

NOTICE TO CONSULTANTS
REQUEST FOR PROFESSIONAL SERVICES

The City and County of Honolulu (City) plans to contract for professional services in the areas of transportation planning and engineering to conduct preliminary engineering (PE) and prepare environmental impact statements for the Honolulu High-Capacity Transit Corridor Project (the Project). Funding for this work is anticipated from the City's FY 2007 and FY 2008 Executive Capital Budgets and Programs. U.S. Department of Transportation, Federal Transit Administration (FTA) assistance will be requested to supplement the local funds. Therefore, FTA's requirements, including the Disadvantaged Business Enterprise (DBE) program requirements will apply to the contract.

Services may include, but not be limited to: 1) preparing environmental documents for the Locally Preferred Alternative (LPA) pursuant to the National Environmental Policy Act of 1969, as amended, and the joint regulations at Title 23 Code of Federal Regulations (CFR) Part 771 and Title 49 CFR Part 622; and Hawaii Revised Statutes Chapter 343, and Title 11, Chapter 200 of the Hawaii Administrative Rules; 2) conducting engineering and technical studies to support the preparation of the environmental impact statements (EISs); 3) assisting the City in preparing for competitively procuring fixed guideway revenue vehicles; 4) conducting public involvement activities; 5) conducting PE; 6) developing procurement documents for an initial design build construction portion of the Project; 7) conducting engineering in support of the City's request to advance the Project to the Final Design phase of FTA's New Starts project development process; and 8) assisting the City in producing reports and documentation for FTA New Starts evaluations and advancement to the Final Design phase.

The City intends to implement the contract with two written notices-to-proceed (NTPs). Any work undertaken prior to issuance of a required written NTP will be the sole responsibility and undertaken at the sole risk of the consultant, without any obligation on the part of the City or the FTA. The first NTP (NTP #1) may include conducting engineering and technical studies to support the preparation of the draft EISs; assisting the City in preparing documentation needed for competitively procuring fixed guideway revenue vehicles; assisting the City in developing a selection process for an initial design-build construction phase of the Project; and conducting public involvement activities. The second NTP (NTP #2) would be for the remaining services, contingent upon FTA advancing the Project to the PE phase of the New Starts project development process.

An indicative list of the tasks relating to the scope of work accompanies this notice. Information regarding the Project and its current status are available on the Project web site www.honolulutransit.org. Copies of technical reports prepared during the Alternative Analysis phase of the Project are available for review at InfraConsult LLC, 1132 Bishop Street, Suite 307, between the hours of 9:00 AM and 4:30 PM Hawaii Standard Time (telephone: 808-536-6610).

The City and County of Honolulu, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all interested firms that it will affirmatively insure that in any contract entered

into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit materials in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

SUBMITTAL MATERIALS REQUIREMENT

1. Letter of interest.
2. Information on the firm:
 - a. Name of the firm, the principal place of business, and location of all of its offices;
 - b. The age of the firm and its average number of employees over the past five years;
 - c. The annual total revenue of the firm over each of the past five years; and
 - d. The names of five clients who may be contacted, including at least two for whom services were rendered during the preceding and current year, preferably for projects similar to this Project.
3. A statement disclosing all legal or administrative active proceedings which involve a claim in excess of \$75,000 in which the firm, its principals, or key personnel are a party to the action.
4. A statement as to whether the firm, its principals or key employees presently, or in the past, are, or have been involved in any debarment or suspension proceedings.
5. A statement identifying any contract involving the firm that was terminated for default within the past three years.
6. Other related information:
 - a. Identification and roles of each subconsultant firm proposed to work on the Project. (This section should not exceed two pages.);
 - b. Identification of only the persons in the following positions who will be assigned to the Project on a full time basis and located in Honolulu over an initial two-year period;

Key Staff Position / Name / Firm or Subconsultant Firm
Project Manager / (insert Name) / (insert firm or subconsultant firm)
Civil Lead / (insert Name) / (insert firm or subconsultant firm)
Systems Lead / (insert Name) / (insert firm or subconsultant firm)
Architectural Lead / (insert Name) / (insert firm or subconsultant firm)
Environmental Planning Lead / (insert Name) / (insert firm or subconsultant firm)

- c. Resumes for the staff identified above and for any other individuals deemed to have a key major role in providing the services (Note: References may be contacted to verify individual performance on projects included in resumes. Thus, resumes should be sufficiently specific to allow verification.);
- d. An organization chart of the proposed consultant team. (Note: Position titles shown in the staffing table in Section 6.b, above are intended to be functional and not mandatory for the organization chart. The organization structure and titles should reflect what the firm deems to be appropriate for the services to be provided;)
- e. A list of major transit PE/EIS projects undertaken and completed within the past five years in accordance with FTA New Starts project development requirements. Include the owners of the projects, dates, the cost of the projects, the scope of services performed, and if the projects were undertaken with Federal funds (this list should not exceed two pages);
- f. Any additional tasks that the firm perceives will be needed to obtain environmental clearances, complete PE, and obtain FTA approval to advance the Project to Final Design. (These additional services should be described in no more than three pages.);
- g. The firm's proposed DBE goal for the project and how it intends to meet the proposed goal; and,
- h. Any other pertinent information that should be considered in the evaluation of the firm's qualifications. (This should be limited to no more than five pages.)

7. Additional materials which may be submitted but are not required:
 Promotional material such as photos and brochures or descriptive literature.

SELECTION

The City will evaluate submittals according to the criteria identified below. These criteria are listed with the most important criteria first and other criteria in descending order of importance. Contract negotiations will be conducted pursuant to Hawaii Revised Statutes Section 103D-304(h).

