

EXHIBIT 1

SPECIAL PROVISIONS

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT

GENERAL ENGINEERING CONSULTANT CONTRACT (GEC II)

SCOPE OF SERVICES

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01 PROJECT MANAGEMENT AND CONTROLS

This section 01 will cover Project Management and Project Controls services to be provided by the CONSULTANT through the design, construction, and implementation of the Honolulu High-Capacity Transit Corridor Project (the Project). The CONSULTANT will communicate and coordinate these services with the City and County of Honolulu (the CITY) to ensure consistency with CITY processes and procedures, to facilitate timely and informed decisions related to delivery of the Project, and to assist the CITY in meeting Federal Transit Administration (FTA) and other third-party processes and requirements.

01.01 Project Management

The CONSULTANT will provide management, technical, professional and administrative staff as required to successfully perform the Work; will assist the CITY in the development and implementation of Project Plans and procedures; will implement information management systems that provide for timely collection, collation, analysis and reporting of Project information at both the project-wide and contract levels; will assist the CITY in meeting Federal, FTA, and other third-party reporting requirements; and will perform the Work in accordance with CITY and FTA requirements.

01.01.01 CITY Integrated Contract Management System (CMS)

The CITY has standardized the use of Oracle P6 and Contract Management as an integrated contract management system (CMS) to assist with configuration, cost and schedule management, and document control of all Project procurements. The CONSULTANT will provide the services in a manner compatible with the CITY's CMS and in accordance with CITY processes and procedures; will integrate the CITY's CMS into the CONSULTANT's processes and procedures (both internal and project-wide) where appropriate; will provide CMS training for the CONSULTANT's staff; will manage and administer the application and use of CMS by the CONSULTANT's staff including the purchasing and administration of the CONSULTANT's Contract Management software licenses and the CONSULTANT's monthly hosting fees; and when requested, will assist the CITY in development and implementation of CMS modules to be used by the CONSULTANT.

Assumptions

The CITY will provide CMS training to persons other than the CONSULTANT's staff.

The CITY will be responsible for the functionality of CMS to include development, implementation, updates, security, administration, access, site hosting, maintenance, and providing support services to the CITY, the CONSULTANT and all other CITY Contractor/Consultant staff.

01.01.02 The CONSULTANT's Project Management Plan (CONSULTANT PMP)

The CONSULTANT will provide for the management of the Work, including preparation of a Project Management Plan that will provide for the control (cost, schedule, scope) of the services being provided (CONSULTANT PMP). Once the services to be undertaken are adequately defined and planned, procedures shall be

developed to ensure the oversight, monitoring and reporting of the progress of the Work, including cost and schedule, are enabled at the Task level.

The CONSULTANT will prepare the CONSULTANT PMP and submit for CITY review and comment. The CONSULTANT PMP shall identify and, to the extent applicable, incorporate references to the Project's PMP and the CITY's policies and procedures. The CONSULTANT PMP shall describe the services to be provided and shall be prepared in accordance with the guidelines issued by the FTA. At a minimum the CONSULTANT PMP shall include the CONSULTANT's organizational approach including an organization chart showing first, second and third level managers, key position descriptions and responsibilities, descriptions of management and project control systems, identification of CONSULTANT policies and procedures, descriptions of contract administration processes and procedures as they apply to the management of the CONSULTANT contract, and identification of key milestones and deliverables. The CONSULTANT PMP will be revised to reflect changes that occur as the Project progresses.

Upon completion of the CONSULTANT PMP, the CONSULTANT shall develop internal procedures to govern oversight and monitoring of the progress of the Work including expenditures of budget against the primary cost categories defined by the CONSULTANT's work breakdown structure (WBS). Upon issuance of the Notice to Proceed (NTP), the CONSULTANT and the CITY shall jointly identify the CONSULTANT internal procedures to be submitted for CITY review and comment.

Assumptions

The CONSULTANT PMP will be consistent with the Project PMP in terms of terminology used.

A draft CONSULTANT PMP shall be submitted to the CITY for review and comment within ninety (90) days from receipt of the NTP. The CITY will provide a consolidated set of comments and proposed edits within twenty-one (21) days of receipt of the draft CONSULTANT PMP.

The CONSULTANT PMP is not subject to the CITY's configuration management procedures.

The number of CONSULTANT internal procedures to be submitted for CITY review and comment will not exceed twenty-four (24).

Deliverables

Draft CONSULTANT PMP

CONSULTANT Internal Procedures which are subject to CITY review

01.01.03 CONSULTANT Configuration Management

The CONSULTANT will review and incorporate relevant provisions of the CITY's Configuration Management Plan, including document control, design development review, baseline documents, and design change control into the CONSULTANT PMP and related CONSULTANT internal procedures.

01.01.04 CONSULTANT Work Breakdown Structure (WBS)

Within thirty (30) days from receipt of the NTP, the CONSULTANT will prepare and submit for CITY review and comment a WBS to a level consistent with the work being accomplished and of sufficient detail to capture CONSULTANT costs in such manner as to be able to report at the FTA Standard Cost Categories (SCC) levels. The WBS will be in alignment with the Project WBS to allow for consistency in tracking and exporting cost and schedule data.

Deliverables

CONSULTANT WBS

01.01.05 CONSULTANT Budget

In addition to the requirement for all budget and costs to be collected by WBS level, at least a three-tier contract budget is required. The top tier will be the contract amount consisting of an aggregation of all top level tasks. The second tier will be top tasks consisting of an aggregation of all lower sub-tasks. The third tier will be the top level sub-task for each task and will consist of an aggregation of all lower sub-tasks. The budget amounts will consist of the hours negotiated for each staff position by tasks and/or sub-tasks multiplied by the applicable fully burdened labor rate. The fully burdened rate will consist of the raw labor, the applicable overhead rate and fixed fee as a percentage of labor and overhead. The CONSULTANT will provide the CITY a hard copy of the budget tabulation and an MS Excel file that contains all the data and all the formulas used in preparation of the budget. Upon approval by the CITY, the budget will be baselined for the three tiers mentioned above.

If there is a need to revise the baselined budget the CONSULTANT will notify the CITY in writing of the justification and provide the proposed budget revisions. Upon agreement from the CITY the baselined budget may be revised as agreed. Should the CONSULTANT choose, for internal management purposes or any other reason, to budget lower than the three tiers mentioned above, CITY approval to make revisions at the lower levels is not required, provided the revisions do not change the baselined budget.

Deliverables

Budget Tabulation Hard Copy
Budget Tabulation MS Excel File

01.01.06 Staffing Plan

The CONSULTANT's initial list of individuals authorized to be reimbursed for Project Work shall be included as an attachment to the Special Provisions, identified as Exhibit 2A, Schedule A. Proposed additions to the list shall be submitted to the CITY for approval prior to invoicing for employees not previously on the list. The CONSULTANT will submit by the last business day of July an annual staffing plan, accompanied by estimate of cost, for approval by the CITY, which covers the period for the beginning of July to the end of June for each year during the term of the Contract. The staffing plan shall be conformed to the budget and will identify position title, names of staff assigned when known, planned start and finish dates, and the planned level of effort they will expend during their assignment to the Project. In addition to cost, the plan will show the level of effort, stated as full-time equivalent. One full-time equivalent shall equal 1,872 billable hours annually.

Assumptions

Deliverables

Annual Staffing and Cost Plan

01.01.07 Monthly Project Progress and Status Reports

The CONSULTANT will submit a monthly report to the CITY that reflects accomplishments in the prior month and significant work anticipated in the coming month. The report will include a list of open action items and current status.

In addition to the above, the report will address the overall Project status for which the CONSULTANT is responsible and will cover scope, schedule, budget, risk assessment, environmental compliance, safety and public involvement.

The monthly report will also include a section that contains the status of cost versus budget grouped by tier 2 and 3 referred to in Section 01.01.05, above. The summary sheet will show monthly cost versus budget, inception to date cost versus budget and the cost to complete. Attached to this section of the report will be the current monthly hours charged by individual by sub-task. If requested by the CITY details by employee by sub-task from inception to date will be provided.

Assumptions

Inception to date details by employee by task will be requested every other month.

Deliverables

Monthly Progress Report

Monthly Action Item List

Monthly Cost and Budget Report

Employee Detail Report by Employee and by sub-task

01.01.08 CONSULTANT Contract Administration

01.01.08.01 Cost Accounting

The CONSULTANT will develop and implement cost accounting procedures that are compliant with CITY, State, Federal, and FTA requirements and meet the terms of the Agreement. The procedures will enable the CONSULTANT to identify and invoice only for costs that are allowable under the Agreement. Exhibit 2B to the Special Provisions describes the invoicing and compensation provisions.

01.01.08.02 Subcontract Administration and Contracting Approach

The CONSULTANT will develop subcontract administration procedures that are compliant with CITY, State, Federal, and FTA requirements. These procedures will address subcontracts at all tiers and provide for the incorporation of proper scopes, schedules, and budgets, as well as all required contract flow-down clauses. Administrative procedures will address such subjects as invoicing, payment, insurance verification, reporting, acceptance of work, and subcontract close-out.

The CONSULTANT will develop subconsultant contracts (subcontracts) in conformance with the overall Agreement. Where practical, subcontracts will be developed using the same contractual arrangement as the Agreement. In cases where this is not practical, the CONSULTANT will notify the CITY on the arrangement used.

The CITY reserves the right to approve all subcontractors. A list of subcontractors at all tiers will be provided to the CITY upon request.

Assumptions

The CITY will request an updated list of subcontractors twice yearly.

01.01.09 Administrative Support Services

The CONSULTANT will provide administrative and support services in the Project office as requested by the CITY.

01.02 Project Controls Services and Support

CMS is the CITY's document management and contract controls software for the Project. Oracle's web-based CMS is the overall project management and document control system that will be used to capture, control and track Project activities and documents. Individual module groups within CMS are used to manage the overall Project and individual contracts. Microsoft's SharePoint, a web-based server platform, is the database used for storage and search/retrieval of all Project files. Files can be managed with access rights, version control, and metadata tags. The interface facilitates collaboration, provides content management features, and will implement business processes. A user-defined dashboard will allow access to individuals in accordance with their Project roles and responsibilities. File attachments within CMS are stored in Microsoft SharePoint.

Where applicable, the CONSULTANT will provide project control services in accordance with the CITY's approved procedures and FTA requirements. Using proven and effective tools and

techniques for dealing with essential Project Control (scope, schedule, budget) procedures, the CONSULTANT will:

- Establish contract baseline scopes, schedules, and budgets consistent with FTA requirements and subject to CITY approval;
- Monitor and report on contractor progress against baselines through the use of data collection, collation, and analysis. Reporting shall be done on a monthly basis; the CITY and the CONSULTANT will jointly determine the method, format, media and scheduling for standard reporting requirements;
- Perform Project-wide and contract level trend analyses relative to cost and schedule. Trend analyses will be performed monthly and updated to reflect the most recent contractor submittals. The CONSULTANT will identify changes in work production including cost and schedule and will address early detection of potential delays, claims, conflicts between contracts, or other potentially significant impacts to the Project; and
- Establish and maintain information management systems to support the CITY's standard reporting requirements and use of CMS.

01.02.01 Project Control Procedures

The CONSULTANT will assist the CITY in developing and updating Project-wide project control procedures to be used by the CITY, the CONSULTANT and Contractors.

The CONSULTANT will prepare CONSULTANT Project Control procedures that describe the processes and methodologies to be used by the CONSULTANT in providing project control services in accordance with the Agreement and with approved CITY Plans and procedures. The list of procedures shall be jointly developed by the CITY and the CONSULTANT. The procedures shall be supplemental to and aligned with the approved CITY procedures such that the services provided will support and be able to fully integrate with the CITY's CMS.

The CONSULTANT shall submit the CONSULTANT project control procedures to the CITY for review and comment within thirty (30) calendar days of the initial NTP.

Assumptions

The number of CONSULTANT Project Control procedures to be developed by CONSULTANT will not exceed six (6).

Deliverables

CONSULTANT Project Control procedures

01.02.02 CONSULTANT Management Information System (MIS)

The CONSULTANT will establish and maintain an integrated management information system (MIS) to support the CITY's standard reporting requirements and use of CMS. Within sixty (60) days of receipt of the initial NTP, the CONSULTANT shall provide a summary level plan describing the CONSULTANT's MIS including the identification of the software applications to be used, the integration

of the applications, MIS organizational structure, system administration and site hosting, and CMS integration and support.

Assumptions

The CONSULTANT will use a full range of software combined into a comprehensive Management Information System. Software applications will include PRISM, P6, Timberline, eTimemachine, SQL Server Rational Database, Palisade's @Risk, Primavera's Pertmaster, Microsoft SharePoint, the CITY's CMS, and other applications as needed. The CONSULTANT will develop the necessary integration and training to produce reports and report graphics as well as the updating of the CITY's CMS. The CONSULTANT's MIS will be located on a Parsons Brinckerhoff server and will be backed up pursuant to Parsons Brinckerhoff policy.

Deliverables

CONSULTANT Management Information System (MIS) Plan

01.02.03 Project Controls Support for FTA Reports

The CONSULTANT will provide cost, schedule, and performance data and information as required by the CITY to meet FTA reporting requirements. The data and information shall be provided in the format and medium designated by the CITY.

Assumptions

Means and methods of obtaining the data will be at the discretion of the CONSULTANT. The CONSULTANT will only be responsible for supplying cost and schedule data for contracts which the CONSULTANT manages.

01.02.04 Scope Control/Work Breakdown Structure (WBS)

The CITY's WBS will be used by the CONSULTANT for budget and cost reporting purposes. The CONSULTANT may expand the CITY's approved WBS as deemed appropriate for its internal purposes. If applicable and when requested the CONSULTANT will provide the CITY with a table of its expanded WBS. The CONSULTANT will develop and implement procedures for use in management of the Agreement and subcontract scopes of services.

01.02.05 Schedule Control

01.02.05.01 Master Project Schedule (MPS)

When requested, the CONSULTANT will assist the CITY in the development and updating of the Master Project Schedule (MPS) in accordance with the CITY's approved procedures.

01.02.05.02 Integrated Project Schedule (IPS)

Within thirty (30) days of receipt of the baseline MPS, the CONSULTANT will develop a Baseline Integrated Project Schedule (IPS) in accordance with the approved CITY procedures. As the Project progresses, the IPS shall be a roll up of the contractor's approved Progress Schedule (CPS) for each active contract as identified in the CITY's baseline Contract Package Plan to allow for the validation and tracking of contract

interfaces and milestones and to provide for the early detection of potential delays, conflicts, claims, or other potential impacts that could affect the successful delivery of the Project.

The CONSULTANT shall perform monthly updates to the IPS to incorporate and reflect active contractor schedules and milestones. The monthly updates will be compared to the Baseline IPS in order to identify, track, and respond to schedule changes as the Project progresses.

The CONSULTANT will provide the updated IPS to the CITY monthly and will notify the CITY of any changes to the Baseline IPS. The development of the IPS including changes, modifications or updates will be performed by the CONSULTANT and in accordance with the approved CITY procedures as supplemented by the CONSULTANT project control procedures.

The CONSULTANT will produce a Monthly Schedule Report identifying key issues derived from a comparison analysis of the updated IPS with the MPS.

Assumptions

The Baseline IPS is not a Project baseline document and therefore not subject to the CITY's configuration management procedures.

Deliverables

Monthly Schedule Reports

Monthly IPS update

01.02.05.03 CONSULTANT Schedule Control and Reporting

The CONSULTANT shall provide a cost and resource loaded schedule of work products and staffing plans for review and comment by the CITY within sixty (60) days from receipt of the NTP. The schedules shall depict the CONSULTANT's scope of work, key deliverables (i.e. those deliverables identified in Exhibit 1 – Scope of Work), and assigned resources. The appropriate schedules shall be updated monthly and submitted along with the monthly progress report.

The CONSULTANT shall produce monthly schedule progress reports and will include a description of variations from the planned schedule and any proposed management actions to adjust resources to achieve CONSULTANT schedule objectives. The schedule progress report will focus on work achieved in the subject reporting period and on work anticipated to be undertaken in the upcoming reporting period.

Assumptions

Upon issuance of the initial NTP, the CONSULTANT and the CITY shall jointly identify the format and content of the monthly schedule progress report.

Deliverables

CONSULTANT Baseline Schedule

Monthly Schedule Progress Reports

01.02.05.04 Review of Contractor Schedule and Pay Request

The CONSULTANT shall perform reviews of Contractor Baseline Schedules, including updates thereto, to verify compliance with the contract requirements. Upon completion of the reviews, the CONSULTANT shall make recommendations for either acceptance or rejection to the CITY. As part of the Baseline Schedule review, the CONSULTANT will also review the Contractor's Schedule of Milestones (SoM), if applicable.

The CONSULTANT will review contractor monthly progress schedules and pay requests in accordance with approved CITY procedures. The CONSULTANT reviews shall be completed within fourteen (14) days of receipt of the contractor's submittal.

Once the Contractor Baseline Schedule and SoM have been accepted, key changes to the Contractor Baseline Schedule or SoM shall be made via the CITY's approved change control processes.

01.02.06 Cost Control

The CONSULTANT shall provide cost control services in accordance with the approved CITY procedures or as supplemented by CONSULTANT Project Control procedures that might exceed the CITY procedure requirements.

01.02.06.01 Project Baseline Budget

The CONSULTANT shall prepare and submit for CITY approval a Baseline Estimate (also referred to as a "Bottom-Up" or "Milestone" Estimate) at predetermined milestones in accordance with the approved CITY procedures and FTA requirements. The CONSULTANT will derive the Year of Expenditure (YOE) cost by spreading the Baseline Estimate on the MPS using CITY agreed upon escalation rates. This will serve as the basis for the Project Baseline Budget. The approved Project Baseline Budget will be broken down by Contract and by WBS/SCC to facilitate reporting to the FTA.

Assumptions

The Bottom-Up Estimate will be made up of estimated YOE costs including contingency for contracts which have not been awarded. Contracts which have been awarded will be included in the Project Baseline Budget at the award price plus an agreed upon Change Order contingency.

Deliverables

Entrance into Final Design:

Bottom-Up YOE by Contract by SCC, Basis of Estimate, Basis of Escalation, FTA Workbook by Contract, YOE by Contract by WBS

Full Funding Grant Agreement:

Bottom-Up YOE by Contract by SCC, Basis of Estimate, Basis of Escalation, FTA Workbook by Contract, YOE by Contract by WBS

01.02.06.02 CONSULTANT Cost Control and Reporting

The CONSULTANT will establish a cost control management information system consistent with the CONSULTANT's cost accounting system. The system shall record costs and provide reports that allow for review and analysis of costs incurred on a monthly basis, by task, both for work incurred by the CONSULTANT itself and for work incurred by subconsultants. The cost control management information system shall also incorporate checking procedures to verify that costs allocated to the Work are consistent with the CONSULTANT contract terms and general conditions.

The CONSULTANT shall produce monthly cost progress reports and will include a description of variations from the planned costs incurred and any proposed management actions to adjust resources to achieve CONSULTANT cost objectives. The cost progress report will focus on costs incurred in the subject reporting period, cost incurred from NTP to the closing date of the reporting period, on work anticipated to be undertaken in the upcoming reporting period, and the forecasted cost to complete over the remaining contract duration.

Assumptions

Upon issuance of the NTP, the CONSULTANT and the CITY shall jointly identify the format and content of the monthly cost progress report.

The CONSULTANT will use PRISM and eTimemachine as the primary cost control software.

Deliverables

Monthly Cost Progress Reports

01.02.07 Estimating Services

The CONSULTANT will provide cost estimating services for all contracts during the design and construction phase of the Project at various milestones. The estimating services shall support multiple contract delivery systems including Design-Build, Design-Bid-Build, Design-Build-Operate and Maintain, and other types of arrangements. Unless otherwise indicated in the estimate, all estimates will be in YOE dollars.

01.02.07.01 Preliminary Estimates

The CONSULTANT will provide cost estimates at typical design milestones. Design-Build is typically at 30% at which point an Engineer's Estimate is developed, prior to receiving the design-builders' proposals. Typical design milestone estimates for DBB will be at 30% or preliminary level design, 60% or interim level design, and at 90% final design. At 100% design the Engineer's Estimate would be developed parallel to the bidders. Design-Build-Operate and Maintain would require only an Engineer's Estimate at 30% Design similar to Design-Build.

For Final Design contracts, the Designer-of-Record will provide all quantities which will be reviewed by the CONSULTANT and corrected as needed prior to incorporation into the preliminary cost estimate. The level of detail of the estimate will increase as the design matures and moves forward. A design contingency will

be established for each estimate based on industry standards for the level of design and reduced as the design is completed.

Assumptions

Schedule

The CONSULTANT will have three (3) weeks, or a mutually agreed upon schedule, to develop a cost estimate followed by two (2) weeks for an independent review prior to submittal to the CITY.

Deliverables

Preliminary Estimates

01.02.07.02 Engineer's Estimates

The CONSULTANT will provide Engineer's Estimates between completion of final design and prior to the receipt of the contractor's proposal for each CITY contract. This will allow evaluation of the contractor's cost proposals to determine compliance with the design documents and scope of work for the contract and responsiveness for potential award.

For Final Design contracts, the Designer-of-Record will provide final quantities upon completion of design. The CONSULTANT will develop the overall estimate for each contract. The CONSULTANT will develop the Engineer's Estimate within the bidding period of the contract and submit the Engineer's Estimate to the CITY twenty-four (24) hours prior to bid opening.

Deliverables

Engineer's Estimate for each project prior to bid opening

01.02.07.03 Change Estimates

The CONSULTANT will provide independent cost estimates for contract cost adjustments changes to the original base contract except contracts that are administered directly by the CITY. These include but are not limited to owner initiated changes, contractor initiated changes, errors and omissions in the case of design-bid-build contracts, and potential claims. The CONSULTANT will be available for negotiations with the contractor as necessary to resolve contract changes.

Estimates will be developed in WBS or Construction Specifications Institute format using database driven computerized estimating software. Costs will be broken down by labor, material and equipment based on historical project data, industry standard cost data, or vendor quotations as applicable.

Assumptions

The CONSULTANT will have two (2) weeks, or a mutually agreed upon schedule, to develop a change order estimate.

There may be multiple iterations of the estimate prior to final negotiation which will become part of the final record with accompanying notations.

Deliverables

Final cost estimate

01.02.07.04 Evaluation of Contractor Bids and Cost Proposals

The CONSULTANT will provide review and evaluation of contractors' bids to determine price reasonableness. The CONSULTANT will provide a narrative of review comments in an outline or other format as required by the CITY.

Assumptions

Schedule

Deliverables

Evaluation results

01.02.08 Document Control

The CONSULTANT will provide document control services in accordance with the CITY's approved procedures. The CONSULTANT will provide oversight of construction documentation processes and procedures undertaken by the Design-Build (DB) Contractors, the Design Consultants, and the Construction Engineering Inspection (CEI) firms.

01.02.08.01 Document Control and Records Management Systems

The CONSULTANT will:

- Establish procedures and work instructions compatible with the CITY's procedures and Microsoft SharePoint and CMS web-based programs.
- Manage the receipt, logging, control, tracking, and timely processing of all Project documents, including correspondence and other forms of communication, technical documents, documentation of mitigation compliance oversight, shop drawings, calculations, data submittals, manuals, and samples received as part of the design, procurement, and construction process.
- File all communication in the Project files, in accordance with the CITY CMS.

01.02.08.02 CONSULTANT Document Control System

The CONSULTANT will provide a searchable document control system to maintain a permanent record of the Work that will be available to the CONSULTANT and the CITY.

For documents prepared by the CONSULTANT, a tracking system will be used that tracks revisions and permits the retrieval of any version of a document but will specifically identify the most current up-to-date revision of any document. The CONSULTANT's document control system will be compatible with the CITY's document control system and, where required, integrate with the CITY's CMS.

