
1.3.1.10	Special requirements (security, access for the disabled, traffic.)	50%	90%	100%			
1.3.1.11	Phasing plans – (if appropriate to the project)	50%	90%	100%			
1.3.2	Architectural Floor Plans:						
1.3.2.1	Background Floor Plans	50%	100%				
1.3.2.2	Grid lines and dimensions	50%	100%				
1.3.2.3	Program “Project criteria-scope of work” compliance tabulations / notes for each floor	50%	100%				
1.3.2.4	All room and area names, numbers, and interior clear dimensions	50%	100%				
1.3.2.5	Wall locations, dimensions and types	50%	100%				
1.3.2.6	Wall index indicating required fire and acoustical ratings	50%	100%				
1.3.2.7	Door and window locations, door swings, centerline dimensions	50%	100%				
1.3.2.8	Door and symbols with reference to door and window schedules		50%	100%			
1.3.2.9	Elevator shafts, equipment rooms, stairwells, ramps, landings, all required railings, dimensions & clearances	50%	100%				
1.3.2.10	Built-in cabinet and counter locations with symbols with reference to interior elevations and details		50%	75%	100%		
1.3.2.11	Electrical and mechanical equipment rooms, janitor closets. with major equipment, sizes and clearances indicated	25%	50%	75%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.3.2.12	Plumbing fixtures: locations and required clearances (i.e. sinks, toilets, urinals, mop sinks, water fountains.) <i>Note: Architect may elect to provide enlarged floor plans and interior elevations for details and clarity of Title 24 disabled compliance for restrooms, stairs, elevators, and ramps.</i>	50%	100%				
1.3.2.13	Restroom equipment: (i.e.: toilet partitions, grab bars, toilet paper, soap and paper towel dispensers, trash receptacles.) including restroom fixture symbols, fixture type, number of each type of fixture required, size, manufacturer, model #, special requirements, finish, reference to installation and support details, and special notes		50%	75%	100%		
1.3.3	Exterior Elevations: (all exterior sides of building, including courtyards if included)						
1.3.3.1	Outline of each side of building and all fenestration's with overall height and opening dimensions	50%	100%				
1.3.3.2	All exterior materials and finishes – doors (indicating swing direction), windows, wall panels, exposed columns, exposed roofs and awnings with symbols referencing to exterior material and finish colors	50%	75%	100%			
1.3.3.3	Top of each floor and bottom of each ceiling (shown as dashed lines) with floor to floor and overall height dimensions	50%	100%				
1.3.3.4	Top of roof lines with prominent roof mounted equipment (shown dashed)	25%	50%	100%			

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.3.3.5	Impact of planters, landscape, site grading, etc on exterior building elevations (shown dashed or solid as appropriate)	25%	50%	100%			
1.3.3.6	Building signage, address numbers and dimensions	25%	50%	100%			
1.3.3.7	Detail symbols indicating location of all appropriate exterior finish, door and window opening and waterproofing details			50%	100%		
1.3.4	Building Sections and Elevations: (longitudinal and transverse cross sections through major and/or complex areas indicating overall horizontal and vertical support)						
1.3.4.1	Background Building Sections and Elevations per POLB's CADD Standards Manual..	25%	50%	100%			
1.3.4.2	All slabs, floors, walls, columns, beams, ceilings, roofs, door and window openings, major framing elements. that would be seen in cross section during framing, prior to finishes being installed	25%	50%	100%			
1.3.4.3	Outline of exterior or building envelope and each floor of building with floor to floor and floor to window sill dimensions	25%	50%	100%			
1.3.4.4	Detail symbols indicating location of all appropriate architectural details			50%	100%		
1.3.5	Roof Plan:						
1.3.5.1	Reference Roof Plan per POLB's CADD Standards Manual (to be used by all other applicable disciplines)	25%	50%	100%			
1.3.5.2	Grid lines	25%	50%	100%			

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.3.5.3	Exterior of building and all parapets with overall dimensions	50%	75%	100%			
1.3.5.4	Skylights, smoke hatches, access hatches, roof mounted equipment and screening. including dimensions	50%	75%	100%			
1.3.5.5	Roof drain, scupper and overflow locations		25%	50%	100%		
1.3.5.6	Roofing materials, slope and direction of flow		25%	50%	100%		
1.3.5.7	Detail symbols indicating location of all appropriate roof parapet, overhang, canopy, flashing, openings, equipment and screening details			50%	100%		
1.3.6	Architectural Reflected Ceiling Plans: (may be done by Architect or Interior Design Consultant)						
1.3.6.1	Reflected Ceiling Plans per POLB's CADD Standards Manual.	50%	100%				
1.3.6.2	Grid lines	50%	100%				
1.3.6.3	All walls, columns, door and window openings	50%	100%				
1.3.6.4	Room and area names, numbers, and symbol with reference to room finish schedule for ceiling types, height dimensions and finishes	50%	100%				
1.3.6.5	Soffits, exposed beams and other structures located above +7 feet above finish floor, dimensions, and reference to any required fire and acoustical ratings	50%	100%				
1.3.6.6	Ceiling patterns and grids, types and appropriate dimensions	25%	50%	100%			
1.3.6.7	Lighting fixture and HVAC grille locations with symbol references to type of fixture or grille		25%	50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.3.7	FFE (Fixtures Furnishings & Equipment Plans): (if required, may be done by Architect or Interior Design Consultant)						
1.3.7.1	Fixture, Furniture & Equipment Plans per POLB's CADD Standards Manual.		25%	50%	100%		
1.3.7.2	Room numbers, and symbol with reference to room finish schedule for finishes		25%	50%	100%		
1.3.7.3	Workstations, furniture, millwork/cabinet and equipment layouts, showing all desks, chairs, systems furniture, file cabinets, office and computer related equipment		25%	50%	100%		
1.3.7.4	Detail symbols indicating location of all appropriate millwork/cabinetry and specialty built-in details			50%	100%		
1.3.8	Interior Elevations: (may be done by Architect or Interior Design Consultant)						
1.3.8.1	Interior Elevations per POLB's CADD Standards Manual.		50%	100%			
1.3.8.2	All interior wall materials with symbols referencing to interior material, finish and colors		50%	100%			
1.3.8.3	Doors (indicating swing direction) , windows (indicate opening direction) with symbols referencing to door and window details		50%	100%			
1.3.8.4	Height dimensions for all floor to ceiling and soffit heights, wainscot heights, door and window heights, and countertop and millwork heights		50%	100%			
1.3.8.5	Width dimensions for required disabled access clearances at hallways, stairways and in restrooms	25%	100%				

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.3.8.6	Interior signage, materials, size and mounting height to comply with disabled access requirements			50%	100%		
1.3.9	Interior Finish Schedule: (may be done by Architect or Interior Design Consultant)						
1.3.9.1	Room finish schedule spreadsheet listing all room and area names and numbers	25%	100%				
1.3.9.2	All interior floor, base, wall, wainscot and ceiling finish materials, finishes and colors and details as needed, including transitions.		25%	50%	100%		
1.3.10	Door and Window Schedules and Details:						
1.3.10.1	Doors listed by symbol, type, total number of each door unit, size, number of doors per opening, glazing size and type, hardware set, lock set, references to door details and special notes		25%	50%	100%		
1.3.10.2	Door type elevations indicating swing direction, any glazed openings, opening height and width, hardware mounting height and reference symbol to door details		25%	50%	100%		
1.3.10.3	Windows listed by symbol, type, total number of each window unit, size, number of glazing lites per opening, references to window details and special notes		25%	50%	100%		
1.3.10.4	Door Details per POLB's CADD Standards Manual.			50%	100%		
1.3.10.5	Window Details per POLB's CADD Standards Manual.			50%	100%		
1.3.11	Millwork Schedules and Details: (if required, may be done by Architect, Interior Design Consultant or Millwork Cabinetry Sub-contractor)						

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.3.11.1	Millwork and Cabinets listed by symbol, type, total number or linear footage of each unit, size, references to millwork and cabinetry details and special notes			50%	100%		
1.3.11.2	Millwork and Cabinet Elevations per POLB's CADD Standards Manual.			50%	100%		
1.3.11.3	Millwork and Cabinet Details per POLB's CADD Standards Manual.			50%	100%		
1.3.12	Architectural Details: (as appropriate, some finish details may be done by Architect or Interior Design Consultant)			50%	100%		
1.3.12.1	Architectural Details per POLB's CADD Standards Manual.			50%	100%		
1.3.12.2	Details of all conditions of wall assemblies, wall, column and beam furring, soffits, and suspended ceilings			50%	100%		
1.3.12.3	Details of all ramps, stairs, landings, railings, elevators			50%	100%		
1.3.12.4	Details for seismic bracing for suspended ceilings, fixtures and equipment			50%	100%		
1.3.12.5	Details of all floor, wall, roof and skylight, penetration, flashing and waterproofing conditions			50%	100%		
1.3.12.6	Details required for disabled access compliance			50%	100%		
1.3.12.7	Details of any special complex areas, designs or systems transition details.			50%	100%		
1.3.13	Architectural Renderings & Models: (as required by the POLB Design Manager)						
1.3.13.1	Architectural Renderings: Perspective Exterior & Interior Elevation views which indicate building scale, materials, colors and finishes.	25%	75%	100%			

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.3.13.2	Architectural Models: 3-Dimensional scale models of proposed building Exteriors	25%	75%	100%			
1.3.13.3	Virtual Computer Models: 3-Dimensional models that are shown on a Computer monitor or projector screen which indicate building scale, materials, colors and finishes. These can be still images, slide shows, fly over or walk-through movies with appropriate detail to the phase of the design.	25%	75%	100%			
1.4	Structural Drawings: as required, the Structural Drawings shall contain all of the requirements in Section 1.1 "General Requirements" of these documents, and the following:						
1.4.1	Structural Reference Plan(s):						
1.4.1.1	Schedules including applicable footing, slab, pad, column, beam, shear wall, floor and roof framing schedules			50%	100%		
1.4.2	Structural Site Plan(s): (If Required)						
1.4.2.1	Proposed location of project building(s) and parking structure(s) – if appropriate	50%	100%				
1.4.2.2	Location of test borings investigated in Soils Report	50%	100%				
1.4.2.3	Grades – drainage flow lines (existing and final)	50%	100%				
1.4.3	Foundation Plan(s):						
1.4.3.1	Foundation Plan(s) per POLB's CADD Standards Manual.	50%	75%	100%			