Evaluation Criteria in Descending Order of Importance	
1	Experience and professional qualifications relevant to the Project
2	Past performance on projects of similar scope, including corrective actions and other responses to notices of deficiencies
3	Capacity to accomplish the work in the required time

DEADLINE

1. . An original and seven (7) copies of the SUBMITTAL MATERIALS packet shall be submitted no later than Thursday, July 5, 2007, 4:00 PM Hawaii Standard Time, to:
Mr. Toru Hamayasu, Chief Planner
Transportation Planning Division
Department of Transportation Services
650 South King Street, 3rd Floor
Honolulu, Hawaii 96813
2. No facsimiles will be considered. The contract for this project will only be awarded to a firm that demonstrates the ability to provide all of the services required for the project. SUBMITTAL MATERIALS submitted for only parts of the project will be considered non-responsive to this notice.

Any inquiry regarding the services required shall be directed in writing to Mr. Toru Hamayasu, Transportation Planning Division, Department of Transportation Services, at the above address or Ms. Deanna Chang at E-mail address dchang@honolulu.gov.



MARY PATRICIA WATERHOUSE, DIRECTOR
Department of Budget and Fiscal Services
By order of MUFU HANNEMANN, MAYOR
City and County of Honolulu

Posted on Web: 6/5/07

ATTACHMENT TO
NOTICE TO CONSULTANTS - REQUEST FOR PROFESSIONAL SERVICES

**HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
PRELIMINARY ENGINEERING/EIS SERVICES
INDICATIVE LISTING OF TASKS RELATED TO THE SCOPE OF WORK**

Introduction

The selected general engineering consultant (GEC) will provide professional transportation planning and engineering services for the Honolulu High-Capacity Transit Corridor Project (“the Project”). The GEC work will be supervised and overseen by the City and County of Honolulu Department of Transportation Services’ Division of Rapid Transit (“the City”). The City intends to establish a consolidated project office that will house the Division of Rapid Transit and up to 30 key staff members of the GEC team.

Background

This scope of services describes professional transportation planning and engineering services that may be provided by the GEC to: 1) prepare environmental documents for the Locally Preferred Alternative (LPA) pursuant to the National Environmental Policy Act of 1969, as amended, and the joint regulations at Title 23 Code of Federal Regulations (CFR) Part 771 and Title 49 CFR Part 622 (NEPA); and Hawaii Revised Statutes Chapter 343, and Title 11, Chapter 200 of the Hawaii Administrative Rules; 2) conduct engineering and technical studies to support the preparation of the environmental impact statements (EISs); 3) assist the City in preparing for competitively procuring fixed guideway revenue vehicles; 4) conduct public involvement activities; 5) conduct Preliminary Engineering (PE); 6) develop procurement documents for an initial design build construction portion of the Project; 7) conduct engineering in support of the City’s request to advance the Project to the Final Design phase of Federal Transit Administration’s (FTA’s) New Starts project development process; and 8) assist the City in producing reports and documentation for FTA New Starts evaluations and advancement to the Final Design phase.

A description of the LPA and other information regarding the Project may be found on the Project’s web site, <http://honolulutransit.org>.

The City intends to implement the contract with two sequential written Notices-to-Proceed (NTPs). Any work undertaken prior to issuance of a required written NTP is the sole responsibility and undertaken at the sole risk of the consultant, without any obligation on the part of the City or the FTA. The first NTP (NTP #1) may include conducting engineering and technical studies to support the preparation of the Draft EISs; assisting the City in preparing documentation needed for competitively procuring fixed guideway revenue vehicles; and conducting public involvement activities. The second NTP (NTP #2) would be for the remaining services, contingent upon FTA advancing the Project to the PE phase of the New Starts project development process.

An indicative listing of tasks for the Preliminary Engineering / EIS work is described in this attachment. Subtasks related to the preparation of environmental documents are described in Task 6.0 below. The environmental work will be based on an evaluation the full 29-mile LPA. PE design work beyond what is necessary to support environmental clearance of the project (“New Starts PE”) will be limited to the “First Project” which currently extends from the

University of Hawaii West Oahu campus to the Ala Moana Center, a distance of approximately 20 miles. If additional funding is identified during preliminary engineering which permits construction of a larger portion of the LPA, the PE effort may be extended to a length beyond the First Project.

NTP # 1—Draft Environmental Impact Statement (Draft EIS) and Technical Support

The activities contemplated by NTP #1 fall into the following four categories

1) Project Organization and Planning—The GEC will develop an organization and various project plans and procedures for executing the upcoming work. Key among these plans will be a Project Management Plan (PMP) which will expand upon the current PMP. An initial listing of the various subordinate plans to support this effort is described in Task 1.0 below. Additionally, the GEC will formulate plans for contract management of the ongoing effort, including such activities as preparation of an appropriate schedule and budget monitoring system, and contact administration procedures as noted in Task 3.0 below. When the project definition has reached a sufficient stage of development, the GEC will assist the City in producing all of the required documentation to support a request to FTA to enter into PE.

2) Development of System Definition—The GEC will undertake ongoing project planning during the NTP #1 period with further studies to refine alignment, station locations and technology. Options for detailed alignment development will be analyzed as well as station configurations and locations. System features such as degree of automation, fare collection technology, and operations alternatives will be determined. This work will include continuing advancement of the travel demand forecast models used in the Alternatives Analysis phase (AA) so that forecasts are based on the latest configuration and reflect the current FTA guidelines. The advancement may include the adjustments and validation based on the current transit ridership pattern collected in 2006 and the handling of unmeasured attributes resulting from the addition of a new mode. A close coordination with the FTA technical office in the advancement of the model is essential. The results from the forecasting will be used to determine the systems' size and capacity, evaluate the benefits and impacts, size the other supporting facilities such as parking lots and bus interface, and provide operational data required for financing plan. These forecasts will also form the basis of required input into FTA's funding recommendations report to Congress on New Starts, Small Starts, and Alternative Transportation in Parks and Public Lands ("New Starts Report").

3) Draft EIS and related Technical Support—The GEC will prepare the Draft EIS working with the City and the cooperating/participating agencies. Scoping for the Project under NEPA has been completed. The GEC will also perform engineering and other technical studies necessary to support analyses required for the Draft EIS. This will include preparing sufficient designs for the LPA and other alternatives being addressed to describe the alternatives and identify impacts associated with each alternative such as land acquisition, utility relocations, noise, and construction and mitigation actions. The Draft EIS is anticipated to be completed in June, 2008.