Assumptions

The CONSULTANT will use Microsoft SharePoint as the primary document control software.

01.02.08.03 Training

The CONSULTANT will:

- Provide training in the use of the CITY's Contract Management and SharePoint based programs to CONSULTANT staff.
- Assist the CITY in the development of training materials for CMS and SharePoint.

Assumptions

Except for its own staff and subconsultants, the CONSULTANT will not be required to train other CITY Contractors.

01.02.08.04 Document Standards

The CONSULTANT will prepare Project correspondence and other forms of communication in accordance with approved CITY document standards and procedures.

01.02.08.05 Technical Library

The CONSULTANT will obtain and maintain specification referenced standards including local and regional specifications, codes, standards, publications, regulations, applicable permitting criteria from local, state, and federal agencies, standard drawings and specifications of the local agencies, and related documents, as referenced in the contract documents and as required to perform the work, making such documents available for review by the CITY, construction contractors, designers, and other interested parties.

01.02.08.06 Final Documentation Delivery

The CONSULTANT will furnish and deliver all original Project documents and final Project reports to the CITY in accordance with approved CITY procedures for Project close out (refer to Task 18).

02 INTERFACE MANAGEMENT AND COORDINATION

The CONSULTANT shall develop and maintain for the CITY the Project Master Interface Plan and the procedures for multiple levels of interface identification, coordination, implementation, and verification, and oversee interfaces during the Contract term. The CONSULTANT will perform the activities described in the procedures.

Assumptions

Individual Designers/Contractors are responsible for the development of Interface Control Manuals (ICM) and interface identification, coordination, implementation, and verification.

Schedule

Per the Master Schedule

Deliverables

- Develop Project Master Interface Plan within thirty (30) days of NTP
- Update Interface Policies and Procedures developed in the PE/EIS Contract, within sixty (60) days of NTP
- Maintain the Project Interface Control Manual (PICM), which is a compilation of individual designers', constructors' and suppliers' ICMs that conform to and are consistent with the Interface Plan and associated procedures
- Review and provide comments for Interface Control Documents submitted by the Contractors to define agreed to interface responsibilities
- The CONSULTANT will assist the contract management teams in conflict resolution, processing change orders and perform other related activities as applicable

03 RISK ASSESSMENT AND AVOIDANCE

The CONSULTANT shall support the CITY in the development of the FTA products related to Risk Assessment, including Risk Assessment Studies, Project Execution Plan (PEP), and the Contingency Management Plan.

03.01 Risk Assessment and Avoidance

03.01.01 Risk Register Management

The CONSULTANT will maintain and manage the CITY's Risk Register in accordance with the Agreement and as required by the Project Management Oversight Consultant (PMOC) and/or FTA. The Risk Register will be updated in Microsoft (MS) ACCESS and transferred to the Project's CMS system where custom reports will be developed with the assistance of the CITY to manage, update and report on the Project's risks.

Assumptions

Updated using MS ACCESS

Schedule

Reviewed and updated monthly

Deliverables

Risk Register updates

03.01.02 Cost and Schedule Risk Analysis

The CONSULTANT will develop, modify and update cost and schedule risk models (top down and bottom up in the case of cost models, bottom up in the case of schedule models). A risk report summarizing remaining cost contingency and schedule contingency comparing with the latest agreed cost and schedule graphic along with a report on current risks, status of risk mitigation against those risks ranked as 'top risks' and recommendations for secondary risk mitigation will be issued in support of FTA milestones and / or Hold Points as may be agreed and incorporated into the Project Execution Plan.

Assumptions

Cost Analysis software will be @Risk for MS EXEL by Palisade Corporation

Schedule Analysis software will be Primavera P6 and Oracle Pertmaster Risk

Schedule

Updated quarterly or at an agreed Milestone or Hold Point as outlined in the PEP

Deliverables

Cost and Schedule Risk report updates

03.01.03 Risk and Contingency Management Plan

The CONSULTANT will prepare the Project's Draft and Final Contingency Management Plan (CMP), which includes the Project Execution Plan (PEP), for review and approval by the CITY. The PEP will set out the agreed minimum contingency capacities in terms of cost and schedule to be available at each Milestone and / or Hold Point. The CONSULTANT will amend periodically, taking into account any revisions to minimum contingency capacities agreed between the CITY and FTA.

Assumptions

Prepared in MS WORD with cost and schedule graphics in MS EXCEL

Schedule

To be determined

Deliverables

Draft CMP

Final CMP

03.01.04 Support for Other Risk Assessment Activities

The CONSULTANT will assist the CITY in support of requests related to Risk Assessment and mitigation activities. These may include, but are not limited to, those required by the CITY procedures, requests from the FTA in connection with risk assessments to support the Grant process in application for an Full Funding Grant Agreement (FFGA), the requirements outlined in the PEP in connection with contingency management and in support of applications for requests for Letters of No Prejudice. The CONSULTANT will work with the CITY and with other designers and contractors as may be appointed to identify and quantify retained risk by the CITY under construction contracts prior to and following their award with the objective to recommend allocated contingency reserves to be assigned.

Assumptions

In line with previous tasks

Schedule

As required

Deliverables

As required

04 QUALITY MANAGEMENT

The CONSULTANT will develop, maintain, and implement a Quality Management System (QMS) with associated procedures in accordance with the CITY's Project Quality Management Plan (QMP). The CONSULTANT will support the CITY's QMP as required by the Contract. The Quality Assurance Plan (QAP) will be submitted to the CITY for approval.

This section covers the development of the QMS, including guidelines and requirements for quality assurance/quality control (QA/QC) of the CONSULTANT's Project-related work as well as the Quality Assurance oversight of the contracted work. The QMS will comply with the general requirements of the CITY's QMP, FTA guidelines regarding the fifteen (15) essential elements of a Quality Program, as described in the Quality Assurance/Quality Control Guidelines (FTA-IT-90-5001-02.1 February 2002 Issue) and applicable provisions of ISO 9001:2000.

Various methods of procurement packaging will be utilized for the Project design, construction, and management contracts. The contractual requirements for quality of each individual contract will be assessed and incorporated into the QMS, as appropriate.

04.01 Quality Assurance/Quality Control (QA/QC)

04.01.01 Quality Management

The CONSULTANT Quality Manager is responsible for developing the QMS to assure quality assurance/quality control for the work being performed by the CONSULTANT and for oversight of each contractor's QMS. The CONSULTANT will prepare the quality documents to effectively implement the QMS. Activities include the following:

- Develop the QMS that establishes a quality policy, quality procedures, and quality measures, all of which conform to the requirements of the CITY's QMP
- Develop a QAP for the CONSULTANT's work, which provides the quality guidelines for the oversight of the Project's contracts
- Establish and manage a quality team organization
- Communicate the quality policy to the Project Team and provide training
- Establish that the quality plan program and procedures are understood, implemented, and maintained throughout the Project Team organization
- Provide leadership by actively participating in quality initiatives
- Establish a quality improvement system to monitor and improve the QMS through periodic effectiveness reviews
- Perform audits and surveillances of the CONSULTANT and contractors as necessary to assess the level of conformance within the QMS and to determine if conformance is having the desired effect on the delivery of products and services

- Identify and document occurrences of the CONSULTANT'S nonconformance, make recommendations on the merits of preventive or corrective actions and verify the implementation and effectiveness of the preventive or corrective actions

Assumptions

The quality documents will be reviewed periodically and updated, as necessary.

Schedule

Per Master Schedule

Deliverables

- Quality Assurance Plan (QAP)

04.01.02 Quality Procedures and Reference Documents

The CONSULTANT will develop and implement procedures for quality relative to the work being performed by the CONSULTANT and the oversight of individual contractor QAPs. The procedures will address the FTA's 15 quality elements including quality audits, preventive/corrective actions, quality training, and maintenance of quality records. Written procedures will include a scope, purpose, identification of responsibilities, the quality procedure process, and quality records to be maintained. Additional forms, checklists, and other reference documents will be developed, as needed, to perform and document quality activities.

Assumptions

The Quality documents will be reviewed periodically and continually improved, as necessary. Quality Procedures will include the necessary forms and checklists associated with the procedures.

Schedule

Per Master Schedule

Deliverables

Quality Procedures

04.01.03 Contractor Quality Oversight

The CONSULTANT will perform quality oversight activities of individual contractor QMSs. The oversight will monitor the performance of contractor's adherence to quality requirements and procedures. Quality activities will include:

- Periodic meetings and coordination with contractors' Quality Manager and staff;
- Review of contractor QAP document submittals and providing comments and recommendation for acceptance;
- Development of Audit and Surveillance schedules and checklist for each individual contract's QAP;

- Audits and Surveillances of contractors' QMS with documentation of Observation and Non-conformance Reports (NCR);
- Audits to verify compliance with supplier process control and that purchased services or products conform to specified requirements;
- Follow-up of the preventive or corrective actions and verification of implementation; and
- Log and tracking of non-conformances of contractors' activities prepared by the CONSULTANT's field staff.

Assumptions

Overall, Project-wide quality oversight requirements will be established with supplemental requirements to monitor compliance with contractor's QMS.

Schedule

Per Master Schedule

Deliverables

- Audit and Surveillance schedules for each individual contract's QMS
- Audit and Surveillance checklists for each individual contract's QMS
- Audit and Surveillance Reports with Observation and NCRs

05 SAFETY AND SECURITY

The CONSULTANT will continue programs to address required aspects of system safety and security for the Project in accordance with FTA guidelines and requirements. This will include maintaining the Project Safety and Security Management Plan (SSMP) and the Safety and Security Certification Plan (SSCP), and supporting the Safety and Security Oversight and Review Committee (SSORC). The CONSULTANT will review and recommend for approval the Safety and Security Plans of each contractor and consultant under its oversight, and conduct ongoing safety and security audits. Oversight of the contractors' and consultants' safety and security certification checklists will be an ongoing CONSULTANT role as well. The CONSULTANT will coordinate with the State Oversight Agency (SOA) during the design, construction and commissioning processes, as directed and deemed appropriate by the CITY Safety and Security Manager. The CONSULTANT will update the Preliminary Hazard Analysis (PHA) and the Threat and Vulnerability Assessment (TVA) as design and construction progress, and ensure that the TVA report findings are maintained as Sensitive Security Information (SSI) in accordance with the CITY's SSI program.

The CONSULTANT will provide construction safety and security oversight including monitoring of the contractors' construction safety program. The CONSULTANT will develop and implement construction safety training programs for CITY and CONSULTANT field staff. While the CONSULTANT is responsible for administration, oversight, and coordination, each individual construction contractor and design consultant shall be responsible for its own safety and security programs.

05.01 Safety and Security Management Plan

The Project Safety and Security Management Plan (SSMP) describes the CITY's approach for implementing a comprehensive safety and security program. The SSMP has been prepared in accordance with FTA Circular 5800.1 (current edition). The CONSULTANT will support the CITY's implementation of the SSMP by reviewing, revising, and updating it in accordance with FTA requirements or as directed by the CITY, as well as periodically auditing the Project's compliance with the requirements of the SSMP. Audit reports of compliance findings shall be submitted to the CITY by the CONSULTANT. All revisions and updates to the SSMP must be submitted to the CITY for review, acceptance, and approval. The CONSULTANT will submit to the CITY a progress report which details the status of safety and security program activities.

Assumptions

The CITY will provide current SSMP.

SSMP to be updated upon application for FFGA, and then annually through completion of the Project.

Audits of active design-build, design-bid-build, design-bid-operate-maintain, and the final design contracts will be conducted monthly.

Deliverables

- Updated and/or revised SSMP
- Safety and Security Program Audit Schedule and Reports
- Monthly Safety and Security Progress Status Reports
- SSMP compliance audit reports

05.02 Safety and Security Oversight and Review Committee (SSORC)

The CITY has established an SSORC to oversee and monitor the Project compliance with the SSMP. The CONSULTANT will provide technical support to the SSORC, including providing recommendations to the CITY for interagency coordination between Project stakeholders as it relates to safety and security issues, events, and activities. The CONSULTANT services include the following:

- Prepare meeting agendas, minutes, and action item lists for SSORC meetings.
- Provide technical reviews of documents submitted to or developed by the SSORC.
- Review, revise, and/or develop safety analysis and TVA studies in support of the objectives of the SSMP.
- Facilitate documentation review and approval process for the SSORC.

Assumptions

CITY will manage and oversee SSORC.

SSORC meetings will be held monthly.

Schedule

Ongoing

Deliverables

- SSORC meeting agendas, meeting minutes, and action items lists

05.03 Safety and Security Certification

The CITY has prepared a Project Safety and Security Certification Plan (SSCP) in accordance with the requirements of the SSMP and the FTA Handbook for Transit Safety and Security Certification guidelines. The CITY has established a Safety and Security Certification Working Group (SSCWG) to implement the certification process described in the SSCP. The CONSULTANT will support the CITY's implementation of the SSCP. The CONSULTANT will review, revise, and/or update the SSCP in accordance with FTA requirements or as directed by the CITY. Revisions and updates to the SSCP and other required safety and security certification documentation shall be submitted to the CITY for review and acceptance. The CONSULTANT services include the following:

- Support the implementation and ongoing work of the SSCP.
- Review, revise, and update the SSCP.
- Participate in and provide safety and security related inputs for design reviews, operational readiness reviews, emergency drills, test plans, and start-up plans.
- Provide technical review of design criteria and specification conformance checklists submitted by Project contractors.
- Provide technical support to the Hazard Management Process, including hazard identification, analysis, and resolution.
- Review, revise, and/or develop detailed safety analyses for safety hazards and TVA studies for security vulnerabilities.
- Develop a Hazard Tracking Database that enables storage, tracking, sorting, and management of project identified safety hazards and security vulnerabilities.
- Review, revise, and update the Preliminary Hazard Analysis (PHA) and TVA.
- Provide technical reviews of safety analyses and security assessments submitted by Project contractors.
- Prepare meeting agendas, minutes, and action item lists for SSCWG meetings.
- Prepare safety and security certification documents submitted by Project contractors for review.
- Facilitate the documentation review process for the SSCWG.
- Audit Project contractors' compliance with the requirements of the SSCP and provide status reports to the CITY.
- Prepare Certificates of Conformance for signature by required parties.
- Prepare Safety and Security Certification Verification Reports for each initial operating segment and a Final Safety and Security Certification Report for the completed Project.

Assumptions

CITY will provide current SSCP and manage and oversee the SSCWG.

The SSCWG will meet monthly until six (6) months prior to the date of revenue service of each segment, and then weekly up to the date of revenue service for each segment.

The SSCP is to be updated upon application for FFGA, upon application to begin Construction, and then annually through the end of the Project.

Deliverables

- Updates and audits as determined by schedule
- Updated and/or revised SSCP
- Updated and/or revised PHA and TVA
- SSCWG meeting agendas, minutes, and action item lists
- Hazard Tracking Database
- Safety and Security Certification Audit Schedule and Reports
- Reports of design and plan reviews and technical analyses
- Safety and Security Certification Verification Report for each initial operating segment
- Project Safety and Security Certification Verification Report

05.04 Construction Safety and Security

The CITY will implement a construction safety and security program in accordance with the SSMP. A Project Construction Safety and Security Plan (CSSP) will provide general information and guidelines to Project contractors. Project contractors are charged with maintaining a safe and secure Project environment and providing full support of the CSSP. Each Project contractor will be required to submit a CSSP to detail its technical approach to construction safety and security. The CONSULTANT will review, revise, and/or update the CSSP based on the Project phase or as directed by the CITY. Revisions and updates to the CSSP must be submitted to the CITY for review and acceptance. As directed by the CITY, the CONSULTANT will coordinate with Owner Controlled Insurance Program Safety Representatives. The CONSULTANT services include the following:

- Support the implementation of the CSSP.
- Review, revise, and update the CSSP.
- Provide an internet based safety management system (iSMS) that has the capability to, gather and trend safety related observations and follow-up, incidents, hazard analysis, training, and CSSP submitted data, and have the functionality to populate the CITY's CMS with certain safety related data and information as jointly determined by the CITY and the CONSULTANT. Notwithstanding anything to the contrary in the CITY's General Terms and Conditions for Professional Services (specifically but not limited to its Article 4.2 Patent and Copyrights), the CONSULTANT, in developing iSMS as a multi project safety management system, shall retain the right to use iSMS for other projects and in other locations.
- Provide safety and security inputs and recommendations during construction meetings.
- Provide technical reviews of Project contractor safety and security deliverables including CSSPs, job hazard analyses, site-specific safety and security plans, health and safety plans and emergency management plans.
- Conduct periodic safety and security audits of Project job-sites, the Project contractor's compliance with the CSSP, and develop and submit audit reports.

- Perform construction accident/incident investigations where the CITY elects to perform its own investigation and develop reports for CITY review.
- Support the development of Corrective Action Plans resulting from accidents and incidents or Project Contractor noncompliance.

Assumptions

The CITY will provide the baseline CSSP.

The CSSP will be updated annually.

Safety and security audits of each active design-build, design-bid-build, and design-build-operate-maintain contractor’s job-sites will be performed quarterly.

Safety meetings at each construction site will be held weekly.

Deliverables

- Updated and/or revised CSSP
- Construction Safety and Security Audit Schedule and Reports
- Accident/Incident investigation reports
- Internet based Safety Management System (iSMS)

05.05 Fire/Life Safety Support

The CITY has prepared a Fire/Life Safety Analysis Report to describe the design, construction, and operating provisions that have been incorporated into the Project to eliminate or minimize the occurrence of hazardous conditions due to fire. The CONSULTANT will review, revise, and update the Fire/Life Safety Analysis Report and design criteria as the Project progresses through each life cycle phase, provide technical input during design reviews related to Fire/Life Safety design criteria, support the hazard identification, analysis, and resolution process for Fire/Life Safety issues, perform egress and emergency evacuation calculations as required, and incorporate identified Fire/Life Safety hazards into the hazard tracking database and track to closure. Revisions and updates to the Fire/Life Safety Analysis Report shall be submitted to the CITY for review and acceptance.

Assumptions

CITY to provide current Fire/Life Safety Analysis Report.

Fire/Life Safety Report to be updated annually.

Deliverables

Updated and/or revised Fire/Life Safety Analysis Report

Hazard data tracking base

Technical input during design reviews related to Fire/Life Safety design criteria

05.06 Federal, State, and Local Agency Compliance Concerning Safety and Security

The CONSULTANT will verify technical support is provided to assure the Project is being designed and constructed in accordance with all applicable Federal, State, and Local requirements. The CONSULTANT support may include technical reviews of documentation developed by the CITY or State Oversight Agency to comply with 49 CFR 659 Rail Fixed Guideway Systems; State Safety Oversight; Final Rule, including the System Safety Program Standard, System Safety Program Plan, System Security Plan, and Emergency Preparedness Plans. The CONSULTANT will also provide technical reviews of safety- and security-related Standard Operating and Emergency Operating Procedures developed by the CITY, support the management and implementation of the Project's SSI Program, and participate in and support the Internal Safety and Security Review process.

Assumptions

CITY to provide current Standard Operating and Emergency Operating Procedures.

Schedule

Ongoing

Deliverables

Technical Review Comments

05.07 Safety and Security Training

The CONSULTANT will support the development of training courses established by the CITY to comply with the SSMP and Federal, State, and Local requirements. The CONSULTANT will develop train-the-trainer modules for each training program that enables CITY staff to conduct safety and security training. The train-the-trainer module shall include an instructor's guide and other required materials such as presentation slides. The CONSULTANT services include the following:

- Develop a Safety and Security Certification Training Course for Project Staff, Project Contractors, and other stakeholders.
- Develop a Construction Safety and Security Training Course for Project staff that enables access to construction work sites.
- Participate in, review, and provide recommendations for emergency drill plans, table-top drill plans, and operational safety training programs.

Assumptions

The CITY to provide all current, applicable safety and security related training program information and materials

Schedule

Both courses and associated modules to be developed within three (3) months of NTP.

Deliverables

- Safety and Security Certification Training Course
- Safety and Security Certification Training Course Train-the-Trainer module
- Construction Safety and Security Training Course
- Construction Safety and Security Training Course Train-the-Trainer module

05.08 Provide Personnel to Respond to Emergency Situations, Prepare Failure Analysis Reports, Conduct Accident Investigations (as needed)

The CONSULTANT will prepare a list of potential emergencies that are unrelated to construction personnel incidents (which are the responsibility of the construction contractor to manage). In addition, a risk assessment will be conducted by the CONSULTANT and the CITY to identify potential emergency situations. The CONSULTANT will participate in the CITY's Emergency Preparedness Program and provide selected personnel for training in the program should the CITY request in writing that the CONSULTANT to do so.

For planning purposes, the CONSULTANT shall identify response personnel with expert backgrounds in areas required by the potential emergency situation, recognizing that personnel may be located on the mainland or other world locations and require travel time accordingly. The CONSULTANT will provide the City with a written roster of these personnel and will update the roster if there are changes.

In the event of an emergency, the CITY will notify the CONSULTANT in writing and the CONSULTANT shall assist the CITY with the preparation of failure analysis reports and in conducting accident investigations should the CITY request the CONSULTANT to do so.

Assumptions

Frequency of emergency situation will be limited to an average of one per year or less.

Deliverables

List of potential emergency situations unrelated to construction personnel incidents.

06 FTA PROCESSES AND REQUIREMENTS

There are a number of reports and studies required by the FTA and/or the PMOC to advance the Project through the New Starts process. The CONSULTANT will support the CITY in the completion and updates of documents such as the *Before and After Study* Reports, the Section 5309 New Starts Report, the requisite management plans, and the Financial Plan. The CONSULTANT shall assist the CITY in developing the Project and will provide input to the monthly and quarterly progress reports that the CITY submits to FTA. The CONSULTANT shall participate in progress meetings, as required, and support the CITY's grants process as requested by the CITY. The CONSULTANT shall assist the CITY with preparing letters-of-no-prejudice (LONPs) and with negotiating a FFGA.

06.01 Before and After Study

The CONSULTANT shall support the CITY's application to enter Final Design by preparing required FTA documentation including, but not limited to, the *Before and After Study* Milestone 2 report. The CONSULTANT shall preserve data related to cost together with the model and data related to travel forecasts. The CITY shall be responsible for retaining any computer hardware and software (operating system) necessary to operate the model. The CONSULTANT will also prepare the *Before and After Study* Milestone 3 report and Final Report as described in the *Before and After Study Plan* if applicable within the term of the Agreement.

Assumptions

- The Final Report will not be required within the initial term of the Agreement.

Deliverables

- The *Before and After Study* Milestone 2 report
- The *Before and After Study* Milestone 3 report

06.02 New Starts Report (Section 5309)

The CONSULTANT shall assist in the preparation of New Starts reports for the CITY's applications to Enter Final Design, LONPs, and the FFGA, and Annual New Starts Reports.

06.03 FTA Project Closeout Report

See Task 18.

06.04 Input to Monthly and Quarterly Reports to FTA

The CONSULTANT will assist the CITY in preparation of monthly and quarterly reports to FTA.

06.05 Participate in Monthly/Quarterly Progress Meetings

The CONSULTANT will participate in support of the CITY in meetings with the FTA and the FTA PMOC.

06.06 Grant Process Support as Requested

The CONSULTANT will assist the CITY in preparation of reports or analyses required to obtain grants in support of the Project.

06.07 Management Plans

The CONSULTANT will support the CITY in producing and/or updating management plans as required.

06.08 Financial Plan

The CONSULTANT will develop a comprehensive Financial Plan for entry into Final Design and to support the application for a Full Funding Grant Agreement. See Task 20 for details.

06.09 Plan Updates

The CITY has prepared a Project Management Plan (PMP) that describes and documents the CITY's overall management approach for the Project. The CONSULTANT will assist the CITY in preparing updates to the PMP and various subordinate plans that are a part of the PMP or incorporated by reference.

The CONSULTANT will also assist the CITY in the preparation and updating of new Plans required as part of the ongoing FTA Project review process. In preparing or updating these Plans, the CONSULTANT will refer to the most recent FTA guidelines covering each.