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.4.3.2	Location, dimensions, size and reinforcement of all piles, grade beams, exterior, interior, and pad footings, and slabs with key references to structural schedules and reference symbol of each condition to appropriate foundation details	25%	50%	75%	100%		
1.4.3.3	Location of any special structural anchors with reference symbol to structural detail		50%	75%	100%		
1.4.3.4	Locations and length of shear walls with key reference to shear wall schedule	25%	50%	75%	100%		
1.4.3.5	Locations, dimensions and reinforcement of any special openings in the slab or footings for equipment or piping by others			50%	100%		
1.4.4	Floor and Roof Framing Plan(s):						
1.4.4.1	Floor and Roof Framing Plan(s) per POLB's CADD Standards Manual.		50%	75%	100%		
1.4.4.2	Location, dimensions, size and reinforcement of all columns, beams, girders, bearing walls, floor and roof slabs with key references to structural schedules and reference symbol of each condition to appropriate framing details		50%	75%	100%		
1.4.4.3	Location, dimensions, size and spacing of repetitive secondary framing elements, joists with key references to structural schedules and reference symbol of each condition to appropriate framing details			50%	100%		
1.4.4.4	Slab/decking assembly and thickness	50%	100%				
1.4.4.5	Location of any special structural anchors with reference symbol to structural detail			50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.4.4.6	Locations and length of shear walls with key reference to shear wall schedule	25%	50%	75%	100%		
1.4.4.7	Locations, dimensions and reinforcement of any special openings in the floor/roof slab for elevators, stairs, equipment, skylights, roof hatches or piping by others		50%	75%	100%		
1.4.4.8	Location of floor/roof mounted equipment and screening with reference to weight and wind load studies in structural calculations			50%	100%		
1.4.4.9	Reference to typical beam and girder loading and seismic studies in the structural calculations	25%	50%	75%	100%		
1.4.5	Building Sections & Elevations: (longitudinal and transverse cross sections through major and/or complex areas indicating overall horizontal and vertical support and the lateral load resisting system)						
1.4.5.1	Building Sections and Elevations per POLB's CADD Standards Manual.	25%	50%	75%	100%		
1.4.5.2	All piles, grade beams, footings, slabs, floors, shear walls, columns, beams, girders, roofs, primary framing elements	25%	50%	100%			
1.4.5.3	Top of exterior grade, top of each floor, shear walls, columns, beams, x-bracing, top of roof, primary framing elements		50%	75%	100%		
1.4.5.4	Structural support and reinforcing in exterior bearing walls and surrounding window and door openings		50%	75%	100%		
1.4.5.5	Detail symbols of typical structural conditions referencing appropriate structural details			50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.4.6	Structural Details:						
1.4.6.1	Structural details per POLB's CADD Standards Manual.			50%	100%		
1.4.6.2	Pile, grade beam, foundation, slab, floor and roof assemblies and connections			50%	100%		
1.4.6.3	Column, beam and girder connections			50%	100%		
1.4.6.4	Shear walls, wall openings and framing for all door, window, skylight and roof opening conditions			50%	100%		
1.4.6.5	Seismic bracing for all equipment			50%	100%		
1.4.7	Structural Calculations:						
1.4.7.1	List of current applicable Federal, State and City of Long Beach adopted building and seismic codes and certification of compliance	25%	50%	100%			
1.4.7.2	List of minimum strength standards for all concrete, masonry, structural and reinforcing steel, and any other materials used for structural support	50%	100%				
1.4.7.3	Detailed load analysis and sizing of all primary and secondary horizontal and vertical load bearing structural elements	25%	50%	100%			
1.4.7.4	Detailed wind and/or seismic analysis and sizing of all lateral load bearing structural elements	25%	50%	100%			
1.5	Mechanical Drawings: as required, the Mechanical Drawings shall contain all of the requirements in Section 1.1 "General Requirements" of these documents, and the following:						

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.5.1	Mechanical Reference Plan(s): When required, the first sheet(s) of Mechanical drawings shall contain the following:						
1.5.1.1	Program compliance and verification analysis, tabulations and notes for the building envelope and each floor including HVAC loads in BTU's, air volumes in CFM, exhaust and make-up return air requirements			50%	100%		
1.5.1.2	Schedules/lists of ducting, piping and HVAC materials – including sizes, grades and standards			50%	100%		
1.5.1.3	Mechanical Equipment Schedules – including mechanical equipment symbols, equipment type, locations, number of each type of equipment required, capacity rating, efficiency rating, size, weight, manufacturer, model #, electrical requirements, finish, reference to installation and support details, and special notes			50%	100%		
1.5.1.4	Title 24 Energy Notes, Mandatory Measures, and Building Envelope Compliance Forms			50%	100%		
1.5.2	Mechanical Site Plan: (Coordinated with other disciplines and showing)						
1.5.2.1	Location of buildings or rooms required for mechanical systems and equipment		50%	100%			
1.5.2.2	Single line diagram for routing of mechanical ducting and piping systems on site with appropriate duct/pipe sizes and required insulation		50%	100%			
1.5.2.3	Symbol reference to installation and support details, for site mechanical equipment			50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.5.3	HVAC Floor Plans, Elevations, Building Sections and Roof Plans: (Coordinated with other disciplines and showing)						
1.5.3.1	HVAC Floor Plans, Elevations, Building Sections and Roof Plan per POLB's CADD Standards Manual.		25%	50%	100%		
1.5.3.2	Location and symbols referencing all mechanical equipment including fans, condensers, compressors, evaporators, chillers, cooling towers, boilers.		50%	75%	100%		
1.5.3.3	HVAC zones, room temperature sensors and thermostat locations and mounting heights, thermal and smoke evacuation zoning			50%	100%		
1.5.3.4	Ductwork – indicate double line for sections and mains, single line for branches and air volumes, location and size of all required pipe and duct shafts, Diffuser and VAV box locations and sizes, fire damper locations and types			50%	100%		
1.5.3.5	Hot and/or chilled water piping and valves with size and flow direction and capacity			50%	100%		
1.5.3.6	Detail symbols at typical HVAC equipment, ducting and piping conditions referencing appropriate mechanical and seismic support details			50%	100%		
1.5.4	Multi-Story Requirements: (To be added to the HVAC Floor Plans if required by the Fire Department)						
1.5.4.1	Stair relief valve locations			50%	100%		
1.5.4.2	Stair pressurization fan locations			50%	100%		
1.5.4.3	Elevator shaft vent locations			50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.5.4.4	Smoke evacuation system diagram			50%	100%		
1.5.4.5	Sequence of all modes of operation showing the relationships between the sensors and equipment (tabular form is recommended)			50%	100%		
1.5.5	Enlarged Equipment Layout Plans: (If required, for Chiller Room(s), Cooling Tower Area(s), Boiler Room(s), Fan Room(s), Storage Tank(s), per POLB's CADD Standards Manual)						
1.5.5.1	Location, sizes and service/safety clearances for central HVAC equipment located in special areas and rooms with symbol reference to mechanical equipment schedules,		25%	50%	100%		
1.5.5.2	Ductwork – indicate double line for sections and mains, single line for branches and air volumes			50%	100%		
1.5.5.3	Hot and/or chilled water piping and valves with size and flow direction and capacity			50%	100%		
1.5.5.4	Fire damper locations and types			50%	100%		
1.5.5.5	Detail symbols at typical HVAC equipment, ducting and piping conditions referencing appropriate mechanical and seismic support details			50%	100%		
1.5.6	Air and Water Flow Diagrams:						
1.5.6.1	All HVAC equipment w/ reference to Mechanical Equipment Schedule		25%	50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.5.6.2	Air and Water Riser Diagram(s) – indicating sizes, capacity in CFM and GPM for all mains, and overall lengths (required for buildings over 2 stories in height)			50%	100%		
1.5.6.3	Chilled Water, Condenser Water, and Hot water Flow Diagrams with pipe sizes and flow volumes (if required)			50%	100%		
1.5.6.4	Location of all control sensors and Air Balance			50%	100%		
1.5.7	Mechanical Details:						
1.5.7.1	HVAC details indicating all mechanical equipment, ducting, and piping connection conditions per POLB's CADD Standards Manual.			50%	100%		
1.5.7.2	Seismic support and bracing for all mechanical equipment			50%	100%		
1.5.8	Title 24 Building Zone and Envelope Calculations:						
1.5.8.1	Applicable Title 24 energy notes, mandatory requirements and certification of compliance		25%	50%	100%		
1.5.8.2	Slab, wall, door, window, floor, and roof assemblies, diagrams, tabulations and calculations		25%	50%	100%		
1.5.8.3	HVAC Load summaries – normal and peak by season		25%	50%	100%		
1.6	Plumbing Drawings: as required, the Plumbing Drawings shall contain all of the requirements in Section 1.1 "General Requirements" of these documents, and the following:						
1.6.1	Plumbing Reference Plan(s): When required, the first sheet(s) of Plumbing drawings shall contain the following:						

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.6.1.1	Program compliance and verification analysis, tabulations and notes for the site, overall building and each floor including identifying water loads (GPM), sewer loads (EFU), and gas loads (CFM) with separate itemization for space heating and hot water demands, and minimum plumbing fixture requirements		25%	75%	100%		
1.6.1.2	Schedules/lists of piping and plumbing materials – including sizes, grades and standards		25%	75%	100%		
1.6.1.3	Plumbing fixture schedules – including plumbing fixture symbols, fixture type, number of each type of fixture required, size, water and sewer loads, manufacturer, model #, electrical requirements, finish, reference to installation and support details, and special notes		25%	75%	100%		
1.6.1.4	Schedules for all domestic hot water heaters and booster pumps – including equipment symbols, type, number of each type required, size, weight (full), capacity, connection sizes, manufacturer, model #, electrical, gas, overflow and seismic bracing requirements finish, reference to installation and support details, and special notes		25%	75%	100%		
1.6.2	Plumbing Site Plan(s): Coordinated with other disciplines and showing:						
1.6.2.1	Locations, type and size of all related off-site and on-site service pit(s) and connection sizes and requirements	25%	50%	100%			

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.6.2.2	Locations, type and size of all underground and above ground tanks, location type and size of all site pumping equipment including pumps, back check flow valves, water mains.		50%	100%			
1.6.2.3	Locations, type and size of all gas meters, and where gas line(s) enter the site and building(s). Locations, type and size of all plumbing utility systems between building(s) and the site. Locations, type and size of all sewer mains and storm drain lines leaving the site and the building(s).	25%	50%	100%			
1.6.2.4	Height of sewer invert elevations at five feet outside the foundation wall, at the street property line and at the street curb directly above the building sewer line	25%	50%	100%			
1.6.2.5	Symbol reference to installation and support details, for site plumbing equipment and piping			50%	100%		
1.6.3	Plumbing Floor Plans, Elevations, Building Sections and Roof Plan: Coordinated with other disciplines and showing:						
1.6.3.1	Plumbing Floor Plans, Elevations, Building Sections and Roof Drainage Plan per POLB's CADD Standards Manual.		25%	75%	100%		
1.6.3.2	Location and symbols referencing all plumbing equipment including meters, pumps, shut-off and flow valves, tanks.		25%	75%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.6.3.3	Storm water system – including all roof and overflow drain locations, types sizes. Sanitary sewer system – including all sewer, drain, and vent locations, types and sizes. Domestic water systems – including all hot and cold water and hot water return (if required) locations, types and sizes. Gas systems – including gas piping locations, types and sizes. Special systems - including gas piping locations, types and sizes.		25%	75%	100%		
1.6.3.4	Location and size of all required pipe shafts and clearances			50%	100%		
1.6.3.5	Detail symbols at typical plumbing equipment, piping conditions referencing appropriate plumbing and seismic support details			50%	100%		
1.6.4	Enlarged Restroom Plumbing Plan(s): (If required)						
1.6.4.1	Location and fixture symbols referencing all plumbing fixtures in restroom(s) (i.e.: toilets, lavatories, and urinals)		25%	50%	100%		
1.6.4.2	Sanitary sewer system – including all sewer, drain, and vent locations, types and sizes		25%	50%	100%		
1.6.4.3	Domestic water systems – including all hot and cold water and hot water return (if required) locations, types and sizes		25%	50%	100%		
1.6.4.4	Detail symbols at typical plumbing equipment, fixtures and piping conditions referencing appropriate plumbing and seismic support details			50%	100%		
1.6.5	Flow and Riser Diagrams: (Isometric plans if required)						

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.6.5.1	Piping flow diagrams with all valves and components to and from water heater and booster pumps			50%	100%		
1.6.5.2	Domestic Water Riser Diagram(s) – indicating hot and cold water piping sizes and connection to each plumbing fixture (required for buildings over 2 stories in height)			50%	100%		
1.6.5.3	Sewer and Vent Riser Diagram(s) – indicating sewer and vent piping sizes and connection to each plumbing fixture (required for buildings over 2 stories in height)			50%	100%		
1.6.6	Plumbing Details:						
1.6.6.1	Plumbing Details indicating typical plumbing equipment and piping connection conditions per POLB's CADD Standards Manual.			50%	100%		
1.6.6.2	Seismic support and bracing for all plumbing equipment and fixtures			50%	100%		
1.7	Fire Protection Drawings: as required, the Fire Protection Drawings shall contain all of the requirements in Section 1.1 "General Requirements" of these documents, and the following:						
1.7.1	Fire Protection Reference Plan(s): When required, the first sheet(s) of Fire Protection drawings shall contain the following:						

