

## **PMOC MONTHLY REPORT**

### **Honolulu High-Capacity Transit Corridor Project**

City and County of Honolulu

Honolulu, HI

October 2011 (FINAL)

PMOC Contract Number: DTFT60-09-D-00012

Task Order No. 2: Honolulu High-Capacity Corridor Project

Project No: DC-27-5140

Work Order No. 1

OPs Referenced: OP 1 and 25

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Length of Time Assigned: Five Years (November 18, 2009 through November 17, 2014)

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## 1.0 EXECUTIVE SUMMARY

### 1.1 Project Description

- **General Description:** The Project is an approximately-20-mile-long elevated fixed guideway rail system along Oahu's south shore between East Kapolei and Ala Moana Center. This Project is based on the Airport Alignment, which includes 21 stations. The alignment is elevated, except for a 0.5-mile at-grade portion at the Leeward Community College station. The Project is planned to be delivered in four guideway segments.
  - Segment I (West Oahu/Farrington Highway) – East Kapolei to Pearl Highlands (6 miles/7 stations)
  - Segment II (Kamehameha Highway) – Pearl Highlands to Aloha Stadium (4 miles/2 stations)
  - Segment III (Airport) – Aloha Stadium to Middle Street (5 miles/4 stations)
  - Segment IV (City Center) – Middle Street to Ala Moana Center (4 miles/8 stations)
- **Length:** 20 miles
- **No. of Stations:** 21
- **Additional Facilities:** Maintenance and Storage Facility and parking facilities
- **Vehicles:** 80 vehicles
- **Ridership Forecast:** Weekday boardings – 97,500 (2019); 116,300 (2030).

### 1.2 Project Status

*(Note: Status of all contracts is provided in Appendix B.)*

- Preliminary Engineering (PE) – Through PE plans and performance specifications, the grantee has provided enough project information to fully illustrate the scope, capacity, level of service, functionality, and expected reliability of the completed project. They sufficiently characterize elements of the PE design, as identified in Appendix C (PE Status by Contract).
- General Engineering Consultant II (GEC) – The grantee executed the GEC II contract with Parsons Brinkerhoff on June 30, 2011. The contract amount is \$300 million (\$150 million base amount plus \$150 million allowance amount). It is anticipated that the \$150 million allowance for additional work will be used after the initial three-year term of the contract. However, it is possible with a contract amendment to expend a portion of the allowance amount any time during the term of the contract. Notice to Proceed (NTP) #1 was issued on August 2, 2011. It should be noted that the cost for the first year of the contract is still being negotiated. The results of these negotiations should not increase the value of the \$300 million total contract amount. HART anticipates issuing a contract amendment to the GEC II contract for the first year of the contract in October 2011.
- West Oahu /Farrington Highway (WOFH) Design-Build (DB) Contract – The grantee has issued NTPs authorizing PE, advanced PE, test and demonstration drilled shafts, and administrative support activities. The grantee received Letter of No Prejudice (LONP) #1

approval from the FTA on May 24, 2011 in the amount of \$4.72 million that allows Kiewit to proceed with Final Design activities.

- Maintenance and Storage (MSF) DB Contract – NTP #1 was issued to Kiewit/Kobayashi Joint Venture on July 25, 2011 for approximately \$16.8 million to perform PE, associated site investigations and coordinating with other contracts. The grantee anticipates issuing multiple Notices to Proceed (NTP) for Final Design and construction activities once they receive the appropriate authorizations from the Federal Transit Administration (FTA).
- Kamehameha Highway (KH) Guideway DB Contract – NTP #1 was issued to Kiewit on July 12, 2011 for approximately \$102 million to perform PE including interim/definitive design submittals and coordinating with other contracts. The grantee anticipates issuing multiple NTPs for Final Design and construction activities once they receive the appropriate authorizations from FTA.
- Vehicles/Core Systems Design-Build-Operate-Maintain (DBOM) Contract (CSC) – Ansaldo Honolulu Joint Venture was selected by the grantee on March 21, 2011. Protests by the two non-selected proposers, Bombardier Transportation USA, Inc. and Sumitomo Corporation of America, have both been denied. HART held a video conference with Ansaldo Honolulu Joint Venture representatives on September 8, 2011 to discuss financial issues. HART is now in the process of preparing the contract.
- Station Design –
  - Farrington Station Group Design Contract – The grantee selected HDR/HPE, Inc. for the design contract. Advanced PE began in February 2011. Eight Requests for Contract Changes have been submitted by the designer for various design issues.
  - Kamehameha Station Group Design Contract – The Request for Qualifications (RFQ) to begin advanced PE was issued in June 2011. NTP is anticipated to be issued in December 2011.
  - West Oahu Station Group – The grantee selected URS Corporation on March 21, 2011 and negotiations are currently underway. NTP #1 is anticipated to be issued in November 2011 to allow for development of management plans and Advanced PE to begin. The grantee is still negotiating the full scope, schedule, and cost associated with NTP #1.
- Airport Guideway Segment Design Contract – The grantee has begun negotiations with the selected firm. The grantee anticipates issuing an NTP in November 2011.
- Professional Real Estate Services Consultant – RFP Part 1 was issued on April 1, 2011, and RFP Part 2 was issued on September 8, 2011. The grantee anticipates issuing an NTP in November 2011.
- Owner Controlled Insurance Program (OCIP) Consultant – The grantee has decided not to use OCIP for WOFH, MSF and KH DB Contracts. However, OCIP remains an option for the remaining contracts, and RFP Part 1 is anticipated to be issued in October 2011.
- Programmatic Agreement (PA) Project Manager – The grantee issued RFP Part I on June 30, 2011 for a PA Project Manager Consultant, or Kako’o. The grantee anticipates issuing an NTP in November 2011. The consultant will report to State Historic Preservation Division and the consulting parties listed in the PA.
- Executive Search Consultant – RFQ responses were received in September 2011 for a consultant to assist HART with identifying candidates for the Executive Director

position. HART anticipates award in October 2011. The grantee anticipates issuing and NTP in November 2011.

- Human Resources Consultant – HART issued an RFQ for a consultant to assist them with providing a class and compensation study. The RFP was issued by HART in September 2011. Proposals are due in October 2011.
- Government Liaison Consultant. – HART is going through the local approval process to solicit a consultant to assist with Government Relations. A Government Liaison Consultant was originally included in the PMC contract. However, HART removed the Government Liaison Consultant scope from the current PMC re-procurement.
- On-call Hazardous Material. – HART is going through the local approval process to solicit a consultant to assist with testing and removal of material found during the Archaeological Inventory Survey work required in the Programmatic Agreement. An On-call Consultant was originally included in the GEC II scope of work. However, HART removed the On-call Consultant scope from the GEC II contract. HART will be selecting a consultant from a qualified list.
- Independent Audit – HART is going through the local approval process to solicit a consultant to assist them with financial audits. The solicitation is finalized and HART anticipates issuing an RFP by the end of October 2011.
- HDOT State Safety and Security Oversight Consultant – HART is assisting HDOT to solicit a consultant to develop System Safety and Security Program Standards (SSSPS). The solicitation is finalized and HART anticipates issuing an RFP by the end of October 2011.

### 1.3 Technical Capacity and Capability

The table in Section 2.3 presents the status of key required management deliverables.

### 1.4 Schedule

- **Preliminary Engineering (PE):** FTA approved entrance into PE on October 16, 2009
- **Record of Decision (ROD):** Publication of the Final Environmental Impact Statement (FEIS) occurred on June 25, 2010. The comment period closed August 26, 2010. The grantee submitted its disposition of all comments to the FTA on October 4, 2010. ROD was issued on January 18, 2011.
- **Revenue Service Date (RSD):** December 2019

### 1.5 Cost Data

The current Project Budget is as follows:

Base Cost Estimate	\$4,117 billion
Total Contingency	\$0.865 billion (21.0% of Base Cost Estimate)
Finance Charges	\$0.230 billion
<b>Total Project Cost</b>	<b>\$5.213 billion</b>

**Total Expenditures to Date \$0.229 billion (August 2011)** (excludes pre-PE costs)

**1.6 Issues or Concerns**

The following key issues or concerns have been identified:

- As a result of the scope, schedule, cost and risk assessments, the PMOC recommends:
  - The grantee should hold its current budget of \$5.213 billion, including \$230.0 million in finance costs and \$813.5 million in contingency (allocated and unallocated), or 19.5% of the Adjusted Base Cost Estimate.
  - Revenue Service Date should be no earlier than the first quarter of calendar year 2020.
- The grantee must remain cognizant of the limits of the pre-award authority granted with the receipt of ROD. The grantee intends to issue multiple NTPs for its DB contracts. However, as noted in a December 1, 2009 letter to the grantee, the FTA will consider LONPs for activities not covered by automatic pre-award authority on a case-by-case basis following issuance of the ROD.
- The grantee must execute a license agreement with the Department of Hawaiian Homelands (DHHL) to construct the MSF on the Navy Drum Site. The PMOC has recommended that the License Agreement be provided to the FTA and PMOC for review prior to execution. A Request for Right of Entry (ROE) for construction was approved by the DHHL Board. The ROE allows access to Navy Drum Site for construction until the property acquisition occurs or the License Agreement is finalized. The grantee provided the PMOC with the minutes from the DHHL Board meeting during which the ROE was approved.
- A new Director of Transportation for HDOT has been appointed and has identified an interim State Oversight Agency (SOA) lead and anticipates hiring a full-time SOA Project Manager in early 2012. A revised program schedule and a safety and security roadmap was provided to the PMOC on October 11, 2011. The PMOC is reviewing the roadmap and will provide comments to the FTA. Also, the PMOC requested HDOT to identify a funding source to fund the SOA once the Project is in operations. A draft Memorandum of Agreement (MOA) was submitted to the PMOC in April 2011 and covers funding of the SOA by the grantee until operations begin. The grantee and HDOT anticipate executing the MOA in November 2011.
- The FTA has determined that the Project Management Support Consultant (PMC) contract was not solicited with the required Federal clauses based on the Fiscal Year 2010 Procurement System Review Final Report prepared for the FTA. The FTA has notified the grantee that it must proceed with timely re-procurement of the PMC contract, which includes Federal clauses. The grantee issued an RFP on August 2, 2011 and anticipates issuing NTP to the selected PMC by December 2011. The terms of the NTP will be determined during negotiations with the selected firm.