The CONSULTANT will participate in Plan review cycles with the CITY and will incorporate comments provided by the CITY or FTA when requested by the CITY.

Assistance may include providing recommendations for updates or revisions; providing tables, exhibits, charts, attachments and other such insertions as may be required by the CITY; providing word processing or editing; and providing supporting materials as may be required by the CITY, the Change Control Board (CCB), the FTA (including the PMOC and FMOC), or other third parties.

The Plan updates may include, but are not limited to, the following:

- Project Management Plan
- Operations and Maintenance Plan (see Task 11)
- Rail Fleet Management Plan (see Task 11)
- Bus Fleet Management Plan (see Task 08)
- Project Quality Assurance Plan (see Task 04)
- Real Estate Acquisition Management Plan (see Task 16)
- Third-Party Agreement Plan (see Task 09)
- Safety and Security Management Plan (see Task 05)
- Safety and Security Certification Plan (see Task 05)
- Project Construction Safety and Security Plan (see Task 5)
- Financial Plan (see Task 20)
- Risk and Contingency Management Plan (see Task 03)
- Mitigation Monitoring Plan (see Task 08)

Assumptions

Assume two major updates for each Plan over the duration of the Agreement.
The budget will be captured in the Task within which the Plan is applicable.

Schedule

As identified in each applicable Task.

Deliverables

Plans and Plan updates as required to support FTA submittals and individual plan requirements.

07 CONTRACT PROCUREMENT

The CONSULTANT will assist the CITY in development of the solicitation and contract documents for contracts identified in the Contract Packaging Plan. The CONSULTANT will prepare independent cost estimates for each of the contracts to be procured for use by the CITY. During the procurement period, the CONSULTANT will assist the CITY by responding to questions, participating in pre-proposal, pre-bid and pre-submittal conferences, and preparing addenda. The CONSULTANT will support the CITY's review and evaluation of bids and proposals and defense of bid protests, and compile the contract documents.

07.01 Contract Procurement

The CONSULTANT will perform services relating to procurement for CITY procurements. The CONSULTANT will work in close coordination with the CITY in scheduling and maintaining the flow of work and services required. The CONSULTANT will attend and participate in Project meetings as requested and required to accomplish the work.

Assumptions

Whenever practical, procurements will be developed using a two-step process. Except in cases where it is impractical, payment terms will be based on Milestones achieved. Best value is the preferred selection method unless it is impractical for a given procurement.

Approximately thirty-five (35) to forty-five (45) contracts will be procured as a part of this task.

Schedule

Pursuant to Contract Packaging Plan.

Deliverables

- Procurement documents for all contracts
- Evaluation and selection procedures for all contracts
- Compiled Contract Documents for all contracts
- Reports and evaluations as requested/required

08 PLANNING COORDINATION AND OVERSIGHT

08.01 Environmental Planning Services

The CONSULTANT will provide general environmental planning services that will include preparation of various environmental documents, supplemental environmental documents, and related supporting technical studies in compliance with the National Environmental Policy Act (NEPA), Hawaii Revised Statutes (HRS) Chapter 343, and FTA environmental guidance. Environmental planning services will include: Required updated or revised environmental documentation, review of construction required environmental documentation, and reports concerning environmental and planning issues that arise during the course of the Project.

The CONSULTANT will implement and/or review contractor-prepared NEPA and HRS Chapter 343 environmental documentation and supporting technical reports for any elements of the original 20-mile Project that require additional environmental clearance if there are refinements or changes that result from, but are not limited to, advancement of design, field conditions, regulatory changes, or permit conditions. Necessary agency and community coordination activities that are required as a part of the processes will also be performed, including preparation of responses to any comments received on draft documents during public circulation periods. As work progresses on environmental documentation, the CONSULTANT will submit progress documentation to the CITY and other Project participants, as appropriate, and will address review comments arising from this process.

The CONSULTANT will prepare, as appropriate, environmental documentation in compliance with applicable laws and requirements including, but not limited to, NEPA; Section 4(f) of the Department of Transportation Act of 1966, as amended (Section 4(f)); Section 6(f) of the Land and Water Conservation Fund Act; Section 106 of the National Historic Preservation Act of 1966, as amended (Section 106); the Clean Air Act of 1970, as amended (CAA); the Clean Water Act of 1972, as amended; the Endangered Species Act of 1973, as amended (Section 7); the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); and HRS Chapter 343.

Preparation of environmental impact evaluations will include:

- Identify the appropriate type of environmental impact analysis documentation (i.e., Environmental Impact Statement (EIS), Environmental Assessment, Categorical Exclusion, HRS Chapter 343 Exemption).
- Components of the environmental impact analysis documents will include documentation of purpose and need, alternatives development and analysis, existing conditions, impacts, and mitigation.
- As appropriate, conducting an environmental impact analysis process that includes scoping, and public and agency coordination.
- The CONSULTANT environmental team shall conduct weekly coordination meetings through the course of any environmental process. The CONSULTANT shall assist the CITY with review of legal issues related to HRS Chapter 343 and NEPA as directed by the CITY.

Deliverables

- Documents related to updating the Final Environmental Impact Statement

- Reports necessary for submittal of FTA required documentation
- Technical Memoranda related to special studies

08.02 Environmental Compliance

The CONSULTANT will develop and implement the Project's "Mitigation Monitoring Plan (MMP) for Project Oversight" to assist the CITY in ensuring compliance with all documented environmental mitigation measures, permits, and design commitments specified in the Project's Final EIS and Record of Decision (ROD), including stipulations specified in the Project's Section 106 Programmatic Agreement (PA). Environmental services will include documenting and tracking of environmental and permit compliance in the CITY's CMS. Environmental compliance services will include, but not be limited to: environmental mitigation monitoring, management and monitoring of the PA, support of the CITY's application and processing of permits; oversight of contractor-initiated permits; support of the Project's self-certification process; and general oversight of compliance with CITY initiated permit conditions.

With respect to mitigation monitoring, the CONSULTANT shall:

- Identify environmental requirements for the Project that require compliance with Federal, State, and Local regulatory permit conditions and procedures.
- Define environmental commitments and mitigation measures in stipulated environmental decision documents for the Project to assure that these requirements are incorporated into the Project plans and specifications and identified in the contract documents.
- Establish procedures for communication, documentation, oversight, and review of environmental compliance activities and CITY initiated permit conditions for each design and construction contract.
- Describe protected resources within the Project area and the types of mitigation measures needed to protect them consistent with the Final EIS or any pertinent subsequent environmental documentation.
- Monitor contractors' activities to avoid or minimize impacts to the environment and general public in compliance with the construction contract documents.
- Develop a Project Environmental Training Program and conduct training for CONSULTANT and CITY staff as necessary throughout the duration of the Project. This training program will cover, at a minimum, the MMP, as well as specific aspects of the various construction contractor's environmental compliance plans as applicable.
- Provide pre-survey photographs and videos of areas impacted by work to be performed by a contract.
- Oversee and manage the development and approval of Construction Mitigation Plans (CMPs), in coordination with contractors; each CMP will include a noise and Vibration Mitigation Plan which will be updated every 6 months.

The CONSULTANT will provide oversight, management, and planning services as stipulated in the Project's Section 106 Programmatic Agreement (PA), as well as other requirements of Section 106 of the National Historic Preservation Act.

The CONSULTANT will provide oversight of the Projects' design, permitting, construction, and operation phases to document contractors compliance with approved environmental mitigation

requirements. The CONSULTANT shall verify that the Final Engineering design by contractors/design consultants reflects compliance with the environmental mitigation measures and permit requirements. The CONSULTANT may assist the CITY in the identification of additional mitigation options to deal with environmental impacts that can be addressed during the design stage.

Deliverables

- Monthly and quarterly reports documenting environmental compliance.
- Permits, reports, and studies required by the CITY as stipulated in the environmental commitments.
- Quarterly reports for the first two (2) years and annually thereafter, documenting compliance with the PA.
- Reports, and studies required by the CITY as stipulated in the PA.

08.03 General Planning Support

The CONSULTANT will:

- Provide transportation and land use planning support to the final design and construction phases of the Project. Specifically, support work as identified in Task 6 in support of the FTA New Starts applications including required FTA documentation, such as the *Before and After Study* Milestone Report(s) as specified in the *Before and After Study* Plan.
- Prepare reports and documentation needed by other Federal and State agencies, such as Interstate Access Modification Request to the Federal Highway Administration (FHWA), and other land-use and transportation-related documents and reports as requested.
- Provide support to transit-oriented development (TOD) and joint development (JD) initiatives around stations.
- Coordinate with other CITY agencies to develop station area plans and policies.
- Prepare and update new Starts templates and other related reporting requirements.
- Conduct studies in response to various inquiries from the CITY and project partners, and affected agencies, communities and constituents on planning issues.
- Conduct surveys and specialized studies to support the construction effort.

08.03.01 Travel Forecasting

Projections of travel demand in the Project influence areas are essential in evaluating the benefit of any changes to the Project. Assessing transportation impacts any supplemental environmental assessment and compliance with Federal requirements for New Starts funding. As appropriate, the travel forecasting model will be updated based upon revised network configurations, socio-economic data, and an updated on-board transit survey. This task includes the provision of travel forecasts for traffic impact, air and noise analysis, related to the original 20-mile project to address questions that arise as a result of final design and construction.

This task will require coordination with other tasks, including Station Access Planning and Bus Transit Planning, and be used in future planning activities included in Task 19. For this task it will include:

- Updated on-board transit survey for The Bus and, where operational, the rail system to reflect ridership characteristics compatible with the time of the analyses.
- Updated socio-economic data from the Department of Planning and Permitting (DPP).
- Model updates/calibration/validation
- Model application
- Alternatives refinement
- FTA coordination/New Starts submittals
- Uncertainty analysis
- Operations analysis and equilibrium
- Additional model refinements, as needed

Assumptions

An updated version of the travel forecasting model based on a TransCAD platform compatible with the Oahu MPO travel demand model will be used for future work on the project.

Deliverables

Updated On-Board Transit Survey results and report

Updated forecasts to support the New Starts process

08.03.02 Bus Transit Planning

Support advancement of Final Design and Construction phases of the Project. Updates to the feeder bus network will be needed as stations are opened. Continue to support submittals to FTA and other assignments as requested. This task may require coordination with other tasks, including GIS/Mapping, Travel Demand Forecasting, Station Access Planning, Station Design, JD and TOD Coordination, and Financial Plan. Activities will include:

- Defining the feeder bus service network
- Bus Transit Center planning
- Bus/Guideway operations integration planning
- Input to capital and operating cost models

Deliverables

- Technical memoranda or reports documenting changes
- Bus Fleet Management Plan updates as needed

08.03.03 Station Access and Modal Interface Planning

This task focuses on planning for passenger access to stations and assuring stations are designed to accommodate all appropriate modes. Access modes will include pedestrians, bicyclists, bus riders, TheHandi-Van riders, passengers being dropped off or picked up via private automobile (kiss-and-ride), private shuttle riders, taxi riders, and passengers wishing to park at stations (park-and-ride). The task will require updating the reports prepared during the Preliminary Engineering phase of the Project as needed for Final Design and Construction.

This task may require coordination with GIS/Mapping, Bus Transit Planning, Land Use Planning, and Station Design.

- **Station Access Planning**—Coordinate with station architects to assure final station design accommodates all appropriate modes at activity levels predicted by the travel demand forecasting model. Use the Station Interface Report prepared during the EIS/Project Engineering phase as a basis upon which to estimate station demand by mode. Update Station Interface Report as needed. Assist CITY in coordination with other CITY and State agencies as needed for approvals and changes to on-street parking, installation of bus pullouts, etc.
- **Station Area Parking**—Conduct before-and-after surveys of parking demand near each station to determine if spillover parking occurs near stations. Support the CITY effort to develop mitigation plans for spillover parking occurring near stations.

Deliverables

- Station Area Spillover Parking Reports (up to two for each station)
- Update to Station Access and Modal Interface Report

08.03.04 Land Use Planning

Support advancement of the Project through Final Design and Construction phases. Coordinate with public and private stakeholders, such as the DPP as well as other governmental entities, private citizens, community and business groups, members of the development community, and property owners. Support the preparation of permit applications, planning programs, documents, and reports. Prepare plans, maps and reports in conjunction with the Project's design and engineering teams. Update reports prepared during Preliminary Engineering as needed for Final Design.

This task will require coordination with other tasks, including Environmental Compliance, Environmental Analysis, GIS/Mapping, Station Access Planning, and Station Design.

Deliverables

- Update Station plans and other material as needed to support project advancement through Final Design and construction

08.03.05 Transit Oriented Development (TOD) Planning Services

The CONSULTANT will provide land use planning support related to TOD at many of the Project's twenty-one (21) station areas. These services will include coordination with various CITY and state agencies, special interest groups (e.g., ADA, elderly), and the private sector to resolve such issues as connectivity, access, safety, and opportunities for joint development (JD) near stations.

The CONSULTANT will also provide advice, planning, urban design services, and targeted recommendations to the CITY in an effort to explore potential JD (transit agency owned land within an easy walk of transit) Program and advance current CITY efforts regarding TOD (privately owned land within an easy walk to transit) towards successful implementation. The work will build upon TOD planning and focus on developing early TOD successes that provide positive examples for all subsequent TOD and JD projects.

This task may require coordination with other tasks, including GIS/Mapping, Land Use Planning, Station Access Planning, Station Design, and Right-of-Way Acquisition.

- **JD Advice and Potential Program Development**—Drawing from U.S. best practice, work collectively with the CITY to develop an effective organizational structure and administrative functions for a potential Honolulu Rail Transit Joint Development Entity and Program. In addition to best practice research, it is envisioned that the work will consist of a number of meetings with the CITY to review alternative models, explore opportunities and constraints, and solicit feedback. The work will result in a draft Honolulu JD Program recommendation describing the JD entity, administrative duties, and potential organizational structure. As needed, the CONSULTANT will advise the CITY and engage with public outreach efforts related to JD.
- **TOD Review and Recommendations**—Building upon the existing TOD planning efforts of the CITY, the CONSULTANT will serve as an additional TOD resource to help advance TOD objectives. Initially, the CONSULTANT will review the status of the current CITY and County of Honolulu Department of Planning and Permitting (DPP) TOD planning efforts and perform an assessment of the results to date and meet with the CITY to discuss objectives. Based on this review, the CONSULTANT may provide recommendations for codes and implementation tools to move programs to the next level.
- **Implementation Review and Advise**—Once the program is identified and strategies for key areas defined, the CONSULTANT will provide implementation review and assessment of key development proposals as requested.

Since all TOD services will be performed with an eye toward successful implementation, the CONSULTANT will focus on practices that assist in developing partnerships with the community and potential TOD developers. It is envisioned that, working closely with the CITY and Project staff, the CONSULTANT will conduct

a multi-day TOD workshop to begin to outline a strategic plan and in an effort to develop targeted TOD recommendations. The recommendations will be defined in text and graphic form and include descriptions of additional measures that could advance TOD at these sites.

The CONSULTANT will advise and assist the CITY and engage with public outreach efforts related to TOD.

Extent of CONSULTANT involvement will depend on the status of JD and TOD initiatives.

Deliverables

- Strategic Plan for TOD activities
- Report on TOD institutional barriers and implementation framework
- Report on funding opportunities related to TOD implementation
- Technical memorandum, as requested, on key development proposals

08.03.06 Traffic Analysis

The CONSULTANT will complete traffic-related studies and reports as requested to support the Project. The CONSULTANT will prepare reports, applications and other analysis as needed for delivery and submission to HDOT, FHWA, FTA, or other Federal, State, or Local agencies.

This task may require coordination with other planning and engineering tasks, including GIS/Mapping, Environmental Compliance, Environmental Analysis, Station Access Planning, Station Design, Land Use Planning, and Engineering.

- Complete required reports/applications and respond to requests, such as Interstate Access Modification for FHWA approval to connect an access ramp from the H-2 Freeway southbound to the Pearl Highlands park-and-ride facility.
- Complete other traffic analyses, studies, and reports as needed.

Deliverables

- Interstate Access Modification Report
- Traffic Analysis Technical Memoranda

08.03.07 GIS/Mapping

GIS and mapping support will be needed throughout Final Design and Construction phases. This task may require coordination with other tasks, including Environmental Compliance, Environmental Analysis, Station Design, Land Use Planning, Right-of-Way Acquisition, and Engineering.

- Maintain and update as required maps, graphics, and files prepared during the Preliminary Engineering phase.
- As needed, prepare updated maps and GIS files to support the completion of Final Design and Construction.

08.03.08 New Starts Support

The CONSULTANT will support FTA New Starts activities in Task 6 as needed for Final Design and Construction phases of the Project. This task may require coordination with other tasks, including GIS/Mapping, Environmental Analysis, Environmental Compliance, Traffic Analysis, Station Access Planning, Station Design, Land Use Planning, and Engineering.

Provide Transportation- and Land-Use-related support to ongoing New Starts activities associated with Final Design and Construction phases of the Project.

Deliverables

- Planning support of New Starts Final Design and FFGA submittals

09 DESIGN MANAGEMENT AND SERVICES

This section will cover CONSULTANT Engineering and Architectural Design Management and Services through the design, construction, and implementation of the Project. The CONSULTANT will communicate and coordinate these activities with the CITY on an ongoing basis for the duration of the Contract.

09.01 Design

This subsection will cover Design Management Services through the Project's various design phases. This will include design management, design services, and procurement support.

09.01.01 Management of Final Design Contracts

The CONSULTANT will manage the day-to-day aspects of the Final Design Contracts under the leadership of the Contract Resident Engineer for the DB Contracts and a Design Contract Manager for each design Contract. This will include the overseeing of scope, Design Criteria compliance, schedule and budget, and assisting in resolution of design issues that arise. Additionally, the CONSULTANT will support value engineering activities required on Design-Bid-Build (DBB) contracts, provide coordination support for the Design Consultants with the CITY, and assist with third parties and other public agencies coordination. Utility coordination will be performed under Task 21. Also, assistance will be provided in coordinating with the Core Systems Contract Designer on design issues, schedule, and other activities as they arise. The CONSULTANT will also oversee peer and constructability reviews, review camera-ready final submittals, provide design support during bidding, and, when necessary, coordinate reviews amongst multiple contractors/consultants/CEI firms.

Assumptions

Ten (10) Final Design Contracts

- *Guideway (2)*
 - Airport Segment Utility and Guideway
 - CITY Center Segment Utility, Guideway, and Ala Moana Center Station structure
- *Stations/Other Facilities (8)*
 - West Oahu Stations (3 stations)
 - Farrington Highway Stations (3 stations)
 - H2 Freeway Ramps Pearl Highlands Multi-Level Parking Facility and Bus Transit Center
 - Kamehameha Highway Stations (3 stations)
 - Airport Stations (3 stations)
 - Dillingham Stations (3 stations)

- CITY Center Stations (3 stations)
- Kakaako Stations (2 stations + Ala Moana Station finish)
- There will be no Engineering support required in the procurement of Final Design Contracts by the CITY

Schedule

Per Master Project Schedule

Deliverables

Reports included under Task 1.02.

09.01.02 Review of Final Design Submittals

As part of the overall management of the Final Design contracts, the CONSULTANT will lead the design review process for the CITY, provide periodic and scheduled formal design reviews of each plan, specification, and estimate submittal, and recommend approvals to the CITY. Reviews will be accomplished by all appropriate design disciplines including civil, structural, geotechnical, pavement, drainage, utility, electrical, systems, mechanical, architectural, traffic signals, ITS, maintenance of traffic, specification, environmental, and estimating. CADD standards compliance reviews will be performed at least once before and after final design submission. The CONSULTANT will also perform reviews of proposed design deviations and provide recommendations to the CITY.

The CONSULTANT will review Maintenance of Traffic (MOT) plans developed by the Final Design Consultant for each Final Design contract to verify they are safe and within normal operational standards. The CONSULTANT shall coordinate with the CITY Department of Transportation Services (DTS), DTS Public Transit Division (PTD), HDOT, and Oahu Transit Services (OTS) to identify and agree upon measures of effectiveness (MOE) for traffic conditions (e.g., travel time, delay, queues) to determine if the contractor’s Traffic Management Plan (TMP) is not adversely affecting service and satisfies the standards of the community during construction.

Assumptions

Each Final Design contract will have three (3) major review submittals:

- Preliminary
- Interim
- Final

Each submittal consists of plans, specifications, geotechnical data and analysis, and associated reports.

Definitions of what comprises each submittal will be developed by the CONSULTANT for each Final Design contract. For the Airport and CITY Center Final design contracts, a separate interim and Final Design submittal for Utility Relocations will also be required from the Final Designer and formally reviewed by the CONSULTANT.

All comments will be reviewed by CONSULTANT to clarify comments, eliminate duplicative comments, and resolve conflicting comments prior to return to the Final Design Consultant. The CITY, with support from the CONSULTANT, will be responsible for requesting, gathering, and resolving conflicting comments from all other reviewing agencies or third parties. CONSULTANT reviews will be accomplished within twenty one (21) calendar days after full submittal receipt by the CONSULTANT.

Schedule

Per Master Schedule and as negotiated with Final Designers

Deliverables

One (1) set of compiled review comments for each submittal, uploaded into CMS for each Final Design contract (10); approximately thirty (30), plus an additional four (4) for Utility Relocations for a total of thirty-four (34).

Maintenance of Traffic Measures of Effectiveness

09.01.03 Refine Conceptual Designs

After the Record of Decision (ROD) for the Final EIS, there may be Project areas or features that need engineering or architectural design refinements to the conceptual design. These refinements will be such that they are consistent with the Final EIS and are contained within the Project study area. Refinements may be required because of new data availability, utility changes, property availability, or as a result of value engineering.

The CONSULTANT will make these refinements before Final Design contracts are procured or as directed by the CITY.

Assumptions

Refinements will be as directed by the CITY

Additional geotechnical investigations are not budgeted.

Schedule

As required, but before Final Design commences for a given Project area.

Deliverables

Updated Conceptual Designs, as necessary for the respective procurement.

09.01.04 Update Project Baseline Documents

During the design phases of the Project, periodic updates and revisions to Project Baseline Documents, (Standard Drawings, Directive Drawings, Compendium of Design Criteria, Plans Standards and Standard Specifications) may be required. The CONSULTANT will coordinate with CITY staff in reviewing and preparing recommended changes to these documents and submit to the CITY's Configuration Manager for processing. The CITY will be the official keeper of these documents. Development of Division 1 Standard Specifications for Design-Bid-Build construction contracts and architectural Guide Specifications is also included. The work in this

subtask will be done under the supervision of a professional engineer or a registered architect licensed in the State of Hawaii. The applicable documents will be signed and sealed by the professional engineer or registered architect as appropriate.

Assumptions

Updated versions of the Standard Documents will be issued once per year over a five (5) year period.

Deliverables

Baseline Documents ready for release as requested by the CITY

09.01.05 System-wide Signage

The CONSULTANT will update the Signage & Wayfinding Systems Manual to include corridor wayfinding signage and the Project's branding guidelines. In addition, the CONSULTANT will prepare Final Station and Wayfinding Signage and Graphics drawings, specifications, signage schedules, and cost estimates. The signage drawings shall include, but are not limited to, the following:

- All Station Signage (interior wayfinding signs including Bus Transit Center and Park/Ride Facilities)
- Corridor Wayfinding (Off-site) Signage (Remote off-site signage system)

The Station Final Designers will prepare the Station Signage drawings. The CONSULTANT will review design submittals from the Station Final Designer for conformance to the Signage & Wayfinding Systems Manual and CONSULTANT-prepared Graphics drawings and specifications.

The CONSULTANT will prepare the construction contract documents for the procurement and installation of the Corridor Wayfinding (Off-site) Signage to be installed by a separate construction contract. Management of the construction contract is covered under Task 12.