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.7.1.1	Program compliance and verification analysis, tabulations and notes for the building and each floor including identifying water loads (GPM) for the fire protection system			50%	100%		
1.7.1.2	Schedules/lists of fire protection equipment, materials and piping – including sizes, grades and standards			50%	100%		
1.7.1.3	Fire Protection equipment schedules – including fixture unit loads, water loads, reference to installation and support details, and special notes			50%	100%		
1.7.2	Fire Protection Site Plan(s): Coordinated with other disciplines and showing:						
1.7.2.1	Locations, type and size of all related off-site and on-site fire service lines and connection sizes and requirements		25%	50%	100%		
1.7.2.2	Locations, type and size of all existing and proposed fire hydrants, fire department connections, locations of detector check valve, post indicator valve and fire pump room		50%	100%			
1.7.2.3	Locations, type and size of Water source – municipal, pump requirements, location of emergency water tanks or fire pumps (above and/or below grade), energy source, size and connections.		25%	50%	100%		
1.7.2.4	Locations, type and size of all Fire Protection utility systems between building(s) and the site		25%	50%	100%		
1.7.2.5	Emergency accesses fire truck circulation, clearances.		25%	50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.7.2.6	Symbol reference to installation and support details, for site Fire Protection equipment and piping			50%	100%		
1.7.3	Fire Protection Sprinkler Plans (Reflected Ceiling Plans): Coordinated with other disciplines and showing:						
1.7.3.1	Fire Protection Sprinkler Plans per POLB's CADD Standards Manual.		25%	50%	100%		
1.7.3.2	Location and symbols referencing all Fire Protection equipment including, pumps, shut-off and flow valves, risers and tanks.		25%	50%	100%		
1.7.3.3	Fire protection water system – including all sprinkler heads, piping types, and sizes			50%	100%		
1.7.3.4	Sensor/alarm locations, types and mounting heights			50%	100%		
1.7.3.5	Detail symbols at typical fire protection equipment, and piping conditions, referencing appropriate fire protection and seismic support details			50%	100%		
1.7.3.6	Special fire protection systems - Identify on drawings the fire protection system for all computer and telecommunications equipment rooms (if required)		25%	50%	100%		
1.7.4	Enlarged Fire Pump Room Plan: (If required, per the POLB's CADD Standards Manual):						
1.7.4.1	Location and fixture symbols referencing all fire protection equipment, fixtures and main piping		25%	50%	100%		
1.7.4.2	Detail symbols at typical fire protection equipment, fixtures and piping conditions referencing appropriate fire protection and seismic support details			50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.7.5	Fire Protection Riser Diagrams: (If required):						
1.7.5.1	Fire protection piping flow diagrams with all valves and components to and from fire service main/pump to main shut off valve at each floor (required for buildings over 2 stories in height)			50%	100%		
1.7.5.2	Detail symbols at typical fire protection equipment, fixtures and piping conditions referencing appropriate fire protection and seismic support details			50%	100%		
1.7.6	Fire Protection Details:						
1.7.6.1	Details indicating typical fire protection equipment and piping connection conditions per POLB's CADD Standards Manual.			50%	100%		
1.7.6.2	Seismic support and bracing details for all fire protection equipment			50%	100%		
1.8	Electrical Drawings: as required, the Electrical Drawings shall contain all of the requirements in Section 1.1 "General Requirements" of these documents, and the following:						
1.8.1	Electrical Reference Plan(s): The first sheet(s) of Electrical drawings shall contain the following:						
1.8.1.1	Schedule list of electrical equipment, outlets, fixtures, conduit and wiring including sizes, grades and standards		25%	50%	100%		
1.8.1.2	Single Line Diagram – indicating schematic layout of primary electrical power distribution		25%	50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.8.1.3	Panel Schedules - including all power and lighting distribution panels			50%	100%		
1.8.1.4	Lighting Fixture Schedule – including light fixture symbol, fixture type, size, number of each fixture type required, manufacturer, model #, lamp type(s), wattage, finish and trim, reference to lighting fixture detail, and special notes		25%	50%	100%		
1.8.1.5	Title 24 Energy notes, mandatory measures and signed compliance forms		25%	50%	100%		
1.8.2	Electrical Site Plan(s): Coordinated with other disciplines and showing the following:						
1.8.2.1	Location of main serving utility transformer		50%	100%			
1.8.2.2	On-site transformer, pad and enclosure location(s)		50%	100%			
1.8.2.3	Source and routing of all electrical lines, off-site and on-site including the underground and overhead distribution for all site electrical, site lighting, telephone, data, security, CCTV distribution conduits and lines		50%	100%			
1.8.2.4	Telephone and data communications equipment and wiring transmitters		50%	100%			
1.8.2.5	Locations of exterior lighting for parking lot, building entrances and features with symbol referencing lighting fixture schedule		50%	100%			
1.8.2.6	Site security – CCTV controlled entry points, intrusion detectors, alarm equipment and transmitters.		50%	100%			

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.8.3	Electrical Power Floor Plan(s): (Per the POLB's CADD Standards Manual) Coordinated with other disciplines and showing the following:						
1.8.3.1	Location and height of all electrical equipment including meters, main switchgear, transformers, panels, sub-panels. with required clearance and service dimensions		50%	100%			
1.8.3.2	Type, location and height of all electrical outlets			50%	100%		
1.8.3.3	All power wiring shown from outlet locations with indication of sub panel and circuit number. Conduit size with number and size of wires indicated on each run			50%	100%		
1.8.3.4	Detail symbols of typical electrical conditions referencing appropriate electrical details			50%	100%		
1.8.4	Electrical Lighting Plan(s): (Per POLB's CADD Standards Manual) Coordinated with other disciplines and showing the following:						
1.8.4.1	Location and height of all electrical equipment including meters, main switchgear, transformers, motor control centers, panels, and sub-panels.		50%	100%			
1.8.4.2	Type, location and number of all lighting fixtures with reference symbol to lighting fixture schedule		25%	50%	100%		
1.8.4.3	All lighting wiring shown from lighting fixture to j-box to switch or clock locations with indication of sub panel and circuit number. Conduit size with number and size of wires indicated on each run			50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.8.4.4	Detail symbols at typical lighting fixture conditions referencing appropriate lighting and seismic support details			50%	100%		
1.8.5	Electrical Distribution Diagrams, Schedules, and Elevations:						
1.8.5.1	Single Line Diagram – indicating schematic layout of primary electrical power distribution and overall load summary		50%	100%			
1.8.5.2	Electrical Riser Diagram(s) – indicating riser conduit sizes, and overall lengths (required for buildings over 2 stories in height)		25%	50%	100%		
1.8.5.3	Special Systems - Single Line Diagrams (if required) for security systems, CCTV, low voltage, ground loops, data processing/IS (cat-5 and fiber), telecommunications, phone.		25%	50%	100%		
1.8.5.4	Schematic Wiring Diagrams of Control Systems (if required)			50%	100%		
1.8.5.5	Switchgear, Electrical Equipment and Panel Schedules - including all motor control centers, power and lighting distribution panels		25%	50%	100%		
1.8.5.6	Switchgear, Motor Control Center, Power and Lighting Panel Elevations including floor, wall and ceiling lines with floor to ceiling height, equipment layout, size and clearance dimensions, size of conduit between all equipment and detail symbols at electrical equipment support and bracing locations referencing appropriate electrical details		25%	50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.8.5.7	Emergency Generator Switchgear (if required) equipment schedule, locations, dimensions, layouts, conduit and wiring sizing and service/safety clearances		25%	50%	100%		
1.8.5.8	Battery Operated UPS (Uninterrupted Power System) (if required) equipment schedule, locations, dimensions, layouts, conduit and wiring sizing and service/safety clearances		25%	50%	100%		
1.8.6	Electrical Details:						
1.8.6.1	12.8.6.1 Electrical power and lighting details indicating all electrical conditions. Typical conduit details to insure proper clearances and cover			50%	100%		
1.8.6.2	12.8.6.2 Seismic support and bracing for all electrical equipment and fixtures			50%	100%		
1.8.7	Electrical and Title 24 Lighting Calculations:						
1.8.7.1	Load summaries – normal, peak and emergency		25%	50%	100%		
1.8.7.2	Lighting loads and Title 24 analysis and compliance		25%	50%	100%		
1.8.7.3	Other Studies: Voltage drop, voltage transient study (Normal, peak and emergency), short circuit, coordination study, system harmonics study, lightening/grounding study.			50%	100%		
1.9	Landscape and Irrigation Drawings: as required, the Landscape and Irrigation Drawings shall contain all of the requirements in Section 1.1 "General Requirements" of these documents, and the following:						

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.9.1	Landscape and Irrigation Reference Plan(s): When required, the first sheet(s) of Electrical drawings shall contain the following:						
1.9.1.1	Program compliance and verification analysis, tabulations and notes for the site, identifying water loads (GPM), and minimum Landscape and Irrigation fixture requirements		25%	50%	100%		
1.9.1.2	Schedules/lists of piping and Landscape and Irrigation materials – including sizes, grades and standards		25%	50%	100%		
1.9.1.3	Landscape and Irrigation fixture schedules – including Landscape and Irrigation fixture symbols, fixture type, number of each type of fixture required, size, water loads, manufacturer, model #, electrical requirements, finish, reference to installation details, and special notes		25%	50%	100%		
1.9.2	Landscape and Irrigation Plan(s): Coordinated with other disciplines and showing:						
1.9.2.1	Locations, type and size of all related off-site and on-site connection sizes and requirements		50%	100%			
1.9.2.2	Location and symbols referencing all Landscape Irrigation equipment including timer clocks, meters, pumps, shut-off and flow valves, tanks.		50%	100%			
1.9.2.3	Sizes, types and locations of all landscape piping and sprinkler heads			50%	100%		
1.9.2.4	Symbol reference to installation details, for site Landscape Irrigation equipment and piping			50%	100%		

Item Number	Item Description	Schematic Design / Programming/ Space Planning (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS & E ²
1.9.3	Landscape Planting Plan: Coordinated with other disciplines and showing:						
1.9.3.1	Overall clear dimensions of all planting areas		25%	50%	100%		
1.9.3.2	Location, symbols and Schedule List of all trees, shrubs, ground cover, grasses and other planting materials		25%	50%	100%		
1.9.3.3	Symbol reference to installation details, for site Landscape Planting			50%	100%		
1.9.4	Landscape and Irrigation Details: Coordinated with other disciplines and showing:						
1.9.4.1	Landscape Irrigation details indicating typical Landscape and Irrigation equipment and piping connection conditions per POLB's CADD Standards Manual.			50%	100%		
1.9.4.2	Landscape Planting installation details			50%	100%		

Footnotes:¹ All drawings, calculations and reports shall be at 100% at Final design. Plan check approval should be in place prior to submitting Final design where practical.

² All drawings and calculations shall be stamped/signed by a California PE or SE at Final Signed PS&E Package stage. Reports requiring stamp/signature shall also be signed.