- The WOFH DB Contractor intends to utilize an existing facility (GPRM Prestress) for pre-casting and prestressing of the concrete guideway segments. This facility was identified in the ROD. The contractor is negotiating with the owner and the current lease-holder to obtain use of the property. However, if the GPRM facility is not secured, another facility will be required. Any impacts to the budget and/or schedule cannot be assessed until a decision is made on the site to be used for pre-casting activities. If another site is selected, the grantee is aware that they must coordinate with FTA to determine the extent of any environmental documentation that may be required.

## **2.0 BODY OF REPORT**

### **2.1 Grantee's Capabilities and Approach**

#### **2.1.1 Technical Capacity and Capability (TCC)**

The project staff includes a high degree of professional maturity and expertise although the organization is quite new and still evolving. Several of the lead managers have worked together on other large, successful projects. Also, through the interview process, the PMOC found the project team is experienced, has established basic defined roles and responsibilities, and can work together as a team. All are essential qualities for a competent and effective project management organization. While the certain challenges are inherent with a blended organizational approach, the PMOC has determined the management team is fundamentally sound and capable.

The grantee has developed a staffing plan and has experienced a significant increase in hires the past several months. Several key management positions remain vacant and the technical capacity will again be stretched if they are not soon filled especially when demand will greatly increase after entry into the final design phase. The grantee has relied heavily on the PMC to temporarily fill many of the current "City" positions as they endure recruiting and employee retention challenges. Such challenges include salary limitations, geographical isolation, and high costs of living compared to the US mainland. The grantee anticipates transitioning the positions currently held by PMC employees to "City" positions over the next two to three years. The grantee has recently included budget allowances to cover the extended employee transition period. The transition process requires knowledge transfer from PMC to "City" employee's which also requires IT system improvements to support the programs and hardware used by the PMC and its consultants.

It is the PMOC's professional opinion that the grantee has demonstrated its TCC to execute the project during the PE phase and its readiness to enter the Final Design phase. Nevertheless, the PMOC meets monthly with the grantee's Administrator of Controls and Administration to discuss any immediate TCC issues and provide recommendations, such as:

- Fill Deputy Director of Finance position
- Identify Deputy for the Executive Director (or a combination of executive managers)
- Increase staff resources for procurement, project controls, and human resources
- Identify Contract Manager for GEC and PMC contracts ("City" positions)
- Identify Claims Analyst ("City" or consultant position)
- Develop Succession Plan
- Include Contract Resident Engineer (CRE) position in Construction Engineering and Inspection scope
- Hire a recruiting consultant to assist with staffing plan, recruiting, training, transition planning and execution, and employee retention

## **2.1.2 Transit Authority**

During the November 2010 election, an amendment to the Revised Charter of the City and County of Honolulu 1972 (as amended) was approved by voters to allow for the creation of a public transit authority. The new authority is responsible for the planning, construction, operation, maintenance, and expansion of the grantee's fixed guideway mass transit system. This authority, which is named the Honolulu Authority for Rapid Transportation (HART), became effective on July 1, 2011. The grantee has begun filling the positions necessary to not only implement this Project but establish a new transit authority.

Revision 4 of the Project Management Plan (PMP), which was submitted for review in April 2011, supports the grantee's request to enter Final Design but only address the new transit authority in general terms. The grantee will require additional time to fully vet the impacts of a new authority on its staff and management approach. The grantee plans to issue a PMP revision to address the impacts of HART after receiving authority to enter into the Final Design Phase by the FTA.

## **2.1.3 Project Controls for Scope, Quality, Schedule, Cost, Risk and Safety**

### System Safety and Security

- The State of Hawaii has established Executive Order No. 10-05 effective April 6, 2010, designating HDOT as the State Oversight Agency.
- Revision 2.0 of the Safety and Security Management Plan (SSMP) was submitted to the PMOC for review on June 1, 2011. The PMOC review found that SSMP Revision 2.0, dated June 1, 2011 contains all sections specified in FTA Circular 5800.1, with the minimum content required for Final Design entry either included or implied. The PMOC review also found, however, a need for revision in some plan sections and appendices for both minor (correction of typographical errors and omissions) and major reasons. One such major concern is whether the staffing plan provides sufficient safety and security technical capacity to cover all activities likely during Final Design, during which phase the Design-Build contractors are likely to begin construction, albeit limited, under Letters of No Prejudice. As a result of its findings, the PMOC has reached the following conclusions:
  - The content of all plan sections and support appendices of the SSMP is at least marginally compliant with requirements for the Final Design entry stage of the Project.
  - The content of certain sections of the SSMP need revision to better clarify intent, correct typographical errors or omissions, and to address specific issues identified in the PMOC OP 22 deliverable comments.
  - Revision must be made to SSMP Section 2.4 and Appendix A prior to submission of an FFGA application.
- The PMOC intends to hold a safety and security workshop that could include representatives from FTA Region IX, FTA Headquarters, and HDOT. The tentative timeframe for the workshop is early 2012.

- The System Safety and Security Program Standards (SSSPS) are an important part of HDOT's comprehensive safety and security assessment. Each of the rail fixed guideway systems covered under this program (currently the Honolulu High Capacity Transit Corridor Project) is required to develop a System Safety Program Plan and System Security Program Plan that formalizes the safety and security duties and responsibilities of the transit organization and ensures a process for identifying and correcting safety and security hazards. The grantee will be assisting the SOA with procuring a consultant to develop the SSSPS.

A new Director of Transportation for HDOT has been appointed and has identified an interim SOA lead and anticipates hiring a full-time SOA Project Manager in early 2012. A revised program schedule and a safety and security roadmap was provided to the PMOC on October 11, 2011. The PMOC is reviewing the roadmap and will provide comments to the FTA. Also, the PMOC requested HDOT to identify a funding source to fund the SOA once the Project is in operations. A draft Memorandum of Agreement was submitted to the PMOC in April 2011 and covers funding of the SOA by the grantee until operations begin. The grantee and HDOT anticipate executing the MOA in November 2011.

### Quality

- GEC II Contract – The Final Draft of the GEC Quality Assurance Plan (QAP) is under internal review. HART QA Audit of GEC is scheduled in November 2011.
- West Oahu/Farrington Highway DB Contract – To date Kiewit has issued 31 Non-Compliance Reports (NCR) and three NCR's are open. HART/GEC has issued eight NCR's and all HART/GEC NCRs have been satisfactorily closed.
- Kamehameha Highway DB Contract – The Quality Assurance Manager (QAM) facilitated an internal quality kick-off meeting for the contract on August 23, 2011. HART/GEC reviewed and approved Kiewit's QAP, Design QAP and Construction QAP.
- Maintenance and Storage Facility DB Contract – The QAM facilitated an internal quality kick-off meeting for the contract to discuss required QAP, DQAP and CQAP. Performed a review of Kiewit/Kobayashi Joint Venture (KKJV) QAP and DQAP.
- Farrington Station Group Design Contract – The PMOC had expressed concern to HART that the design consultant was performing advanced PE including interim/definitive design submittals without having an approved QAP. HART/GEC subsequently reviewed and approved HDR's QAP on August 19, 2011 and issued/closed NCR-FS-001 for working without an approved QAP. Performed QA Surveillance of HDR on September 21, 2011 and UrbanWorks on September 22, 2011 and issued three observations for HDR and none for UrbanWorks. HART/GEC QA Audit of HDR to be performed in New York in November 2011.
- The PMOC performed a compliance review of the project's PMP and QMP process from October 11-13, 2011.

### **2.1.4 Compliance with Applicable Statutes, Regulations, Guidance and FTA Agreements**

#### National Environmental Policy Act (NEPA)

- The ROD was issued on January 18, 2011.

- A lawsuit was filed in federal court against the Project in May 2011. The lawsuit is asking for a declaratory judgment saying that the rail approvals have been "legally inadequate," an injunction to withdraw approvals for the project, and require a new public review process including and a Draft Environmental Impact Statement.