Assumptions

The Station Final Designer's design will include identification and placement of the appropriate station signage based upon the Signage & Wayfinding Systems Manual

Each Final Design contract will have three (3) major review submittals:

- Initial
- Interim
- Final

Procurement and installation of the station signage will be performed by the station construction contractor

Guideway operational signage is procured and installed in accordance with the Core System Contract, Technical Provision 3.2.9.6.

Electronic signage will be procured and installed by the CSC Contractor, as coordinated with the Station Final Designer for location, mounting details, power, and communication connections.

The Corridor Wayfinding (Off-site) Signage design will have three (3) major review submittals:

- Preliminary
- Interim
- Final

Schedule

Per Master Schedule or otherwise negotiated

Deliverables

Updated Signage & Wayfinding Systems Manual

Final Station and Wayfinding Signage Graphics drawings and specifications

Review comments on preliminary, interim, and final design submittals for eight (8) Final Station Design packages

Preliminary, interim, and final PS&E submittals for one (1) construction contract that will contain Corridor Wayfinding (Off-site) Signage elements

09.01.06 Final Design for System-Wide Landscape

The CONSULTANT will provide Design Management oversight (as described in Section 9.01.01) for landscape design elements of the final design contracts and DB contracts, and prepare Final Design PS&E for the Landscape required for system-wide facilities and sites for incorporation into the Station Construction Contract drawings. The final design will be based on the Project's Compendium of Design Criteria (CDC). The CONSULTANT will have a Certified Landscape Architect to perform the design requirements of the contract and support in the oversight of the Final Designers and Design-Build Teams. In addition the Landscape Architect will support Public Involvement activities (Task 13.0) as requested.

The landscape drawings shall include, but are not limited to, the following:

- Site plans
- Paving plans
- Planting plans
- Irrigation system plans
- Material schedules
- Tree disposal plans

Sites to be included are:

- Traction power substations (TPSS 13, GBS 3)
- Medians and edge landscape of roadways between stations

Assumptions

Because the overall Project will be opening in phases and designs will progress on different schedules, it is assumed that the system-wide landscape Final Design will be split into up to eight (8) PS&E contracts. The physical limit of each of these contracts will be determined at a later date. Accordingly, the scope, schedule and cost will be negotiated at a later date.

Each Final Design contract will have three (3) major submittals:

- Preliminary
- Interim
- Final

Definitions of what comprises each submittal will be determined when the scope, schedule, and budget are negotiated for this task.

It is assumed that the CITY will review and submit comments for each submittal within thirty (30) calendar days of receipt from the CONSULTANT.

Includes restoration and improvement of ecological and aquatic function and restoration of riparian areas at Waiawa Stream and Springs.

Schedule

Per Master Project Schedule

Deliverables

Preliminary, interim, and final PS&E review submittals for up to eight (8) construction contract packages

09.01.07 Prepare Landscape Plant Material Listing and Delivery Schedule

The CONSULTANT will develop a detail listing of the landscape material required for the PROJECT. This listing will be used by the CITY as the basis for procuring the plant materials early on in the Project to help ensure materials required will be available when needed and allowing for the plants to mature in a nursery environment.

Assumptions

The CITY will either procure the plant material by separate contract or will alert island nurseries of the Project requirements for purchase by the construction contractors responsible for their installation.

The Final Designer or Design-Builder responsible for the landscape design will be limited to selecting plant material from the listing prepared by the CONSULTANT.

The CONSULTANT will not be responsible for the management, oversight, or performance of CITY-contracted nurseries.

Schedule

Per Master Project Schedule

Deliverables

Preliminary, interim, and final landscape plant listing and proposed schedule for procurement of the plant materials required for the Project.

09.01.08 Final Design for Elevators & Escalators

The CONSULTANT will prepare performance and procurement specifications for the Design, Manufacture, Install and Maintain Elevators and Escalators Contract required for the facilities listed below.

The facilities to be included are:

- Twenty-one (21) stations
- Parking structure (1)
- Transit center passenger facilities (Pearl Highlands & Ala Moana Center)

Assumptions

The elevators and escalators for the locations listed above will be procured by the CITY in one contract. The contract will include a milestone schedule for installations based upon the Master Project Schedule.

Contractor will provide Final Design and erection drawings for each equipment installation. Each station will have three (3) major submittals:

- Preliminary
- Interim
- Final

The CONSULTANT will review and submit comments for each submittal within TWENTY-ONE (21) calendar days of receipt of the complete drawing package from the Contractor.

Schedule

Per Master Project Schedule

Deliverables

Draft and final specifications for the Design, Manufacture, Install and Maintain procurement documents.

Review comments for each design submittal made by the Contractor.

09.01.09 Sustainability Initiatives

This task will focus on assisting the CITY in achieving the sustainability goals set forth by the CITY. The CONSULTANT shall designate a LEED-certified professional to implement, manage, and monitor the Project's sustainability initiatives. It will require coordination with each of the major contractors. The overall goal will be to reduce the use of energy and consumption of natural resources in the planning, design, and operation of the Project.

This task will require coordination with other tasks, including Public Involvement, Station Design, and Project Engineering.

- Organize and lead a Project Sustainability Committee. The committee shall involve members representing engineering, planning, architecture, and public involvement. This committee will develop plans, designs, and ideas to reduce energy use and consumption of natural resources and recommend implementation into the Project.
- Produce regular reports that describe the activities of the Project Sustainability Committee and describe the plans, designs, and ideas that have been incorporated into the Project.
- Coordinate with contractors involved in each of the major construction contracts. Monitor contractor compliance with sustainability commitments. Meet regularly with contractor sustainability coordinators.

Deliverable

Monthly sustainability reports

09.01.10 Traffic Analyses

The CONSULTANT will complete traffic-related studies and reports as requested to support Final Design and Construction phases of the Project. The CONSULTANT will also prepare reports, applications, and other analyses as needed for delivery and submission to HDOT, FHWA, FTA, or other Federal, State, or Local agencies.

This task will require coordination with other tasks, including GIS/Mapping, Environmental Compliance, Environmental Analysis, Station Access Planning, Station Design, Land Use Planning, and Engineering.

- Support preparation of the FHWA Interstate Access Request to obtain permission from FHWA to connect a proposed access ramp from the H-2 Freeway southbound to the Pearl Highlands park-and-ride facility.
- Complete other traffic analyses, studies, and reports as needed.

Assumptions

Up to three (3) submittals of the draft FHWA Interstate Access Request may be necessary to gain the CITY's and HDOT's concurrence prior to submittal to FHWA.

The finding of engineering and operational acceptability and approval will be pursued simultaneously.

Deliverables

Draft and Final FHWA Interstate Access Request

Traffic analysis technical memoranda

09.01.11 Floodway and Flood Plain

The CONSULTANT will provide support to the CITY in the analyses and evaluation of construction impacts on floodway, flood plain, and stream crossings. This work includes obtaining additional hydrologic and hydraulic data, preparation of

hydrologic, hydraulic, river mechanic and sediment transport modeling and analyses, evaluation of construction impacts to flood elevation, No-Rise certification and mitigation for temporary and permanent facilities, Flood Hazard Variance Application, flood plain mapping revisions, development of a Pearl Highlands Transit Center Station/Park-and-Ride Facility (PHSPR) Operations and Maintenance (O&M) concept plan related to Facility impacts caused by flood flows from the Waiawa Stream/Panakauahi Gulch watersheds, coordination with Federal, State, and local agencies, and technical memoranda or reports.

The CONSULTANT will also prepare Final Design PS&E for modification/restoration of streams and station flood proofing based on the analyses performed above. The construction documents will be included in the Final Designers' Construction Contract Packages.

Assumptions

The CONSULTANT will prepare the construction contract documents for stream modifications and station floodproofing.

Detailed development and implementation of the PHSPR O&M Plan are not included in this scope of work.

The Final Design Contract will have three (3) major review submittals:

- Preliminary
- Interim
- Final

Schedule

Per Master Project Schedule or otherwise negotiated

Deliverables

Technical memoranda/reports

No-Rise Certifications

Revised Floodplain Maps

Flood Hazard Variance Application

Preliminary, interim, and final PS&E submittals for up to ten (10) construction contracts, guideway segment (2), parking garage/ramps/transit center (1) station (7)

09.01.12 Intelligent Transportation Systems (ITS) Operational Support

The CONSULTANT will provide ITS traffic operational support, coordinate ITS infrastructure across all rail construction segments, and coordinate modifications to the Oahu Advanced Traveler Information System (ATIS) with HDOT. This work is anticipated to include:

- Field and central system verification of Contractor's initial installation of ITS infrastructure. This is anticipated to include witnessed testing of ITS data, video and communications infrastructure.

- Ongoing monitoring of Contractor-installed ITS infrastructure including data validation, video functionality and verification of system uptime. When appropriate, adjustment to ITS infrastructure locations will be recommended to CITY and, when approved, coordinated with Contractor(s). Monthly reports will be provided to the CITY detailing ITS system performance.
- Ongoing coordination and verification of Dynamic Message Sign (DMS) messaging within and between construction segments. This work will include periodic review of field message status. If travel time messaging is implemented, this work will include integration support between the HDOT travel time system and the Contractor's ITS system. This integration will be limited to implementation of the travel time data stream for Contractor use. Integration with the data stream is the responsibility of the Contractor.
- Ongoing configuration of speed sensor infrastructure into HDOT's central system software. This work is anticipated to be primarily a coordination effort with the Contractor and HDOT's speed data vendor.
- Ongoing configuration of the HDOT travel time system software to accommodate Contractor installed travel time infrastructure (license-plate recognition (LPR) devices). This work includes configuration of each LPR into the central system and system adjustments to filter field data to maximize accuracy of the output. Bi-weekly reports will be provided to the CITY summarizing observed travel times in each construction corridor. Quarterly analysis will be completed and provided in a formal report to document Contractor impacts on travel times in each corridor as well as overall ITS infrastructure performance and Contractor conformance to related contract requirements.
- Provide staff support to DTS to manage ITS related submittals, coordinate integration with DTS infrastructure and monitor ongoing ITS performance including signal operations. (Level of effort to be determined by DTS and CITY.)
- Integration of rail construction travel condition (speed and travel time), video and construction data into HDOT's Go Akamai traveler information system. This work is anticipated to include data and video integration and limited interface development to accommodate the relevant traveler information generated by the rail construction infrastructure and public information program.

Schedule

Per Master Project Schedule or otherwise negotiated

Deliverables

ITS Witnessed Test Report(s)

Monthly ITS Performance Reports – Uptime, Data/Video Quality

Bi-Weekly Corridor Travel Time Reports

Quarterly ITS Conformance Reports

DTS Support – Monthly Staff Support Summary

09.01.13 Renderings/Drawings for Public Outreach

The CONSULTANT will assist the CITY in the preparation of presentation-quality renderings and drawings necessary for public meetings, outreach events, and task force meetings. When required, a schedule for production of these materials will be presented by the CONSULTANT to the CITY for approval. The CONSULTANT will coordinate this task with the activities in Task 13.

The CONSULTANT will prepare for and participate in Project Public Involvement Meetings described in Task 13.01.02.

Assumptions

No models will be prepared by CONSULTANT

Up to three (3) design staff will participate in up to fourteen (14) station specific Public Involvement Meetings at three (3) meetings per station and up to five (5) hours per meeting

Deliverables

Presentation materials (mounted on 34-inch-by-46-inch foam core board), approximately 350 each.

Photographic simulations (before and after, various sizes), approximately 200 each.

09.01.14 Support Cost Estimating

The CONSULTANT, as directed by the CITY, will support the CITY in ongoing updates of the Project-wide cost estimates as the various phases of the Project progress. The CITY retains overall responsibility for the updating of, and revisions to, the estimates. The CONSULTANT will coordinate with all Final Designers so that estimating is prepared and presented consistently and per Project guidelines. Note: all changes must be supported by an independent cost estimate. This work should be done by the CONSULTANT in conjunction with the CITY task leader(s). Cost estimating for contract Change Orders is performed under Task 10.01.10.

09.01.15 Support System-Wide Interface and Integration

The CONSULTANT will provide design-level coordination to the ongoing system-wide interface and integration activities included in Task 02.

Assumptions

Design phase duration approximately five (5) years

09.01.16 Third-Party Agreements Support

The CONSULTANT, as directed by the CITY, will support the preparation of draft Third-Party Agreements (i.e. the HDOT Master Agreement).

Assumptions

Up to four (4) Agreements

CITY produces and distributes all Agreements

Schedule

Per Master Schedule

Deliverables

Draft Master Agreements as directed by the CITY

09.01.17 Industrial Design

The CONSULTANT shall develop standard details and specifications for systems, sub-assemblies, and components such as a kit of parts to be used throughout the Project. Such components and sub-assemblies may be used for canopies, signage, pylons, cladding, guardrails, benches, etc.

Assumptions

The Farrington Station Group (FSG) Final Designer will develop the industrial design components for the initial station construction package. The CONSULTANT will collaborate with the FSG Final Designer through the design process and provide direction in common industrial design practices.

The CONSULTANT will develop standard drawings from the design concepts developed in the FSG design.

Schedule

Standard drawings to be available for inclusion in the West Oahu Station Group Construction Contract Package.

Deliverables

Standard Detail Drawings and Specifications

Submittal review comments during FSG design process

09.02 Design Support during Construction

This section will cover Design Support services to assist the CONSULTANT's Construction Management (CM) team through the duration of the overall construction phase of the Project. The CONSULTANT's level of support will vary depending on the type and size of the construction contract. The CONSULTANT will coordinate with the activities in Tasks 10, 11, and 12. Support will include quality assurance/independent testing and verification on an "as-needed" basis.

09.02.01 Design Support for Design-Build (DB) Construction

For DB projects, the DB contractor is responsible for all quality control of the Project, including all self-performed work, as well as the work and products of all subcontractors, fabricators, suppliers, and vendors. Design Support functions to be performed by the CONSULTANT include:

- Reviewing contractor design submittals for contract compliance
- Attending weekly contractor design meetings as necessary
- Field observations to verify contract requirements conformance
- QA Inspections and verification testing

- Reviewing procedural submittals, contractor RFIs and RFCs, and As-Builts
- QA surveying
- QA surveying
- Analyzing contractor claims/making recommendations to the CITY for resolution

Assumptions

Three (3) Design-Build Contracts

- West Oahu/Farrington Highway Guideway
- Kamehameha Highway Guideway
- Maintenance and Storage Facility

Responses to RFIs will be prepared for issues specific to the baseline Standards of the Project. Requests by the DB Contractor for design support or direction that are within the contractual requirements of the DB Contract will not be addressed.

Responses will be returned to the DB Contractor generally within fourteen (14) days of receipt of an RFI.

Submittal reviews performed by the CONSULTANT will be coordinated with CITY with the goal of completing the review and returning to the DB Contractor within thirty (30) calendar days of receipt of the complete submittals.

Schedule

Per Master Project Schedule

Deliverables

Design submittal review comments

Responses to Contractor-initiated RFIs and RFCs

Assistance with CITY-initiated RFCs including drawings as necessary

09.02.02 Design Support for Design-Bid-Build (DBB) Construction

For DBB projects, the CITY will select and contract with CEI consultants that will be responsible for the QA inspection during construction. The CONSULTANT will oversee the CEI consultants as part of its CM role. Design Support functions to be performed by the CONSULTANT include:

- Monitoring of CEI's QA of contractors' activities
- Manage Final Designer's responses to contractor submittals and RFIs
- Attend, as required, weekly progress meetings with the CEI and contractor
- Assist with negotiations for changes and claims by the contractor
- Assist with final acceptance tests and inspections

Assumptions

Twelve (12) Design-Bid-Build Construction Contracts

Procurement of Construction Contracts will be by the CITY

- *Guideway (2)*
 - Airport Segment Guideway
 - CITY Center Segment Guideway and Ala Moana Center Station structure
- *Utilities (2)*
 - Airport Segment Utility Relocations
 - CITY Center Segment Utility Relocations
- *Stations/Other Facilities (8)*
 - West Oahu Stations (3 stations)
 - Farrington Highway Stations (3 stations)
 - H2 Freeway Ramps Pearl Highlands Multi-Level Parking Facility and Bus Transit Center
 - Kamehameha Highway Stations (3 stations)
 - Airport Stations (3 stations)
 - Dillingham Stations (3 stations)
 - CITY Center Stations (3 stations)
 - Kakaako Stations (2 stations + Ala Moana Station finish)

In the event that the Design Consultant does not fulfill its responsibilities to respond to submittals and RFIs, the CITY may elect to have the CONSULTANT provide responses to the contractor. The CITY will provide additional compensation, consistent with the provisions of Exhibit 2B-Compensation and Invoicing, for these services to be negotiated with the CONSULTANT at the time of tasking.

Schedule

Per Master Project Schedule

09.02.03 Design Support for Design-Build-Operate-Maintain (DBOM) Construction

For the DBOM contract, the Core Systems Contractor (CSC) is responsible for all design, manufacturing, installation, testing, commissioning, operations, and maintenance of all vehicles and systems. Design Support functions to be performed by the CONSULTANT include:

- Monitoring the CSC's System and Verification process
- Monitoring and participating, as requested, in post-installation inspections, integration testing, etc.

Assumptions

One (1) Core Systems (including vehicles) DBOM Construction Contract

Procurement of DBOM Contract will be by the CITY

Schedule

Per Master Project Schedule

09.02.04 Design Support for Elevators and Escalators Furnish, Install, and Maintain Contract

Design Support functions include:

- Specifications review
- Room and equipment list review

Assumptions

One (1) Elevator and Escalator Construction Contract

Procurement of Furnish, Install, and Maintain Contract will be by the CITY

Schedule

Per Master Project Schedule

Deliverables

Review comments

09.03 Additional Design Services

This section covers Additional Design Services scoped, but not budgeted for, through all phases of the CONSULTANT contract as directed by the CITY and negotiated with the CONSULTANT.

09.03.01 On-call Design Studies

The CONSULTANT will provide additional Engineering or Architectural Design Studies, excepting geotechnical investigations and studies that may be required throughout the various design phases. These may be necessary as a result of Final Design progression or as other issues arise. This effort will only be as requested in writing by the CITY. Examples may be, but are not limited to, Hydraulic Hazard Studies, Machine Room-less Elevators, site-specific seismic risk studies, etc.

Assumptions

Cost, schedule, and deliverable proposals will be provided to the CITY within ten (10) calendar days of written request. The CITY will provide authorization to proceed within five (5) calendar days after receipt from the CONSULTANT.

Schedule

To be negotiated per request

Deliverables

To be determined per request

09.03.02 On-call Design Surveying

Periodically, additional field survey information may be required from the CONSULTANT in advance of Final Design contracts during refinements of Conceptual Designs (Task 09.01.03). All requests will be provided in writing by the CITY. Such

tasking may include field work, traffic control necessary for the survey, and office work associated with compiling the survey information in the format necessary for the request.

Assumptions

Cost, schedule, and deliverable proposals will be provided to the CITY within five (5) calendar days of receipt of written request. The CITY will provide authorization to proceed within three (3) calendar days after receipt from the CONSULTANT.

Schedule

To be negotiated per request

Deliverables

To be determined per request

10 CONSTRUCTION MANAGEMENT FOR DESIGN-BUILD (DB) AND DESIGN-BID-BUILD (DBB) CONTRACTS

The CONSULTANT will provide construction oversight for the Design-Build (DB) Contractors and for the CEI firms contracted by the CITY for the Design-Bid-Build (DBB) elements of the Project. This will include participating in the contract partnering programs. The CONSULTANT will develop manuals and procedures to be used for the management of the contractors. The CONSULTANT will be responsible for implementing the CITY procedures for NCRs and construction change orders, and will oversee the documentation of NCRs and change orders by the CEI firms. The CONSULTANT will implement the CITY construction claims avoidance program, and manage the construction claims process while providing oversight of the DB Contractors and CEI firms.

The CONSULTANT will manage construction documentation by providing oversight of the DB Contractors and CEI firms in monitoring construction shop drawings, verifying construction documentation is adequate, and reviewing O&M Manuals prior to recommending them for approval to the CITY. The CONSULTANT will implement the as-built procedures and provide oversight of the DB Contractors and CEI firms in monitoring as-built drawings for completeness, preparation of the record documents, and then recommending them for approval to the CITY.

The CONSULTANT has the primary responsibility for the administration, management and inspection oversight of the DB Contractors. The CONSULTANT will assign a Contract Resident Engineer and staff to the project for various periods of time, as required. It is the responsibility of the CONSULTANT to oversee the CEI firms. The CONSULTANT may assign specialized personnel to the project to inspect special phases of the work. These personnel will work under the supervision of the specific Contract Resident Engineer. The CITY will assign a CITY Contract Manager for each contract to work directly with the CONSULTANT Contract Resident Engineer.

This section will address CONSULTANT CM services performed on the Project. CM services will commence at contract award for DB and DBB contracts. The CONSULTANT will communicate and coordinate these activities with the CITY on an ongoing basis throughout the duration of the Contract.

10.01 Construction Management

The following sections will address the range of DB and DBB CM services to be provided by the CONSULTANT.

10.01.01 Contract Resident Engineer Services

The CONSULTANT will perform CM services under the leadership of Contract Resident Engineers for individual contracts in accordance with the CITY Construction Management Plan (CMP). Contract Resident Engineers will oversee all CONSULTANT efforts on their respective contracts and will serve as the primary point of contact for the respective contractors.

Contract Resident Engineers will generally be responsible for quality oversight on DB contracts, quality assurance on DBB contracts (coordinated with Task 04.01), and contract administration on all contracts.

Contract Resident Engineers shall be supported by staff typically including Office Engineers, Field Engineers/Inspectors, Public Involvement representatives, Change/Claim Engineers, Project Controls Engineers, Construction Support Liaison

Engineers, Environmental Compliance representatives, Document Control representatives, Systems Engineers, Interface/Startup Engineers, as well as administrative and data entry assistants. Specific staff assignments, as well as the determination of whether a staff member is dedicated to a specific contract or to multiple contracts, will be determined by the CONSULTANT taking into consideration the size, scope, and contracting method of the individual contracts.

The CONSULTANT will prepare two separate Project-wide Contract Resident Engineers and Inspectors Manuals (CRE Manuals) – one for DB and one for DBB.

The CONSULTANT will prepare Construction Management Procedures as needed.

Assumptions

On DBB contracts, CEI consultants will be contracted by the CITY but managed by the CONSULTANT, specifically, the assigned Contract Resident Engineer (CRE). Field office support staff (i.e., Office Engineers, Claim/Change support, Cost/Schedule support, Administrative/Document Control support, etc.) will be provided by the CONSULTANT whereas field inspection and testing staff and services will be provided by the CEI consultant.

Contract administration will be documented electronically using Primavera Contract Management software as configured by the CITY.

Schedule

Per Master Project Schedule

Deliverables

Construction Management Procedures

Two Project-wide Contract Resident Engineers and Inspectors Manual(s) (one each for DB and DBB contracts)

10.01.02 Communication/Meeting/Record Keeping

As the primary point of contact for the CITY with contractors, the CONSULTANT will receive contractor correspondence and control outgoing CONSULTANT/CITY correspondence. Pursuant to written a delegation of authority from the CITY The CONSULTANT will sign transmittals and either draft letters for CITY signature or sign on behalf of the CITY, depending on the CITY's preferences. The CONSULTANT will maintain an ongoing dialogue with contractors at all working levels in order to promote unity of purpose and teamwork.

The CONSULTANT will participate in or conduct regular meetings with contractors, including

- Preconstruction meetings
- Progress meetings
- Design review meetings
- Change/claim negotiation meetings

The CONSULTANT will generate meeting minutes or records for all regular meetings conducted by the CONSULTANT.

The CONSULTANT will maintain files for all formal documents associated with construction contracts. Files will be organized under a uniform file index to maintain consistency between contracts. Files will be maintained in accordance with CITY approved procedures.