4) Competitive Vehicle Technology Selection—The technology selection process will be initiated and refined following NTP #1. It is anticipated to be based on a two-step competitive procurement process. Step 1 would include establishing necessary technology performance

requirements, conducting reviews of the performance specifications with interested technology suppliers, receiving and assessing technical proposals. Step 2 would include determining the life-cycle cost implications of vehicle technology on other project elements, and soliciting firm price proposals from proposers who are determined capable of providing acceptable technology. It is anticipated that the initial activities covered by NTP #1 will carry this process into the development of the RFP for technical proposals. The RFP would be finalized following NTP #2. Technical support for the Draft EIS will be developed in a manner consistent with all fixed guideway technologies under consideration until the technology selection has been made.

In parallel with technology solicitation, the GEC will support the initiation of a process to select a design-build (DB) contractor or contractors for the initial construction phase of the First Project ("Phase 1"). In order for a potential contractor to respond to a DB solicitation, a potential contractor must obtain the relevant parameters of the selected vehicle technology and have access to the suppliers to understand specific construction issues related to the technology. As with the technology selection, NTP #1 will only authorize preparatory work for this process, but will not initiate the development of the DB solicitation document. This process is further outlined in Task 19.0 below. The GEC will refine and assist the City in executing the initial steps of this process as a part of work within NTP #1.

NTP #2—PE/Final Environmental Impact Statement (FEIS)

The activities contemplated by NTP #2 fall into two categories.

1) Preliminary Engineering—All remaining PE/FEIS tasks will be authorized in NTP #2. This will include concluding the development of RFPs for vehicle technology selection and DB contractor(s) selection. During PE, the GEC will complete all design criteria for the First Project (20-miles) and develop architectural and engineering designs suitable for use by subsequent designers working within either a DB or design-bid-build (DbB) process to complete their work and make it ready for construction. This work will cover all project physical features including guideway, stations, maintenance base, systems, access roads, temporary works and anything else necessary for the production of a complete and fully operational system. If the technology selection process has not been completed when NTP#2 is issued, PE will proceed addressing all fixed guideway technologies under consideration until such selection has been made. Additionally during PE, the GEC will prepare Final Environment Impact Statements and other supporting information for a Record of Decision (ROD). The ROD is presently anticipated to be issued in June 2009.

2) New Starts PE—Following the issuance of the ROD, the City intends to award both the Vehicle Technology Contract and the DB contract(s) for Phase 1 utilizing 100% local funds. The GEC will continue with New Starts PE which will define the remaining contract packages for the design phase of the DbB work and continue to support the City in other activities leading up to a federal decision to authorize Final Design, such as updating the PMP and various supporting documents to correspond with the upcoming phases of detailed design and construction program.

The work under the contract is intended to end upon FTA approval to enter Final Design anticipated around September 2009.

Indicative Scope Tasks

1.0 Plans for PE/EIS Phase Inclusive of FTA Acceptance

The GEC will prepare and periodically update a series of plans for the PE/EIS phase of the project which are required for the FTA project review process. Requirements and guidance for the content of these plans are contained in various documents produced by FTA and can be found at FTA's web site <http://www.fta.dot.gov>. These plans generally require specific FTA acceptance in order for the Project to be eligible for FTA New Starts funding. The required reports include at least the following sections, which may be revised from time to time, and any other information that FTA may require in the future:

1.1 Project Management Plan (PMP)

Working with the current PMP for the Project produced by the City, provide update revisions to that document and produce a subordinate PMP for the GEC team. Conduct review cycles on the document with the City and incorporate comments from the City. The PMP will be produced in accordance with the most current FTA guidelines.

1.2 Vehicle Fleet Management Plan (FMP)

Working with the current FMP provided by the City and information available from the Alternatives Analysis, prepare a revised updated FMP. Conduct review cycles on the document with the City and incorporate comments from the City. The FMP will be produced in accordance with the most current FTA guidelines.

1.3 Quality Plan (See Task 8.0 below)

Produce and maintain a Quality Plan for the Project based upon the most current FTA guidance for such plans. Conduct review cycles on the document with the City and incorporate comments from the City.

1.4 Real Estate Acquisition Management Plan (RAMP)

Produce a RAMP for the Project based upon the most current FTA guidance for such plans and the current real estate acquisition processes of the City. Conduct review cycles on the document with the City and incorporate comments from the City. Further information on the RAMP is contained in Task 12.0 below.

1.5 Third Party Agreement Plan

Define all of the third party agreements which will be necessary for the execution of the Project and produce a plan and schedule for the development of all of the agreements. Identify the major issues to be addressed in each agreement and the anticipated costs, if any, to be incurred by the Project. Conduct review cycles on the document with the City and incorporate comments from the City.

1.6 Safety and Security Management Plan (SSMP)

Produce the SSMP for the Project based upon the most current FTA guidance for such plans and taking into account the City's safety and security organizations. Conduct review cycles on the document with the City and other designated agencies and incorporate comments received. Further information on the SSMP is included in Task 10.0 below.

1.7 Safety and Security Certification Plan

Produce an initial Safety and Security Certification Plan for the Project based upon designs progressed through preliminary engineering. Conduct review cycles on the document with the City and other designated agencies and

incorporate comments received. Take into consideration the processes required by the State Safety Oversight organization.

1.8 Financial Plan (See Task 14.0 below)

Produce a Financial Plan for the Project based upon the most current FTA guidance for such plans. Conduct review cycles on the document with the City and incorporate comments from the City.

1.9 Conform FTA Templates to PE/EIS Results

Produce the inputs to the 5309 New Starts Report templates as changes occur to the Project information.

1.10 New Starts Report Submittal

On an annual basis assist the City in preparing its submittal to the New Starts Report. Conduct review cycles on the document with the City and incorporate comments from the City.