#### Letters of No Prejudice (LONP)

- In a December 1, 2009 letter to the grantee, the FTA clarified its policies and procedures related to LONPs. The letter states, "After completion of NEPA, FTA will consider LONPs for activities not covered by automatic pre-award authority on a case by case basis. Absent of pre-award authority or an LONP, no project cost can be incurred and be eligible for reimbursement or as local matching for any portion of the entire 20 mile alignment."
- The FTA issued an LONP on May 24, 2011 to allow for final design activities to proceed for the WOFH DB Contract. The amount authorized by the LONP was \$4.7 million. This LONP will allow for Kiewit to submit Final Design drawings to the City's Department of Permit and Planning for permit approval.
- The grantee intends to request a second LONP for approximately \$282 million that would allow for construction activities to begin on the WOFH DB Contract, MSF DB Contract, KH DB Contract, and Farrington Station Group construction contract immediately following receipt of approval to enter Final Design.

## **2.2 Project Scope**

The Project is a 20-mile fixed guideway rail system along Oahu's south shore between East Kapolei and Ala Moana Center. This Project is based on the Airport Alignment, which currently includes 21 stations. The alignment is elevated, except for a 0.5-mile at-grade portion at the Leeward Community College Station. The Project is planned to be delivered in four guideway segments.

- Segment I (West Oahu/Farrington Highway) – East Kapolei to Pearl Highlands (6 miles/7 stations)
- Segment II (Kamehameha Highway) – Pearl Highlands to Aloha Stadium (4 miles/2 stations)
- Segment III (Airport) – Aloha Stadium to Middle Street (5 miles/4 stations)
- Segment IV (City Center) – Middle Street to Ala Moana Center (4 miles/8 stations)

The alignment will average a total of 97,500 weekday boardings at the Revenue Service Date in the year 2019 and 116,300 weekday boardings in the year 2030. It will provide two significant areas with potential for Transit Oriented Development, one near the Airport and one in the surrounding industrial areas. The initial fleet will include 80 "light metro" rail vehicles based on the Ansaldo Honolulu Joint Venture CSC proposal.

## 2.2.1 Status of Design/Construction Documents

The scope as contained in the Project’s FEIS and ROD is reflected in the PE plans, specifications, estimates, and the PMP.

Through PE plans and performance specifications, the grantee has provided enough project information to fully illustrate the scope, capacity, level of service, functionality, and expected reliability of the completed project. They sufficiently characterize elements of the design and exceed the requirements of a PE design.

The project scope review has noted numerous challenges to the Project, including implementing the CSC as soon as possible, managing coordination issues between the grantee and its many contractors, controlling costs, making key decisions (Ala Moana Station layout, platform edge screens, implementing accepted VE alternatives), implementing third-party agreements, and resolving the precast facility location issue. However, all of these issues can be resolved during Final Design.

The grantee has undertaken the following activities related to Value Engineering (VE):

- VE Workshop for Stations – Workshop was held the week of April 19-23, 2010. The PMOC staff attended as observers. The objective of the VE workshop was to provide VE for six stations along the alignment – West Loch, Pearl Highlands, Aloha Stadium, Kalihi, Downtown, and Ala Moana Stations, representing elevated stations with and without concourses, direct access stations, and unique stations. As part of VE, the team was expected to consider not just ways of cutting costs, but also ways to reduce project risks, enhance operations, and bring to light any improvement opportunities that may exist.
- VE Workshop for Airport and City Center Guideway and Utility Relocation packages – Workshop was held April 11-15, 2011. The PMOC staff attended as observers. Approximately \$200 million in potential VE savings were identified. The PMOC is reviewing the report, which was provided in late August 2011.
- The final VE Report for Stations and the Alternative Technical Concepts (ATC) Report from the DB proposals were provided to the PMOC in October 2010. This included a list of the VE recommendations that the grantee intends to implement. The PMOC has reviewed the final VE report to ensure that the purpose and objectives were met, the findings were adequately summarized, and an action plan was developed. The table below presents the summary of VE results provided by the grantee.

Source	No. of Proposals Received	Estimated Value (M)	No. of Proposals Accepted	Estimated Value (M)
VE Workshop for Stations	30	\$318.5	26	\$104.1
ATC Proposals – WOFH DB Contract	29	\$85.4	13	\$60.5
ATC Proposals – KH DB Contract	16	\$29.0	7	\$18.3
ATC Proposals – MSF DB Contract	11	\$16.1	5	\$2.7
ATC Proposals – CSC	41	\$35.6	15	\$15.5
VE Workshop for Airport & City Ctr.	27	\$225.6	13	\$109.2
<b>TOTAL</b>	<b>154</b>	<b>\$710.2</b>	<b>79</b>	<b>\$310.3</b>

\*Total includes “conditionally accepted” proposals

To date, the only VE proposals that have been implemented are associated with the Alternative Technical Concepts associated with the DB contracts. The PMOC will monitor that all VE recommendations are reviewed by the grantee and that those that are accepted are implemented accordingly.

## 2.2.2 Status of Third-Party Agreements

The following table provides the status of Third Party Agreements for the project:

Agreement	Completion Date	Segment/ Contract	Status
University of Hawaii Master Agreement	Pending	I, II, IV	UH Reviewing
Leeward Community College Sub-agreement	Pending	I	UH Reviewing, will finalize after master agreement is executed
Department of Education Master Agreement and Consent to Construct	08-Feb-11	I	Executed
Department of Hawaiian Home Lands (DHHL) Master Agreement	10-Mar-10	I and MSF	Executed
DHHL Consent to Construct	30-Aug-11	I and MSF	DHHL approved
DHHL License Agreement	Pending	I and MSF	DHHL reviewing
Department of Land and Natural Resources (DLNR) Executive Order	Pending	I	DLNR review and awaiting legal description
Easement in Navy Property	Pending	I and MSF	Navy is processing easement request
HDOT Master Agreement for WOFH	31-Oct-10	I	Executed
HDOT Use and Occupancy/WOFH	Pending	I	Awaiting completion of documents necessary for FHWA approval of project within HDOT ROW
HDOT Master Agreement for KHG	Pending	II	Under review by HDOT
HDOT Use and Occupancy KHG	Pending	II	Will be completed after Master Agreement
Department of Accounting and General Services(DAGS)/Aloha Stadium	Pending	II	Under review by DAGS
Navy/General Services Administration(GSA)	Pending	III	Initiated discussions with Navy
Post Office/GSA Administration	Pending	III	Pending Design
HDOT Master Agreement Airport	Pending	III	Pending
Federal Court House/GSA	Pending	IV	Pending Design
Honolulu Community College Use & Occupancy	Pending	IV	Pending
Hawaii Community Development Agreement (HCDA)	Pending	IV	Pending Design
DAGS	Pending	IV	Pending Design
HDOT Master Agreement City Center	Pending	IV	Pending

### **2.2.3 Delivery Method**

In accordance with the Contract Packaging Plan developed by the grantee, construction of the project guideway is to be implemented in four segments. The method of delivery for the four guideway segments is as follows:

- Segment I – East Kapolei to Pearl Highlands – DB
- Segment II – Pearl Highlands to Aloha Stadium – DB
- Segment III – Aloha Stadium to Middle Street Station – DBB
- Segment IV – Middle Street Station to Ala Moana Center – DBB

The DB approach is being planned to advance the project schedule in order to minimize escalation costs and start construction of the initial portion of the project while the remainder of the project proceeds through the DBB process. Work on these early contracts (Segments I & II, MSF and CSC) is planned to be initiated ahead of the FFGA utilizing excise tax funding. However, as noted above, any design activities beyond PE or construction activities not covered by automatic pre-award authority would require an LONP, which would be considered on a case-by-case basis.

The PMOC has reviewed the grantee's contracting plan for project delivery and procurement and evaluated the soundness and adequacy of its approach to bidding and awarding of contracts, procurement of materials, equipment and vehicles, and the construction administration and construction management of the Project. The selected project delivery methods and contract packaging strategies are reasonable and are reflected in project schedules and cost estimates.

### **2.2.4 Vehicle Status**

Ansaldo Honolulu Joint Venture proposes an automated light metro car, similar to railcars currently in operation in Copenhagen, but not in the United States. Vehicles are anticipated to be run in two-railcar (consists) trains. Following is a summary of the anticipated vehicle characteristics:

- “Light Metro” (identified as Heavy Rail in SCC estimate)
- Approximate number of vehicles: 80
- Standard gauge, steel wheel on steel rail
- Fully automated, manual operation possible (hostler panel)
- Nominal vehicle dimensions:
  - Length: 64 feet
  - Width: 10 feet
  - Height: Up to 13.3 feet
  - Floor Height: 3.77 feet above top of rail (at entry)
- Nominal Passenger Capacity: 190 per vehicle (AW2 load)
- Electric traction via third rail, nominal 750V direct current (DC) supply, all axles powered
- Semi-permanently coupled, bi-directional trainsets
- Wide gangways between cars
- 2 to 3 double passenger plug doors per side (per car)
- Manual crew doors with steps

- Dynamic / regenerative braking
- Alternating current (AC) propulsion
- 30+ year design life

Vehicle procurement is included in the CSC, the status of which is discussed in Appendix B.

### 2.3 Project Management Plan and Sub-Plans

The following table presents the status of each of the grantee's management deliverables.