10.01.03 Contract Cost and Payment Administration

The DB and DBB contracts may require different approaches to contractor payment. In general, a payment based on achieving specific Milestones in a schedule is the assumed method, where each Milestone has an agreed-upon value.

Pay requests submitted in accordance with CITY approved procedures will be processed by the CONSULTANT for payment by the CITY.

Assumptions

All construction contracts will have a schedule of milestones which will be used as a basis of payment.

Schedule

Per Master Project Schedule

Deliverables

Contractor Pay Requests, reviewed by CONSULTANT, ready for CITY approval

10.01.04 Contract Schedule Administration

Schedules will be submitted by the contractors in accordance with CITY approved procedures.

The CONSULTANT will review and analyze contractor's schedule for conformance with the schedule criteria. Upon acceptance by the CONSULTANT, the CONSULTANT will make recommendations and prepare a monthly report to the CITY.

Assumptions

Contractors will submit a monthly schedule update in Primavera P6 (or higher version) using appropriate coding approved by the CONSULTANT.

Schedule

Contractor schedules will be submitted to the CONSULTANT monthly.

Deliverables

Contractor Monthly Schedule Update, reviewed by CONSULTANT

10.01.05 Contract Technical Support (including witness testing and first article testing)

Beginning with requirements established in the Specifications, testing of components, assemblies, and systems will be required. Each test will require establishment of a procedure and reporting method, as well as which party is primarily responsible and which party will only observe the test. Tests may be

conducted in the field (witness tests) or in a place of manufacturing if a system component (first article test). CONSULTANT will monitor (DB) or verify (DBB) that testing is specified and performed per contract requirements with participation by needed parties; and that reports are prepared and follow-up actions addressed. CONSULTANT or CEI will witness tests when owner witness is required.

Refer to Task 09.02 for additional technical support responsibilities.

Assumptions

Specifications will be developed by the Design Contractor with clear testing requirements in each section, including the method of testing, duration of the test, who is present at the test, who conducts the test, and who reports the outcomes.

Schedule

In accordance with the specifications and detailed Project construction schedule.

Deliverables

Observation reports documenting participation in tests with recommendations as applicable.

10.01.06 Manage Environmental Compliance

Environmental Compliance will be managed as described in Task 08.02.

10.01.07 Manage Interface and Integration of the Various Design and Construction Contracts

Interface and Integration will be managed as described in Task 2.

10.01.08 Contractor Submittals

The CONSULTANT will process contractor submittals via CMS. Submittals will be received by the CONSULTANT, reviewed for completeness and verification of contractor reviews, and forwarded to appropriate reviewers for comments. The CITY will be included in submittal reviews to the extent desired. Upon return of reviewer comments, the CONSULTANT will return comments to contractors. Submittal reviews performed by the CONSULTANT will be coordinated with CITY with the goal of completing the review and returning to the contractor within thirty (30) calendar days of receipt. Submittal processing will vary by type of contract.

DB Contracts

The CONSULTANT will be responsible for reviewing submittals for compliance to the DB contract documents. These will generally consist of design submittals, Special Provision type submittals, and other submittals designated in the DB contracts as requiring CITY review. Review of submittals that are required to show compliance with Design Builder's design, such as shop drawings, product data, and samples, will be the responsibility of the Design Builder's designer. The CONSULTANT will comply with Task 04.01.03 (Contractor Quality Oversight) as applicable.

DBB Contracts

The CONSULTANT will be responsible for reviewing non-technical submittals for compliance to the DBB contracts. These will generally consist of Special-Provision and Division-1 type submittals along with any other submittals designated in the DBB contracts as requiring CITY review. Technical submittals will be forwarded to the Designer of Record for review.

Assumptions

Task 2 process will apply.

Contractors will send submittals to third parties.

CONSULTANT review of submittals for code compliance, if requested by CITY, will be accomplished under Task 22.

Schedule

Per Master Project Schedule

10.01.09 Requests for Information (RFI)

In accordance with procedures approved by the CITY the CONSULTANT will process contractor RFIs via CMS. RFIs will be received by the CONSULTANT and forwarded to appropriate reviewers for comments. The CONSULTANT will review and respond to RFIs pertaining to CONSULTANT-generated documents and other questions within their purview. On DBB contracts, technical RFIs will be forwarded to the Designer of Record for response. The CITY will be included in RFI reviews for questions within their purview and otherwise to the extent desired. Upon return of reviewer responses, the CONSULTANT will review responses for overall contract compliance then return responded RFIs to contractors. RFI reviews performed by the CONSULTANT will be targeted to be completed within 14 calendar days. RFI processing will vary by type of contract. On DBB contracts, the CITY may elect to use CEI consultants for these services, in which case the CONSULTANT will manage CEI efforts.

Assumptions

Contractors will be responsible for getting answers to third party questions.

Schedule

Per Master Project Schedule

10.01.10 Change Management

In accordance with procedures approved by the CITY, the CONSULTANT will manage the construction contract change process, from initiation through change order execution as follows.

CITY-Initiated Changes

CITY-initiated changes are those changes that are generally initiated by the CITY, CONSULTANT, or Designer of Record on DBB contracts. The CONSULTANT will follow the CITY's Procedures and be responsible for

- Preparing the outgoing change package generally consisting of cover transmittal document, technical attachments (generally prepared by the CONSULTANT on DB contracts and by the Engineer of Record on DBB contracts), along with internal documentation explaining the reason for the change.
- Determining if the change affects additional contracts within the Project and prepares the necessary documents.
- Preparing independent estimate of cost and time impacts associated with change.
- Determining whether the change affects the Project configuration and, if so, informing the CITY's Configuration Manager and assist in managing the effects on configuration in accordance with the CITY's Configuration Management Plan.
- Determining whether contractor needs to implement the change prior to completion of cost and time negotiations in order to mitigate impacts.
- Reviewing change with the CITY and obtaining concurrence.
- Transmitting change to contractor.
- Evaluating contractor cost and time estimate against independent estimate.
- Negotiating the change cost and time with contractor, including preparation of pre-negotiation plans and post negotiation records as applicable. Cost and time settlements negotiated by the CONSULTANT will be subject to approval by CITY.
- Assisting the CITY in the preparation of change order documentation and routing for signature by the CITY and contractor.

Contractor-Initiated Changes and Notifications of Potential Changes

Contractor-initiated changes will generally consist of scope changes, differing site condition changes, impact-type changes resulting from CITY-controlled actions or documents, or notifications of potential changes where the extent of impact is not yet clear. The CONSULTANT will be responsible for performing the following on contractor initiated changes:

- Receiving the contractor request for change, performing a technical (performed by Engineer of Record on DBB contracts) and commercial evaluation, with recommendation to the CITY.
- Determining if the change affects additional contracts within the Project and preparing the necessary documents.
- Determining whether the change affects the Project configuration and, if so, informing the CITY's Configuration Manager and assisting in managing the effects on configuration in accordance with the CITY's Configuration Management Plan.
- With CITY concurrence, preparing responses to the contractor. Responses will generally recognize requested change, reject or deny merit of requested change, or request additional information for evaluation.

- On recognized impact type changes, working with contractor to mitigate impacts.
- Preparing independent estimate of cost and time impacts associated with recognized changes.
- Evaluating contractor cost and time estimate against independent estimate.
- Negotiating the change cost and time with contractor, including preparation of pre-negotiation plans and post-negotiation records as applicable. Cost and time settlements negotiated by CONSULTANT will be subject to approval by CITY.
- Assisting the CITY in the preparation of change order documentation and routing for signature by CITY and contractor.

Assumptions

CONSULTANT to take the lead role on change order negotiation and documentation. CMS as configured by CITY will be utilized for change management and administration.

10.01.11 Contractor Claims and Disputes

For purposes of this document, “claims” are defined as contractor-requested changes where merit has initially been denied by CONSULTANT in the Change Management responsibilities described above but which continue to be pursued by contractor. “Disputes” are defined as claims that continue to be pursued by contractor, cannot be resolved between CONSULTANT/CITY and contractor, and are submitted to third parties for resolution.

In accordance with procedures approved by the CITY, the CONSULTANT will assist CITY in the resolution of claims and disputes as follows:

Claims

- Preparing merit assessments with recommendations to settle or dispute for CITY review.
- For claims where CITY elects to settle, assisting the CITY to the extent requested in the negotiation and resolution of the issue, and preparing documentation similar to that discussed above in Change Management.
- For claims where CITY elects to dispute, preparing responses to the contractor.

Disputes

Pursuant to CITY approved procedures the CONSULTANT will:

- Assist CITY in the disputes management process.
- Support the dispute resolution process on an on-call basis as requested by CITY, providing support such as information, documentation, analysis, testimony, etc.

On DBB contracts, CITY may elect to use CEI consultants for these services, in which case CONSULTANT will manage CEI efforts.

Assumptions

CITY may request CONSULTANT to provide expert witnesses and/or other consultants to assist in the evaluation and resolution of contractor claims and disputes. The CITY will provide additional compensation, consistent with the provisions of Exhibit 2B-Compensation and Invoicing, for these services to be negotiated with the CONSULTANT at the time of tasking.

Additional compensation, consistent with the provisions of Exhibit 2B-Compensation and Invoicing, will be provided when the level of support required from the CONSULTANT exceeds that which can reasonably be provided by CONSULTANT's personnel or subcontractors assigned to the Project within the context of maintaining their primary responsibilities.

10.01.12 Construction Oversight, Inspection, and Testing

CONSULTANT will provide qualified field personnel and equipment to monitor, document, inspect and test the field construction as appropriate to the type of contract. These services will be provided as follows:

General (all contracts)

- Perform pre-construction condition surveys and prepare reports including photographs and video records. Condition surveys will include photo and/or video documentation of existing conditions within and immediately adjacent to the construction areas with notations of observed defects or damage. In areas where CITY will assume the maintenance of State right of way, CONSULTANT will additionally perform a survey of observable Consent Decree environmental violations utilizing previous State surveys combined with a physical inspection of the right of way. Consent Decree violations will be documented with photographs and noted within a report.
- Document construction observations in daily construction reports and in progress photographs.
- Review contractor progress payment estimates for conformance to actual progress.
- Participate in Contract Milestone turnover and Substantial Completion Inspections, including concurrence of Contractor punchlist items and resolution. CONSULTANT shall make recommendation to CITY for acceptance of Contract Milestone completions and issuance of Substantial Completion.
- Participate in Final Acceptance Inspections, including concurrence of Contractor punchlist items and resolution. CONSULTANT shall make recommendation to CITY for issuance of Final Acceptance.
- Ensuring Contractor achieves contract requirements for construction quality, maintaining public safety, and protecting the environment during construction.
- Participate in resolution of issues pertaining to field construction.
- Initiate Nonconformance Reports (NCR) when applicable. Maintain deficiency log in CMS

- Provide services of a qualified construction testing laboratory.
- Perform Special Inspections as required by Uniform Building Code.

DB Contracts

Perform construction oversight, verifying that contractor installations are performed in compliance with their approved quality program (coordinated with Task 04.01).

DBB Contracts

Some or all of the following services may be performed by CITY furnished CEI consultants, in which case CONSULTANT's role will be to provide oversight management of the CEI consultants efforts.

- Document construction progress, resources, and issues in daily construction reports and in progress photographs.
- Perform quality assurance inspections on all field construction.
- Perform quality assurance inspections on shop fabrications when warranted or requested by CITY.
- Perform cross-sonic logging (CSL) and Mini-Shaft Inspection Device (SID) testing.

Assumptions

DB Contractors are responsible for quality control, quality assurance, and primary testing and inspection.

Schedule

Per Master Project Schedule

11 MANAGEMENT AND OVERSIGHT FOR THE CORE SYSTEMS DESIGN-BUILD-OPERATE-MAINTAIN (CSDBOM) CONTRACT

The CONSULTANT will provide design and construction management oversight for the Core Systems Design-Build-Operate-Maintain (CSDBOM) Contract. For Phase 1 (East Kapolei to Aloha Stadium), the CONSULTANT will take the lead in the oversight of the DBOM Contractor's design and construction scope of work. For Phases 2 and 3 (Middle Street to Aloha Stadium and Aloha Stadium to Ala Moana), the CITY will take the lead in the oversight of the DBOM Contractor's design and construction scope of work and the CONSULTANT will support this effort, as needed and requested by the CITY. The CONSULTANT will support the CITY on an as needed basis in the management oversight of the DBOM Contractor for passenger service start-up and operations. The CONSULTANT will assign a Contract Resident Engineer, Office Engineer, field engineers and staff to the project for various periods of time, as required. The CONSULTANT may assign specialized personnel to the contract to inspect special phases of the work. These personnel will work under the supervision of the Contract Resident Engineer. The CONSULTANT's primary services are listed below. These services will commence at contract award for the CSDBOM contract. The CONSULTANT will communicate and coordinate these activities with the CITY on an ongoing basis throughout the term of the Agreement.

- Review and approval of contract submittals
- Design audit, review, and acceptance
- Fixed Facilities interface management (Task 02)
- Manufacturing oversight and factory inspections
- Construction management
- System acceptance/testing and commissioning (Task 17)
- Project close-out (Task 15)

11.01 Review and Approval of Contract Submittals

The CSDBOM contract documents identify various data and documentation that the CSDBOM contractor must prepare and submit for review and approval throughout the course of the Project. The CONSULTANT will track and review submittals in accordance with approved CITY procedures for conformance with Contract requirements. The CONSULTANT will work with the CSDBOM contractor to verify that the review and approval of the contract submittals are carried out in an organized, systematic way. The review will require participants from CONSULTANT's specialists and experts in various fields such as Automated Train Control, vehicles, O&M, communications, traction electrification, etc.

The CONSULTANT will process contractor submittals in CMS. Submittals will be received by the CONSULTANT, reviewed for completeness and verification of contractor reviews. The CITY will be included in submittal reviews to the extent desired. Upon return of reviewer comments, the CONSULTANT will return comments to the CSDBOM contractors. Submittal reviews performed by the CONSULTANT will be coordinated with CITY with the goal of completing the review and returning to the contractor within thirty (30) calendar days of receipt.

Internal documents and products that are required to show compliance with the CSDBOM Contractor's design, such as shop drawings, product data, and samples, will generally not be reviewed by the CONSULTANT.

Schedule

Per Master Project Schedule

11.02 Design Review and Acceptance

The CSDBOM contract documents require that the CSDBOM Contractor submit Core Systems technical designs for review. In accordance with the CSDBOM Special Provisions Section 4.7, the CSDBOM Contractor is required to carry out major design reviews: (1) Definitive Design Review, (2) Interim Design Review, and (3) Final Design Review. The CONSULTANT's audit and review activities shall provide verification that the CSDBOM Contractor's designs meet the contract requirements and that they have appropriate interfaces with the fixed facilities and latest project requirements. The CONSULTANT shall audit designs for all of the major Core Systems elements and subsystems including: vehicles, traction and propulsion power, automatic controls, station equipment, O&M equipment, operation control center equipment, and other applicable Core Systems equipment.

The CONSULTANT shall closely monitor the Design Review Records prepared by the CSDBOM Contractor and verify that open design issues are tracked and resolved in a timely manner.

Schedule

Per Master Project Schedule

11.03 Manufacturing Oversight and Factory Inspections

The purpose of this task is to verify that the CSDBOM Contractor is in compliance with the QA Plan and accepted designs at the manufacturing sites. These manufacturing components include the vehicles, automated train control system, automatic door system (if applicable), communication equipment, fare collection equipment, power equipment, etc. Close monitoring should be maintained to verify a successful delivery of the Core Systems' equipment. Manufacturing oversight and inspection services will include:

- Participation in First Article Inspection—Quality Review
- In-process inspection of component manufacture
- In-process inspection of final assembly
- Production progress monitoring
- Pre-shipment inspection
- Factory testing oversight and audit

The CONSULTANT will review certified test results and participate in qualification testing, if deemed appropriate by CONSULTANT. The qualification testing is the controlled testing of individual components, elemental assemblies, new designs or product modifications, prior to their being incorporated into larger parts of the CSDBOM's work. During the design review process, the CONSULTANT will collaborate with the CSDBOM Contractor in the identification of new design or product modification that will require qualification testing prior to final

installation and/or assembly. The CONSULTANT will monitor this situation to verify the CSDBOM Contractor perform qualification tests in accordance with industry standard tests and specifications and/or quality assurance test specifications.

Assumptions

The CONSULTANT will coordinate testing and manufacturing oversight with the CITY to facilitate knowledge transfer of the various systems operations and maintenance characteristic from the CONSULTANT's technical team to the CITY's Engineering and Operation's staff. The CONSULTANT is to mentor and utilize CITY staff where appropriate in this task.

Schedule

Per Master Project Schedule

Deliverables

Trip Reports

11.04 Construction Management

The CONSULTANT will develop manuals and implement CITY procedures to be used for construction management of the CSDBOM contract. The CONSULTANT will comply with approved CITY procedures for NCRs and construction change orders, and will oversee the documentation of NCRs and change orders. The CONSULTANT will comply with the approved CITY construction claims avoidance program, and manage the construction claims process while providing oversight of the CSDBOM. These services will include participating in the contract partnering programs.

11.04.01 Contract Resident Engineer Services

The CONSULTANT will perform CM services under the leadership of the CONSULTANT's Contract Resident Engineer. The CONSULTANT's Contract Resident Engineer will oversee all CONSULTANT's efforts on the CSDBOM's contract and will serve as the CITY's primary point of contact for the CSDBOM Contractor.

The CONSULTANT's Contract Resident Engineer will generally be responsible for the quality oversight of all aspects related to the CSDBOM contract, and contract administration. Detailed responsibilities will be discussed throughout this section.

The CONSULTANT's Contract Resident Engineer will be supported by staff typically including Office Engineers, Field Engineers, Public Involvement representatives, Change/Claim Engineers, Project Controls Engineers, Construction Support Liaison Engineers, Environmental Compliance representatives, Document Control representatives, Systems Engineers, Interface/Startup Engineers, as well as administrative and data entry assistants.

Deliverables

Construction Management Procedures

Contract Resident Engineer Manual

11.04.02 Communication/Meeting/Record Keeping

As the primary point of contact for the CITY with contractors, the CONSULTANT will receive contractor correspondence and control outgoing CONSULTANT/CITY correspondence. Pursuant to a written delegation of authority from the CITY The CONSULTANT will sign transmittals and either draft letters for CITY signature or sign on behalf of the CITY, depending on the CITY's preferences. The CONSULTANT will maintain an ongoing dialogue with contractors at all working levels in order to promote unity of purpose and teamwork.

The CONSULTANT will participate in or conduct regular meetings with the CSDBOM Contractor, including:

- Preconstruction meetings
- Progress meetings
- Design review meetings
- Change/claim negotiation meetings

The CONSULTANT will generate meeting minutes for all regular meetings conducted by the CONSULTANT. The CONSULTANT will review and provide comments on all meeting minutes provided by the CSDBOM Contractor.

The CONSULTANT will maintain files for all formal documents associated with construction contracts. Files will be organized under a uniform file index to maintain consistency between contracts. Files will be maintained in accordance with CITY approved procedures.

11.04.03 Contract Cost and Payment Management

Pay requests will be processed in accordance with CITY approved procedures.

11.04.04 Contract Schedule Management

Contractor's schedule will be processed in accordance with CITY approved procedures.

Assumptions

The Contractor will submit a monthly schedule update in Primavera P6 (or higher version) using appropriate coding approved by the CONSULTANT.

Schedule

Contractor's schedules will be submitted to the CONSULTANT monthly.

Deliverables

Monthly Schedule Update with analysis by CONSULTANT

11.04.05 Manage Environmental Compliance

Environmental Compliance will be managed as described in Task 08.02.

11.04.06 Manage Interface and Integration of the Various Design and Construction Contracts

Interface and Integration will be managed as described in Task 2.

11.04.07 Requests for Information (RFI)

In accordance with CITY approved procedures the CONSULTANT will process contractor RFIs via the CITY's CMS. RFI reviews performed by the CONSULTANT will be targeted for completion within 14 calendar days.

Assumptions

Contractors will be responsible for getting answers to third party questions.

11.04.08 Change Management

In accordance with procedures approved by the CITY the CONSULTANT will manage the construction contract change process, from initiation through change order execution as follows.

CITY-Initiated Changes

CITY-initiated changes are those changes that are generally initiated by the CITY or CONSULTANT. The CONSULTANT will be responsible for:

- Preparing the outgoing change package generally consisting of cover transmittal document, technical attachments (generally prepared by the CONSULTANT), along with internal documentation explaining the reason for the change.
- Determining if the change affects additional contracts within the Project and prepares the necessary documents.
- Preparing independent estimate of cost and time impacts associated with change.
- Determining whether the change affects the Project configuration and, if so, informing the CITY's Configuration Manager and assist in managing the effects on configuration in accordance with the CITY's Configuration Management Plan.
- Determining whether the CSDBOM Contractor needs to implement the change prior to completion of cost and time negotiations in order to mitigate impacts.
- Reviewing change with the CITY and obtaining concurrence.
- Transmitting change to the CSDBOM Contractor.
- Evaluating contractor cost and time estimate against independent estimate.
- Negotiating the change cost and time with the CSDBOM Contractor, including preparation of pre-negotiation plans and post negotiation records as applicable. Cost and time settlements negotiated by the CONSULTANT will be subject to approval by CITY.
- Assisting the CITY in the preparation of change order documentation and routing for signature by the CITY and the CSDBOM Contractor.

Contractor-Initiated Changes and Notifications of Potential Changes

Contractor-initiated changes will generally consist of scope changes, differing site condition changes, impact-type changes resulting from CITY-controlled actions or documents, or notifications of potential changes where the extent of impact is not yet clear. In accordance with CITY approved procedures, the CONSULTANT will be responsible for performing the following on the CSDBOM Contractor initiated changes:

- Receiving the contractor request for change, performing a technical and commercial evaluation, with recommendation to the CITY.
- Determining if the change affects additional contracts within the Project and prepares the necessary documents.
- Determining whether the change affects the Project configuration and, if so, informing the CITY's Configuration Manager and assisting in managing the effects on configuration in accordance with the CITY's Configuration Management Plan.
- With CITY concurrence, prepare a response to the CSDBOM Contractor. Response will generally recognize requested change, reject or deny merit of requested change, or request additional information for evaluation.
- On recognized impact type changes, working with the CSDBOM Contractor to mitigate impacts.
- Preparing independent estimate of cost and time impacts associated with recognized changes.
- Evaluating the CSDBOM Contractor cost and time estimate against independent estimate.
- Negotiating the change cost and time with contractor, including preparation of pre-negotiation plans and post-negotiation records as applicable. Cost and time settlements negotiated by CONSULTANT will be subject to approval by CITY.
- Assisting CITY in the preparation change order documentation and routing for signature by CITY and the CSDBOM Contractor.

Assumptions

CONSULTANT to take the lead role on change order negotiation and documentation.

Primavera Contract Management software as configured by CITY will be utilized for change management and administration.

11.04.09 Contractor Claims and Disputes

For purposes of this document, "claims" are defined as contractor-requested changes where merit has initially been denied by CONSULTANT in the Change Management responsibilities described above but which continue to be pursued by the CSDBOM Contractor. "Disputes" are defined as claims that continue to be pursued by the CSDBOM Contractor, cannot be resolved between

CONSULTANT/CITY and Contractor, and are submitted to third parties for resolution. (The CITY has a Claims and Disputes Resolution Procedure)

In accordance with procedures approved by the CITY, the CONSULTANT will assist CITY in the resolution of claims and disputes as follows:

Claims

- Preparing merit assessment with recommendation to settle or dispute for CITY review.
- For claims where CITY elects to settle, assisting the CITY to the extent requested in the negotiation and resolution of the issue, and preparing documentation similar to that discussed above in Change Management.
- For claims where CITY elects to dispute, preparing responses to the CSDBOM Contractor.

Disputes

- Assist CITY in the initiation of the disputes management process.
- Support the dispute resolution process on an on-call basis as requested by CITY, providing support such as information, documentation, analysis, testimony, etc.