2.0 Plans for Final Design (or Design Build) Inclusive of FTA Acceptance

At the end of the PE/EIS phase, the GEC will prepare an update of each of these FTA required plans with a focus on the final design and design/build phase of the Project. The required documents will include but not be limited to:

- 2.1 Project Management Plan (PMP)
- 2.2 Vehicle Fleet Management Plan
- 2.3 Quality Management Plan
- 2.4 Real Estate Acquisition Management Plan
- 2.5 Third Party Agreement Plan
- 2.6 Safety and Security Plan
- 2.7 Safety and Security Certification Plan
- 2.8 Financial Plan

3.0 PE/EIS Contract Management

The GEC will provide for the management of its PE/EIS work, including preparation of detailed refinements to the overall work plan which will allow for the proper project control of the work being undertaken. Once the work to be undertaken is completely refined and planned, project procedures shall be developed to assure the oversight and monitoring of the progress of the works and the expenditure of budget against each task. Subtasks for management of the PE/EIS work include:

- 3.1 Detailed Work Plan
 - 3.1.1 Key Milestones
 - 3.1.2 Key Deliverables
- 3.2 Work Breakdown Structure (WBS)
- 3.3 Budget
- 3.4 Schedule, Cost Loaded (Primavera)
- 3.5 Schedule Control Procedures
- 3.6 Cost Control MIS
- 3.7 Cost Control Procedures
- 3.8 Document Control
- 3.9 Configuration Management
- 3.10 Contract Administration

- 3.10.1 Cost Accounting
- 3.10.2 Work Authorization
- 3.10.3 Subcontract Administration
- 3.10.4 Support Services
- 3.11 Legal Support Purposes

4.0 PE/EIS Team Command and Control

Working in concert with the PMP, the GEC will develop a program structure for the execution of the PE/EIS tasks which will include a refinement of the organizational information contained in the PMP. Subtasks to be developed for command and control of the Project include:

- 4.1 Organizational Approach
- 4.2 Staffing Plan
- 4.3 Organization Chart
- 4.4 Position Descriptions
- 4.5 Organizational Unit Charters
- 4.6 Procedures
- 4.7 Committee Structure
- 4.8 Contracting Approach
- 4.9 Response to Enabling Legislation Requirements
- 4.10 Legislatively Mandated Milestones
- 4.11 Third Party Interfaces

5.0 Project Controls for New Starts Capital Project

More extensive project controls procedures will be required as the Project advances. The GEC will develop a detailed program which will allow the City to control the Project during the follow-on phases of final design, procurement and construction. Elements of this program should be developed to allow the City to make informed decisions on progress and cost issues and to make corrective actions where necessary. Functions which will be necessary in this regard include:

- 5.1 Detailed Work Plan
 - 5.1.1 Key Milestones
 - 5.1.2 Key Deliverables
- 5.2 Work Breakdown Structure (WBS)
- 5.3 Budget
- 5.4 Schedule, Cost Loaded (Primavera)
- 5.5 Schedule Control Procedures
- 5.6 Cost Control MIS
- 5.7 Cost Control Procedures
- 5.8 Contract Administration
 - 5.8.1 Approach
 - 5.8.2 Packaging
 - 5.8.3 Contract Unit Descriptions
 - 5.8.4 Interface Responsibility
- 5.9 Design, Procurement and Construction Change Procedures
- 5.10 Design, Procurement and Construction Claims Procedures

6.0 Environmental Impact Statement (EIS) Preparation

The GEC will prepare Draft and Final Environmental Impact Statements for the Project. Necessary agency and community coordination activities which are required as a part of the mandated processes will also be performed, including preparation of responses to all commentary on the Draft EIS during its circulation period. As work progresses on the EIS documentation, the GEC will submit progress documentation to the City and other project participants as appropriate and will address review comments arising from this process.

6.1 Draft EIS

The GEC will prepare the Draft EIS for the proposed Project in compliance with all applicable laws and requirements, including but not limited to the NEPA; Section 4(f) of the Department of Transportation Act of 1966, as amended (“Section 4(f)”); Section 106 of the National Historic Preservation Act of 1966 as amended (“Section 106”); the Endangered Species Act of 1973, as amended; the Safety, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); and the Hawaii Revised Statutes (HRS) Chapter 343.

The preliminary Draft EIS will be reviewed by the City and agreed-upon changes incorporated into the Draft EIS document by the GEC. The Draft EIS will include at least the following chapters:

- 6.1.1 Table of Contents
- 6.1.2 Executive Summary
- 6.1.3 Purpose of and Need
- 6.1.4 Alternatives Considered
- 6.1.5 Transportation Impacts
- 6.1.6 Environmental Analysis and Consequences
- 6.1.7 Financial Analysis and Evaluation
- 6.1.8 Index
- 6.1.9 Appendices
 - 6.1.9.1 List of Preparers
 - 6.1.9.2 List of Recipients

6.2 Environmental Disciplines to be Analyzed

The GEC will conduct analyses on the affected environments including but not limited to: land use and economic activity; neighborhoods and communities, including identification of minority populations and low-income populations in compliance with Executive Order 12898 on Environmental Justice; farmlands; visual and aesthetic resources; air quality and energy; noise and vibration; water resources; natural resources, including the potential for any threatened or endangered flora or fauna; hazardous materials; and cultural, historic and archaeological resources. At a minimum, the GEC will also prepare individual technical reports as needed on each of the subjects above.

6.3 Significant Impacts

The GEC will identify and discuss both direct and indirect significant impacts of the alternatives based on established and approved FTA criteria.

6.4 Mitigation Measures

The GEC will develop measures to mitigate significant impacts to levels below significance, in consultation with the City. If any significant impacts cannot be mitigated to levels below significance, the GEC will alert the City at the earliest opportunity.

6.5 Applicable Permits

The GEC will identify applicable federal, state and local permits, licenses, and entitlements that need to be obtained for the Project to proceed. The identification of these items should occur as early in the environmental process as possible in order to facilitate the fast-track completion of this proposed project.

6.6 Circulation of Draft EIS

Once the preliminary Draft EIS has been approved for circulation by the FTA, the GEC will prepare printed and CD copies of the Draft EIS for distribution. The GEC will identify the agencies, persons, and organizations to which the Draft EIS is to be distributed for comment, in cooperation with the City. The GEC will prepare the draft Notice of Availability (NOA) for publication in the Federal Register.