Attachment C

Specifications

Attachment C – Required Formal Specifications for all Projects

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD)¹	Final Signed PS&E²
1.1	Front End Specifications						
1.1.1	Project Specification Worksheet: Completed by Consultant and Submitted to Design Manager a minimum of 2 weeks prior to 100% Submittal				100%		
1.1.2	Specification Signature Sheet: Provided to Design Manager by Specs Team for signature by Consultant				50%	100%	
1.1.3	Specification Stamp Page: Provided to Design Manager by Specs Team for use by Consultant				50%	100%	
1.1.4	Title Sheet: Provided to Design Manager by Specs Team				100%	100%	
1.1.5	Master Table of Contents (MTOC): Provided to Design Manager by Specs Team		50% (Outline of tech specs)	75%	100%	100%	
1.1.6	Notice Inviting Bids (NIB): Provided to Design Manager by Specs Team				100%	100%	
1.1.7	Instructions to Bidders (ITB): Provided to Design Manager by Specs Team				100%	100%	
1.1.8	Bid Proposal Package (BPP): Provided to Design Manager by Specs Team. Note: Form CR2 is coordinated effort by Consultant and POLB; to be completed by 100% Design.				100%	100%	

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS&E ²
1.1.9	Schedule of Bid Items: Use Base Bid Form template provided by Design Manager.			75%	100%		
1.1.10	General Conditions (GC): Provided to Design Manager by Specs Team	The Port's responsibility (Color Coding)		Can be provided as Reference	100%	100%	
1.1.11	Special Conditions (SC): Template provided to Design Manager by Specs Team for use by Consultant			75%	100%	100%	
1.2	Technical Specifications						
1.2.1	Technical Specifications: All technical requirements including Measurement & Payment language (following Specs Team requirements) completed by Consultant			75%	100%	100%	
2.1	Single Alpha Appendices						
2.1.1	Single Alpha Appendices: All forms and requirements needed by the Contractor prepared by Specs Team. (Can be provided to Consultant if requested for reference.)					100%	
3.1	Double Alpha Appendices (AA, BB, CC labeling cannot be modified, other labeling changes are flexible)						
3.1.1	Appendix AA: Project Labor Agreement (if applicable); provided to Consultant if requested for reference.				100%		

Item Number	Item Description	Schematic Design (SD)	30% Design (DD)	50% Design (CD)	100% Design (CD)	Final Design (CD) ¹	Final Signed PS&E ²
3.1.2	Appendix BB: Harbor Development Permit; not provided to Consultant unless requested for reference.				100%		
3.1.3	Appendix CC: Reference Documents including, but not limited to: Reference Drawings, Geotechnical Reports, Soil Environmental Characterization Reports, Potholing Reports, etc. (See definition in SC-4.)			50%	100%		
3.1.4	Appendix DD:			50%	90%	100%	
3.1.5	Appendix EE: Electric Vehicle Infrastructure Training Program (EVITP), if applicable.			100%	100%	100%	
3.1.6	Appendix FF: Tenant Access Agreement, if applicable.			50%	90%	100%	
3.1.7	Appendix GG:			50%	90%	100%	
3.1.8	Appendix HH:			90%	100%		
3.1.7	Appendix II:			50%	100%		
3.1.8	Appendix JJ:			75%	100%		
3.1.9	Appendix KK:				100%		
3.1.10	Appendix LL:				100%		
3.1.11	Appendix MM:				100%		
3.1.12	Appendix NN:				100%		
3.1.13	Appendix OO:				100%		
3.1.14	Other Double Alpha Appendices: Consultant to notify Design Manager if additional double alpha appendices are required						

Footnotes:¹ All specifications shall be at 100% at Final design.

²Specification Signature Sheet shall be signed at Final Signed PS&E Package stage. Specification Stamp Page shall be stamped/signed by a California PE or SE at Final Signed PS&E Package stage.

Attachment D

Sample Fee Breakdown

Attachment D - Sample Fee Breakdown

(Consultant's Company Letterhead)

Project/Task Title: Sample

Sample Fee Breakdown

Milestone	Task	SubTask	Description	Prime	Sub1	Sub2	Subconsultant Mark-up (5% on Labor Only)	ODC	TOTAL
1			Alternative Studies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	1.1		Design/Project Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.1.1	Internal Meetings and Coordination	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.1.2	Meetings and Coordination with POLB	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.1.3	Meetings and Coordination with External Stakeholders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.1.4	Contract Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.1.5	DQMP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	1.2		Draft Report	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.2.1	Preparation of Draft Report	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.2.2	QA/QC of Draft Report	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.2.3	Draft Report Review Meetings with POLB and External Stakeholders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	1.3		Final Report and Presentation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.3.1	Incorporation of Review Comments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.3.2	QA/QC of Final Report	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1.3.3	Final Report Presentation to POLB and External Stakeholders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2			30% PS&E Design Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	2.1		Design/Project Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.1	Internal Meetings and Coordination	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.2	Meetings and Coordination with POLB	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.3	Meetings and Coordination with External Stakeholders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.4	Contract Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.5	DQMP and PMP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.6	Third Party Utility Coordination and Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.7	Right of Way Coordination and Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.8	Permitting Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.9	Envision/Sustainability Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.1.10	Grant Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	2.2		Site Investigations and Activities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.2.1	Site Visits / Field Assessments / Surveys	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.2.2	Utility Investigations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.2.3	Environmental Soil and Groundwater Characterization	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.2.4	Geotechnical Investigations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	2.3		30% PS&E Development and Completion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.3.1	Prepare 30% Basis of Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.3.2	Prepare 30% Design Drawings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.3.3	Prepare 30% Supplemental/Modified Technical Specifications Table of Contents	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.3.4	Prepare 30% Calculations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.3.5	Prepare 30% Construction Estimate and Schedule	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.3.6	Prepare 30% Additional Support Documents	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	2.4		30% PS&E Review Meetings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.4.1	30% Design Review Meeting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.4.2	30% Risk Assessment Workshop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.4.3	30% Sustainability Workshop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.4.4	30% Constructibility Workshop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2.4.5	30% Review Meeting with Outside Stakeholders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project/Task Title: Sample

Sample Fee Breakdown

Milestone	Task	SubTask	Description	Prime	Sub1	Sub2	Subconsultant Mark-up (5% on Labor Only)	ODC	TOTAL
3			50% PS&E Design Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	3.1		Design/Project Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.1	Internal Meetings and Coordination	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.2	Meetings and Coordination with POLB	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.3	Meetings and Coordination with External Stakeholders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.4	Contract Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.5	DQMP and PMP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.6	Third Party Utility Coordination and Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.7	Right of Way Coordination and Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.8	Permitting Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.9	Envision/Sustainability Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.1.10	Grant Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	3.2		50% PS&E Development and Completion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.2.1	Incorporation of 30% PS&E Comments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.2.2	Prepare 50% Basis of Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.2.3	Prepare 50% Design Drawings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.2.4	Prepare Supplemental/Modified 50% Specifications	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.2.5	Prepare 50% Calculations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.2.6	Prepare 50% Construction Estimate and Schedule	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.2.7	Prepare 50% Additional Support Documents	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	3.3		30% PS&E Review Meetings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.3.1	50% Design Review Meeting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.3.2	50% Risk Assessment Workshop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.3.3	50% Sustainability Workshop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.3.4	50% Constructibility Workshop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		3.3.5	50% Review Meeting with Outside Stakeholders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4			100% PS&E Design Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	4.1		Design/Project Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.1	Internal Meetings and Coordination	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.2	Meetings and Coordination with POLB	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.3	Meetings and Coordination with External Stakeholders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.4	Contract Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.5	DQMP and PMP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.6	Third Party Utility Coordination and Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.7	Right of Way Coordination and Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.8	Permitting and Plan Check Review Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.9	Envision/Sustainability Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.1.10	Grant Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	4.2		100% PS&E Development and Completion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.2.1	Incorporation of 50% PS&E Comments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.2.2	Prepare 100% Basis of Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.2.3	Prepare 100% Design Drawings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.2.4	Prepare Supplemental/Modified 100% Specifications	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.2.5	Prepare 100% Calculations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.2.6	Prepare 100% Construction Estimate and Schedule	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.2.7	Prepare 100% Additional Support Documents	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.2.8	Prepare Long Lead Item List and List of Construction Submittals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	4.3		100% PS&E Review Meetings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.3.1	100% Design Review Meeting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.3.2	100% Risk Assessment Workshop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.3.3	100% Sustainability Workshop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.3.4	100% Constructibility Workshop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		4.3.5	100% Review Meeting with Outside Stakeholders	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project/Task Title: Sample

Sample Fee Breakdown

Milestone	Task	SubTask	Description	Prime	Sub1	Sub2	Subconsultant Mark-up (5% on Labor Only)	ODC	TOTAL
5			Final PS&E Design Services	\$	-	\$	-	\$	-
	5.1		Design/Project Management	\$	-	\$	-	\$	-
		5.1.1	Internal Meetings and Coordination	\$	-	\$	-	\$	-
		5.1.2	Meetings and Coordination with POLB	\$	-	\$	-	\$	-
		5.1.3	Meetings and Coordination with External Stakeholders	\$	-	\$	-	\$	-
		5.1.4	Contract Management	\$	-	\$	-	\$	-
		5.1.5	DQMP and PMP	\$	-	\$	-	\$	-
		5.1.6	Third Party Utility Coordination and Support	\$	-	\$	-	\$	-
		5.1.7	Right of Way Coordination and Support	\$	-	\$	-	\$	-
		5.1.8	Permitting and Plan Check Review Support	\$	-	\$	-	\$	-
		5.1.9	Envision/Sustainability Support	\$	-	\$	-	\$	-
		5.1.10	Grant Support	\$	-	\$	-	\$	-
	5.2		Final PS&E Development and Completion	\$	-	\$	-	\$	-
		5.2.1	Incorporation of 100% PS&E Comments	\$	-	\$	-	\$	-
		5.2.2	Prepare Final Basis of Design	\$	-	\$	-	\$	-
		5.2.3	Prepare Final Design Drawings	\$	-	\$	-	\$	-
		5.2.4	Prepare Supplemental/Modified Final Specifications	\$	-	\$	-	\$	-
		5.2.5	Prepare Final Calculations	\$	-	\$	-	\$	-
		5.2.6	Prepare Final Construction Estimate and Schedule	\$	-	\$	-	\$	-
		5.2.7	Prepare Final Additional Support Documents	\$	-	\$	-	\$	-
		5.2.8	Prepare Long Lead Item List and List of Construction Submittals	\$	-	\$	-	\$	-
	5.3		Final PS&E Review Meetings	\$	-	\$	-	\$	-
		5.3.1	Final Design Review Meeting	\$	-	\$	-	\$	-
		5.3.2	Final Risk Assessment Workshop	\$	-	\$	-	\$	-
		5.3.3	Final Sustainability Workshop	\$	-	\$	-	\$	-
		5.3.4	Final Constructibility Workshop	\$	-	\$	-	\$	-
		5.3.5	Final Review Meeting with Outside Stakeholders	\$	-	\$	-	\$	-
	5.4		Bid Package Development and Completion	\$	-	\$	-	\$	-
		5.4.1	Incorporation of Final PS&E Comments	\$	-	\$	-	\$	-
		5.4.2	Prepare stamped/signed Bid Package PS&E for Advertising	\$	-	\$	-	\$	-
		5.4.4	Prepare Lessons Learned Log	\$	-	\$	-	\$	-
6			Bid Support Phase	\$	-	\$	-	\$	-
	6.1		Bid Support Services	\$	-	\$	-	\$	-
		6.1.1	Internal Meetings and Coordination	\$	-	\$	-	\$	-
		6.1.2	Meetings and Coordination with POLB (including Pre-Bid Meeting and Project Hand-Off Meeting)	\$	-	\$	-	\$	-
		6.1.3	Contract Management	\$	-	\$	-	\$	-
		6.1.4	Bidding Support (Response to Questions, Prepare Addenda)	\$	-	\$	-	\$	-
		6.1.5	Support Bid Review and Analysis	\$	-	\$	-	\$	-
	6.2		Post Bid Meetings	\$	-	\$	-	\$	-
		6.2.1	Bid Phase Risk Assessment Workshop	\$	-	\$	-	\$	-
7			Construction Phase	\$	-	\$	-	\$	-
	7.1		Construction Support Services	\$	-	\$	-	\$	-
		7.1.1	Internal Meetings and Coordination	\$	-	\$	-	\$	-
		7.1.2	Meetings and Coordination with POLB	\$	-	\$	-	\$	-
		7.1.3	Meetings and Coordination with Contractors	\$	-	\$	-	\$	-
		7.1.4	Contract Management	\$	-	\$	-	\$	-
		7.1.5	Site Visits and Field Observations	\$	-	\$	-	\$	-
		7.1.6	Submittal Reviews	\$	-	\$	-	\$	-
		7.1.7	RFI Support	\$	-	\$	-	\$	-
		7.1.8	Change Order and DDC Support	\$	-	\$	-	\$	-
		7.1.9	Punch List Support	\$	-	\$	-	\$	-