Assumptions

The CITY will be responsible for managing claims and/or disputes arising during O&M phases of the Project.

CITY may request CONSULTANT to provide expert witnesses and/or other consultants to assist in the evaluation and resolution of contractor claims and disputes. The CITY will provide additional compensation, consistent with the provisions of Exhibit 2B-Compensation and Invoicing, for these services to be negotiated with the CONSULTANT at the time of tasking.

Additional compensation, to be negotiated with the CONSULTANT at the time of tasking and consistent with the provisions of Exhibit 2B-Compensation and Invoicing, will be provided when the level of support required from the CONSULTANT exceeds that which can be reasonably be provided by CONSULTANT's personnel or subcontractors assigned to the Project within the context of performing their primary duties.

11.04.10 Construction Oversight and Testing

CONSULTANT will provide qualified field personnel and equipment to monitor, document and observing tests and construction. These services will be provided as follows:

- Document construction progress and issues in daily construction reports and in progress photographs.
- Review contractor progress payment estimates for conformance to actual progress.
- Participate in Substantial Completion activities.

- Ensuring the CSDBOM Contractor achieves contract levels of construction quality, maintaining public safety, and protecting the environment during construction.
- Participate in resolution of issues pertaining to field construction.
- Observe and report work done by Contractor for Force Account Work.
- Initiate Nonconformance Reports (NCR) when applicable. Maintain deficiency log in CMS.
- Provide qualified testing laboratory services as requested by the CITY.
- Perform construction oversight, verifying that Contractor quality personnel are working in accordance with their approved procedures as well as performing random check inspections and testing. The CONSULTANT will inform the CITY of any observed deviations from the construction documents.

Assumptions

The CONSULTANT will coordinate field testing with the CITY to facilitate knowledge transfer of the various systems operations and maintenance characteristic from the CONSULTANT’s technical team to the CITY’s Engineering and Operation’s staff. The CONSULTANT is to mentor and utilize CITY staff where appropriate in this task.

Schedule

Per Master Project Schedule

11.05 Operations and Maintenance (Phase #1 through Phase #3)

The services of the CONSULTANT will generally be in support of the CITY’s Engineering and Operations Staff for the Start-up of each operating phase of the PROJECT. In Phase 1 (includes West Oahu segment and up to Aloha Stadium) the CONSULTANT will take the lead in the oversight of the DBOM Contractor’s O&M scope of services, including preparation of plans, drawings, programs (including training), manuals, Standard Operating Procedures (SOPs), rule books, operating bulletins, and other Project-related O&M materials necessary for the operations and maintenance. For Phases 2 and 3 (Aloha Stadium to Middle Street and Middle Street to Ala Moana, respectively), the CITY will take the lead in the Start-up of each phase and the CONSULTANT will support, as needed, in the review of the aforementioned documentation. The CONSULTANT will be responsible for overseeing activities related to Substantial Completion and Final Completion.

For Phases 2 and 3 (after Phase 1 is open for service), the CONSULTANT will provide technical expertise, as requested, for the acquisition and/or implementation of any additional Core Systems equipment; review operational and physical plant impacts resulting from any equipment modifications or implementations; provide assistance with regards to system service availability (SSA), service mode availability (SMA), fleet availability (FA), and station availability (SA); and review, verify, and validate the calculation of performance payments and the way various contract performance metrics are measured. The CONSULTANT will mentor CITY staff as requested, to provide O&M technical and administrative training during the start-up and operations.

Assumptions

The CITY will oversee the DBOM Contractor and provide assurance monitoring for all operating Phases. This will include oversight of the maintenance Management Information System (MIS) (after it is placed into service) for all aspects of rail operations; initial provisioning, spare parts, expendables, and other inventory to assure required stocking levels; system service and all other availability measurements, including review of the performance-based payment invoice request each month; equipment failure rate monitoring; and all other system and contractor assurance monitoring and oversight services, FTA and other oversight agency reporting.

Schedule

Per Master Project Schedule

Deliverables

The CONSULTANT will review plans, drawings, programs (including training), manuals, Standard Operating Procedures (SOPs), rule books, operating bulletins, and other Project-related O&M material as requested by the CITY and provide comments to the DBOM Contractor within 30 days of receipt.

12 CONSTRUCTION MANAGEMENT FOR OTHER CONTRACTS

This task refers to the construction management of several distinct CITY-procured contracts that the CONSULTANT will oversee.

12.01 Signage Program

The CONSULTANT will manage the contracts for the fabrication and installation of system-wide wayfinding signage. CONSULTANT will coordinate the work of the signage contractor(s) in a manner similar to that described in Task 10 for DBB contracts.

Assumptions

Wayfinding signage is planned to be away from the immediate transit corridor and stations, and will be located within the public ROW (State or CITY).

Contracting package is to be determined, but On-Call Contract is an option.

Design by CONSULTANT as described in Task 09.01.05.

Schedule

Per Master Project Schedule

Deliverables

Construction contract documentation similar to that described in Task 10 for DBB contracts.

12.02 Elevators and Escalators

CONSULTANT will coordinate the installation work of the elevator and escalator contractor with that of the respective facility contracts. Work will be managed in a manner similar to that described in Task 10 for DBB contracts.

Assumptions

Installation as per Station Construction Schedules.

Procurement of Construction Contract by the CITY pursuant to Contracting Packaging Plan.

Schedule

Per Master Project Schedule

Deliverables

Construction contract documentation similar to that described in Task 10 for DBB contracts.

12.03 On-Call General Construction Contractor (GCC)

The CONSULTANT will be responsible for managing work orders and overseeing results of the GCC's work. Work will be managed in a manner similar to that described in Task 10 for DBB contracts.

Assumptions

The purpose of the On-Call General Contractor is to expedite small but necessary scopes of work.

Schedule

On-Call Contract to be set up early in the Project construction with individual work orders implemented on an as needed basis.

13 PUBLIC INVOLVEMENT

The Project's Public Involvement Plan will be updated by the CONSULTANT through a collaborative effort with the CITY to create and maintain an ongoing process for Project communication between the CITY, the CONSULTANT, key stakeholders, agency representatives, and the general public for Final Design and Construction. The CONSULTANT will implement the Public Involvement Plan to provide the citizens of Oahu with timely and accurate information regarding the Project. The CONSULTANT will assist the CITY in preparing for and participating in public meetings and other outreach activities. The CONSULTANT will provide oversight of contractor Public Involvement Teams; will provide personnel to support the CITY in community outreach, media and public information efforts; will coordinate, in conjunction with the CITY, public and agency interaction elements of environmental compliance requirements specified in the Final EIS, the Record of Decision (ROD), and the Section 106 Programmatic Agreement.

13.01 Public Involvement Program Activities

The Public Involvement Program activities developed by the CITY and the CONSULTANT for this phase of the Project are to continue, enhance, and add to the public involvement activities conducted during the Preliminary Engineering/EIS phase of the Project. The comprehensive Public Involvement Program will provide the opportunity for public input through public information meetings, neighborhood/interest group briefings, and personal outreach. CONSULTANT'S support of the Public Involvement Program will include, at minimum the following components:

The CITY shall retain responsibility for providing and coordinating site security and safety at CITY-sponsored Public Involvement meetings and community events and such responsibility will not be delegated to the CONSULTANT. The CITY may elect to procure the services of the Honolulu Police Department (HPD) to provide various services such as site security, crowd control, traffic control, and other site security and safety related services. In such instances, CONSULTANT shall coordinate CONSULTANT's on-site event activities with the CITY and HPD.

CONSULTANT's support of the Public Involvement Program will include the following components:

13.01.01 Participate in Community Events

The CONSULTANT will actively seek out community events to inform and educate the public about the Project. The CONSULTANT will facilitate, prepare, coordinate, and participate in all aspects of these events. Staffing will be on an as-needed basis. Comment cards will be available for attendees to voice concerns, issues, and comments regarding the Project. Where applicable and appropriate, public meeting materials (e.g., displays, fact sheets, and comment forms) will be developed and presented to the CITY for review and comment.

Community events could include organizational meetings, trade shows, professional conferences, workshops or seminars. The events selected for Project participation will be those likely to reach the broadest number of residents to promote Project awareness. Participation in these events will focus on reaching various groups in the community, including business, residential, ethnic, and special community groups

(e.g., seniors, disabled) providing a mechanism for communication with the spectrum of people affected by the Project.

Assumptions

The pace and type of community events for overall Project information will be similar to the PE/EIS Phase of the Project.

Deliverables

Original printed and electronic copies of:

- Informational materials/handouts,
- Comment forms,
- Attendance records, and
- Summary reports including agendas, comments and statements of responsive members, specified action items and issues, and any required follow up.

13.01.02 Facilitate Project Public Involvement Meetings

The CONSULTANT will provide event coordination, including selecting and securing a location compatible with community needs; conducting site checks of proposed facilities, and paying all rental fees if required; drafting and producing information materials, such as agendas, fact sheets, and programs; handling design, production, and dissemination of information and publicity materials prior to each meeting, including postcards, newsletters, flyers, and media releases; conducting reminder telephone calls to encourage attendance; audio and visual support; drafting and producing comment cards, sign-in sheets, and staff name tags; providing refreshments; setting up and cleaning up equipment and facilities; following up the meeting, including preparing summary reports with specified action items and issues and appropriate responses, database maintenance, and correspondence; as well as all other event logistics.

The CONSULTANT will provide the CITY with original printed and electronic copies of all informational materials/handouts, comment forms, attendance records, summary reports of all meetings complete with agendas, comments and statements by responsive members, specified action items and issues, and any required follow up.

In addition to regular public involvement meetings, design charrettes will continue to gather public input on station entry areas. A series of three (3) workshops will be held for each station grouping in communities that have not yet had a workshop opportunity.

Significant Project milestones will warrant special events, such as Groundbreaking, station openings, and dedications. The CONSULTANT will provide event support for these events under the direction of, and in coordination with, the CITY.

Assumptions

Project will continue to communicate with communities through Project-sponsored public events.

Deliverables

Original printed and electronic copies of:

- Informational materials/handouts,
- Comment forms,
- Attendance records, and
- Summary reports including agendas, comments and statements of responsive members, specified action items and issues, and any required follow up.

13.01.03 Produce Graphics in Support of Public Outreach

Graphics will be developed and provided by the CONSULTANT for public involvement activities. Graphics will include, but are not limited to, those necessary for newsletters, sign-in sheets, website, media and community involvement presentations. All graphics will incorporate the Project Logo after it is finalized.

Interactive materials will continue to provide new and tactile means for the public to interact with Project concepts as they develop. Future materials will build on successful experiences, such as the “rail ride” experience and the scale model of the rail vehicle. Materials that convey relevant and important information will be produced, which include, but are not limited to, the following:

- Community event materials
- Newsletters and direct mailings
- Construction signage

Assumptions

A graphic logo is adopted for the Project during this phase.

Deliverables

Public outreach materials with an innovative and consistent graphic representation

13.01.04 Develop and Produce Presentations and Manage Presentation/Schedule (i.e., “Speakers Bureau”)

The CONSULTANT will participate in Speakers Bureau meetings, as well as participate in additional meetings during the progression of the Project. Preparation for these meetings will include solicitation, coordination, preparation and execution of presentation materials.

In addition, the CONSULTANT will assist the CITY in preparing for briefings to the Council and local governing bodies regarding the community involvement component of the Project. Where applicable and appropriate, public meeting materials (e.g., displays, fact sheets, and comment forms) will be prepared and presented to the CITY for review and comment. The CONSULTANT will update the public involvement calendar on a weekly basis.

Assumptions

Speakers Bureau events and presentations continue to be an effective means of communicating with the public.

13.01.05 Maintain Existing and Develop New Contacts with Local Groups and Organizations, including CITY Council and Neighborhood Boards

The CONSULTANT will assist the CITY in maintaining existing and developing new contacts with local groups and organizations to include participation in their meetings. Where applicable and appropriate, public meeting materials (e.g., displays, fact sheets, and comment forms) will be prepared and presented to the CITY for review and comment.

Particular attention will be paid to reaching groups that are traditionally underserved or underrepresented in the public involvement process, such as low-income and minority populations that are often referred to as “environmental justice” populations. Materials will be prepared in the languages most often used on Oahu, and translators will be available upon request by the CITY at the meetings. Information will be distributed through cultural organizations, ethnic associations, housing associations, and community development groups, such as the Kalihi-Palama-Chinatown Community Initiating Group, and similar groups in other areas of the island.

As construction begins, additional contacts will be established with business owners, community leaders, and residents along the route and near construction areas. Contractors will be the primary contact for these groups; however, the CONSULTANT will provide oversight and guidance for this communication.

In addition, the CONSULTANT in conjunction with the CITY will maintain contact and interaction with the transit advisory committees. The committees serve as a sounding board for the Project and will advise where appropriate in an effort to proactively resolve potential Project issues.

The CONSULTANT will update and assist in maintenance of the Public Involvement database.

Assumptions

The existing contact database will increase as the Project develops.

Deliverables

Public Meeting materials

13.01.06 Maintain the Project Mailing List, Internet Outreach, and Telephone Hotline

The CONSULTANT will assist the CITY staff to enhance the inclusive and diverse CITY database incorporating all interested parties from the Alternatives Analysis and PE/EIS phases, as well as new contacts. Meeting attendees will be able to have their contact information added to the Project mailing list and email list on all sign-in sheets provided at public involvement meetings. The Project websites such as, www.honolulustransit.org and www.movingusforward.org, will continue to be operated and updated by the CONSULTANT with relevant information, including

construction-related information. Information related to the Project, implementation schedule, briefing/fact sheets, agendas, newsletters, meeting announcements, Project milestones, press releases/articles, etc., will be posted on the website. The informational telephone hotline used for the Project will continue to provide 24-hour access for public inquiry and comment. The CONSULTANT will monitor inquiries and answer the phone to handle construction-related issues in real time. An emergency contact phone tree will enable the staff member to provide accurate and timely information.

Assumptions

The contract database is owned by the CITY.

The development and management of a website for Rail Operations is not included in this task.

Deliverables

Updated Project websites, managed telephone hotline, and updated Project contact database

13.01.07 Develop, Produce, and Distribute Public Information Documents and Electronic Media

The CONSULTANT will design and produce materials, video programs, fact sheets, agendas, and other needed public information documents with detailed information on current Project issues. The CONSULTANT will prepare, publish and assist the CITY in distribution of video programs. Materials and video programs will be printed and distributed via direct mail, distributed at meetings, events, hearings, and briefings and through multi-media outlets. General Project monthly newsletters will be produced in an easy-to-read format that will provide concise, yet necessary, information in an inviting format. In addition, material will be translated, as appropriate, into languages represented in the corridor to enable a wide circulation of knowledge concerning the Project.

CONSULTANT will prepare and print fact sheets to be provided to the CITY for distribution to property owners, businesses, community leaders, and the general public as to the ongoing status of the design and construction of the Project. Fact sheets will be produced as needed and will be available for all public meetings. When appropriate, fact sheets may also be created in video or multi-media format.

The CONSULTANT will identify areas and present applicable project information in heavily trafficked areas such as satellite CITY Halls, shopping malls, etc. Current Project information will also be posted on the Project website.

The CONSULTANT will develop, produce, and distribute DVDs or CDs to illustrate technical aspects of the Project and aid the public in understanding rail transit. Materials for the DVDs and CDs will be formatted to be opened on standard operating systems (PC, Mac, etc).

Assumptions

Materials and video program content and overall messaging will be generated by the CITY.

The existing newsletter distribution list, which is currently at 15,000, will continue to grow.

General newsletters and fact sheets will be created for significant Project events or milestones.

Some material will be produced on DVD or CD where warranted because of material content or size and will be produced for significant Project events or milestones.

Deliverables

Public Information documents and electronic media

13.01.08 Respond to Public Inquiries about the Project

The CONSULTANT will work with the CITY to respond in a timely manner to public inquiries made through established outlets including, but not limited to, the website and hotline.

The CONSULTANT will provide ample opportunity for public input throughout the Project process and shall document public comments, beginning with the scoping process. The CONSULTANT will use CommentSense to allow multiple users to record comments into a single tracking system. This will make it easier to document the comments and show the public that their input received due consideration.

Assumptions

CommentSense will be used to track and categorize public comments. The Project will not shift to a CITY-specified tracking system.

Policy makers are included as part of the general public.

Deliverables

A tracking system of public comments and associated responses

13.01.09 Present Community Feedback to the Project Team

As the Project design develops, there will be a need to provide input/feedback to the Project Team on behalf of the general public. The CONSULTANT will form committees or provide other such efforts to accomplish this. The committees will include public involvement team representatives who have regular contact with the general public and representatives of particular special interest groups. It is anticipated that sustainability, logo and branding, street trees, streetscape design, and safety and security issues will be of specific concern to the public. To represent the public perspective, the public involvement committee members will share information with the Project Team. Specific community members may be identified for inclusion by the CITY.

The CONSULTANT will provide additional public outreach efforts for other Project tasks as requested by the CITY.

Assumptions

Public interest will support activating a specific committee.

The Project Team consists of the CITY and the CONSULTANT.

Outreach content and overall messaging will be generated by the CITY.

13.01.10 Effectiveness of the Program

The CONSULTANT will assist the CITY in assessing the effectiveness of the Public Outreach program and to determine if any changes are needed to convey the Project message. The CONSULTANT will provide market research semi-annually or will evaluate specific milestones or issues. Market research could include direct mail surveys, phone surveys, focus groups or other professional services market research tools. Results of market research will be communicated with the CITY and applied to Project messaging as appropriate.

Assumptions

Market research may be performed by an internal group or professional market research firm.

Schedule

Semi-annually

Deliverables

Summaries

13.01.11 System Branding

The CONSULTANT will support the CITY's branding efforts.

The CONSULTANT will create graphics to support the system name.

The CONSULTANT will create branding guidelines and implement a program to generate public awareness of the final system name and graphics. Once naming and graphic elements have been selected, the brand will be incorporated into materials and video programs.

Assumptions

A paid media program will be part of implementation.

Schedule

Early in CONSULTANT contract

Deliverables

Branding Guidelines

13.02 Support Construction Management (CM) in Oversight of Contractor Public Outreach Teams

Each construction contractor will have a public outreach team and the CONSULTANT will oversee contractor efforts in order to maintain a consistent message. The CITY will be the primary conduit for media contacts. The CONSULTANT will coordinate the contractor efforts and liaison with the CITY and key community groups to support the management of construction-related public involvement.

13.02.01 Oversee Public Contact

Contractors will have regular contact with businesses and residents in their area of responsibility. The CONSULTANT will oversee the consistent message, positive Project representation, and encourage conflict resolution.

13.02.02 Disseminate Construction-Related Travel Information Changes

The CONSULTANT will aggregate travel information provided by others to provide a weekly travel advisory. The travel advisory and updates will be posted on internet sites, updated on social media sites. Media updates will be forwarded to the CITY for release.

Assumptions

Contractors will be the primary contact for communities

13.02.03 Weekly Travel Advisory to Support Construction Impact Mitigation

The CONSULTANT will supplement contractors' public outreach programs as directed by the CITY. Such activities shall be limited to dissemination of information regarding access to roads and driveways; business disruptions, parking, and special land use.

13.03 Support the CITY in Media and Agency Coordination as Needed

The CONSULTANT will assist the CITY to prepare editorial boards, press conferences, media releases, and offer proposals for television and radio appearances. The CONSULTANT will work closely with media outlets to increase the public awareness of significant developments and construction-related travel pattern changes. Project-related articles to be distributed by the CITY's public information office will be coordinated with local publications, such as *The Honolulu Star-Advertiser*, *Civil Beat*, *Pacific Business News*, and other print or online media. This includes information on Project milestones, as well as opportunities for public participation and input. While the bulk of the media effort is assumed to be in earned media, paid advertising will be used in a strategic manner.

13.03.01 Construction-related Media Contact

The CONSULTANT will provide oversight of construction contractor public outreach teams. All media contact will be routed through the CITY with support of the CONSULTANT. The CONSULTANT will work with construction contractors to update travel information and prepare the traveling public for changes in routes or construction timing. The construction contractor's teams have the responsibility of communicating directly with business owners and residents in their area. In the event of an emergency, the CITY or designated representative will be contacted immediately to give direction based on the situation.

Assumptions

CITY will be the primary project spokesperson

Deliverables

Emergency contact tree for active construction sites

13.03.02 Paid Media

The CONSULTANT will design and produce paid media materials, such as television, radio, print and multi-media outlets, with detailed information on current Project issues. Legal notices, major milestones and significant project events may warrant paid media in accordance with strategic project needs and notification requirements. Paid media will be produced in an easy-to-read format that will provide concise, yet necessary, information in an inviting format. As necessary, paid advertisement will be translated and placed in local ethnic media, as appropriate, for ethnicities represented in the corridor to enable a wide circulation of knowledge concerning the Project.

Assumptions

Overall messaging will be generated by the CITY

13.04 Documentation

The CONSULTANT will prepare monthly public involvement activity reports for inclusion in the CONSULTANT's Monthly Progress Report (see Task 01.01.07). These reports will describe public involvement activities for the subject time period and will summarize results (i.e., summaries of the public input received).

The CONSULTANT will update the Public Involvement Plan to identify how the public involvement activities will be implemented throughout Project.

Public outreach materials, correspondence, and other materials will be maintained in electronic form and hard copies will be stored at the CITY office.

Assumptions

The CITY will review all public involvement materials in a timely manner.

Schedule

Updated Public Involvement Plan (6 weeks after NTP)

Deliverables

Updated Public Involvement Plan

Electronic and hard copy files of public outreach-related Project material

Monthly FTA binder

14 ARTS IN TRANSIT

The Mayor's Office of Culture and the Arts (MOCA) is the lead for the Arts in Transit program. The CONSULTANT will assist the CITY to provide input to MOCA.

The CONSULTANT will provide oversight of final designers to verify the art selected by the CITY is incorporated into the final design construction contract documents.

Assumptions

MOCA will identify artist and contract scope.

The Artists and Art Administrator will be the CITY responsibility

15 CONTRACT MANAGEMENT SUPPORT SERVICES

This section refers to the administration and management of contracts in support of the HHCTCP project delivery. Work in this section will be in conjunction with Task 01, Task 03, Task 07 and Tasks 10 thru 12.

15.01 Contract Management Support Services

15.01.01 Contract Packaging Plan Updates

The CONSULTANT will support the CITY in updating the Contract Packaging Plan (CPP). CONSULTANT will maintain contract data sheets and provide updates on a quarterly basis to the CITY in support of the CPP updates.

15.01.02 Quarterly Contract Data Sheets, Updated Contract Administration

The CONSULTANT will assist the CITY in the development and preparation of contracts, respond to contract interpretation queries, and maintain a “conformed contract” that will contain authorized changes. The CONSULTANT will provide administrative processing of change orders and associated revisions to contract documents, maintain “control copies”, distribute to those assigned “conformed contracts” and perform audits periodically at the Contract Field Management operations to maintain consistency and document control conformity as it relates to contract documents. In addition, the CONSULTANT will coordinate efforts with the CITY’s procurement and contract management personnel. The CONSULTANT will also perform periodic audits of the contractor’s Buy America cost tracking and documentation as required by contract.

Assumptions

The CONSULTANT will coordinate with the CITY’s management personnel throughout the contract delivery.

The CONSULTANT shall perform contract document management functions that support the usage of the CITY’s CMS and maintain supporting files and records associated with contract changes and administrative actions/recommendations.

The CONSULTANT will comply with all approved CITY procedures.

Schedule

30-days following authorized Change Order receipt, control copies shall be distributed with the appropriate conformed contract documents to field management staff. Audit findings reports will be prepared and submitted to the CITY, as reviews are authorized and conducted.