Management Deliverable	Current Revision No.	Date of Current Revision	DRAFT Submission	FINAL Submission	Further Revision Required	Status
Project Management Plan (PMP)	4	Mar-11	16-Feb-10	01-Apr-11	No	Acceptable for FD
Quality Management Plan (QMP)	0	01-Jan-11	14-Jun-10	06-Jan-11	No	Acceptable for FD
Real Estate Acquisition and Management Plan (RAMP)	4	21-Dec-10	21-Dec-10	01-Feb-11	No	Accepted by FTA on 08-Feb-11
Bus Fleet Management Plan (BFMP)	2	Jun-10	21-Dec-10	09-Jun-11	No	Acceptable for FD
Rail Fleet Management Plan (RFMP)	0	06-Apr-11	06-Apr-11	(Sep-11)	No	Acceptable for FD
Safety and Security Management Plan (SSMP)	2	01-Jun-11	11-Jan-11	01-Jun-11	No	Acceptable for FD
Safety and Security Certification Plan (SSCP)	1	01-Jun-11	25-Feb-11	01-Jun-11	No	Acceptable for FD
Configuration Management Plan (CMP)	0	23-Dec-10	29-Jun-10	05-Jan-11	No	Acceptable for FD
Staffing Plan	3	11-Mar-11	Mar-11	Mar-11	No	Acceptable for FD
Risk and Contingency Management Plan (RCMP)	0	22-Sep-11	22-Jul-11	26-Sep-11	No	Acceptable for FD
Operating Plan		06-Apr-11	06-Apr-11	06-Apr-11	No	Acceptable for FD
Force Account Plan	0	21-01-11	May-11	May-11	No	Acceptable for FD
Mitigation Monitoring Program	0	18-02-11	N/A	N/A	No	Acceptable for FD
Interface Management Plan	0	23-Mar-11	23-Mar-11	(Sep-11)	No	Acceptable for FD
Contract Packaging Plan	2	24-Feb-11	16-Dec-10	11-Mar-11	No	Acceptable for FD
Claims Avoidance Plan	0	06-Apr-11	12-Dec-10	17-May-11	No	Acceptable for FD
Construction Management Plan	0	12-Apr-11	12-Apr-11	15-Aug-11	No	Acceptable for FD
Contract Resident Engineer Manual (DB & DBOM)	-	12-04-11	(Jun-11)	(Sep-11)	Yes	PMOC provided comments to FTA; grantee to revise and resubmit

Note: Anticipated dates are in parentheses

## 2.4 Project Schedule Status

The grantee submitted a Master Project Schedule (MPS) on July 9, 2011 (Data Date of June 24, 2011) that identified a Full Funding Grant Agreement (FFGA) Revenue Service Date of March 2019. The PMOC has completed a review to characterize each element in the project/program schedule, from schedule development and performance measurement, through post project archive record documentation. The Schedule Review evaluated the efficiency and effectiveness of the project sponsor's project implementation during any phase of the project life cycle. The Schedule Review also validated the inclusivity of the Project scope and characterizes individual project elements within the current Project phase. It also validated the program management's readiness to enter and implement the next major program phase, the Final Design phase.

The PMOC has identified a significant number of recommendations and opportunities to strengthen the integrity of the grantee's Project Controls organization, procedures, plans, technical schedule input, and technical capacity and capability. The PMOC expects the grantee to incorporate these recommendations during the Final Design phase and prior to submission of refreshed cost estimate and schedule documents in support of a Full Funding Grant Agreement (FFGA) Application.

It is the PMOC's professional opinion that the current MPS is mechanically correct and fundamentally sound, and that it meets the FTA guidance and requirements necessary to advance the Project into the Final Design phase.

The table below provides a comparison of key milestone dates at the start of PE and in the current MPS.

Milestone Description	Finish Date		Variance (Days)
	PE Entry Baseline	MPS (Data Date 30-Sep-11)	
FTA Approve Entry into Final Design	10-Aug-10	14-Nov-11	-461
FTA Award Full Funding Grant Agreement	11-Sep-10	01-Aug-12	-690
WOFH/KH Revenue Service	14-Sep-16	27-Dec-15	262
Airport Segment Revenue Service	31-Oct-17	29-Oct-17	2
City Center Revenue Service	31-Mar-19	20-Sep-18	192

The following is a 90-day look ahead for important activities associated with the Project:

Period: November 2011 – January 2012		
Activity	Responsibility	Date
Monthly Progress Meeting	HART, PMC, GEC and PMOC	November 2, 2011 (Conference Call Only)
Monthly Progress Meeting	HART, PMC, GEC and PMOC	December 7, 2011
Monthly Progress Meeting	HART, PMC, GEC and PMOC	January 11, 2012
Core Systems Design Workshop	HART, PMC, GEC and PMOC	January 2012
Safety and Security Workshop	HART, PMC, GEC and PMOC	TBD

## 2.5 Project Cost Status

The current Project Budget is as follows:

Base Cost Estimate	\$4,117 billion
Total Contingency	\$0.865 billion (21.0% of Base Cost Estimate)
Finance Charges	\$0.230 billion
<b>Total Project Cost</b>	<b>\$5.213 billion</b>

**Total Expenditures to Date \$0.229 billion (August 2011)** (excludes pre-PE costs)

### 2.5.1 Standard Cost Category (SCC)

The SCC Workbook is submitted as a separate electronic file.

### 2.5.2 Funding Sources

The following are the project capital revenue (funding) sources:

Beginning Cash Balance	\$0.154 billion
General Excise Tax (GET)	\$3.524 billion
Section 5309	\$1.550 billion
Section 5307	\$0.305 billion
Interest	\$0.011 billion
<b>Total</b>	<b>\$5.544 billion</b>

The GET surcharge receipts received to date are approximately \$673 million.

## 2.6 Project Risk

The PMOC performed “an evaluation of the reliability of the grantee’s project scope, cost estimate, and schedule, with special focus on the elements of uncertainty associated with the effectiveness and efficiency of the grantee’s project implementation and within the context of the surrounding project conditions.” Through the process of risk and contingency review, the

PMOC attempts to aid the grantee in its efforts to better define the project's risks and to provide avenues for recovery should those risks become reality.

The PMOC has provided recommendations for adjustments to scope, cost, and project delivery options and risk mitigation options and alternatives, particularly in regard to contingencies, in order to respond to established project risks.

Three Risk Assessment workshops have been held:

- Risk Workshop 1 was held April 5-8, 2011 in Honolulu and addressed the following: preliminary PMOC findings from a scope, schedule and cost review; Risk Register, and action items; and path forward.
- Risk Workshop 2 was held April 27, 2011 in San Francisco and addressed the following: quantitative risk assessment process; summary of key PMOC findings for the cost and schedule risk analyses; Risk Mitigation; and Path forward. To condition the cost estimate for the cost risk analysis, the PMOC identified approximately \$52 million (Year of Expenditure) in net adjustments to the Base Cost Estimate (BCE). To condition the Master Project Schedule (MPS) for the schedule risk analysis, the PMOC identified numerous adjustments that were incorporated into an Adjusted Project Schedule (APS).
- Risk Workshop 3 was held August 2, 2011 and addressed the Draft Risk and Contingency Management Plan (RCMP).

As a result of the scope, schedule, cost and risk assessments, the PMOC recommends:

- The grantee should hold its current budget of \$5.213 billion. This budget should include \$230.0 million in finance costs and \$813.5 million in contingency (allocated and unallocated), or 19.5% of the Adjusted BCE.
- Revenue Service Date should be no earlier than the first quarter of calendar year 2020.

## 2.7 Action Items

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
1	Perform onsite review of PMP and QMP activities	PMOC	Mar-11	Oct-11		Closed
2	Include Interface Management in monthly presentation and monthly report	HART	Aug-11	Sep-11		Closed
3	Provide DHHL Agreement/ ROE	HART	Aug-11	Aug-11		Open
4	Provide Estimate at Completion and Contingency balance in monthly presentation and monthly report	HART	Aug-11	Sep-11		Closed
5	Provide KHG contract schedule	HART	Sep-11	Oct-11		Open
6	Include GEC II staffing levels in monthly presentation and monthly report	HART	Sep-11	Oct-11		Open
7	Include Real Estate budget in monthly presentation and monthly report	HART	Sep-11	Oct-11		Open
8	Provide Pre-award Buy America Audit for CSC Contract	HART	Sep-11	Oct-11		Closed
9	Provide SOA Roadmap	HART/SOA	Sep-11	Oct-11		Closed
10	Provide PMP and QMP Compliance Review Agenda	PMOC	Sep-11	Sep-11		Closed
11	Include breakdown of risk by category	HART	Sep-11	Oct-11		Open
12	Provide MPS with Data Date of July 29, 2011	HART	Sept-11	Sep-11		Open
13	Provide HDOT SOA source of funds	HART/SOA	Sep-11	Oct-11		Open
14	Include DBE goal in monthly presentation	HART	Oct-11	Nov-11		Open
15	Provide Environmental Review Documentation Form for 5 proposed laydown yard sites	HART	Oct-11	Oct-11		Closed