Project/Task Title: Sample

Sample Fee Breakdown

Milestone	Task	SubTask	Description	Prime	Sub1	Sub2	Subconsultant Mark-up (5% on Labor Only)	ODC	TOTAL
8			Project Close-Out Phase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	8.1		As-Builts Development and Completion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		7.1.1	Internal Meetings and Coordination	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		7.1.2	Meetings and Coordination with POLB	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		7.1.3	Contract Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		7.1.4	Preparation of As-Builts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		7.1.5	Incorporation of POLB Comments and Contractor redlines on As-Builts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		7.1.6	Record As-Builts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Totals				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

SBE	0.0%
VSBE	0.0%
SBE/VSBE	0.0%

Attachment E

POLB Design Standards Exception Request Form



Design Standards Exception Request

1.0 Instructions

- **All form fields are required.** Incomplete forms will be returned without consideration.
- Utility Abandon-in-place application is per a separate form.
- Submit only one exception request per form.
- This form must be completed for each item where an exception is requested.
- Submission is handled by the Applicant and must be submitted at time of Harbor Development Permit (HDP) application.
- **Attach relevant plans, details, cut sheets, illustrations, sketches, calculations, coordinates, stations, and/or other supporting material necessary to explain the request in detail. Include supplemental pages as seen necessary.**

2.0 Applicant Information

Project Information	
HDP#	Project Name
Company Name	
Company Address	
Applicant Name	
Applicant Email	Applicant Phone Number
POLB Publication Name, Version and Issue Date Applicable to Project	

V0.3

3.0 Design Exception Description

Request Information

Criteria Section (Reference Document)

Criteria Verbiage (verbatim from document)

Requested Exception to the Criteria (be specific and descriptive)

Reason for this Exception

Request Information

Proposed Recommendation

Relevant Plan, details, illustrations, sketches, calculations or supporting material (include additional sheets as needed)

4.0 APPLICANT SIGNATURE

Signature

Applicant Name (Print)

Title

Signature

Date

5.0 Approval

☐ APPROVED

Signature

Print Name

Clint Herrera, P.E.

Title

Port of Long Beach, Engineering Design Division, Director

Signature

Date

Notes:

☐ DENIED

Reason for Denial

Attachment F

Utility Pothole Documentation



Utility Pothole Documentation

List of Documents

- 01 – Utility Pothole Documentation Outline
- 02 – POLB Utility Pothole Template
- 03 – Sample of Pothole Data from Contractors
- 04 – Sample of Utility Location Data Report
- 05 – Utility Pothole Detailed Data Dictionary

POLB: Engineering Design Division 03/05/2026

01-Utility Pothole Documentation Outline

- 1) The following details are meant to help contractors and/or consultants compile utility pothole locating information in a way that it can be most efficiently processed by the City of Long Beach Harbor Department Engineering Design Division (POLB) and made available to the enterprise by way of WebGIS.
- 2) If the primary contractor and/or consultant cannot deliver a GIS database (please refer to **05-Utility Pothole Detailed Data Dictionary**), they must use an Excel spreadsheet file included in this documentation prior to starting work. The spreadsheet has been developed for contractors and/or consultants to capture information in a consistent manner (the primary contractor and/or consultant shall provide the utility pothole documentation and templates to its subcontractors). The Excel template file is named **02-POLB Utility Pothole Template.xlsx**.
- 3) The document named **03-Sample of Pothole Data from Contractor.xlsx** can serve as a guide and provides sample tabular data entries.
- 4) In addition to submitting the tabular data, the contractor and/or consultant must include a utility pothole report in Adobe PDF format. The document named **04-Sample of Utility Location Data Report.pdf** is an example of a sheet from a utility pothole report. Note that the term to describe the document that records a utility pothole result varies with the contractor and may be called "Test Hole Data Form"; "Potholing Data Sheet"; "Certified Utility Location Report"; "Individual Pothole Sheet" or others. At a minimum, it shall contain the POLB specification number, the unique pothole location number (refer to **05-Utility Pothole Detailed Data Dictionary** "PotholeID" for numbering system), a Northing and Easting coordinate, Coordinate System, Epoch and source of the aerial photo and flight year (if a digital image background is used).

04 - Sample of Utility Location Data Report

POT HOLE DATA FORM

SUE CREW	EC / RA	POT HOLE NUMBER	S02504-PH-001
TRUCK NO.	550803	DATE EXCAVATED	8/29/2014
CLIENT PROJECT NO.	HD-S2504	LOCATION	FORMER POLB ADMIN BUILDING
CARDINO PROJECT NO.	CAD58002.07	PROJECT	DEMO OF FORMER POLB ADMIN BUILDING
CITY	LONG BEACH		
COUNTY	LOS ANGELES		

LOCATION PLAN

SECTION VIEW

AERIAL FLIGHT YEAR: 2013

NOT TO SCALE

Include Northing, Easting, Coordinate System & Epoch

	ENGLISH	SWING TIES FROM STRUCTURE	APPROX. DIST.
SURFACE TYPE	ASPHALT CONCRETE	A WATER VALVE	41'
THICKNESS	0.50'	B FIRE HYDRANT	48'
SOIL CONDITIONS	TYPE 2	C TIP OF ISLAND	27'
UTILITY TYPE	N/A		
UTILITY SIZE	N/A		
UTILITY MATERIAL	N/A		
MARKER SET	N/A		

DATA ENTERED BY: CHRIS CHILDRÉE

REVIEWED BY: RICHARD HERNANDEZ

REMARKS: OPENED UP POT HOLE ON USA MARKINGS. UNABLE TO GET A SIGNAL WITH ELECTRONIC DESIGNATING EQUIPMENT. CLEARED HOLE TO DEPTH OF 8.00' AND NORTH AND SOUTH BASED ON MARKINGS, BUT DID NOT FIND TARGET UTILITY. WE TRIED TO OBTAIN SIGNAL FROM NEARBY COMMUNICATION MANHOLE IN PARKING LOT, WE MAY NEED TO GO ACROSS THE STREET AND TRY DESIGNATING FROM THERE BEFORE ATTEMPTING FURTHER POTHOLES.

- 5) Finally, the last file **05-Utility Pothole Detailed Database Dictionary.pdf**, is a reference document that includes brief descriptions and samples of acceptable entries for each of the fields.

02 - POLB Utility Pothole Template

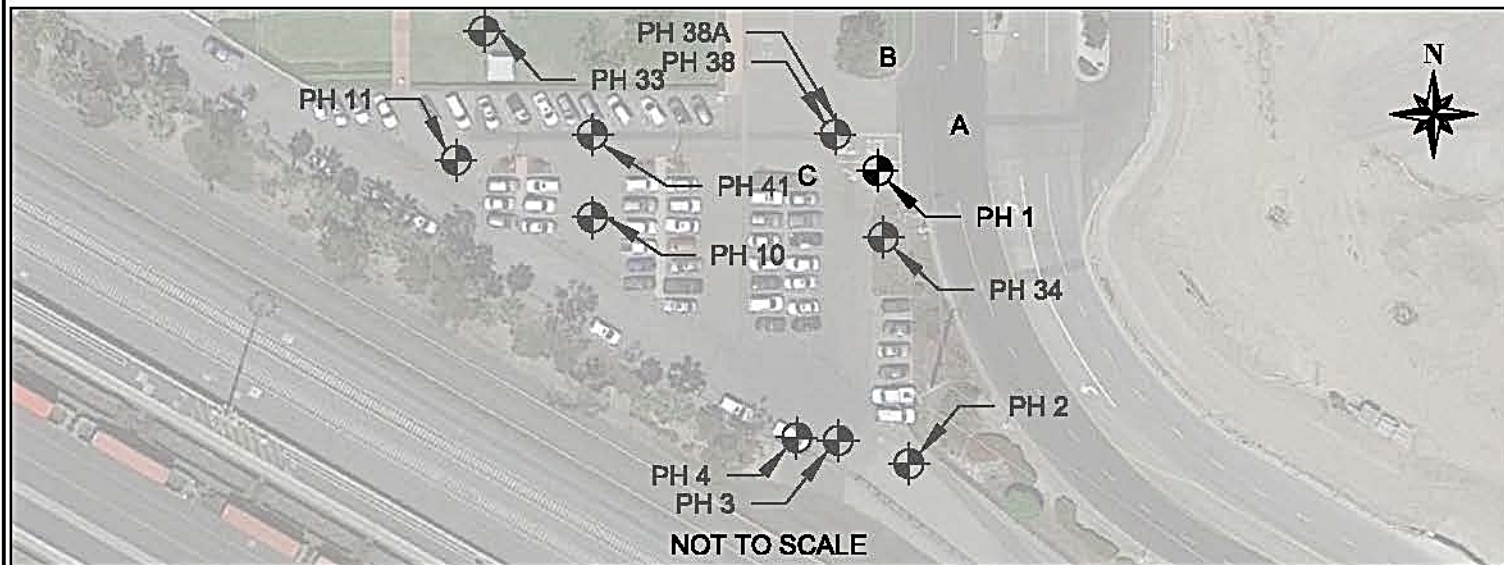
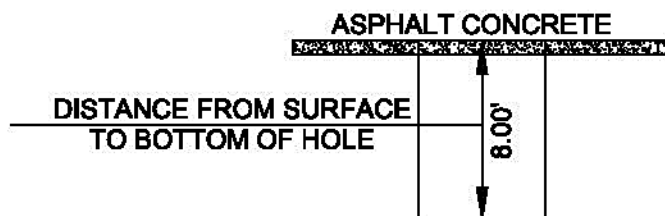
[illegible]