6.7 Public Hearings and Meetings

The GEC will prepare notices, exhibits, distribution materials, comments forms and other appropriate materials for presentations at the public hearing(s) and meetings for the Draft EIS, and assist the City at the public hearings related to the Draft EIS.

6.8 Responses to Comments

The GEC will organize the comments received on the Draft EIS and, in consultation with the City, prepare responses to the comments received. The GEC will prepare a matrix of the comments and responses, as well as copies of all comments received, for inclusion in the Final EIS. Note that Chapter 343 of the Hawaii Statutes requires individual responses to comments. If necessary, improved, modified or supplemental analyses may be required, and/or modifications to the alternatives, including to the Proposed Action, may be warranted.

6.9 Final EIS

The GEC will prepare a draft Final EIS for submittal to the City for review and will prepare a final document based on the comments received. In addition to the chapters identified in Task 6.1, above, the Final EIS will include a chapter on responses to comments. The GEC will prepare and distribute printed and CD copies of the Final EIS and perform the appropriate actions for filing the Final EIS.

7.0 Project Delivery and Capital Plan

7.1 Procurement Approach

The City's current plan for the Project envisions an initial design-build (DB) procurement for civil works construction over an approximately six-mile section of the Project at its Ewa (western) end. This section is referred to as Phase 1. Stations and a maintenance base and storage yard for vehicles would either be

included in this DB contract or would be the subject of other concurrent DB procurements. A separate procurement would cover the vehicle supply contract. Additional work including supply and installation for traction power, signals, communications, SCADA, trackworks and other such systems features would be on a full First Project (20-mile) basis and might be included in the initial DB contract or included in one or more independent systems procurements depending on decisions yet to be made. These types of contracts would have staged schedules corresponding to the prior completion of necessary facilities where they would be installed. Other construction of civil works and stations would be on a design-bid-build (DbB) basis where individual segment designers would be selected and complete designs prepared for subsequent open public bidding to construction contractors. Working with the City, the GEC will refine this approach to procurement of the overall system recommending cost effective alternatives which will meet the City's goals of early initial construction, priced selection of vehicle technology, a portion of the project ready for early operations within five years and staged opening of the remaining segments. The GEC will prepare contract unit descriptions and interface control requirements for each procurement.

7.2 Capital Plan

The GEC will prepare and maintain a capital plan or plans for the Project and update it as required. This plan must be consistent with the FTA required Financial Plan (see Task 14.0), but will specifically address the amount, timing and procedures for all capital income and disbursements planned for the construction and procurement program. Conduct review cycles on the Plan with the City and incorporate comments from the City. Elements of the plan will include:

- 7.2.1 Income Plan
- 7.2.2 Outflow Plan
- 7.2.3 Cash Flow Plan
- 7.2.4 Treasury
- 7.2.5 Cost Accounting
- 7.2.6 Local Reporting
- 7.2.7 FTA Reporting
- 7.2.8 Financial Procedures
- 7.2.9 Report Layouts

8.0 **Quality Assurance (QA)**

The GEC will prepare a Quality Plan and associated procedures for the Project and will develop and staff a quality oversight organization for its work. The Quality Plan will spell out the policies, processes and procedures to be used in order to assure the quality of all work and products produced for the Project. The FTA Quality Assurance and Quality Control Guidelines shall be referenced in the preparation of this plan. The GEC will conduct review cycles on the Quality Plan with the City and incorporate comments from the City. These procedures include:

- 8.1 Management Responsibility
- 8.2 QA Procedures and Reference Documents
- 8.3 Design Control
- 8.4 Document Control
- 8.5 Purchasing
- 8.6 Implementation Phase Procedures
- 8.7 Quality Records and Audits

9.0 External Project Reviews

The GEC will participate in and support a number of reviews involving experts not otherwise directly participating in the Project. These reviews, which will take place over the course of the work effort, are generally intended to bring in additional oversight or expertise with an eye towards improving the Project, reducing risks, addressing special issues or reducing project costs. Such reviews will include:

- 9.1 FTA Quarterly Reviews
- 9.2 PMO Reviews (typically monthly)
- 9.3 Value Engineering Workshops
- 9.4 Peer Reviews (addressing the overall Project)
- 9.5 Issue Forums (addressing a single issue)
- 9.6 Risk Management Reviews

10.0 Safety and Security Management Plan (SSMP)

The GEC will develop programs to address required aspects of system safety and security in accordance with FTA guidelines and requirements. These activities will be documented in the SSMP and will include:

- 10.1 Honolulu Commitment and Philosophy
- 10.2 Safety and Security Organizational Development
- 10.3 Safety and Security Analyses
- 10.4 Safety and Security Design Criteria
- 10.5 Safety and Security Verification Process
- 10.6 Construction Safety and Security Plans
- 10.7 Plans for Safety and Security during Operations
- 10.8 State Safety Oversight and Homeland Security Coordination

The GEC will conduct review cycles on each document with the City and incorporate or address comments from the City.

11.0 Land Use Planning

The GEC will be developing plans for providing a responsive transit corridor interface with the surrounding land use environment. Tasks will include extensive coordination with public and private corridor alignment stakeholders, such as, but not limited to; the City Department of Planning and Permitting and other governmental entities, various community and business groups, as well as members of the development community and property owners. The GEC will be expected to maximize opportunities for optimizing transit system functions and layout in harmony with existing and planned land use, particularly at station-area locations. The goal is to provide for development of the

station proper and surrounding community in a mutually supportive, economically beneficial and context-sensitive manner.