## APPENDICES

### Appendix A: Acronym List

ATC	▪ Alternative Technical Concept
BAFO	▪ Best and Final Offers
BFMP	▪ Bus Fleet Management Plan
CMP	▪ Construction Management Plan
CSC	▪ Core Systems Contract
DB	▪ Design-Build
DBB	▪ Design-Bid-Build
DBOM	▪ Design-Build-Operate-Maintain
DCCA	▪ Department of Commerce and Consumer Affairs
DHHL	▪ Department of Hawaiian Homelands
DOE	▪ Department of Education
FD	▪ Final Design
FEIS	▪ Final Environmental Impact Statement
FFGA	▪ Full Funding Grant Agreement
FHWA	▪ Federal Highway Administration
FTA	▪ Federal Transit Administration
FY	▪ Fiscal Year
GEC	▪ General Engineering Consultant
GET	▪ General Excise Tax
GSA	▪ General Services Administration
HART	▪ Honolulu Authority for Rapid Transportation
HDOT	▪ Hawaii Department of Transportation
KH	▪ Kamehameha Highway
LCC	▪ Leeward Community College
LEED	▪ Leadership in Energy and Environmental Design (LEED)
LONP	▪ Letter of No Prejudice
MOA	▪ Memorandum of Agreement
MOT	▪ Maintenance of Traffic
MPS	▪ Master Project Schedule
MSF	▪ Maintenance and Storage Facility
NCR	▪ Non-Compliance Report
NEPA	▪ National Environmental Policy Act
NTP	▪ Notice to Proceed
OCIP	▪ Owner Controlled Insurance Program
PA	▪ Programmatic Agreement
PE	▪ Preliminary Engineering
PMC	▪ Project Management Consultant
PMOC	▪ Project Management Oversight Contractor
PMP	▪ Project Management Plan
QAM	▪ Quality Assurance Manager
QAP	▪ Quality Assurance Plan
QMP	▪ Quality Management Plan
RAMP	▪ Real Estate Acquisition and Management Plan
RCMP	▪ Risk and Contingency Management Plan
RFMP	▪ Rail Fleet Management Plan
RFP	▪ Request for Proposals
RFQ	▪ Request for Qualifications
ROD	▪ Record of Decision
ROE	▪ Right of Entry
RSD	▪ Revenue Service Date
SCC	▪ Standard Cost Category

- SOA     ▪ State Oversight Agency
- SSCP    ▪ Safety and Security Certification Plan
- SSMP    ▪ Safety and Security Management Plan
- SSPP    ▪ System Safety Program Plan
- SSSPS   ▪ System Safety and Security Program Standards
- TCC     ▪ Technical Capacity and Capability
- VE       ▪ Value Engineering
- WOFH    ▪ West Oahu/Farrington Highway
- YOE     ▪ Year of Expenditure

## Appendix B: Contract Status

The following sections provide the scope and status of the various contracts identified for this Project.

### Project Management Consultant (PMC) Contract.

- Scope – The consultant will serve as a program manager in providing oversight of the PE, Final Design, and construction activities for all DB and DBB contracts.
- Status – The grantee awarded a contract to InfraConsult LLC in November 2009 to provide Project Management Support Services. The PMC Agreement is for five years with a Not-to-Exceed amount of \$36.7 million.
- It must be noted that the PMC contract was not solicited with the required Federal clauses based on the Fiscal Year 2010 Procurement System Review Final Report prepared for the FTA. The FTA has notified the grantee that it must proceed with timely re-procurement of the PMC contract, which includes Federal clauses. The grantee issued an RFP on August 2, 2011 and anticipates issuing NTP to the selected PMC by December 2011. The terms of the NTP will be determined during negotiations with the selected firm.

### General Engineering Consultant (GEC II) Contract

- Scope – The consultant will provide services related to elevated guideway engineering, systems engineering, rail station design, construction management oversight, procurement, contract administration, configuration control, claims support, scheduling, project financing and environmental planning.
- Status – The grantee executed the GEC II contract with Parsons Brinkerhoff on June 30, 2011. The contract amount is \$300 million (\$150 million base amount plus \$150 million allowance amount). It is anticipated that the \$150 million allowance for additional work will be used after the initial three-year term of the contract. However, it is possible with a contract amendment to expend a portion of the allowance amount any time during the term of the contract. Notice to Proceed (NTP) #1 was issued on August 2, 2011. It should be noted that the cost for the first year of the contract is still being negotiated. The results of these negotiations should not increase the value of the \$300 million total contract amount. HART anticipates issuing a contract amendment to the GEC II contract for the first year of the contract in October 2011.
- Cost
  - Original Contract Value – \$300,000,000
  - Current Contract Value – \$150,000,000
  - Expended to Date – \$0
  - % Expended – 0%
  - Approved Change Orders – \$0
- Schedule – The contract duration is approximately 36 months from NTP with an option for an additional 36 months.
- Issues or Concerns

- None identified at this time.

#### West Oahu/Farrington Highway (WOFH) DB Contract

- Scope – This contract includes the design and construction of a portion of the guideway alignment from the initial station at East Kapolei and continuing approximately 6.8 miles to a point just east of the planned Pearl Highlands station. Part of the alignment runs along the east side of North South Road. This portion of the guideway, which also includes alignment in the median of Farrington Highway, is being identified as the West Oahu/Farrington Highway Design-Build Contract. The guideway is comprised mostly of a two-track aerial structure with a 0.3-mile portion of twin single-track guideways and a 0.3-mile section of guideway at grade.

As the alignment approaches Leeward Community College (LCC), the guideway alignment traverses from the median of Farrington Highway to the makai side of the highway where it transitions to an at-grade section. Once at grade, the entrances to the Maintenance and Storage Facility (MSF) are encountered. The Guideway crosses Ala Ike Road at two locations, with the roadway passing under the guideway alignment in box-culverts. At the LCC Station, a below-grade station plaza area is planned, to allow passengers to walk under the guideway to access either platform.

- Status – Kiewit was awarded a contract on November 18, 2009. Following NTPs have been issued:
  - NTP #1 – Issued December 1, 2009 and authorized \$27 million to complete elements of PE whose principal purpose is refinement and validation of information supporting the NEPA process.
  - NTP #1A – Issued March 11, 2010 and authorized \$25.8 million for PE activities to be completed.
  - NTP #1B - Issued March 23, 2010 and authorized \$21.2 million for interim design activities.
  - NTP #1C – Issued June 7, 2010 and authorized \$3.5 million for test and demonstration drilled shafts to complete the deep foundations interim design.
  - NTP #1D – Issued January 6, 2011 and authorized \$8.7 for continued administrative costs through June 2011 including project management, quality management, safety plan administration, coordination with local agencies, design management, and public information.
  - NTP #2 – Issued March 3, 2011 and authorized \$62 million for work activities related to the relocation of utilities, in accordance with the grantee’s pre-award authority associated with the FTA’s issuance of a ROD.
  - NTP #3 – Issued June 2011 and authorized \$4.7 million for Final Design activities to allow contractor to submit drawings to the City’s Department of Permit and Planning for permit approval.
- Schedule – The original contract duration was approximately 43 months from NTP. The grantee has approved the baseline schedule submittal. The contractor is preparing a schedule analysis for NTP delays.

- Cost
  - Original Contract Value – \$482,924,000
  - Current Contract Value – \$482,924,000
  - Expended to Date – \$110,400.00
  - % Expended – 23.0%
  - Approved Change Orders – \$4,000,000
  
- Issues or Concerns
  - The executed agreement called for issuance of all four NTPs within 120 calendar days of December 1, 2009. Since that requirement was not met, the grantee has been coordinating with Kiewit’s to determine what impact there has been to the approved baseline schedule.
  - The WOFH DB Contractor intends to utilize an existing facility (GPRM Prestress) for pre-casting and prestressing of the concrete guideway segments. This facility was identified in the ROD. The contractor is negotiating with the owner and the current lease-holder to obtain use of the property. However, if the GPRM facility is not secured, another facility will be required. Any impacts to the budget and/or schedule cannot be assessed until a decision is made on the site to be used for pre-casting activities. If another site is selected, the grantee is aware that they must coordinate with FTA to determine the extent of any environmental documentation that may be required.

Kamehameha Highway Guideway DB Contract

- Scope – The contractor will design and construct a portion of the guideway alignment from the initial station at East Pearl Highlands to a point just east of the planned Aloha Stadium Station, a distance of approximately 3.9 miles. This portion of the guideway is being identified as the Kamehameha Highway Design-Build Contract. The guideway is comprised of a two-track aerial structure.
  
- Status – Kiewit was awarded a contract on June 30, 2011. Following NTPs have been issued:
  - NTP #1 – Issued July 12, 2011 and authorized \$102 million to perform PE including interim/definitive design submittals and coordinating with other contracts.
  
- Cost
  - Original Contract Value – \$372,150,000
  - Current Contract Value – \$372,150,000
  - Expended to Date – \$0
  - % Expended – 0%
  - Approved Change Orders – \$0
  
- Schedule – The contract duration is approximately 48 months from NTP.
  
- Issues or Concerns
  - None identified at this time.