03 - Sample of Pothole Data from Contractor

Project Name: HD-S2504, Demolition of Former Harbor Dept. Administration Building Complex (HA-1417) Date: 11/7/2014 Client: POLB Cardno Project #: CA05900207													
PotholeID	Northing	Easting	PotholeDate	ProjectDescription	Contractor	Utility	PotholeResult	UtilitySize	UtilityMaterial	PotholeDepth	SurfaceElevation	TopUtilityElevation	Comments
S02504-PH-001	1732805.80	6500675.50	8/29/2014	Admin Bldg Demo	Cardno	Communication	Dry Hole			8			Dry Hole (Target Utility not found)
S02504-PH-002	1732677.10	6500687.70	8/26/2014	Admin Bldg Demo	Cardno	Communication	Telephone Concrete Encasement		SL/Concrete	2.9	27.2		Unknown Telephone Slurry/Red CC Encasement
S02504-PH-003	1732666.20	6500656.40	8/26/2014	Admin Bldg Demo	Cardno	Communication	Telephone Concrete Encasement		SL	5.9	26.9		Telephone Concrete Encasement
S02504-PH-004	1732670.90	6500646.30	8/26/2014	Admin Bldg Demo	Cardno	Communication	Telephone Concrete Encasement		Concrete	3.2	27		40in Red CC Telephone Concrete Encasement
S02504-PH-005	1732982.20	6500369.10	8/21/2014	Admin Bldg Demo	Cardno	Communication	1in PVC Communication	1in	PVC	0.9	29.7		1in PVC Communication
S02504-PH-005A	1732982.20	6500369.10	8/21/2014	Admin Bldg Demo	Cardno	Electric	3in PVC Electric	3in	PVC	2.1	29.7		(2) 3in PVC Electric
S02504-PH-006	1733539.00	6500339.60	8/19/2014	Admin Bldg Demo	Cardno	Electric	18in Electric Concrete Encasement		Concrete	3.2	24.2		18in Electric Concrete Encasement
S02504-PH-006A	1733538.80	6500346.10	8/19/2014	Admin Bldg Demo	Cardno	Oil	55in Oil Slurry Concrete Encasement		SL	0.7	24.2		55in Oil Slurry Concrete Encasement
S02504-PH-007	1733324.90	6500531.70	8/21/2014	Admin Bldg Demo	Cardno	Electric	Dry Hole			7			Dry Hole (Target Utility not found)
S02504-PH-007A	1733328.90	6500531.70	8/21/2014	Admin Bldg Demo	Cardno	Electric	2in PVC Electric	2in	PVC	1.3	27.2		2in PVC Electric-could be Irrigation Line
S02504-PH-008	1733214.40	6500531.60	8/21/2014	Admin Bldg Demo	Cardno	Electric	Dry Hole			7			Dry Hole (Target Utility not found)
S02504-PH-009	1733276.20	6500452.00	8/20/2014	Admin Bldg Demo	Cardno	Electric	1in Direct Buried Electric Cable	1in		2.1	28.9		1in Direct Buried Electric Cable
S02504-PH-010	1732780.20	6500543.40	8/28/2014	Admin Bldg Demo	Cardno	Electric	3in Electric	3in	Metal	2.6	28		3in Electric
S02504-PH-011	1732805.50	6500470.40	8/26/2014	Admin Bldg Demo	Cardno	Electric	1in PVC Electric	1in	PVC	2.8	29.1		1in PVC Electric
S02504-PH-012	1733126.40	6500337.80	8/22/2014	Admin Bldg Demo	Cardno	Electric	Unknown Electric Concrete Encasem		Concrete	3.7	28.7		Unknown Electric Concrete Encasement
S02504-PH-012A	1733126.40	6500337.80	8/22/2014	Admin Bldg Demo	Cardno	Electric	Unknown Electric Concrete Encasem		Concrete	1.1	28.7		Unknown Electric Concrete Encasement
S02504-PH-013	1733089.20	6500207.90	8/25/2014	Admin Bldg Demo	Cardno	Electric	16in Electric Concrete Encasement		Concrete	2.7	26.6		16in Electric Concrete Encasement
S02504-PH-014	1733053.20	6500250.40	8/22/2014	Admin Bldg Demo	Cardno	Electric	16in Electric Concrete Encasement		Concrete	0.6	26.7		16in Electric Concrete Encasement
S02504-PH-014A	1733053.20	6500250.40	8/22/2014	Admin Bldg Demo	Cardno	Electric	Unknown Electric Concrete Encasem		SL/Concrete	2.5	26.7		Unknown Electric Slurry/Red CC Encasement
S02504-PH-015	1732899.80	6500252.20	8/28/2014	Admin Bldg Demo	Cardno	Electric	Dry Hole			8			Dry Hole (Target Utility not found)
S02504-PH-016	1732897.80	6500261.70	8/28/2014	Admin Bldg Demo	Cardno	Electric	Unknown Electric Concrete Encasem		Concrete	5.7	27.8		Unknown Electric Red Concrete Encasement
S02504-PH-017	1732857.50	6500322.00	8/28/2014	Admin Bldg Demo	Cardno	Electric	Dry Hole			9			Dry Hole (Target Utility not found)
S02504-PH-018	1733324.70	6500317.00	8/19/2014	Admin Bldg Demo	Cardno	Electric	Unknown Electric Concrete Encasem		Concrete	2.7	27		Unknown Electric Red Concrete Encasement
S02504-PH-019	1733125.60	6500254.00	8/22/2014	Admin Bldg Demo	Cardno	Electric	14in Electric Concrete Encasement			0.6	27.2		14in Electric Slurry/Red Concrete Encasement
S02504-PH-020	1733223.20	6500198.50	8/25/2014	Admin Bldg Demo	Cardno	Electric	Unknown Electric Concrete Encasement			3.1	27.5		Unknown Electric Red Concrete Encasement
S02504-PH-020A	1733222.20	6500196.20	8/25/2014	Admin Bldg Demo	Cardno	Sewer	8in VCP Waste Water	8in	VCP	6.7	27.5		8in VCP Waste Water (Sewer)
S02504-PH-021	1733451.20	6500259.50	8/20/2014	Admin Bldg Demo	Cardno	Electric and Water	Dry Hole			7			Dry Hole (Target Utility not found))
S02504-PH-021A	1733452.20	6500255.50	8/20/2014	Admin Bldg Demo	Cardno	Electric and Water	Dry Hole			7			Dry Hole (Target Utility not found))
S02504-PH-022	1733450.20	6500298.30	8/18/2014	Admin Bldg Demo	Cardno	Electric and Water	Dry Hole			7			Dry Hole (Target Utility not found))
S02504-PH-023	1733268.80	6500307.50	8/20/2014	Admin Bldg Demo	Cardno	Electric	18in Electric Concrete Encasement		Concrete	3.4	27.6		18in Electric Concrete Encasement
S02504-PH-023A	1733268.80	6500307.50	8/20/2014	Admin Bldg Demo	Cardno	Unknown	2in PVC Unknown	2in	PVC	3.3	27.6		2in PVC Unknown
S02504-PH-024	1733194.20	6500314.30	8/25/2014	Admin Bldg Demo	Cardno	Sewer	8in VCP Waste Water	8in	VCP	6.1	27.9		8in VCP Waste Water (Sewer)
S02504-PH-025	1733125.20	6500317.70	8/14/2014	Admin Bldg Demo	Cardno	Water	2in PVC Water	2in	PVC	1.5	28.2		2in PVC Water also other utilities found check 025A for detail
S02504-PH-025A	1733125.20	6500317.70	8/22/2014	Admin Bldg Demo	Cardno	Electric	14in Electric Concrete Encasement	14in	SL	0.6			14in Electric Slurry Concrete Encasement
S02504-PH-026	1733325.10	6500306.10	8/19/2014	Admin Bldg Demo	Cardno	Electric	Dry Hole		Concrete	7			Dry Hole (Target Utility not found))
S02504-PH-026A	1733317.10	6500306.10	8/20/2014	Admin Bldg Demo	Cardno	Communication	Dry Hole			8			Dry Hole (Target Utility not found)
S02504-PH-027	1733538.50	6500351.90	8/19/2014	Admin Bldg Demo	Cardno	Gas	4in Gas	4in	Metal	3.2	24.2		4in Metal Gas Pipe
S02504-PH-027A	1733538.80	6500346.10	8/19/2014	Admin Bldg Demo	Cardno	Oil	55in Oil Slurry Concrete Encasement		SL	0.7	24.2		55in Wide Concrete Encasement has TOPKO (3) Oil Lines 6in and 10in
S02504-PH-028	1733013.60	6500352.50	8/21/2014	Admin Bldg Demo	Cardno	Gas	4in Gas	4in	Metal	3.5	29.6		4in Metal Gas Pipe
S02504-PH-029	1733165.60	6500360.70	8/18/2014	Admin Bldg Demo	Cardno	Communication	(3) 4in Communication Conduits	4in	TR	3.1	28.7		(3) 4in Communication Conduits
S02504-PH-030	1733539.80	6500260.70	8/18/2014	Admin Bldg Demo	Cardno	Water	Unknown Water		Metal	4	24.8		Unknown Metal Water Line
S02504-PH-031	1733538.10	6500275.60	8/18/2014	Admin Bldg Demo	Cardno	Water	Dry Hole			7			Dry Hole (Target Utility not found)
S02504-PH-032	1732876.70	6500375.50	8/26/2014	Admin Bldg Demo	Cardno	Water	8in PVC Water	8in	PVC	4.5	29.2		8in and 3in PVC Water Lines at the T connectionn
S02504-PH-033	1732860.40	6500492.60	8/8/2014	Admin Bldg Demo	Cardno	Water	6in Unknown Water	6in		3	29.7		6in Unknown Water
S02504-PH-034	1732770.50	6500675.50	8/8/2014	Admin Bldg Demo	Cardno	Water	Dry Hole			7			Dry Hole (Targety Utility not found)
S02504-PH-035	1732895.00	6500493.60	8/8/2014	Admin Bldg Demo	Cardno	Water	Unknown Water			3.6	30.3		Unknown Water Line
S02504-PH-037	1733197.80	6500652.10	8/29/2014	Admin Bldg Demo	Cardno	Communication	18in PVC Communication		PVC	3.3	27.3		18in Wide PVC Communication also other utilities found check 037A for deta
S02504-PH-037A	1733197.80	6500652.10	8/29/2014	Admin Bldg Demo	Cardno	Water	6in Metal Water	6in	Metal	4.7	27.3		6in Metal Water
S02504-PH-038	1732817.30	6500652.10	8/28/2014	Admin Bldg Demo	Cardno	Water	6in Metal Water	6in	Metal	2.5	28		6in Metal Water
S02504-PH-038A	1732817.30	6500652.10	8/28/2014	Admin Bldg Demo	Cardno	Communication	Unknown Communication		SL/PVC	4.2	28		Unknown Slurry/PVC Communication
S02504-PH-039	1733158.20	6500285.20	8/29/2014	Admin Bldg Demo	Cardno	Electric	21in Electric Concrete Encasement		Red Concrete	0.5	27.7		21in Wide Electric Red Concrete Encasement
S02504-PH-040	1733203.30	6500326.70	8/29/2014	Admin Bldg Demo	Cardno	Unknown	3in Unknown PVC	3in	PVC	1.1	28		3in Unknown PVC Line-Possible Water Line

POT HOLE DATA FORM

SUE CREW	EC / RA	POT HOLE NUMBER	S02504-PH-001
TRUCK NO.	550603	DATE EXCAVATED	8/29/2014
CLIENT PROJECT NO.	HD-S2504	LOCATION:	FORMER POLB ADMIN BUILDING
CARDNO PROJECT NO.	CA059002.07	PROJECT:	DEMO OF FORMER POLB ADMIN BUILDING
CITY	LONG BEACH		
COUNTY	LOS ANGELES		

LOCATION PLAN**SECTION VIEW**

TARGET UTILITY NOT FOUND

AERIAL FLIGHT YEAR: 2013

NOT TO SCALE

Include Northing, Easting,
Coordinate System & Epoch

	ENGLISH	SWING TIES FROM STRUCTURE		APPROX. DIST.
SURFACE TYPE	ASPHALT CONCRETE	A	WATER VALVE	41'
THICKNESS	0.50'	B	FIRE HYDRANT	48'
SOIL CONDITIONS	TYPE 2	C	TIP OF ISLAND	27'
UTILITY TYPE	N/A	DATA ENTERED BY: <u>CHRIS CHILDREE</u> REVIEWED BY: <u>RICHARD HERNANDEZ</u>		
UTILITY SIZE	N/A			
UTILITY MATERIAL	N/A			
MARKER SET	N/A			

REMARKS: OPENED UP POT HOLE ON USA MARKINGS, UNABLE TO GET A SIGNAL WITH ELECTRONIC DESIGNATING EQUIPMENT. CLEARED HOLE TO DEPTH OF 8.00' AND NORTH AND SOUTH BASED ON MARKINGS, BUT DID NOT FIND TARGET UTILITY. WE TRIED TO OBTAIN SIGNAL FROM NEARBY COMMUNICATION MANHOLE IN PARKING LOT, WE MAY NEED TO GO ACROSS THE STREET AND TRY DESIGNATING FROM THERE BEFORE ATTEMPTING FURTHER POTHOLES.

05 – Utility Pothole Detailed Data Dictionary

DETAILED DATABASE DICTIONARY Utility Pothole Data Feature Dataset (engrptUtilityPothole) March 5, 2026

Feature Class:	engrptUtilityPothole
Feature Type:	Point
Data Source(s):	Utility Potholing Contractors
Description:	Pothole Field Data Collection Results
Reference:	N/A

Background:

With numerous construction projects underway, Port of Long Beach (POLB) needs to verify the existence, depth and alignment of underground utility pipelines and infrastructure prior to commencing actual construction activities. All POLB construction projects rely on accurate utility pipeline information in order to execute work on schedule and under budget.