Deliverables

Conformed contracts

Review reports (Field Management Operations and Buy America findings)

15.01.03 Change Management

The CONSULTANT will facilitate resolution and prepare contract adjustment documentation for changes to active contracts. The CONSULTANT will follow the CITY's approved Change Order procedures in identifying, analyzing, clarifying, resolving and processing including the maintaining of change logs that identify pending changes, probable changes, changes in the change order process, and authorized Change Orders (COs).

Dispute avoidance and resolution services shall be provided as required on all CITY-contracts consistent with contract provisions and general practices. Refer to Tasks 10, 11, and 12 for further description of change and dispute management.

Deliverables

Change Order Supporting Documentation

Dispute Resolution Supporting Documentation

15.01.04 Configuration Management Coordination

The CONSULTANT will assist and coordinate with the CITY's Configuration Management processes. The CONSULTANT will provide assistance and support to the Configuration Manager in the Change Control Board (CCB) process.

Assumption

Changes that occur on each contract may trigger an impact to the configuration thresholds established by the CCB.

The CONSULTANT will follow the CITY's approved Configuration Management Plan and associated procedures.

Schedule

15-days following identification of a breach or trend to a breach to configuration target(s) as established by the CITY.

Deliverables

Contract configuration control log

Contract configuration usage and variance reports

15.01.05 Contract Status Reports

The CONSULTANT will prepare monthly contract status reports for each active contract identified in the CPP, except those managed directly by the CITY. The reports shall reflect the contract status including scope, schedule, budget and pending changes; and enable cross-contract analysis.

Schedule

15 days after close of reporting period

Deliverables

Contract status reports

Contract variance reports

15.01.06 Project/Contract Contingency Management

In accordance with CITY approved procedures the CONSULTANT will establish and maintain contingency management processes that support the establishment of contract budgets and contingency usage so that plan variances can be monitored and reported to the CITY and the CCB. Each contract budget will contain a "Contract Value" and a "Contingency" that is assigned from the Project Contingencies by the CCB. Recommendations to the CITY / CCB shall be made and contract allocated contingency managed by the CONSULTANT.

Assumptions

The Project Risk Register shall be used as a starting point but will be augmented with the details uncovered by the contract management team.

Schedule

Monthly – consistent with Master Project Schedule

Deliverables

- Project/Contract contingency plan
- Project/Contract contingency usage reports
- Contract Risk Register (CRR)

15.02 Labor Compliance

The CONSULTANT will be responsible for maintaining prevailing wage and civil rights compliance records and reports for the Project. Prevailing wage compliance will consist of certified payroll management, payment tracking, and (if necessary) OCIP management reporting and data exchange with OCIP provider. The Civil Rights compliance will include DBE, EEO, OJT and state/federal form maintenance. The labor compliance effort will be closely coordinated with CITY's Civil Rights staff.

Assumptions

The CONSULTANT will employ third party software designed to manage contractor input and produce properly formatted DBE, EEO, OJT reports.

Schedule

Monthly

Deliverables

- LCM mandated reports
- Subcontractor usage report

15.03 Contract Closeout

The CONSULTANT shall provide contract closeout assistance to the CITY on all Design, CE&I, Construction and Design-Build contracts in accordance with CITY approved procedures and in compliance with FTA guidelines.

For each design and CE&I services contract the closeout and transfer of records to the CITY shall include all work products and relevant supporting materials, all change documentation, quality control and assurance records, and verify that all commercial issues have been resolved.

For each construction and design-build contract, the CONSULTANT will support the closeout and transfer of records to the CITY as follows:

- Review contractor as-built drawings for completeness. Accuracy of as-built drawings will remain the responsibility of contractors.
- Verify that all punchlist items have been completed by contractors. On DB and CSDBOM contracts, this function will be an audit of contractor QC verification. On DBB contracts, this function will involve physical verification of punchlist item completion (may be performed by CITY CEI firms).
- Verify that all contract documents that must be retained by the CITY, such as calculations, QC records, environmental reports and records, labor compliance reports, safety and security documentation and reports, etc., have been submitted by contractor.
- Verify that all software programs and design documentation such as software design descriptions, software verification and validation plan, verification results reports, user documentation, software configuration management plan and other documents as applicable are delivered to the CITY and/or escrow account (primarily applicable to CSDBOM contract).
- Verify that all closeout documents, such as warranty certificates, O&M manuals, releases, etc., have been submitted by contractor.
- Verify that all commercial issues have been resolved.

Assumptions

Contract field management staff shall assist in the closeout process

Schedule

Prior to final payment

Deliverables

Closeout checklist and report for each Contract

16 REAL ESTATE PROGRAM

Utilizing the baselined Real Estate Acquisition Management Plan (RAMP); the CONSULTANT will assist the CITY with boundary surveys, right-of-way and parcel mapping, survey descriptions, easements, subdivision processing, coordination, Project budget updates, and support of the real estate team and its consultants, and maintenance of the real estate database.

16.01 Support CITY in Real Estate Program

The CONSULTANT, as directed by the CITY, will support the CITY in real estate acquisition activities. This support includes but not limited to the following:

- Conduct boundary/property surveys necessary for land acquisition
- Prepare right-of-way maps and other documents necessary to satisfy agency requirements
- Prepare parcel maps, permanent easement maps, and survey descriptions
- Provide field survey layout of easements for negotiations with property owners
- Assist in updating the RAMP
- Assist in obtaining rights-of-entry
- Provide real estate database support as required
- Participate in weekly Real Estate Team meetings , including prepare minutes and action items
- Provide cost estimates as needed
- Assist in identification of environmental remediation measures and provide estimates when requested
- Prepare maps and materials required for third-party agreement; consents to enter and other real estate related documents
- Prepare and process subdivision maps and other required documents
- Provide scheduling assistance
- Provide property appraisal services to supplement appraisal services performed by the CITY's Real Estate Consultant when directed by the CITY.

Assumptions

CONSULTANT will not be responsible for obtaining permits

Title search will be done by others

Temporary easements will be identified and obtained by others

Primary property appraisals will be performed by others. CITY may request CONSULTANT to provide supplemental appraisal services and will provide additional compensation, consistent with the provisions of Exhibit 2B-Compensation and Invoicing, for these services.

Schedule

Per Master Project Schedule

Deliverables

Draft and Final Right-of-Way and Easement Maps

Draft and Final Parcel Maps and legal Descriptions

Subdivision and Maps/Documents

17 COMMISSIONING ACTIVITIES

The CONSULTANT shall provide oversight for commissioning of the various construction contracts.

17.01 Design-Build (DB) Contracts (Guideway Segments)

The DB Contractor has the primary role for project design, documents and equipment submittals, inspection, and conducting field functional performance tests for electrical/mechanical equipment to verify compliance with the contract documents. The CONSULTANT will perform periodic Quality Assurance inspections, maintain records of all witness testing, maintain a log of deficiencies and resolutions, review warranty documentation for completeness and acceptance, and confirm the acceptability of training and O&M documentation.

Deliverables

Final Report by Contract recommending actions of acceptances and tests

Develop warranty matrix (all contracts)

17.02 Design-Build (DB) Contract (Maintenance and Storage Facility)

The CONSULTANT shall provide oversight of the Leadership in Environmental and Energy Design (LEED) New Construction (NC) Commissioning Consultant selected by the CITY for the MSF design and construction.

Assumptions

The LEED NC Commissioning Consultant shall follow the commissioning guidelines of the U.S. Green Building Council for NC.

17.03 Core Systems Design-Build-Operate-Maintain (DBOM) Contract (CSC)

The CONSULTANT shall monitor the Core Systems Contractor's performance regarding acceptance activities in accordance with the Plan required in the CSC Technical Provisions Section 2 Verification, Test and Acceptance. The Plan, as expanded by Core Systems Contractor, will specify all requirements and activities and the basic order of conduct for verifying that the completion of each operating segment meets CSC requirements. The Core Systems Contractor will develop the expanded Plan early in the project and submit it for review and acceptance. While the contract documents have established the general sequence in which on-site acceptance activities are to occur, the Core Systems Contractor will develop their specific acceptance schedule as part of the Plan. After the CONSULTANT's review and approval of this Plan, it will serve as the basis for all on-site acceptance activities.

The tasks to be performed in this section cover the following major activities:

- **Post Installation Check-out**—these activities occur after the physical installation and energization of the Core Systems' equipment. These activities systematically test and verify proper functional performance of each element of the Core System equipment.
- **On-Site Integration Testing and Inspection**—these activities verify that each subsystem and assemblies thereof, are installed and interconnected in accepted design drawings and engineering installation instructions, and that they function in accordance with intended design.

- **System Demonstration**—this activity is the culmination of Core Systems and Fixed Facilities verification activities to demonstrate system’s maintainability and dependability.

The CONSULTANT, in conjunction with the CITY, will review and provide approval of the CSC’s proposed acceptance test and inspection procedures and plans for each of the acceptance activities in conformance with specified CSC requirements. The CONSULTANT will also review and provide approval of the Core Systems Contractor’s Acceptance Schedule for each activity. The CONSULTANT, in conjunction with the CITY, will monitor the status of the documentation and progress for each activity. Also, the CONSULTANT will maintain active status tracking of each activity prior to the scheduled beginning of acceptance activities.

Following the acceptance approval of test plans and procedures, the CONSULTANT, in conjunction with the CITY, will observe critical acceptance activities, tests, and inspections conducted by the Core Systems Contractor to verify compliance with the CSC requirements

After the completion of the test procedures, the Core Systems Contractor will prepare reports of on-site acceptance tests and other activities and submit them for review and acceptance. The CONSULTANT will review the reports and results of tests and inspections for conformance with the CSC requirements and report on the Core Systems Contractor’s progress toward Substantial Completion and readiness for passenger service.

As the Core Systems Contractor progresses to the next construction segment, it will be necessary for the Core Systems Contractor to separate the Operating Segment from the next construction segment to assure that the activities on the construction segment do not impact passenger service and vice versa. The CONSULTANT will review and approve the “Cutover” plan to be developed by the Core Systems Contractor when the construction of a new segment is ready to be integrated to the existing operating segment. Upon successful acceptance of each segment, the CONSULTANT will make recommendation to the CITY regarding the issuance of the Certificate of Substantial Completion to the Core Systems Contractor.

The CONSULTANT will perform periodic Quality Assurance inspections, maintain records of all witness testing, maintain a log of deficiencies and resolutions, review warranty documentation for completeness and acceptance, and confirm the acceptability of training and O&M documentation.

Assumptions

The CONSULTANT will coordinate testing and acceptance with the CITY to facilitate knowledge transfer of the various systems operations and maintenance characteristics from the CONSULTANT’s technical team to the CITY’s Engineering and Operation’s staff. The CONSULTANT is to mentor and utilize CITY staff where appropriate in this task.

Deliverables

Substantial Completion Report

Close-out Report when punch list is completed

Develop warranty matrix (all contracts)

17.04 Design-Bid-Build (DBB) Contracts (Guideway and Stations)

The CONSULTANT shall provide oversight of the Final Designers in the development of a Commissioning Plan that will be implemented by the construction contractor and inspected by

the CEI firms. The CONSULTANT will review and approve the Commissioning plan and will provide oversight of the CEI field teams inspection of the construction contractor's testing and acceptance work. The CONSULTANT will perform periodic Quality Assurance inspections, maintain record of all witness testing, maintain a log of for deficiencies and resolutions, review and accept warranty documentation for completeness and acceptance, and confirm the acceptability of training and O&M documentation.

Assumptions

Final Design Consultant and CEI firms selected by the CITY will have the experience and expertise in commissioning facilities.

Deliverables

Substantial Completion Report

Close-out Report when punch list is completed

18 PROJECT CLOSEOUT

This section will cover CONSULTANT activities that provide the CITY with the required documentation for closing out the CONSULTANT's contract and that assist the CITY at the completion of the CONSULTANT's contract with future FTA Closeout documentation that will be finalized and submitted by the CITY.

18.01 Contract Closeout

This section will cover CONSULTANT activities for closeout of the CONSULTANT's contract.

18.01.01 Contract Closeout Documents

The CONSULTANT will provide to the CITY all required CONSULTANT-developed Contract closeout documents in accordance with the applicable CITY approved procedures.

For those contracts where the CONSULTANT was the designer-of-record, closeout services will include:

- Review and transfer of as-built drawings prepared by the contractor.
- Verification that all punchlist items have been completed by the contractor (or otherwise resolved to the satisfaction of the CITY).
- Verification that all contract documents that must be retained by the CITY, such as calculations, QC records, environmental reports and records, labor compliance reports, safety and security reports, etc., have been submitted by the contractor. Additionally, the CONSULTANT will verify that all closeout documents, such as warranty certificates, O&M manuals, releases, etc., have been submitted by the contractor, as applicable, and that all commercial issues have been resolved.
- Verification that all software programs and design documentation such as software design descriptions, software verification and validation plan, verification results reports, user documentation, software configuration management plan and other documents as applicable are delivered to the CITY and/or escrow account.

Schedule

Per Master Project Schedule

Deliverables

As-built drawings where applicable

18.01.02 Contract Summary Report

The CONSULTANT will prepare and submit to the CITY a Contract Summary Report that packages and summarizes applicable CONSULTANT records including a summary narrative.

Schedule

Per Master Project Schedule

Deliverables

Draft and Final Contract Summary Report

18.02 Other Closeout Support

Prior to the completion of the CONSULTANT's contract, the CONSULTANT will assist the CITY in preparing initial documents for the FTA Project Closeout Report and Full-Funding Grant Agreement Closeout documentation. The CITY will be responsible for the continued updating of these reports and documentation until finalized and submitted to FTA.

Schedule

Per Master Project Schedule and beginning approximately 3 months before CONSULTANT contract completion

19 PROJECT DEVELOPMENT ACTIVITIES FOR EXTENSIONS

The CONSULTANT shall undertake project development activities for extensions, including preparing Alternatives Analyses and producing EIS EA Categorical Exclusion, and/or HRS Chapter 343 Exemption documents pursuant to NEPA and HRS Chapter 343. The CONSULTANT shall assist the CITY with advancing the resulting projects into the New Starts Preliminary Engineering phase of project development, if applicable. This Task will be coordinated with Tasks 6, 8, 9, and 13.

Planning services may be required to conduct updates of previously prepared alternatives analyses; preparation of appropriate NEPA and HRS Chapter 343 environmental documents and related technical studies of four future guideway extensions, namely, Kapolei extension, Salt Lake Boulevard extension, UH Manoa extension, and Waikiki extension.

The CONSULTANT will also provide master planning services for potential future alignments beyond those identified in the LPA.

19.01 Alternatives Analyses/Draft Environmental Impact Statements (AA/DEIS)/Other Documentation

Alternatives Analyses (AA) will evaluate a range of alternatives for each extension, which may include at-grade alignments and different technologies. The alternatives considered will include a combination of alignments identified in the LPA as adopted in Ordinance No. 07-001 (2007) and any additional alignments as determined in the future. Each AA will include a comparison of the impacts of vehicle technologies compatible with the original 20-mile Project, as appropriate. Each AA Report will address such issues as costs, benefits, environmental and community impacts, cultural/historical impacts, including Traditional Cultural Properties studies, and financial feasibility. The AA/DEIS effort will be coordinated at a minimum with the State Historic Preservation Division (SHPD) concerning cultural/historical investigations and related studies. Following selection of a Locally Preferred Alternative, environmental documentation (most likely an EIS) will be prepared. The work will span a wide range of technical disciplines, ranging from engineering to ridership forecasting to the natural, cultural/historical, and social sciences.

Assumptions

Separate AA reports will be prepared for each extension

Separate environmental documents will be prepared for each extension

Documents will be prepared in accordance with NEPA and HRS Chapter 343

19.01.01 Conceptual Design

The CONSULTANT shall perform conceptual engineering and architectural design for a high capacity transit system that supports the AA and environmental documentation necessary for future extensions of the Project. These designs will be expressed in the form of Design Guidelines for technology associated with an alternative followed by conceptual drawings and cost estimates. This will allow full evaluation of the various alternative alignments, station concepts, and technologies for each extension. Conceptual design will be accomplished by all appropriate design disciplines including, but not limited to, civil, structural, geotechnical, pavement, drainage, utility relocations, electrical, systems, mechanical, architectural, traffic, ITS, right-of-way requirements, and estimating at a level sufficient to support decisions made during the environmental documentation process.

Assumptions

Up to one (1) additional alignment, beyond that identified in the original Alternatives Analysis, will be developed for each extension.

Existing utility location information provided by the utility owner will be drawn on or imported from GIS into the aerial photogrammetric base map. Location of utilities by ground survey will not be performed.

Deliverables:

Conceptual plans and profiles of the alignments

Engineering studies/analyses/reports consistent with the level of engineering being completed for the project

Conceptual stations and facilities layouts

Cost estimates

19.01.02 Environmental Analyses

The CONSULTANT shall conduct appropriate environmental analyses, including describing the affected environment, evaluating the long-term and construction effects, evaluating indirect and cumulative effects, identifying mitigation for the extension impacts, and identifying unavoidable adverse impacts of the future extensions of the Project. This work will build upon the work conducted and documented for the original 20-mile Project. Other corridor assessments will require development of the appropriate supporting documentation.

Technical reports for the environmental disciplines, as appropriate, will be produced first, and information from the technical reports will be summarized for use in the environmental documents prepared for each extension. The technical reports for each extension will provide an overview of the discipline, including existing conditions, project impacts, and possible mitigation measures. Any required technical reports will be written for the appropriate level of analysis, which could range from a brief assessment for a categorical exclusion to a full analysis for a draft EIS.

To provide the background material necessary for the environmental impact analyses in support of the AA and the EIS, the CONSULTANT will prepare technical reports or memoranda as necessary to provide backup documentation for the major disciplines included in the analyses including:

- Transportation (including freight, transit, streets and highways, and major airports)
- Demographics and socioeconomic factors
- Economic impacts
- Environmental Justice (including transit user benefits and equity)
- Community facilities and services (including public health and safety)
- Land use and economic development
- Acquisitions, displacements/relocations
- Noise and vibration

- Air quality and climate change
- Historic Resources
- Archaeological Resources
- Cultural Resources
- Section 4(f) Evaluation
- Visual quality and aesthetic characteristics
- Hazardous materials
- Ecosystems and natural resources
- Threatened or endangered species
- Water quality and water resources
- Energy
- Geology and soils
- Construction period impacts
- Cumulative and indirect effects
- Financial Analysis

The CONSULTANT shall plan and implement public and agency coordination related to the draft environmental impact analyses and technical studies as required. This effort shall include a scoping process for each Alternative Analysis and for each EIS to provide an opportunity for public and agency input in identifying alternatives and technologies to be considered, important issues, purpose and need, goals and objectives, and alternatives and technologies to be considered. The CONSULTANT will respond to comments to the AA/DEIS and include these responses in the Final EIS prepared by the CONSULTANT. The CONSULTANT will also be responsible for preparation of the decision document (i.e., FONSI, ROD) per NEPA and HRS Chapter 343 requirements.

Deliverables

Environmental documents required by NEPA and HRS Chapter 343 to achieve final approval from the Governor of Hawaii and a Finding of No Significant Impact or Record of Decision from the FTA.

19.01.03 Transportation Planning

Support future project extensions and special project development activities by preparation of planning studies and reports using travel forecasting results and coordinating with other CITY and State agencies.

Deliverables

Transportation planning reports and technical memoranda required to provide information and support decisions in the AA and the EIS, FEIS, and decision documents.

19.01.04 Travel Forecasting

Projections of travel demand in the Project influence areas are essential in evaluating the benefit of a project, assessing transportation impacts for the No Build and Build Alternatives as part of an environmental assessment, and complying with Federal requirements for New Starts funding. As appropriate, an updated version of the travel forecasting model based on updated network configurations, socio-economic data, and using the most recent on-board transit survey data, and built on a platform compatible with the most recent OahuMPO travel demand model will be used to evaluate extensions and other identified corridors to ensure compatibility with the original project. This task includes the provision of travel forecasts for traffic impact analysis, air and noise analyses, to be conducted for analyses of existing or future rail corridors and supporting systems.

This task may require coordination with other tasks, including Station Access Planning and Bus Transit Planning, including:

- Updated socio-economic data from the Department of Planning and Permitting (DPP)
- Updated network definitions based on the latest Regional Transportation Plan (RTP)
- Model updates/calibration/validation
- Model application
- Alternatives refinement
- FTA coordination/New Starts submittals
- Uncertainty analysis
- Operations analysis and equilibrium
- Additional model refinements, as needed

Deliverables

Network and socio-economic updates

Travel forecasts for each studied alternative for each designated study forecast period

Specialized analyses as needed to assist in evaluating traffic impacts, bus operations and TOD/land use plans

19.01.05 Bus Planning

The feeder bus network will be modified to support the introduction of stations along all extensions evaluated in the AA/DEIS. This task may require coordination with other tasks, including GIS/Mapping, Travel Demand Forecasting, Station Access Planning, Station Design, JD and TOD Coordination, and Financial Planning. Activities will include:

- Developing a feeder bus service network
- Bus Transit Center planning
- Bus/Guideway operations integration plan
- Input to capital and operating cost model development

Deliverables

Conceptual plans for bus capital, operations and facilities to support the analysis of extensions

19.01.06 Station Access Planning

Planning for passenger access to stations and assuring stations are designed to accommodate all appropriate modes. Access modes will include pedestrians, bicyclists, bus riders, The Handi-Van riders, passengers being dropped off or picked up via private automobile (kiss-and-ride), private shuttle riders, taxi riders, and passengers wishing to park at stations (park-and-ride).

This task may require coordination with GIS/Mapping, Bus Transit Planning, Land Use Planning, and Station Design.

- **Station Access Planning**—Coordinate with station conceptual designs to assure designs accommodate all appropriate modes at levels predicted by the travel demand forecasting model. A separate Station Interface and Access Report will be prepared for each guideway extension.
- **Station Area Parking**—Evaluate the potential for spillover parking demand near stations.

Deliverables

Station Interface and Access Reports for each extension

Parking analyses for each extension

19.01.07 Land Use and TOD Planning Services

The CONSULTANT, in coordination with appropriate CITY staff will evaluate extensions impact on existing surrounding land uses. They will prepare plans, maps and reports in conjunction with Project design and engineering teams to identify station locations and identify appropriate access characteristics. The CONSULTANT will evaluate opportunities for TOD and joint development at station areas identified for the future extensions as part of the preparation of the AA and the EIS. These services will include coordination with various CITY, development and state agencies.

Deliverables

Report on TOD opportunities in the analyzed corridors

19.01.08 Traffic Analysis

The CONSULTANT shall complete traffic-related analyses, studies and reports to support future project extensions using travel demand forecasting results and traffic count information as appropriate to define the effects on traffic flow in each affected area.

This task may require coordination with other tasks, including GIS/Mapping, Environmental Compliance, Environmental Analysis, Station Access Planning, Station Design, Land Use Planning, and Engineering.

Deliverables

Traffic analyses, impact studies, and reports as needed

19.01.09 New Starts Support and Evaluation

The CONSULTANT will support FTA New Starts activities, as appropriate, for each extension. These may include preparation of reports or applications for grant funding (e.g., application to enter Preliminary Engineering) and supporting documentation.

Deliverables

Reports and applications required to seek New Starts funding for extensions

19.01.10 GIS/Mapping/Photogrammetry

The CONSULTANT shall prepare maps and GIS files, including aerial photogrammetry as needed, to support the environmental documentation for future project extensions and any special project development. Mapping and graphics will also be prepared to support public outreach and other project communications needs. This task may require coordination with other tasks, including Environmental Compliance, Environmental Analysis, Station Design, Land Use Planning, Right-of-Way Acquisition, and Engineering. Ground surveys shall be performed at select locations such as intersections to acquire the detail necessary to determine channelization feasibility, accomplish traffic analysis, and prepare conceptual design and layout.

Assumptions

Up to ten (10) intersections per extension shall be surveyed.

Ground survey will not be merged with the aerial photogrammetry

Deliverables

Maps, graphics, and files needed to support the environmental documentation and communications needs.