### Maintenance and Storage Facility DB Contract

- Scope – The contractor will design and construct the MSF to accommodate 80 revenue vehicles. The maximum capacity of the site is 100 revenue vehicles. The Shop Facility will include administrative and operational offices for the agency, including an Operations Control Center. The MSF will be designed and commissioned to achieve Leadership in Energy and Environmental Design (LEED) Green Building Rating System Silver Certification, and will operate in accordance with FTA Sustainable Maintenance and Operational Standards. The scope of the contract includes the procurement of all rail materials.
- Status – Kiewit/Kobayashi Joint Venture was awarded a contract on June 30, 2011. Following NTPs have been issued:
  - NTP #1 – Issued on July 25, 2011 and authorized \$16.8 million to perform PE, associated site investigations and coordinating with other contractors.
- Cost
  - Original Contract Value – \$195,258,000
  - Current Contract Value – \$195,258,000
  - Expended to Date – \$0
  - % Expended – 0%
  - Approved Change Orders – \$0
- Schedule – The contract duration is approximately 36 months from NTP.
- Issues or Concerns
  - The Memorandum of Agreement (MOA) has been executed with the DHHL for the Navy Drum Site. However, the grantee must sign a License Agreement with the DHHL prior to any construction beginning. A Right of Entry (ROE) for construction was approved by the DHHL Board. The ROE allows access to Navy Drum Site for construction until the property acquisition occurs or the License Agreement is finalized.
  - The grantee anticipates that Kiewit/Kobayashi will submit a change order for material cost escalation since there has been a delay in execution of the contract.

### Vehicle/Core Systems DBOM Contract (CSC)

- Scope – Design-Build-Operate-Maintain (DBOM) contract will include:
  - Design and manufacture of vehicles
  - Design, manufacture, and installation of systems components including train control communications, traction power, Central Control and fare collection equipment
  - Operations and Maintenance.

The Operations and Maintenance contract will extend 5 years beyond the full build revenue date (2019), with an additional 5 year option. The Operations and Maintenance contractor will be responsible for Intermediate Operating Section Openings.

- Status – Ansaldo Honolulu Joint Venture was selected by the grantee on March 21, 2011. Protests by the two non-selected proposers, Bombardier Transportation USA, Inc. and Sumitomo Corporation of America, have both been denied. HART held a video conference with Ansaldo Honolulu Joint Venture representatives on September 8, 2011 to discuss financial issues. HART is now in the process of preparing the contract.
- Cost – The contract amount is \$574 million, including equipment and installation.
- Issues or Concerns
  - The PMOC has identified numerous issues and questions related to the systems design that require grantee clarification. These items were identified during a review of the selected CSC proposal and will need to be resolved during Final Design. A future workshop will be held to discuss these issues. However, a follow-up workshop cannot be held until all protests associated with the CSC DBOM are resolved.
  - Pre-Award Buy America Audit must be completed prior to contract execution.

#### Airport Guideway & Utility Relocation

- Scope – The project delivery method for the guideway and utility relocations will be DBB. The grantee anticipates awarding separate construction contracts for the utility relocation and guideway. This segment extends from Aloha Stadium Station to Middle Street Station.
- Status – The grantee has completed PE of this segment. The RFQ for design services for Final Design was issued in January 2011 with responses due in March 2011. The grantee began interviews in May 2011. The grantee anticipates issuing an NTP in November 2011.
- Issues or Concerns
  - None identified at this time.

#### City Center Guideway & Utility Relocation

- Scope – The project delivery method for the guideway and utility relocations will be DBB. The grantee anticipates awarding separate construction contracts for the utility relocation and guideway. This segment extends from Middle Street Station to Ala Moana Center Station. The guideway contract will likely now include the Ala Moana Center Station.
- Status – The grantee has completed PE of this segment. The grantee will not proceed with procurement of design services until after the procurement of design services for the Airport Guideway is complete.
- Issues or Concerns
  - None identified at this time.

### Station Packages

- Scope – All stations will be implemented using DBB. The grantee has developed station group packages for design, and it intends to issue construction contracts based on those station packages. Following are the packages that the grantee is currently considering:
  - West Oahu Station Group (3 stations): East Kapolei, UH-West Oahu and Hoopili.
  - Farrington Station Group (3 stations): West Loch, Waipahu Transit Center and Leeward Community College.
  - Kamehameha Station Group (3 stations): Pearl Highlands, Pearlridge and Aloha Stadium.
  - Airport Station Group (4 stations): Pearl Harbor Navy Base, Honolulu International Airport, Lagoon Drive and Middle Street Transit Center.
  - Dillingham Station Group (2 stations): Kalihi and Kapalama.
  - City Center Group (3 stations): Iwilei, Chinatown and Downtown.
  - Kakaako Station Group (2 stations): Civic Center and Kakaako, plus station finishes on the Ala Moana Station
  - Pearl Highlands Station Parking Garage and H2 Ramps
  
- Status
  - Farrington Station Group Design Contract – The grantee selected HDR/HPE, Inc. for the design contract. Advanced PE began in February 2011. Eighteen Requests for Contract Changes have been submitted by the designer for various design issues totaling approximately \$750K.
  - Kamehameha Station Group Design Contract – The Request for Qualifications (RFQ) to begin advanced PE was issued in June 2011. NTP is anticipated to be issued in December 2011.
  - West Oahu Station Group – The grantee selected URS Corporation on March 21, 2011 and negotiations are currently underway. NTP #1 is anticipated to be issued in November 2011 to allow for development of management plans and Advanced PE to begin. The grantee is still negotiating the full scope, schedule, and cost associated with NTP #1.
  
- Issues or Concerns
  - None identified at this time.

### Elevators and Escalators

- Scope – The grantee originally intended to issue a contract to furnish, install, test, and commission all elevator and escalator equipment. However, the grantee now anticipates using a DB approach and may include Platform Edge Screens with this procurement.
  
- Status – The grantee anticipates beginning procurement for this contract in late 2011.
  
- Issues or Concerns
  - None identified at this time.

## Appendix C: PE Status by Contract

*Note: Within the context of this matrix, Advanced PE is subjectively defined as greater than 30% and less than 65%. Design development greater than 65% typically occurs during Final Design. Within the confines of the DB contracts, the Special Provisions define the following design stages:*

- (1) *Definitive Design*
- (2) *Interim Design*
- (3) *Final Design*
- (4) *Working Plans*
- (5) *As-Constructed Plans and Specifications*

*The Special Provisions of each contract provide specific criteria for each design phase.*

<b>Contract</b>	<b>Segment</b>	<b>PE Status</b>
West Oahu Farrington Highway Guideway DB Contract	Segment I – East Kapolei to Pearl Highlands  Length: 6 miles	GEC I prepared contract documents for DB procurement, including 30% plans. Advanced PE was continued by Kiewit under NTP #1, 1A, 1B, 1C, and 1D. NTP #2 issued on March 3, 2011 for work activities related to the relocation of utilities. NTP #3 issued in June 2011 for Final Design under LONP.  Kiewit has one of eight Load Test Shafts remaining to be completed. No significant changes to design have been noted as a result of testing. Utility relocations are continuing on 6-inch gas line.
Kamehameha Highway Guideway DB Contract	Segment II – Pearl Highlands to Aloha Stadium  Length: 4 miles	GEC I prepared contract documents for DB procurement, including 30% plans. NTP #1 issued to Kiewit on July 12, 2011 allowing mobilization, insurance, development of management plans and procedures, and Definitive Design and Interim.
Airport Guideway Contract and Utilities Relocation DBB Contract	Segment III – Aloha Stadium to Middle Street  Length: 5 miles	GEC I prepared 30% plans for segment. Advanced PE will be performed with grantee's selection of design consultant and issuance of NTP in October 2011.
City Center Guideway & Utilities DBB Contracts	Segment IV – Middle Street to Ala Moana Center  Length: 5 miles	GEC I prepared 30% plans for segment. Advanced PE will be performed with grantee's selection of design consultant after completion of procurement for Airport Guideway design services.
Maintenance & Storage Facility DB Contract	Segment I	GEC I prepared contract documents for DB procurement, including 30% plans. NTP #1 issued to Kiewit/Kobayashi on July 25, 2011 allowing mobilization, insurance, development of management plans and procedures, and Definitive Design and Interim.

<b>Contract</b>	<b>Segment</b>	<b>PE Status</b>
WOFH Station Group (3) DBB Contract	Segment I	GEC I prepared 20% plans for segment. It is anticipated that NTP will be issued to URS Corporation in November 2011 to begin Advanced PE.
Farrington Station Group (3) DBB Contract	Segment I	GEC I prepared 20% plans for segment. NTP was issued to HDR/HPE, Inc was issued on March 15, 2011 to begin advanced PE. The following preliminary activities are on-going: <ul style="list-style-type: none"> <li>• Site survey complete</li> <li>• Soil test borings pending completion</li> <li>• Monthly interface meetings with WOFH ongoing</li> <li>• Architectural/Civil/Landscape/Structural discussions</li> </ul>
Kamehameha Station Group (3)	Segment II	GEC I prepared 20% plans for segment. RFQ to begin advanced PE is expected to be released in August 2011.
Airport Station Group (4)	Segment III	GEC I prepared 20% plans for segment.
Dillingham Station Group (2)	Segment IV	GEC I prepared 20% plans for segment.
City Center Station Group (3)	Segment IV	GEC I prepared 20% plans for segment.
Kakaako Station Group (3)	Segment IV	GEC I prepared 20% plans for segment.
Pearl Highland H2 Ramps and Multiple Parking Structure	Segment I	GEC I prepared 20% plans for segment. Grantee is repackaging to include the Pearl Highland Station in the KH Station Group and to separate the H2 Ramps and Multiple Parking Structure into a separate contract.
Core Systems Contract DBOM Contract	Segment 1-IV	GEC I prepared contract documents for DBOM procurement, including 15-20% plans. Contractor will advance the conceptual drawings and performance specifications in the RFP Part 2 contract documents to the Definitive and Interim Design levels during the early portion of contract.  Ansaldo Honolulu Joint Venture was selected on March 21, 2011. However, contract is on hold pending resolution of protests by non-selected bidders.