In order to prevent duplication of effort, share information collected and verify accuracy of existing Geographic Information System (GIS) records, this feature dataset is designed to make potholing information graphically available to staff via POLB's enterprise GIS.

Staff can access Information collected from previous potholing work to guide decision making for future projects and make the best use of POLB resources.

This detailed database dictionary serves as the foundation for providing staff with the information needed to process and organize potholing information collected by utility potholing contractors working for POLB.

05 – Utility Pothole Detailed Data Dictionary

Database Schema:

NOTE: The following database schema has been developed without default value definitions, associated domains or subtypes.

FEATURE CLASS: engrptUtilityPothole (Point)							
	FIELD NAME	DATA TYPE	ALIAS	DESCRIPTOR (Y/N)		LENGTH	DISPLAY
				Short	Long		
System	OBJECTID	System	OBJECTID	N	N	n/a	N
Unique Identifier	PotholeDate	Date	Pothole Date	N	Y	n/a	N
Feature Specific Record Information	ProjectDescription	Text	Project Description	Y	Y	100	Y
	UtilityPotholeReport	Text	Utility Pothole Report	Y	Y	20	Y
	SpecificationNumber	Text	Specification Number	Y	Y	10	N
	Contractor	Text	Contractor	N	Y	40	N
	PotholeID	Text	Pothole ID	Y	Y	30	Y
	Utility	Text	Utility	Y	Y	40	Y
	PotholeResult	Text	Pothole Result	N	Y	50	N
	UtilitySize	Text	Utility Size	N	Y	16	Y
	UtilityMaterial	Text	Utility Material	N	Y	20	N
	PotholeDepth	Double	Pothole Depth (Ft)	N	Y	n/a	N
	SurfaceElevation	Double	Ground Elevation (Ft)	N	Y	n/a	Y
	TopUtilityElevation	Double	Depth to Utility (Ft)	N	Y	n/a	Y
	Comments	Text	Comments	N	Y	255	Y
	UtilityPotholeReportFilename	Text	Utility Pothole Report Filename	N	N	255	N
Audit Fields Data Input & Maintenance	Remarks	Text	Remarks	N	N	255	N
	ModifyDate	Date	Modify Date	N	N	n/a	N
	ModifyUser	Text	Modify User	N	N	10	N
	CreateDate	Date	Create Date	N	N	n/a	N
	CreateUser	Text	Create User	N	N	n/a	N
System	Shape	System	Shape	N	N	n/a	N
	GlobalID	System	Global ID	N	N	n/a	N

05 – Utility Pothole Detailed Data Dictionary

Data Dictionary:

OBJECTID	System generated.
PotholeDate	Pothole Date – date field for the input of the date that pothole was performed. Format to be as follows: dd/mm/yyyy.
ProjectDescription	Project Description – text field describing the project name followed by a slash key (/) and a program (project) managers name. An acceptable entry example is the following: Pier E NOIT Building PH 1/Eric Paulsen.
UtilityPotholeReport	Utility Pothole Report – Alpha-numeric character used to uniquely describe a report. Format is alpha characters "POT" (pothole) dash, year and month followed by dash and sequentially assigned number beginning with 001. Any other reports published that year and month are assigned 002, 003 etc... • POT-201804-001
SpecificationNumber	Specification Number – text field calling out a contract specification number. The following alpha-numeric convention shall be used wherein the "S" indicates this is a specification, the leading zero acts as a place holder for future expansion of the numeric series, the four numerals represent the specification number and the trailing alpha-character indicates the revision of the specification. There is to be no trailing alpha-character for specifications that have not been revised. Informal specification shall be prefixed with the letters "IS" rather than just an "S" otherwise the input convention remains the same. Following are the acceptable field entries: • Unrevised specification S0#### (e.g. S02233) • Revised specification S0####X (e.g. S02066A) • Informal specification IS0#### (e.g. IS09815)
Contractor	Contractor – text field describing the source of the pothole data. Acceptable field entries are either a CONTRACTORS NAME or a POLB SURVEY CREW .
PotholeID	Pothole ID – Pothole identification number. Comprised of a prefix that is the project contract specification number followed by the abbreviation for the word pothole (PH) and finally a suffix that is generally a sequentially assigned numeral but convention

05 – Utility Pothole Detailed Data Dictionary

maybe numeric, alpha, or alpha-numeric. Following are examples of acceptable field entries:

- S02382-PH-001
- S02382A-PH-001
- IS02382-PH-001
- S02382-PH-001A
- S02382-PH-001.1

Utility

Utility – Description of utility type **FOUND**. Following are examples of some acceptable field entries:

- Water
- Electric
- Oil
- Oil-Water Injection
- Gas
- Gas-High Pressure

PotholeResult

Pothole Result – Any observation made while performing pothole. Generally used to record the three most descriptive facts of the utility: Size, Material and Utility type. Following are examples of acceptable field entries:

- 6in PVC Water
- Dry Hole
- Found 2in pipe (Oil Line?) Elec not Found

UtilitySize

Utility Size - Alpha-numeric string of, pipe(s) diameter in inches. Following are examples of acceptable field entries:

- 8in
- 2-12in

UtilityMaterial

Utility Material – Abbreviation for type of pipe material. Following are examples of some acceptable field entries:

- STL
- RGS
- ABS
- PVC

PotholeDepth

Pothole Depth – Numeric character that is the total depth of pothole in tenths of a foot. An example is the following:

- 7.4

SurfaceElevation

Surface Elevation – Numeric character that is the total depth of pothole in tenths of a foot. Following are examples of some acceptable field entries:

05 – Utility Pothole Detailed Data Dictionary

- 12.6
- -5.2

TopUtilityElevation	Depth to Utility – Vertical elevation at the top of utility pipe, to 1/10 tenths of a foot. Following are examples of some acceptable field entries: • 12.6 • -5.2
Comments	Comments – Text field that records a contractors conclusion, method of detection, etc. Following is an example of an acceptable field entry: • “Electric not detected . Oil, possible GPR detection”.
UtilityPotholeReportFilename	Utility Pothole Report Filename – (URL) file name of the contractor’s pothole report.
Remarks	Remarks – GIS comments.
ModifyDate	Modify Date – System generated. It is a date field showing when the record was modified/updated/edited.
ModifyUser	Modify User – System generated. It is a text field showing the last name of the editing party.
CreateDate	Create Date – System generated. It is a date field showing when the record was created.
CreateUser	Create User – System generated. It is a text field showing the last name of the creating party.
SHAPE (Point)	Shape – System generated.
GlobalID	Global ID – System generated.

05 – Utility Pothole Detailed Data Dictionary

REVISION HISTORY

Revision 7 – February 24, 2026 (Dondiego/Vachon)

Updated content per upgraded schema.

Revision 6 – February 9, 2023 (Vachon)

Updated "Utility" and "Pothole Result" to reflect actual database needs/use.

Revision 5 – January 21, 2020 (Schumacher)

General edits to field descriptions

Revision 4 – March 5, 2018 (McCarthy)

"Descriptor" definitions for Port Atlas added.

Revision 3 – February 4, 2015 (McCarthy)

REF_NO format change, single digit suffix changed to triple digit

Revision 2 – October 23, 2014 (McCarthy)

REF_NO format changed to include spec no. prefix

Revision 1 – July 25, 2013 (McCarthy)

Field "Layer Description" removed.

Original – May 2, 2012 (McCarthy)

Initial draft development.

Attachment G

Utility Notification Letter TEMPLATE

[Date]

[Company]

[Address Line 1]

[Address Line 2]

Attention: [To]

Subject: Utility Information Confirmation Request

[Project Title]

Specification HD-Sxxxx, CWO HAxxxx

The Port of Long Beach (Port) is currently preparing design, plans and specifications to [Project Scope] at the following location: [Project Location]

The enclosed location map includes our GIS record of utilities in the Project area, and is enclosed for your reference. The Port is requesting confirmation of your facility's existence, the location, and depth and size of your utilities in the Project area, which is indicated by the yellow boundary on the location map. This project is planned to advertise for bid in [Date].

A Utility Notice Form is enclosed for your use and return. Unless otherwise stated in writing, failure to provide a written response to this Utility Information Confirmation Request will be taken by the Port and the City of Long Beach (City) as if your company does not own or operate any utilities/facilities in the Project area. Furthermore, any impacts on the existing utilities/facilities by either the Port or its contractor(s), and/or impacts on the project and possible subsequent damages/delay claims shall be the responsibility of the facility owner, should it be determined that the facilities in question are in fact owned by your company.

[The Port is also requesting information regarding your company's future plans to relocate, repair, replace or abandon any of the existing utilities within the next five years. The Port adopts the City's policy of placing a five-year moratorium on all newly reconstructed streets.]

The final due date for a written response to this letter is [Date]. We would like to resolve all potential impacts on the design and construction of this project as soon as possible. Your cooperation is highly appreciated. Any questions regarding the request should be directed to [Design Manager] by email at [email] or by phone at [phone].

Sincerely,

Clint Herrera, P.E.
Director of Engineering Design

Attachments: Location Map
Utility Notice Reply Form

Attachment H

Utility Information Form

Attachment H - Utility Information Form

UTILITY INFORMATION FORM

Port of Long Beach

[Project]

[Date]

Please complete the following and return the original together with any record drawing and/or information that depicts the horizontal and vertical locations of your facilities and planned projects within the subject area **no later than [Date]**. If necessary, please inform us of any special procedures pertinent to obtaining this information. **For further questions regarding this notice, please contact [Design Manager] at [Email] or [Phone].**

COMPANY TO SIGN AND RETURN

Company

Telephone & Email

By

Date

____ We have prior rights on work to be done. We will submit an estimate of the cost of the relocation and proof of prior rights to your office within 30 days.

____ No facilities within the limits of the proposed job.

____ Facilities within the proposed job limits are not affected at this time.

____ Our work will require coordination with the general contractor. (Explain fully.)

____ We have facilities that will be affected and/or work to perform.

- (1) The following work is contemplated: _____
- (2) It is estimated that our construction will take _____ working days.
- (3) Construction work can be started _____ days after receipt of second notice.

Please return completed form and any additional information to:

Attention: [Design Manager]

Port of Long Beach

415 W Ocean Blvd

Long Beach, CA 90802

[xxx.xxx@polb.com]

Attachment I

Project Budget Anatomy Chart

Attachment I - Project Budget Anatomy Chart

PROJECT BUDGET ANATOMY

DEFINITIONS

Engineer’s Opinion of Probable Construction Cost – The engineer’s estimate of the likely expense of construction of a specific proposed project. It reflects the latest information available to the engineer at the time of the estimate and the engineer’s experience, qualifications and prior experience with projects and cost sources. This cost includes direct construction materials, equipment, labor, and indirect costs required to deliver a project. *This cost is also known as Project Hard Cost or Construction Cost.* This cost is made up of two components: **Defined Design Scope** which is shown as the Base Estimate cost, and **Undeveloped Design Scope** which is shown as the Design Development Factor. Both costs do not include any soft cost contingency.

Project Soft Cost – All other costs that are not directly tied to the construction of the project. Soft costs include internal labor, architectural, engineering, financing, and legal fees, and other pre- and post-construction expenses.