- 11.1 Station Area Development Interface
- 11.2 Circulation Interface – Traffic, Parking, Drop-Off, Pedestrian, Bicycle, Other
- 11.3 Station Typologies and Urban Design Considerations
- 11.4 Stakeholder Input Report – Land Use
- 11.5 Preservation and Protection Plans – Trees, Historic, Cultural, Other
- 11.6 Sustainable Neighborhood Impact Report
- 11.7 FTA Land Use Requirements
 - 11.7.1 Templates 11 & 12 Updates
 - 11.7.2 Compliance with FTA Guidelines
- 11.8 Joint Development Opportunities Report

12.0 Property Acquisition

The GEC will define the real estate requirements for the Project and will develop a Real Estate Acquisition Management Plan (RAMP) in accordance with FTA requirements. This plan will set out the process and organizational structure needed to acquire the properties necessary for construction of the First Project. Activities will include:

- 12.1 Management Approach
- 12.2 Permanent Facilities
- 12.3 Temporary Works
- 12.4 Partial Takings/Whole Parcel Takings
- 12.5 Procedures
- 12.6 Parcel Acquisition Schedule

The GEC will conduct review cycles on the RAMP with the City and incorporate or address comments.

13.0 Operability Input to Design

The GEC will produce a comprehensive operating plan for the system including a variety of staged opening scenarios. The GEC will conduct review cycles on the operating plan with the City and incorporate or address comments.

The plan will be used to guide the design of facilities and will cover the following elements:

- 13.1 General Operating and Approach Plan in 2013
- 13.2 General Operating and Approach Plan in 2017
- 13.3 General Operating and Approach Plan in 2030
- 13.4 Rail and Bus Fleet Maintenance Plans
- 13.5 Feeder Bus Interface
- 13.6 Kiss-and-Ride / Park-and-Ride
- 13.7 Walk-and-Ride
- 13.8 Service Levels
- 13.9 Capacity
- 13.10 Service Recovery Plan
- 13.11 Power Sectionalization
- 13.12 Track Interlockings
- 13.13 Reverse Running

- 13.14 ADA Compliance
- 13.15 O&M Testing Plan
- 13.16 O&M Commissioning Plan
- 13.17 O&M Rule Book
- 13.18 Capitalized Training, Start-Up
- 13.19 Security
- 13.20 Safety
- 13.21 Staffing Plan
- 13.22 Operability Assurance of PE Design

14.0 Financial Plan

The GEC will prepare a comprehensive Financial Plan for the Project and update it as required. This plan must comply with FTA procedures which are used for assessment of a grantee's financial capacity to implement the designated project without adverse effects on the existing transit system and to operate the entire transit system as planned once the Project is completed. The Financial Plan will use the required FTA Outline:

- 14.1 Introduction
- 14.2 Capital Plan
 - 14.2.1 Project Capital Plan
 - 14.2.2 Agency-Wide Capital Plan
- 14.3 Operating Plan
 - 14.3.1 Operating Revenues
 - 14.3.2 Operating and Maintenance Costs
 - 14.3.3 Agency-Wide Operating Plan
- 14.4 Cash Flow Analysis
 - 14.4.1 Twenty-Year Cash Flow Projection
 - 14.4.2 Financial Evaluation

14.5 Appendices

Additionally, the plan will identify requirements and procedures for:

- 14.6 Local Reporting
- 14.7 FTA Reporting
- 14.8 Procedure for Maintenance of the Plan

15.0 TheBus Interface

In coordination with the City, the GEC will develop a bus operations plan to restructure bus routes to support the fixed guideway transit line. Activities will include the following functions:

- 15.1 Define Feeder Bus Service Network
- 15.2 Bus/Transit Transfer Facilities
- 15.3 Bus/Guideway Operations Integration Plan

16.0 Architectural and Engineering Design Services

The architectural and engineering design services will commence with the development of Design Criteria that will guide and govern all project design activity. Established Design Criteria will define the parameters for the Project's facilities. The compilation of space and functional requirement programs for each facility will parallel the production

of Design Criteria. The GEC will insure that all activities related to architectural and engineering design and facility space and functional requirements program are coordinated. The GEC will prepare a comprehensive preliminary engineering and architectural design for the fixed guideway system. These designs will be expressed in the form of design criteria for each major element of the Project followed by drawings and performance specifications that would be in sufficient detail for subsequent contract unit designers to complete designs as part of either a standalone design assignment or in concert with a construction or procurement contractor as part of a design-build assignment. The GEC will coordinate with the City such that design decisions may be reviewed both informally and in the formal processes required by the configuration management plan.

16.1 Architectural Design

Completed and approved Design Criteria and facility space programs will form a comprehensive basis for design which the GEC will use to proceed with design studies. The result will be prototype designs for each of the Project's facilities. Once the prototype facility designs are fully vetted and approved, the GEC will commence with the adaptation of those prototype designs to site specific conditions.

16.1.1 Architectural Design Criteria

16.1.2 Facility Programs – Space and Functional Requirements

16.1.3 Station Prototype Designs

16.1.4 Architectural Design Drawings – All Facilities and Sites

16.1.5 Preliminary Specifications

16.1.6 Presentation Materials including Scale Models and Photo Simulations

16.1.7 Reports and Calculations

16.1.7.1 Stakeholder Design Input Report

16.1.7.2 Fire/Life Safety Analysis Report

16.1.7.3 Sustainability Design Report

16.1.7.4 Accessibility Compliance Report

16.1.7.5 Art-in-Transit Report

16.1.7.6 Graphic Signage Report

16.2 Civil Engineering Design

The GEC's initial task for civil engineering design will be the production and compilation of Design Criteria governing all aspects of the design work. Paralleling this effort, the GEC will proceed with the production of all base mapping, utility surveys, geotechnical and hydrological investigations and hazmat investigations. The GEC will proceed with the design of facilities and structures according to the system definition developed in the initial studies after the necessary materials and data impacting the civil structures are gathered.