**Appendix D: Bidding Schedule**

Contract	Type	RFP - DBB		RFP Part 1 - DB		RFP Part II - DB		Exec.	LONP Request			NTP				Contr. Value (M)
		Advert	Bid	Advert	Qual.	Issue	Proposal		Draft	Final	FTA Approve	NTP	Date	Desc.	NTP Value (M)	
West Oahu Farrington Highway (WOFH) Guideway	DB	N/A	N/A	04-Feb-09	13-Mar-09	03-Apr-09	28-Aug-09	17-Nov-09	11-Apr-11 (FD)	21-Apr-11 (FD)	24-May-11 (FD)	1	01-Dec-09	PE to support to FEIS	\$48.2	\$482.9 <sup>(1)</sup>
												1A	11-Mar-10	Geotech	\$4.7	
												1B	23-Mar-10	Interim Design (PE)	\$21.2	
												1C	04-Jun-10	Test Shafts	\$14.0	
												1D	TBD	Admin & Bonds	TBD	
												2	15-Feb-11	Utility Relocations	—	
												3	24-May-11	FD	\$3.9	
												4	TBD	Construction	—	
Kamehameha Highway Guideway (KHG)	DB	N/A	N/A	18-Nov-09	05-Jan-10	19-Mar-10	07-Oct-10	30-Jun-11	—	—	—	1	12-Jul-11	PE, Test shafts, Utility	—	\$372.0 <sup>(1)</sup>
												2	TBD	FD	—	
												3	TBD	Construction	—	
Maintenance and Storage Facility (MSF)	DB	N/A	N/A	29-May-09	02-Jul-09	24-Jul-09	17-Feb-10	30-Jun-11	—	—	—	1	25-Jul-11	PE, test shafts	—	\$195.0 <sup>(1)</sup>
												2	TBD	FD	—	
												3	TBD	Construction	—	

Contract	Type	RFP - DBB		RFP Part 1 - DB		RFP Part II - DB		Exec.	LONP Request			NTP			Contr. Value (M)	
		Advert	Bid	Advert	Qual.	Issue	Proposal		Draft	Final	FTA Approve	NTP	Date	Desc.		NTP Value (M)
Vehicle/Core Systems Contract (CSC)	DBO M	N/A	N/A	09-Apr-09	05-Jun-09	17-Aug-09	2 <sup>nd</sup> BAFO Received 24-Feb-11	Protest Stay Remove 13-Aug-11	—	—	—	—	11-Oct-11	—	—	\$574.0 <sup>(1)</sup>
Airport Utility Relocation	DBB	01-Nov-12	28-Feb-13	N/A	N/A	N/A	N/A		—	—	—	—	01-Mar-13	—	—	
Airport Guideway	DBB	22-Feb-13	22-Jun-13	N/A	N/A	N/A	N/A		—	—	—	—	23-Jun-13	—	—	
City Center Utility Relocation	DBB	15-Feb-13	14-Jun-13	N/A	N/A	N/A	N/A		—	—	—	—	15-Jun-13	—	—	
City Center Guideway & Ala Moana Station	DBB	7-Nov-13	6-Mar-14	N/A	N/A	N/A	N/A		—	—	—	—	16-Apr-14	—	—	
West Oahu Station Group (3) Construction DBB Contract	DBB	15-Aug-12	12-Dec-12	N/A	N/A	N/A	N/A		—	—	—	—	13-Dec-12	—	—	
Farrington Station Group (3) Construction	DBB	01-Mar-12	28-Jun-12	N/A	N/A	N/A	N/A		—	—	—	—	29-Jun-12	—	—	
Pearl Highlands Parking and Ramps	DBB	11-Jun-15	08-Oct-16	N/A	N/A	N/A	N/A		—	—	—	—	09-Oct-16	—	—	
Kamehameha Station Group (2)	DBB	25-Oct-12	21-Feb-13	N/A	N/A	N/A	N/A		—	—	—	—	22-Feb-13	—	—	
Airport Station Group (3)	DBB	07-Jun-14	04-Oct-14	N/A	N/A	N/A	N/A		—	—	—	—	05-Oct-14	—	—	
Dillingham Station Group (3)	DBB	04-Nov-14	03-Mar-15	N/A	N/A	N/A	N/A		—	—	—	—	04-Mar-15	—	—	
City Center Station Group (3)	DBB	01-Jun-15	30-Apr-15	N/A	N/A	N/A	N/A		—	—	—	—	01-May-15	—	—	

Contract	Type	RFP - DBB		RFP Part 1 - DB		RFP Part II - DB		Exec.	LONP Request			NTP			Contr. Value (M)	
		Advert	Bid	Advert	Qual.	Issue	Proposal		Draft	Final	FTA Approve	NTP	Date	Desc.		NTP Value (M)
Kakaako Station Group (3)	DBB	14-Nov-15	12-Mar-16	N/A	N/A	N/A	N/A		—	—	—	—	13-Mar-16	—	—	
Elevators/Escalators	DBB	30-Sep-11	30-Dec-11	N/A	N/A	N/A	N/A		—	—	—	—	25-Nov-11	—	—	
Plants and Shrubs (Owner Furnished)	DBB	10-Sep-11	30-Dec-11	N/A	N/A	N/A	N/A		—	—	—	—	02-Jan-12	—	—	
Fare Collection (Owner Furnished)	DBB	—	—	N/A	N/A	N/A	N/A		—	—	—	—	—	—	—	

<sup>1</sup> Indicates actual bid amount

## Appendix E: PE Approval Letter Requirements

No.	Item	Completion Date	Comments
<b>Project Scope, Design and Development</b>			
1	Identify any third party agreements necessary for project completion, including utility agreements with private and public owners and military	Jan-10	Complete
2	Resolve the specific regarding proximity of the guideway to runways 22R/4L and 22L/4R at the Honolulu International Airport with HDOT and FAA	May-10	Complete
3	Fully develop vehicle basis of design and functional sizing	Jun-11	Complete
4	Determine rail fleet size requirement	Jun-11	Complete
5	Fully develop scope for the administration building and operations control center	Jun-11	Complete – will be refined by MSF contractor
6	Determine the final location of the maintenance and storage facility		Execution of the License Agreement with DHHL is pending; Right of Entry is pending
7	Finalize a contracting packaging plan which includes a source selection plan(s) and contract specific work plans	Mar-11	Complete
8	Develop strategies to streamline the City's process to award contracts and to enter into grant agreements, especially as applicable to FTA grants	Jul-11	Complete – will be addressed further by HART Board
9	Develop a preliminary operation plan	08-Feb-10	Complete
10	Ensure the service velocity does not erode over the next course of design changes	Jun-11	Complete
<b>Project Schedule</b>			
11	Provide a baseline of the master Project Schedule (MPS) early in PE which will be used for monthly progress updates and tracking schedule variances	9-Jul-11	Complete
12	Address the utilization manpower and equipment resource loading and budget and cost loading	9-Jul-11	Complete
13	Include critical activities in the MPS: utility activities, real estate acquisitions, system integration, starting and testing, operational commissioning and training, vehicle procurement, major construction material procurement, FTA review and comment, detail activities for early construction packages	9-Jul-11	Complete
14	Develop a right-of-way schedule	9-Jul-11	Complete
15	Modify the Work Breakdown Structure to cross over with the project budget and cost breakdown structure	21-Dec-09	Complete