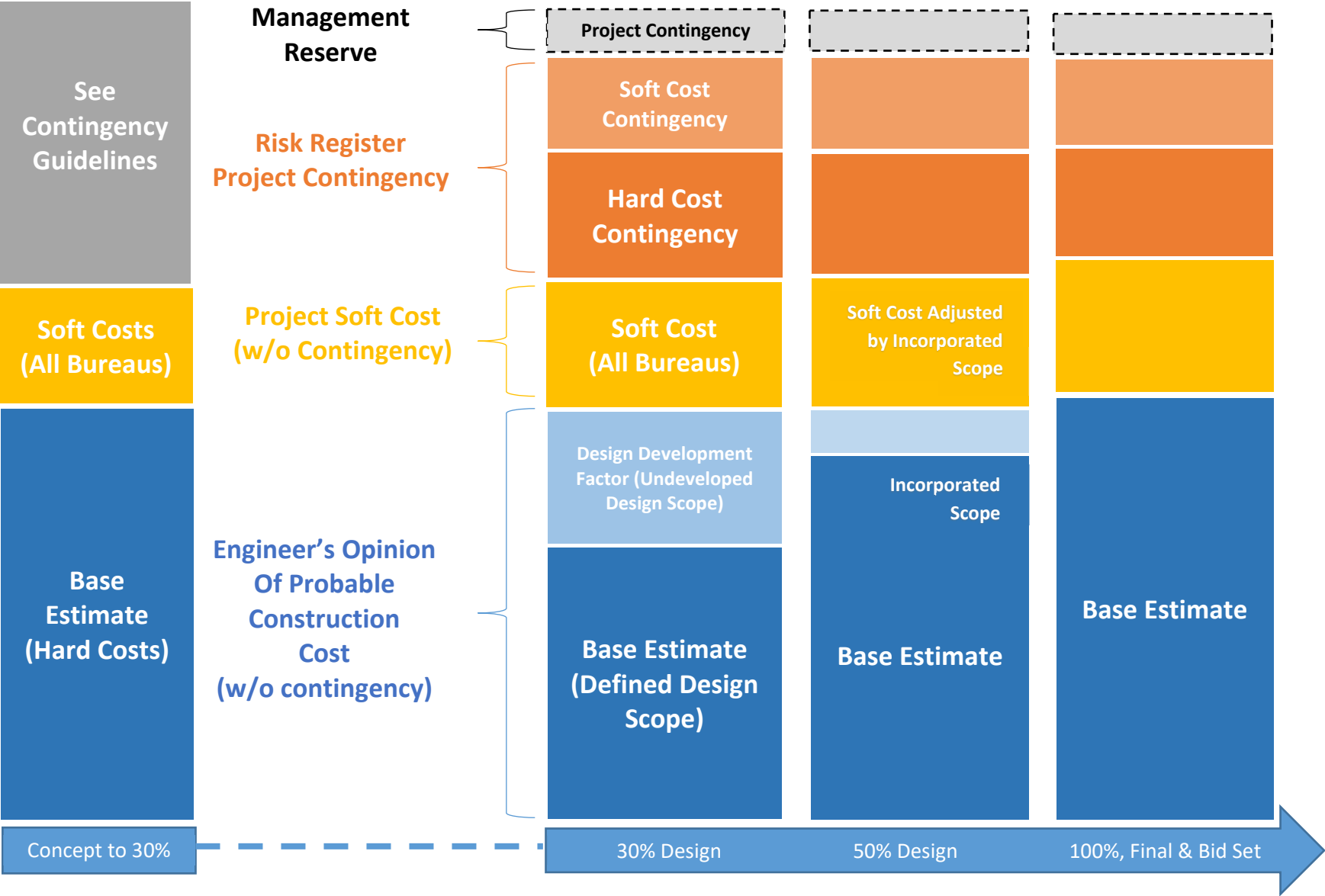
Risk Register (Hard Cost Contingency) – The estimated value of unmitigated risk events on the Construction Cost (Hard Cost). These costs are developed by the entire project team and simulated to the 70th percentile of non-exceedance.

Risk Register (Soft Cost Contingency) – The estimated value of unmitigated risk events on the Soft Costs. These costs are typically based on project delay events and are developed by the project team and simulated to the 70th percentile of non-exceedance.

Project/Program Contingency (Management Reserve) – A management-held contingency (WBS 1J-13-00-0000) reserved above and beyond the risk register contingency, used only on an as-needed basis. It requires PMD Director approval and GovCom approval. This contingency is not typically used and may sometimes be applied to round project budgets to whole numbers.

Total Project Cost – The total project cost at any point in time is the addition of all costs defined above.

**Column heights are a visual depiction and may vary per each project circumstance.*



Attachment J

POLB Engineering Design Standard Invoice
Format

Attachment J - POLB Engineering Design Standard Invoice Format

(Consultant's Company Letterhead)

POLB ENGINEERING DESIGN DIVISION ON-CALL CONTRACT INVOICE SUMMARY SHEET

PORT OF LONG BEACH - Engineering Design
415 W. Ocean Blvd., 5th Floor
LONG BEACH, CA 90802

Invoice Date: MMDDYY

Consultant Invoice No.: _____

Billing period: MMDDYY-MMDDYY
(start date-end date)

Contract No.: _____
Work Auth. No.: _____
Task Order No.: _____
Project Title: _____
Project No.: _____
Project Phase: _____
Fund: _____
Unit: _____
Object: _____
Program: _____
Design Manager: _____

Consultant Name: _____
Remit To Address: _____

Contract Term: MMDDYY-MMDDYY
(start date-end date)

Summary of Costs for This Invoice by Task

Scope of Work Task Number	Task Amount	Authorized Amount	Current Invoice	Invoiced to Date (Incl. Current Invoice)	% of Authorization Complete
Task Number 1	\$ 100,000.00	\$ 100,000.00	\$ -	\$ 100,000.00	100%
Task Number 2	\$ 100,000.00	\$ 100,000.00	\$ -	\$ 100,000.00	100%
Task Number 3	\$ 100,000.00	\$ 50,000.00	\$ 20,000.00	\$ 40,000.00	80%
Task Number 4	\$ 100,000.00	\$ 50,000.00	\$ 5,000.00	\$ 5,000.00	10%
Task Number 5	\$ 100,000.00	\$ -	\$ -	\$ -	
Task Number 6	\$ 100,000.00	\$ -	\$ -	\$ -	
Task Number 7	\$ 100,000.00	\$ -	\$ -	\$ -	
Task Number 8	\$ 100,000.00	\$ -	\$ -	\$ -	
Totals	\$ 800,000.00	\$ 300,000.00	\$ 25,000.00	\$ 245,000.00	

Amount Due this Invoice **\$ 25,000.00**

Total Work Authorization Amount: \$ 300,000.00
Total Remaining on Work Authorization: \$ 55,000.00
Percent (%) of Work Authorization used: 81.67%

Approved By: _____

Approved By: _____

Consultant Project Manager Date

Port Design Manager Date

(The consultant is required to attach all back-up detail for reimbursables and a cost breakdown on a task basis consistent with the above summary and the fee schedule included in the contract)

(Consultant's Company Letterhead)

**POLB ENGINEERING DESIGN DIVISION
ON-CALL CONTRACT INVOICE SUMMARY SHEET**

PORT OF LONG BEACH - Engineering Design
415 W. Ocean Blvd., 5th Floor
LONG BEACH, CA 90802

Invoice Date: MMDDYY
Consultant Invoice No.:
Billing period: MMDDYY-MMDDYY
(start date-end date)

On-Call Contract Summary

Total On-Call Contract Amount:	\$ 1,000,000.00
Total Committed Funds:	\$ 305,000.00
W.A. No. 1:	\$ 300,000.00
W.A. No. 2:	\$ 5,000.00
W.A. No. 3:	
W.A. No. 4:	
W.A. No. 5:	
W.A. No. 6:	

Total Uncommitted Funds:	\$ 695,000.00
% of Funds Used:	31%

Consultant Insurance Type* & Month Ending Expiration Dates
INVOICES WILL NOT BE PROCESSED WITHOUT THIS INFORMATION

General Liability	MM/DD/YY	Divers	MM/DD/YY
Employer Liability	MM/DD/YY	Watercraft	MM/DD/YY
Professional Liability	MM/DD/YY	Property	MM/DD/YY
Workers' Comp	MM/DD/YY	U.S.L & H.	MM/DD/YY
Company Owned Auto	MM/DD/YY	Excess Liability	MM/DD/YY
Private Owned Auto	MM/DD/YY	Water Pollution	MM/DD/YY
Aircraft	MM/DD/YY	(Other)	MM/DD/YY
Jones Act	MM/DD/YY	(Other)	MM/DD/YY
Contractor Pollution	MM/DD/YY	(Other)	MM/DD/YY
Protection & Indemnification	MM/DD/YY	(Other)	MM/DD/YY

*If not applicable to contract then mark N/A in the date cell

Attachment K

SBE-1 SBE/VSBE Goal Request Form

Attachment K - SBE-1 SBE/VSBE Goal Request Form


**SMALL BUSINESS
ENTERPRISE PROGRAM**
Section 1 - General Information

TO BE COMPLETED BY DIVISION

PROJECT MANAGER:		DIVISION:		SPEC NUMBER (if applicable):		DATE:	
PROCUREMENT TITLE:				PROCUREMENT CATEGORY:	☐ Prof Services ☐ Construction ☐ Other		
PROCUREMENT TYPE:	☐ RFP ☐ Low Bid ☐ RSOQ ☐ Sole Source ☐ GSA ☐ VAR			ESTIMATED CONTRACT VALUE (\$):			
Please provide a brief description of the scope of work, including subbing opportunities:							

Section 2 - Statement of Work (SOW) Breakdown

Click on the Planet Bids link to identify NIGP codes. Please identify as many as possible as these codes generate bid alerts---->
(use "Ctrl+F" for word search).

[Planet Bids NIGP Codes](#)

Click on the NAICS link to identify six-digit NAICS codes that are also used to determine SBE eligibility----->

[NAICS Codes](#)

TO BE COMPLETED BY DIVISION				TO BE COMPLETED BY SBE PROGRAM			
Work Element/Description (Add additional rows if necessary)	NIGP Codes	Performing Work (Prime, Sub or Vendor)	Work Element Dollar Value (\$)	Subcontractable Dollar Value (\$)	Total Contract Percent Value (%)	Number of SBE/VSBE Firms	Number of VSBE Firms
TOTAL:			\$ -	\$ -	0%		

*****DIVISION STOPS HERE AND SUBMITS FORM TO SBEPROGRAM@POLB.COM*****

Section 3 - SBE Goal Recommendation

TO BE COMPLETED BY SBE

SBE will recommend a goal and return form to division for final goal and approval.

IS THIS PROJECT SBE APPLICABLE?*		☐ YES*	☐ NO, PROJECT IS NOT-APPLICABLE**
SBE/VSBE RECOMMENDATION:			VSBE PORTION:
SBE STAFF REPRESENTATIVE:			DATE:

*****SBE STOPS HERE AND RETURNS FORM TO DIVISION FOR FINAL GOAL AND APPROVAL*****

Section 4 - Division Final Goal & Approval

TO BE COMPLETED BY DIVISION

The Division shall set a final goal below, obtains Director approval and return a sign copy to SBE. If a Division does NOT agree with recommended goal, complete the justification line, obtain Director's approval and return to SBE. After receipt of an approved SBE-1, the Division will be provided with the SBE goal language for the procurement.

SBE/VSBE FINAL GOAL:		VSBE PORTION:	
GOAL TYPE (CHECK ONE BOX): PROFESSIONAL SERVICES: ☐ Aspirational Goal, No GFE ☐ No Goal ☐ Exempt CONSTRUCTION: ☐ Aspirational Goal, GFE Required ☐ Mandatory Goal ☐ No Goal ☐ Exempt OTHER: ☐ Aspirational Goal, No GFE ☐ No Goal ☐ Exempt			
If a zero (or no) goal was assessed, please provide justification:			
DIVISION DIRECTOR APPROVAL:			
		DATE:	

*If a project is SBE applicable, SBE staff will evaluate and set a goal recommendation, which can include a 0% goal (also defined as no goal).

rev: 11/30/22

**If a project is not-applicable, it is exempt from SBE requirements. This includes GSA, VAR, international procurements, procurements the Port does not control (such as piggyback or cooperatives), and procurements not competed.

Note: SBE-1s must be re-submitted if the scope of work, or estimated contract value changes, or if procurement is not released within three months