16.2.1 Civil Design Criteria

16.2.2 Surveys and Base Mapping – Alignment ROW and Facility Sites

16.2.3 Utilities – Investigations, Surveys and Composite Base Maps

16.2.4 Geotechnical – Investigations, Examination and Design Criteria

16.2.5 Hydrological – Investigations, Examination and Design Criteria

16.2.6 Hazmat – Investigations, Examination, Remediation Recommendations

- 16.2.7 Track Alignment Design – Plan and Profile
- 16.2.8 Roadway, Parking Lot and Traffic Design
- 16.2.9 Storm Water Management and Drainage Design
- 16.2.10 Right-of-Way Acquisition Support
- 16.2.11 Preliminary Specifications
- 16.2.12 Reports and Calculations
 - 16.2.12.1 Utilities Report
 - 16.2.12.2 Geotechnical Report
 - 16.2.12.3 Hydrological Report
 - 16.2.12.4 Hazmat Report
 - 16.2.12.5 ROW Acquisition Report
 - 16.2.12.6 Sustainable Design Report
- 16.2.13 Traffic Mitigation During Construction – Roadway, Safety, Vehicles, and Pedestrians

16.3 Structural Engineering Design

The GEC's initial task for structural engineering design will be the production and compilation of Design Criteria governing all aspects of the design work. Once this work completed and approved and the civil alignment definition has been develop, the GEC will proceed with the design of the guideway structures. The GEC will evaluate and present alternative structural systems for the guideway and station structures and other Project facilities.

- 16.3.1 Structural Design Criteria
- 16.3.2 Guideways, Track Alignment Structures
- 16.3.3 Stations
- 16.3.4 Ancillary Facilities including Yards & Shops
- 16.3.5 Preliminary Specifications
- 16.3.6 Reports and Calculations
 - 16.3.6.1 Structural Report
 - 16.3.6.2 Sustainable Design Report

16.4 Mechanical Engineering Design

The GEC's initial mechanical engineering design task will be the production and compilation of Design Criteria governing all aspects of the design work. Additionally the mechanical system space and functional requirements will be developed for each of the Project's facilities.

- 16.4.1 Mechanical Design Criteria
- 16.4.2 Stations
- 16.4.3 Ancillary Facilities including Yards & Shops
- 16.4.4 Preliminary Specifications
- 16.4.5 Reports and Calculations
 - 16.4.5.1 Mechanical Report
 - 16.4.5.2 Input to Facility Programs – Space and Functional Requirements
 - 16.4.5.3 Sustainable Design Report
 - 16.4.5.4 Fire/Life Safety Report

16.5 Electrical Engineering Design

The GEC's initial electrical engineering design task will be the production and compilation of Design Criteria for both facilities and traction power. Additionally the electrical system space and functional requirements will be developed for each of the Project's facilities. Power supply needs and sources will be analyzed with the use of operational simulation programs which cover both normal and abnormal operations. Task 18.0 below provides a matrix of various design analyses and reports which will be developed for systems electrical designs.

16.5.1 Electrical Design Criteria

16.5.2 Traction Power

16.5.3 Track Alignment Facilities

16.5.4 Stations

16.5.5 Ancillary Facilities including Yards, Shops, Traction Power Substations, etc.

16.5.6 Preliminary Specifications

16.5.7 Reports and Calculations

16.5.7.1 Electrical Report

16.5.7.2 Input to Facility Programs – Space and Functional Requirements

16.5.7.3 Sustainable Design Report

16.5.7.4 Fire/Life Safety Report

16.6 Trackwork Design

The GEC will ensure that trackwork design is appropriately sequenced with the finalization of the guideway design. Early trackwork design could potentially occur at the Yards and Shops facility if its location and configuration is finalized expeditiously. Electrical isolation and grounding requirements will be coordinated with the electrical system requirements. This work will cover:

16.6.1 Trackwork Design Criteria

16.6.2 Track and Track Support Designs—Main Line

16.6.3 Track and Track Support Design—Storage Facility and Maintenance Base

16.6.4 Cross-overs, Turnouts and other Special Trackwork

16.6.5 Preliminary Specifications

16.7 Constructability Assurance of PE Design

Constructability reviews will take place during all aspects of the architectural and engineering design work. Key to these reviews will be the optimization of contract units, construction sequencing and the cost and schedule implications of all aspects of the Project's design.

16.7.1 Method and Approach

16.7.2 Laydown Areas

16.7.3 Preliminary Works

16.7.4 Temporary Works

16.7.5 Permanent Works

16.7.6 Staffing

16.7.7 Labor/Skill Sets

16.7.8 Special Equipment

16.7.9 Sequencing

17.0 Transit Systems Design Criteria and Designs

The GEC will develop definition information for the various systems which will compose the Project. For each system, this information will cover the following elements:

17.1 Overview to Project Approach

17.2 Systems Interface

17.3 Vehicle Clearance Dynamic Outline

17.4 Systems Sizing

17.5 Design Criteria

17.6 Performance Specifications

17.7 Americans with Disabilities Act (ADA) Criteria

17.8 Fire/Life Safety Criteria

17.9 Reliability, Availability, and Maintainability Criteria

17.10 Preliminary Engineering Design

17.11 Procurement Specifications

17.12 Implementation Schedule

17.13 Cost Estimates

17.14 Input to Facility Space Programs and Function

17.15 Systems Reports and Calculations

18.0 - Transit Sub-Systems to be Addressed in Task 17.0 Above

The GEC will apply the design approach for the fixed guideway transit subsystems shown in Figure 18.0 below. As design progresses the GEC will assess alternative options and configurations and provide interim reports addressing trade-offs among alternatives considered. Reports will be reviewed and discussed with comments by the City and other project participants being taken into consideration and addressed.