19.01.11 Financial Plan

The CONSULTANT shall prepare a financial strategy plan for any proposed extension to identify potential sources of capital funds, and support decisions regarding potential applications for FTA New Starts funding, as appropriate. Based on information in the financial strategy plan, the CONSULTANT shall develop a comprehensive Financial Plan to support the development of future project extensions, including any Financial Plans required to support receipt of FTA New Starts funding.

Deliverables

Capital Plans for the extensions

Operating cost plans for the extensions

Cash flow analyses for the extensions

Financing plans and strategies to support the implementation of the extensions

19.01.12 Public Involvement

The CONSULTANT shall develop and produce public involvement programs and documents as required for the AA and EIS for each extension. Public and agency events, such as scoping, hearings and public outreach will be the bulk of this effort. Services to be provided may include: participation in community events; facilitation of public involvement meetings; production of

graphics; maintaining existing and developing new contacts; developing, producing, and distributing public information documents; responding to public inquiries about the Project; and presenting community feedback to the CITY and the CONSULTANT.

Assumptions

Outreach content and overall messaging will be generated by the CITY

Deliverables

19.02 Master Planning Services for Potential Future Alignments

As directed, the Consultant shall undertake master planning analyses of alignments beyond the LPA-specified extensions to assess the viability of extending high capacity transit service into other areas of O`ahu while ensuring compatibility with existing systems. At a minimum, the studies will be prepared at level of detail sufficient to permit amendment of the General Plan and the Project Implementation Map (PIM). The analyses will present the pros and cons and generalized costs of each such potential extension in preparation for a possible NEPA and HRS Chapter 343 evaluation process.

Deliverables

Master Plan Study Report outlining the long-range vision for future extensions and/or improvements to the existing system.

19.03 Operations Planning and Analysis

CONSULTANT will produce operations analysis for each extension and technology selected. This analysis will include preliminary operating plans, fleet requirements, operating headways, and operations and maintenance cost estimates. In addition, the CONSULTANT will analyze the impacts to the base rail system's operating plan and maintenance facilities.

Assumptions

Up to one (1) additional alignment, beyond that identified in the 2006 Alternatives Analysis Report will be developed for each extension

Deliverables

Operations and Maintenance Study for each technology and extension to compare different conceptual operational scenarios and cost to input into the AA and EIS planning efforts.

Prepare Fleet Management Plan and Operations Plan for preferred alternative(s)

20.01 FTA New Starts Financial Plan

20.01.01 Financial Plan Update for Application to Enter Final Design

Consistent with FTA requirements and procedures, and building upon the Financial Plan developed for entry into Preliminary Engineering, a comprehensive Financial Plan will be developed in close collaboration with other elements of the preliminary engineering process. The Financial Plan will assess the CITY's financial capacity to implement, operate, and maintain the Project as well as the rest of the transit system.

A quarterly financial plan review meeting will be conducted to provide an update on the Project financial feasibility and to discuss outstanding issues/challenges present in the financial plan and upcoming Project milestones that will have an impact on the financial plan. Additional financial support will be provided on an as-needed basis as outlined in this scope of work.

20.01.01.01 Capital Plan Update

- **Capital Cost**—Update the capital cost with latest bottom-up estimate, incorporating results from FTA's risk assessment, and budgets of already awarded contracts where possible.
- **Escalation Rates**—Support risk assessment process, as needed.
- **General Excise Tax (GET) Revenues**—Update GET surcharge revenue forecast with the following scenarios:
 - Forecast using the growth rates projected at the State level by the Hawaii Department of Taxation. This will be used as a benchmark against which any other forecast should be compared.
 - Range of Forecasts produced by CONSULTANT. These will be used in the risk and uncertainty section.
- **New Starts Revenues**—Refine New Starts schedule and amount of receipts based on:
 - Actual appropriations to date and schedule of expenditures
 - Timing of Full Funding Grant Agreement (FFGA) execution if needed.
 - Uncertainty around the outlook for congressional earmarks or New Starts appropriations.
- **FTA Section 5307 Revenues**
 - Revise Section 5307 forecast based on actual apportionments to date and revised outlook (if necessary).
 - Assess impact of changes to TheBus fleet management plan.

- Assess potential for eliminating the usage of these funds for rail capital.
- Describe strategy for TheBus service to maintain consistent future service levels if Section 5307 funds are used for rail capital.
- **FTA Section 5309 Bus Revenues**—Revise forecast to be more in line with historical experience.
- **FTA Section 5309 Fixed Guideway Modernization Revenues**—Revise Section 5309 Fixed Guideway Modernization forecast based on actual apportionments to date and revised outlook (if necessary), including incremental non-rail fixed guideway planned in the Oahu Regional Transportation Plan (ORTP).
- **Federal Highway Funding (FHWA)**—Review Hawaii Department of Transportation (HDOT) receipt of FHWA funding to determine if these funds can be transferred to the Project.
- **Airport Funding** – Determine whether airport-related funding sources, including passenger facilities charges (PFC's), could be used to fund rail facilities located on airport property to serve airport patrons or employees. This will include an evaluation of the existing Airport CIP, planned funding levels, and potential for new funding capACITY if Federal legislation authorizes an increase in maximum PFC's.
- **Other Federal Funding** – Monitor Federal legislation for potential new funding programs that could provide capital funding or financing subsidies for the project. If needed, support the CITY by preparing applications for competitive discretionary grants for Federal funds.
- **Private Funding Sources** — Determine whether opportunities exist for the private sector to provide Project funding and develop order-of-magnitude funding estimates, if necessary.

20.01.01.02 Operating Plan Update

Operating and Maintenance (O&M) Costs

- Revise O&M unit costs based on FTA comments for TheBus and TheHandi-Van.
- Update systemwide O&M costs based on revised fleet management plans.
- Revise O&M cost inflation using disaggregated O&M cost by object class (wages, salaries, fringe benefits, materials & supplies, fuel, etc.).

- Incorporate an operating reserve or document how the CITY covers an increase in O&M costs through the Budget Amendment process.
- Incorporate O&M costs from the O&M contract agreement when available.
- Incorporate O&M costs related to the Honolulu Authority for Rapid Transportation.

Fare Revenues

- Revise fare revenue forecast if needed based on updated outputs from travel demand model and most recent fare structure and average fare.
- Revise fare revenue forecast with updated actual expenditures to date and budget.

20.01.01.03 Cash Flow Analysis Update

Debt Financing

- Long-term debt:
 - Incorporate the CITY’s affordability guidelines in the financial analysis.
 - Work with the CITY to forecast the CITY’s overall general obligation (GO) bonding requirements through FY2023, including for the years beyond the Capital Improvement Program (CIP) period.
 - Update financing assumptions, including interest rates and cost of issuance (if necessary).
 - Work with the CITY to evaluate the potential impact on credit rating (thus cost of borrowing) if one or more of the CITY’s affordability guidelines is breached.
 - Assist the CITY in discussions with Bond Counsel and Financial Advisors to evaluate impact of affordability guidelines or other legal and financial guidelines that could impact the financial plan.
- Short-term (TECP) financing
 - Work with the CITY to refine the constraints and limitations on Tax Exempt Commercial Paper (TECP) issuance, given the additional GET surcharge revenues.
 - Update financing assumptions on short-term interest rates and cost of issuance (if necessary).

Cash Balance

Evaluate the feasibility of incorporating a minimum cash balance sized proportionally to anticipated payables during the construction period.

20.01.01.04 Risk and Uncertainty Analysis

Scenarios

Develop up to four scenarios with detailed mitigation strategies to include in Financial Plan. Scenarios may include:

- Increase capital cost by 10 percent.
- Assess potential need for additional CITY revenues to cover 10-percent overrun.
- Assess the CITY’s GO debt capacity to absorb up to a 10-percent increase in capital cost.
- Delay receipt of New Starts revenues by two years (keeping the total amount the same).
- Lower the maximum amount of New Starts funds received in any year (keeping the total amount the same).
- Vary interest rates (both short-term and long-term).
- Vary O&M cost (depending on the O&M agreement and form of the procurement).
- Vary growth rate of the GET tax base.
- Vary sunset date of GET surcharge collections.

20.01.01.05 Supporting Documents

Produce application financial attachments and other required financial supporting documents.

Schedule

Completion—Initial Draft will be provided in accordance with the approved Project Schedule.

Deliverables

- Initial Draft Financial Plan for Entry into Final Design
- Final Financial Plan for Entry into Final Design
- Supporting Documentation for Financial Plan
- Updated Local Financial Commitment Chapter of FTA New Starts Report Submittals
- Draft and Final FTA Finance template
- Presentations, as required

20.01.02 Financial Plan Update for Application to Receive a Full Funding Grant Agreement

Consistent with FTA requirements and procedures, and building upon the Financial Plan developed for entry into Final Design, a comprehensive Financial Plan will be developed in close collaboration with other elements of the engineering process. The Financial Plan will assess the CITY's financial capacity to implement, operate, and maintain the Project as well as the rest of the system.

A quarterly financial plan review meeting will be conducted to provide an update on the Project financial feasibility and to discuss outstanding issues/challenges present in the financial plan and upcoming Project milestones that will have an impact on the financial plan. Additional financial support will be provided on an as-needed basis as outlined in this scope of work.

20.01.02.01 Capital Plan Update

- **Capital Cost**—Update capital cost with the latest estimate.
- **Escalation Rates**—Update escalation rates in financial model and technical memo on cost escalation rates for PMOC review.
- **GET Revenues**—Update GET surcharge revenue forecast.
- **New Starts Revenues**—Refine New Starts schedule of receipts with actual appropriations to date. Revise annual maximum amount and timing of FFGA execution, if needed.
- **Other Capital Funding**—Update amounts and timing of receipt of other funding sources.

20.01.02.02 Operating Plan Update

O&M Costs

- Revise O&M costs from the O&M contract agreement, if necessary
- Update cost estimates for CITY

Fare Revenues

- Revise fare revenue forecast if needed based on updated outputs from travel demand model
- Revise fare revenue forecast with updated actuals to date and budget

Escalation Rates

Update escalation rates in financial model

Other Operating Funding

Update amounts and timing of receipt of other funding sources

20.01.02.03 Cash Flow Analysis Update

Debt Financing

- Long-term debt
 - Work with CITY to forecast the CITY’s overall GO bonding requirements through FY2023.
 - Update financing assumptions, including interest rates and cost of issuance (if necessary)
- Short-term (TECP) financing
 - Update financing assumptions on short-term interest rates and cost of issuance (if necessary)

20.01.02.04 Risk and Uncertainty Analysis

Scenarios

Develop up to four scenarios with detailed mitigation strategies to include in Financial Plan. Scenarios may include

- Increase capital cost by 10 percent
- Assess potential need for additional CITY revenues to cover 10-percent overrun
- Assess the CITY’s GO debt capacity to absorb up to a 10-percent increase in capital cost
- Delay receipt of New Starts revenues by two years (keeping the total amount the same)
- Lower the maximum amount of New Starts funds received in any year (keeping the total amount the same)
- Vary interest rates (both short-term and long-term)
- Vary O&M cost (depending on the O&M agreement and form of the procurement)
- Vary growth rate of the GET tax base
- Vary sunset date of GET surcharge collections

20.01.02.05 Supporting Documents

Produce application financial attachments and other required financial supporting documents.

Deliverables

Updated Financial Plan

Updated Financial Templates for FTA New Starts Report Submittals

Supporting Documentation for Financial Plan

20.02 Financial Working Group

- Establish working group of key CONSULTANT/CITY staff with a role in the Project financial plan to review progress on key financial planning issues.
- Organize and attend quarterly financial working group meetings to review financial plan developments and discuss key issues. The meetings will take place shortly after quarterly GET revenue updates are made available and can be incorporated into the financial model.

Deliverables

CONSULTANT will prepare the following materials as backup for each meeting:

- Updated cash flow forecasts
- Presentation slides containing current summary of Project financial feasibility
- Summary of outstanding issues/challenges present in the Financial Plan
- List of upcoming Project milestones that will have an impact on the Financial Plan
- Long-term cash flow forecast
- Summary financial feasibility presentation

20.03 Support Cash Management Activities

Work with CITY to:

- Track Project incurred cost and funding received
- Create a quarterly (or monthly, if needed) short-term cash flow forecast to identify whether adequate funding will be available to meet Project expenditure requirements
- Support CITY in updating the annual operating budget and 6-Year CIP

Deliverables

Provide reports to be used for budget tracking.

20.04 Perform Ad Hoc Financial Model Updates

Update the financial model with new Project cost, schedule, and funding information to assess impacts of potential scope, schedule, or budget changes

Deliverables

Long-term cash flow forecast

20.05 Assist with Review of the Financial Plan

- Coordinate with CITY and FMOC to facilitate review of the financial plan, including preliminary financial plans, supplementary documents, or responses to comments

- Coordinate with the CITY to facilitate review of financial plan and decisions regarding policy/programmatic changes
- Assist CITY with responses to questions about funding issues

Deliverables

Requested financial information

20.06 Support Honolulu Authority for Rapid Transportation Reporting Requirements

Assist the Honolulu Authority for Rapid Transportation, as necessary, as it completes annual capital and operating budgets and produces reports for its Board of Directors.

20.07 Support for Bond Issuances

Support the CITY with bond issuances:

- Presentations on the project financial plan to Bond Counsel
- Review and prepare project information for the preliminary and final offering statements
- Review financial information prepared by the CITY’s financial advisors and underwriters, including project information, funding projections, and debt amortization schedules
- Support the CITY in presentations to rating agencies and/or investors

Deliverables

Requested financial information

20.08 Support Risk Assessment

- Evaluate proposed contingency levels and schedule changes to assess impact on Project financial plan
- Provide supplemental information on cost escalation rate forecasts

Deliverables

Long-term cash flow forecast for scenarios with various levels of contingency

20.09 Update Cost Escalation Rate Forecast

Work with CITY and PMOC to develop mutually agreed-upon cost escalation rates at various stages of New Starts process to support project cost estimates.

Deliverables

Updated cost escalation rate forecasts

20.10 Refine Project Financial Strategy

As needed, assess strategies for improving financial plan rating, including identification of new Project funding sources.

Deliverables

Long-term cash flow forecast for identified scenarios

20.11 Additional Revenue Analysis

The CONSULTANT will prepare order of magnitude revenue potential for various funding sources, as requested by the CITY. The CONSULTANT will identify timing of administrative and legislative steps needed to secure the funding commitment.

Provide detailed analysis of other funding sources as appropriate.

Funding sources may include:

- Private funding sources
- Value Capture - including station Public Private Partnerships (PPP), TOD, Tax Increment Financing (TIF).
- Electronic Farecard Monetization—assess capital cost reduction resulting from potential AdSense for Content (AFC) monetization.
- Advertising Revenues
- Parking Revenues at Park-and-Ride Lots, including potential outsourcing strategies.
- Specialty Vending and ATMs
- Sale/Leaseback Transaction
- Developer Contributions – in the form of capital or right-of-way

21 UTILITY COORDINATION

The CONSULTANT shall assist the CITY in utility coordination efforts, including those necessary for utility relocations and new services, throughout the design and construction phases of the Project.

21.01 Utility Agreements

CONSULTANT shall assist the CITY in preparing Utility Agreements, specifically confirming scope and budget.

CONSULTANT shall monitor utility companies' task deliverables for timeliness and completeness and keep the CITY informed of issues as they develop.

CONSULTANT shall monitor work requirements to identify any betterments that should be paid for by the respective utility company.

Schedule

Per Master Project Schedule

21.02 Design Coordination

CONSULTANT shall attend utility design coordination meetings, as needed for DB, DBOM, and Final Design contracts.

CONSULTANT shall facilitate resolution of conflicts between utility companies and others.

21.03 Design Review

CONSULTANT shall review submittals from DB and Final Design contracts for contract and Utility Agreement compliance.

CONSULTANT shall attend submittal review comment disposition meetings.

Assumptions

Design-Build utility relocation submittals will be phased to correspond to construction schedules resulting in multiple partial submittals for review.

Construction oversight is the responsibility of the Contract Resident Engineer.

Deliverables

One (1) set of compiled review comments for each submittal uploaded into CMS; for each Final Design contract ten (10) for each DB Guideway Contract two (2); and for the MSF DB Contract approximately three (3) total.

21.04 Design Support During Construction

CONSULTANT shall review and provide input to the responses to RFIs and RFCs, as needed, for DB and Final Design contracts.

CONSULTANT shall review utility as-builts as needed for DB and DBB contracts.

Assumptions

In the event that the Design Consultant does not fulfill its responsibilities to respond to submittals and RFIs, the CITY may elect to have the CONSULTANT provide responses to the contractor. The CITY will provide additional compensation, consistent with the provisions of Exhibit 2B-Compensation and Invoicing, for these services to be negotiated with the CONSULTANT at the time of tasking.

Deliverables

Responses to RFIs and RFCs

21.05 Project Coordination with Utilities

CONSULTANT shall serve as the liaison with the public utilities and agencies to keep them informed of project schedules and upcoming work.

22 THIRD PARTY REVIEWS

The CITY and County of Honolulu Department of Planning and Permitting (DPP) is the responsible department within the CITY to oversee the permitting process and issue permits for Project construction. This section will cover CONSULTANT activities that provide the CITY with the support for this oversight.

22.01 Third Party Reviews and Inspections

22.01.01 Third Party Reviews

The CONSULTANT will provide Third Party Reviews of design drawings submitted by others for code compliance. Once complete, the plans are forwarded to the CITY for issuance of construction permits. For those contracts where the CONSULTANT was the designer-of-record, code compliance review will be performed by the CITY.

Assumptions

CONSULTANT will not perform Code Compliance reviews for work performed in the State DOT right-of-way

The CITY will establish a Transit Right-of-Way (ROW), incorporating the aerial guideway and station facilities. This ROW will be under the control of the Rapid Transit Division of the CITY or a future Transit Agency. The Director of DTS concurrence with the Code Compliance review and signature on the plans is adequate for DPP to issue permits.

Board of Water Supply (BWS), Environmental Services (ENV), Department of Design and Construction (DCC), Department of Facilities Maintenance (DFM), and DTS-Traffic, will continue to review plans from the Design Builders or Final Designers and provide comments.

State permit requirements are not included in this scope and will be obtained by responsible designers and constructors.

Building permits for the Maintenance and Storage Facility are not included in this task.

Code compliance reviews will be separate from contract compliance reviews and will be performed by different staff.

Approximately fifty (50) reviews are anticipated

Schedule

Per Master Project Schedule as required, reviews will be completed within ten (10) working days or to an agreed-to duration after formal receipt from the CITY.

Deliverables

Certifications of Code Compliance

22.01.02 Construction Inspections for Permitting

The CONSULTANT will perform construction inspections for wet and dry utilities, and street restoration as directed by the CITY to determine if the construction has met all applicable CITY code requirements.

Assumptions

All Certificates of Occupancy (as applicable) will be issued by the CITY upon receipt of final inspection/acceptance from the CONSULTANT.

Code inspections for the Maintenance and Storage Facility are not included in this task.

Code inspections within State DOT ROW are included in this task, except for BWS, ENV, and DTS facilities, impacted by the Project.

Inspections and non-compliance actions taken by the CONSULTANT against contractors is with the authority of the CITY.

Approximately one-hundred fifty (150) construction inspections are anticipated.

Schedule

Per Master Project Schedule as required. Inspections will be performed to meet the construction schedule.

Deliverables

Final Inspection Acceptance Reports

23 ARCHAEOLOGICAL SERVICES

23.01 Archaeological Inventory Survey (AIS) Coordination

CONSULTANT shall coordinate development of the Archaeological Inventory Survey Plan (AISP), State Historic Preservation Division (SHPD) approval process and implementation of the AIS activities for Airport and CITY Center construction segments. Services to include:

- Plan, prepare for, and attend meetings as required in the Programmatic Agreement (PA)
- Plan, prepare for, and attend meetings with SHPD, Oahu Island Burial Council (OIBC), other agencies, and individuals as required in the PA and by regulation
- Attend meetings with regulatory agencies as required for permitting
- Coordinate with business owners and residential property owners to maintain access during AIS work in roadways
- Coordinate with property owners if AIS work occurs in a building

Assumptions

One (1) meeting per week minimum for the duration of this task.

Up to two (2) graphics (36" x 48") will be developed for each meeting.

Schedule

The schedule for the AIS work will be performed in accordance with the stipulations in the PA

Deliverables

Meeting notes.

Graphic displays for meetings.

23.02 Archaeological Inventory Survey Plan

23.02.01 AIS Plan Preparation

Develop a plan for surveying archaeological resources for each construction segment starting with CITY Center. The Plan shall include site locations based on preliminary engineering drawings and historical/cultural information in the area.

Schedule

Per PA requirements

Deliverables

Draft and Final AISP

23.02.02 Permit Acquisition

Identify and develop permit information, and obtain permits as required for AIS field work. Anticipated permits required include NPDES, Noise, Use, and Occupancy (State), Street Usage (CITY).

Assumptions

Permit applications will be based on work areas in the approved AISP.

Schedule

Per PA requirements

Deliverables

Permits

23.02.03 Engineering Plans Preparations

Prepare trenching plan and Maintenance of Traffic (MOT) plan for each work area. Prepare building trenching plan based on building plans, if available. Develop BMPs for excavation work. Develop specifications for AIS contractor's work.

Develop contaminated material management plan for testing and disposal. Prepare application for disposal of contaminated material indicating the CITY as generator of waste material.

Investigate procurement of building plans and obtain, if possible. CITY Real Estate staff will make initial contact with building owners.

Submit plans for work in HDOT jurisdictional areas to HWY-T for review and approval. Submit plans for work in CITY & County of Honolulu (CCH) to DTS for review and approval and CCH first floor for permitting.

Coordinate with CITY for rights-of-entry. Support service for early right-of-way acquisition is covered under Task 16 Real Estate Program.

The CITY recognizes that a delay by CITY Real Estate to obtain right-of-entry or acquire properties will impact the AIS schedule.

Assumptions

AIS work will be completed in areas approved in the AISP or as modified based on field results.

AIS work will be conducted in roadways and station areas. AIS work locations will comply with permit requirements for work in roadways, community input and ability to obtain right-of-entry or real estate acquisition.

Schedule

Per PA requirements

Deliverables

Trenching and Maintenance of Traffic (MOT) plans

23.02.04 Archaeological Inventory Survey (AIS)

Complete AIS based on the AISP approved by the SHPD. This work includes field activities and report preparation.

Assumptions

Right-of-entry will be obtained by the CITY. All rights-of-entry to private property within the CITY Center segment will be obtained no later than September 1, 2011 to meet the Project schedule.

The field work to support preliminary engineering can overlap with the AIS.

Schedule

Per PA requirements

Deliverables

Draft and Final AIS report

23.02.05 AIS Engineering Field Support

Prepare trenching and MOT plan revisions as necessary to accommodate changes in the AIS Plan due to archaeological finds. Evaluate changes and provide recommendations to guideway structure span lengths, support types, and station layout configurations in response to archaeological finds. The structural evaluations shall be used to revise the AIS Plan as necessary. Changes to the guideway or station design resulting from the archaeological survey shall be reflected in revisions to the Preliminary Engineering drawings. Revisions to the Preliminary Engineering drawings are part of the work in Subtask 09.01.03 Refine Conceptual Designs.

Assumptions

Number of plan revisions total half of the original plans prepared.

One half of all stations will require reconfiguration of its layout.

Schedule

Per PA requirements

Deliverables

Revised trenching and MOT plans

Evaluation and recommendation of revised guideway span lengths and support structure types

Evaluation and reconfiguration of station layout

23.03 Data Recovery, Mitigation, and Monitoring During Construction

Conduct field monitoring, prepare mitigation plans, and complete data recovery as required by the PA for the construction phase of the Project.

Schedule

Per PA requirements

Deliverables

Draft and Final mitigation plans, data recovery plans, and/or monitoring plans as determined by the results of the AIS.

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