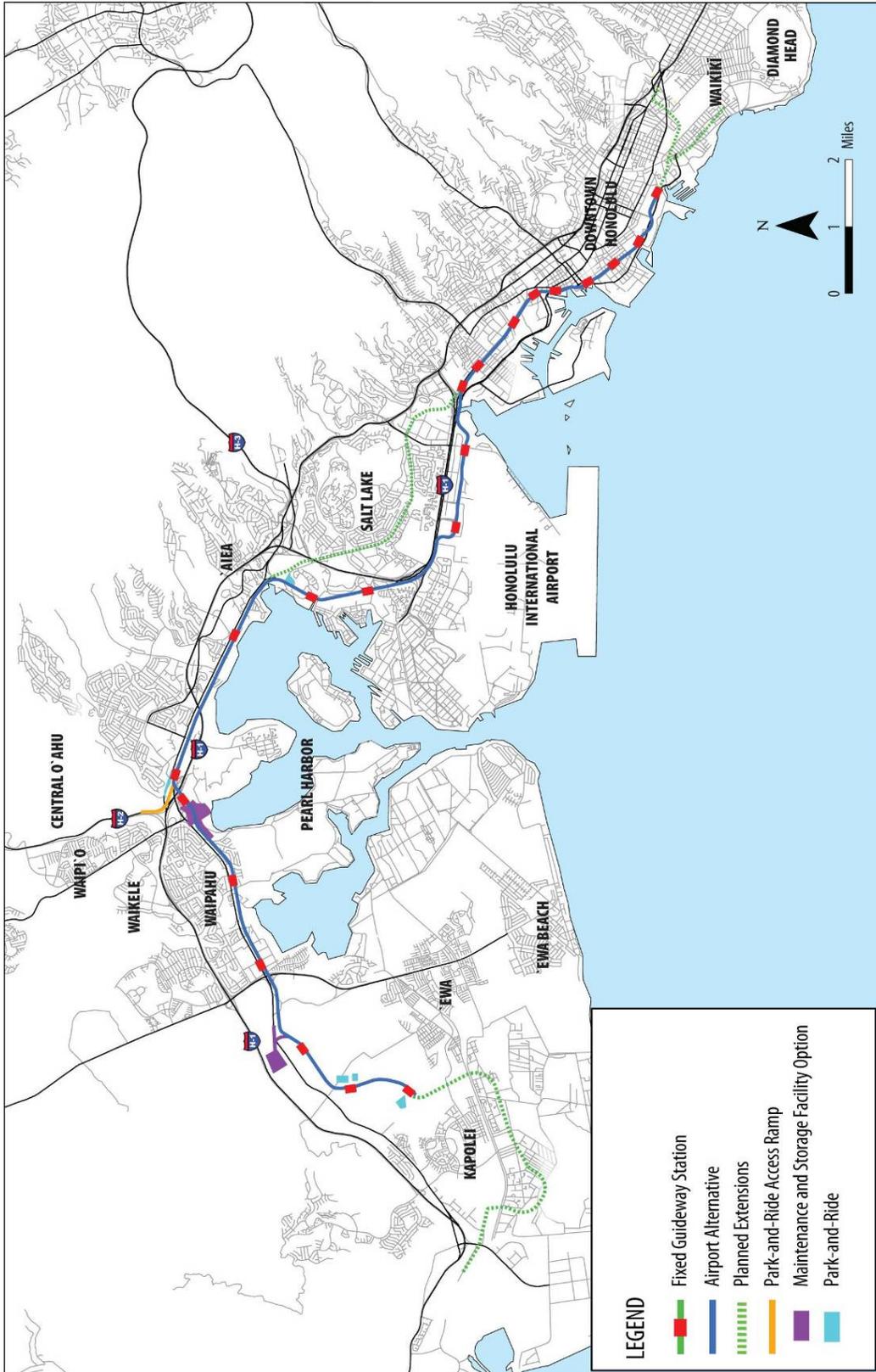
No.	Item	Completion Date	Comments
<b>Project Cost</b>			
16	Develop a detailed bottoms-up-style project cost estimate to Standard Cost Category format. The estimate should be detailed sufficiently to determine distributions of materials, labor, equipment and general conditions elements at a minimum. The soft cost estimates should be based on staffing plans, force account plans, contracts and so forth rather than solely on percentages. The estimate should eliminate parametric-style values, cost estimating relationships, and lump sums as much as possible during PE	15-Apr-11	Complete
17	Escalate the cost estimate in accordance with the MPS	15-Apr-11	Complete
18	Provide justification and backup documents to support the quantification and assumptions for the "soft costs" and related general conditions of the project	15-Apr-11	Complete
<b>Technical Capacity</b>			
19	Configuration management and change control mechanism	Jan-11	Complete
20	Develop detailed staffing plans for all remaining phases of the project to ensure adequate technical capacity. The plans should include the dates by which the City will fill each key position. All key City management positions should be filled during PE.	May-11	Complete – Grantee to develop Succession Plan (not required for FD approval)
21	Work with the State of Hawaii to establish a State Safety Oversight Agency office to oversee the project	6-Apr-10	Complete
22	Submit a fully developed Rail Fleet Management Plan	8-Jul-11	Complete
23	Have a quantifiable metrics for measuring the real status of work, both cost and schedule of all professional service contracts, and any inter-local agreements for participatory services	Jun-11	Complete
24	Develop a Contingency Management Plan which will identify the specific risks and implement the anticipated mitigation measures		Complete
25	Develop an Environmental Mitigation Program that identifies required environmental mitigation actions and the party responsible for the mitigation and that will eventually become the basis for quarterly mitigation monitoring and quarterly mitigation reports	Jan-11	Complete
26	Update and implement the:		
	Real Estate Acquisition and Management Plan	Jan-11	Complete
	Bus Fleet Management Plan	Jun-11	Complete
	Safety and Security Management Plan	Jun-11	Complete
	Quality Management Plan	12-Jan-11	Complete

**Appendix F: Project Overview and Map (Transmitted as a separate file)**

**Appendix G: Safety and Security Checklist (Transmitted as a separate file)**



# Honolulu High-Capacity Transit Corridor Project Map



## Appendix G: Safety and Security Checklist

<b>Project Overview</b>			
Project Name	Honolulu High-Capacity Transit Corridor		
Project mode (Rail, Bus, BRT, Multimode)	Rail		
Project phase (Preliminary Engineering, Design, Construction, or Start-up)	PE		
Project Delivery Method (Design/Build, Design/Build/Operate Maintain, CMGC, etc)	DB, DBB and DBOM		
<b>Project Plans</b>	<b>Version</b>	<b>Review by FTA</b>	<b>Status</b>
Safety and Security Management Plan	2.0	Jun-11	PMOC has recommended acceptance
Safety and Security Certification Plan	1.0	Jun-11	PMOC has recommended acceptance
System Safety Program Plan			Submittal date TBD
System Security Plan or Security and Emergency Preparedness Plan (SSEPP)			Submittal date TBD
Construction Safety and Security Plan	1.0	Jun-11	Submitted in Mar-11
<b>Safety and Security Authority</b>	<b>Y/N</b>		<b>Status</b>
Is the grantee subject to 49 CFR Part 659 state safety oversight requirements?	Y		
Has the state designated an oversight agency as per Part 659.9	Y		Executive Order 10-04 effective April 6, 2010
Has the oversight agency reviewed and approved the grantee's SSPP as per Part 659.17?	N		Submission/Approval in 2014
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	N		Submission/Approval in 2014
Did the oversight agency participate in the last Quarterly Program Review Meeting?	N		SOA in formation
Has the grantee submitted its safety certification plan to the oversight agency?	N		SOA in formation
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N		None issued to date
<b>SSMP Monitoring</b>			
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	Y		
Grantee reviews the SSMP and related project plans to determine if updates are necessary?	Y		
Does the grantee implement a process through which the Designated Function (DF) for Safety and DF for Security are integrated into the overall project management team? Please specify.	Y		
Does the grantee maintain a regularly scheduled report on the status of safety and security activities?	Y		Reported Monthly
Has the grantee established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	Y		
Does the grantee update the safety and security responsibility matrix/organization chart as necessary?	Y		

Has the grantee allocated sufficient resources to oversee or carry out safety and security activities?	TBD	
Has the grantee developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases?	Y	
Does the grantee implement regularly scheduled meetings to track to resolution any identified hazards and/or vulnerabilities?	Y	
Does the grantee monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	
Does the grantee ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	Y	
Has the grantee ensured the development of safety design criteria?	Y	
Has the grantee ensured the development of security design criteria?	Y	
Has the grantee verified conformance with the safety and security requirements in the design?	N	Will be done during FD/Construction
Has the grantee identified conformance with safety and security requirements in equipment and materials procurement?	N	Will be done during FD/Construction
Has the grantee verified construction specification conformance?	N	Will be done during construction
Has the grantee identified safety and security critical tests to be performed prior to passenger operations?	N	Will be done during Rail Activation phase
Has the grantee verified conformance with safety and security requirements during testing, inspection and start up phases?	N	Will be done during Rail Activation phase
Does the grantee evaluate change orders, design waivers, or test variances for potential hazards and/or vulnerabilities?	N	Will be done during FD/Construction
Has the grantee ensured the performance of safety and security analyses for proposed work-arounds?	N	Will be done during Rail Activation phase
Has the grantee demonstrated through meetings or other methods, the integration of safety and security in the following: <ul style="list-style-type: none"> <li>• Activation Plan and Procedures</li> <li>• Integrated Test Plan and Procedures</li> <li>• Operations and Maintenance Plan</li> <li>• Emergency Operations Plan</li> </ul>	N	Will be done during Rail Activation phase
Has the grantee issued final safety and security certification?	N	Will be done after completion of Rail Activation phase
Has the grantee issued the final safety and security verification report?	N	Will be done during Rail Activation phase
<b>Construction Safety</b>		
Does the grantee have a documented/implementation Contractor Safety Program with which it expects contractors to comply?	Y	CSP development is included in construction contracts
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	TBD	Is a requirement of CSSP
Does the grantee's contractor(s) have a site-specific safety and security program plan?	TBD	Is a requirement of CSSP

Provide the grantee's OSHA statistics compared to the national average for the same type of work?	TBD	None developed yet
If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	TBD	None developed yet
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	Audit required in CSSP
<b>Federal Railroad Administration</b>		
If the shared track: has the grantee submitted its waiver request application to FRA? (Please identify any specific regulations for which waivers are being requested)	NA	
If the shared corridor: has grantee specified specific measures to address shared corridor safety concerns?	NA	
Is the Collision Hazard Analysis underway?	NA	
Other FRA required Hazard Analysis – fencing, etc?	NA	
Does the project have Quiet Zones?	NA	
Does FRA attend Quarterly Review Meetings?	NA	