Figure 18.0 Systems Preliminary Engineering Design Criteria and Designs

System or Subsystem	17.1 Overview/Project Approach	17.2 Systems Interfaces	17.3 Vehicle Dynamic Outline	17.4 System Sizing	17.5 Design Criteria	17.6 Performance Specifications	17.7 ADA Criteria	17.8 Fire/Life Safety Criteria	17.9 RAM Criteria (Availability)	17.10 Preliminary Engineering Design	17.11 Procurement Specifications	17.12 Implementation Schedule	17.13 Cost Estimates	17.14 Input into Facility Space & Function	17.15 Systems Reports and Calculations
18.1 Revenue Vehicle	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18.2 Train Control	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
18.3 Traction Power Substations	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
18.4 Traction Power Distribution	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
18.5 Communications	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18.6 Central Control	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18.7 SCADA	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
18.8 Trackworks	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓
18.9 Fare Vending	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18.10 Passenger Information Systems	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18.11 Passenger Monitoring Systems	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18.12 Yard and Shop Equipment	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
18.13 Non Revenue Rail Vehicles	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
18.14 Fire/Life Safety Systems	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

19.0 Vehicle Technology and DB Contractor Selection Process

The City intends to use a competitive priced procurement process to select the vehicle technology and, in parallel with that technology selection, initiate a design-build procurement process for the Phase 1 construction (refer to Task 7.0). The following steps outline a sequence of activities so that the technology may be selected and design attributes known for early DB procurements. The City intends to award a DB contract or contracts immediately after a ROD on the Project currently envisioned to occur approximately in June 2009. The GEC will further develop this approach for selection based on three guiding premises: a) that the selection of a fixed guideway vehicle technology will be made on the basis of pricing committed by eligible suppliers, b) that the DB contract(s) will be ready for award in June 2009, and c) that initial operations on Phase 1 could commence in calendar year 2012. The activities leading up to this goal are expected to include:

- 19.1 Request for Letters of Interest (LOI) to DB Industry
- 19.2 Request for Letters of Interest to Transit Systems Industry
- 19.3 Receive LOI's
- 19.4 Issue Draft RFP, Phase I (DB and Technology)
- 19.5 DB/Technology Workshop

- 19.6 Phase I Proposals Due
- 19.7 Announce Roster for DB and Technology
- 19.8 Issue RFP Phase II for Technology
- 19.9 Finalize Station Facility Programs – Space and Functional Requirements
- 19.10 Finalize Design Guidelines
- 19.11 Finalize Utility Design
- 19.12 Phase II Proposals Due for Technology
- 19.13 Selection of Technology Supplier
- 19.14 Workshop with Technology Supplier and DB Roster
- 19.15 Phase III RFP for DB with Selected Technology
- 19.16 Phase III Proposals Due
- 19.17 Selection of DB
- 19.18 Issue Limited NTP for DB and Technology Design under LONP
- 19.19 Anticipated Signing of FFGA

20.0 Maintenance and Storage Facilities

Following the assessment of the maintenance needs for the Project, the GEC will develop preliminary engineering designs for the maintenance and storage facilities. While two site options are presently under consideration, the GEC will focus initially on the Navy Drum Site in the vicinity of station 900+00 on the Alternatives Analysis drawings. If a fatal flaw is found for that site, an alternative will be developed at the Horton Property Site in the vicinity of station 360+00. The following elements will be included in the development of the maintenance facility:

- 20.1 Maintenance Approach
- 20.2 Service and Cleaning
- 20.3 Light Maintenance
- 20.4 Heavy Maintenance
- 20.5 Design Criteria
- 20.6 Yard Layout
- 20.7 Yard Preliminary Specifications
- 20.8 Shop Layout
- 20.9 Shop Preliminary Specifications
- 20.10 List of Key Equipment and Tools
- 20.11 Shop Architecture
- 20.12 Schedule Development
- 20.13 Cost Development

The GEC will conduct review cycles on the maintenance plans with the City and incorporate or address comments.

21.0 Public Involvement

The purpose of this task is to provide information to the public about the Project's progress and to actively seek and incorporate input from the public to assure that the needs of the various communities are met, and that minority persons and limited English proficiency persons are not excluded in the public involvement process. The Public Involvement Program developed for this phase of the Project will include activities and strategies that are directly linked to project milestones, technical activities, and decision-making.

21.1 Implementation

- 21.1.1 The GEC will implement the Public Involvement Plan activities and strategies (described in 20.2 below) designed to provide input to the technical work identified in this scope, including but not limited to:
- 21.1.2 Continued focus on identifying environmental issues
- 21.1.3 Preliminary station design
- 21.1.4 Art in transit
- 21.1.5 Urban design guidelines, e.g., project integration into streetscape, varying neighborhood characters, adjacent land uses, development patterns and goals.
- 21.1.6 Landscape

21.2 Public Involvement Program Activities

The Public Involvement Program developed by the City for the PE/EIS phase of the Project will continue, enhance, and add to the public involvement activities conducted during the previous Alternatives Analysis phase of the Project.

Specific activities in the PE/EIS phase Public Involvement Program requiring assistance from, support for, or led by the GEC will include:

- 21.2.1 Participating in community events
- 21.2.2 Facilitating project public involvement meetings
- 21.2.3 Coordinating and managing the public meeting(s) serving as the EIS public hearing
- 21.2.4 Producing graphics in support of the public involvement program
- 21.2.5 Developing and producing presentations and managing presentation/meeting schedule (i.e., "Speaker's Bureau")
- 21.2.6 Maintaining existing and developing new contacts with local groups and organizations, including City Council and Neighborhood Boards, and participating in their meetings as appropriate
- 21.2.7 Maintaining the Project mailing list, website, and hotline with appropriate updates
- 21.2.8 Developing, producing, and distributing public information documents (e.g., newsletters, fact sheets)
- 21.2.9 Developing and producing public information electronic media (e.g., DVD, CD) designed to describe and illustrate technical documents and project progress
- 21.2.10 Responding to public inquiries about the Project
- 21.2.11 Assisting the City in media and/or agency coordination as needed

21.3 Documentation

During the course of the public involvement program, the GEC will provide information for preparation of monthly and quarterly update reports. The reports will describe public involvement activities for the subject time period and will summarize results, i.e., summaries of the public input received. At the completion of the public involvement program, the GEC will provide information and assistance in preparing a Public Involvement Summary Report describing formation and implementation of the Public Involvement Plan and results thereof.

22.0 Public Art

The GEC will assist the City in the development of a public art program for the system:

22.1 Approach

22.2 Schedule

22.3 Interface with PE

23.0 Request Record of Decision (ROD)

Following completion of the Final EIS, the GEC will assist the City in the preparation of a request for a formal FTA Record of Decision to proceed with the Project.