

PMOC MONTHLY REPORT

Honolulu Rail Transit Project

City and County of Honolulu
Honolulu Authority for Rapid Transportation (HART)
Honolulu, HI

March 2015 (FINAL)

PMOC Contract Number: DTFT60-14-D-00012

Task Order No. 3: Honolulu Rail Transit Project

Project No: DC-27-5288

Work Order No. 1

OPs Referenced: OP 1 and 25

Jacobs Engineering Group, Inc.

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Length of Time Assigned: Five Years (November 18, 2009 through February 23, 2015)

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1.0 EXECUTIVE SUMMARY

1.1 Project Description

- **General Description:** The Project is a 20-mile-long elevated fixed guideway rail system along Oahu's south shore between East Kapolei and Ala Moana Center. The Project will include 21 stations. The alignment is elevated, except for a 0.6-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 (7 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 – 104,300 (2020); 119,600 (2030)

1.2 Project Status

- Status of primary construction contracts:
 - West Oahu /Farrington Highway (WOFH) Design-Build (DB) Contract –
 - Contract is approximately 60.4% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 69.5%.
 - The contract is approximately four months behind schedule. The delay is the result of less than planned production rates and lack of site access. HART and KIWC have been working to mitigate impacts to critical path activities. A revised baseline schedule was submitted by the contractor and it was rejected by HART. HART requested that the schedule be resubmitted by KIWC via the Change Order process.
 - Approximately two-miles of guideway has been erected. Overall quality of the contract is good.
 - Kamehameha Highway Guideway (KHG) DB Contract –
 - The contract is approximately 34.7% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 65.9%.
 - The contract is approximately seven months behind schedule. The delay is the result of less than planned production rates and lack of site access. HART and KIWC have been working to mitigate impacts to critical path activities. HART received a revised baseline schedule from the

- contractor, but it was rejected by HART. HART requested that the schedule be resubmitted by KIWC via the Change Order process.
- Casting of segments is scheduled to begin in April 2015, and guideway erection is scheduled to begin in August 2015.
 - KIWC is mobilizing a third guideway erection truss to help mitigate the WOFH and KHG delays.
- Maintenance and Storage (MSF) DB Contract –
 - The contract is approximately 66.3% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 70%.
 - Contract substantial completion date has slipped 10 calendar days due to weather that impacted construction operations. KKJV and HART are working to mitigate the impacts to the critical path, which are not significant.
 - Building structures are moving along well with installation of tilt-up wall panels. Overall quality of the contract is good.
 - Core Systems Design-Build-Operate-Maintain (DBOM) Contract –
 - The contract is approximately 18.9% complete based on expenditures (design, manufacturing, and construction activities). The planned completion at this time is approximately 20.8%.
 - AHJV revised their baseline contract schedule, and it has been approved. However, re-procurement of Westside Stations Group and use of DB for the eastside guideway and stations will result in another revision to CSC schedule. The revised baseline schedule will be available in June/July 2015 after all interface milestones are finalized.
 - Limited construction work (MSF signal house) is anticipated beginning in May/June 2015; significant construction activity will not begin until fall 2015.
 - Hitachi, LTD has an agreement to purchase AnsaldoBreda and Ansaldo STS from Finmeccania S.P.A. The sale is expected to close later this year.
 - HART will perform a Buy America Audit of the M (Middle) car in March/April 2015.
 - Airport Advanced Utilities Construction Contract –
 - Work is scheduled to begin March 2015. However, easements must still be granted by the Navy for this portion of the work to begin. HART has not been able to secure the necessary easements from the Navy to date. There are potential construction delays as a result of the lack of Right of Entry.
- Overall design of the project is approximately 83.4% complete as of January 2015. However, this percent complete may change as a result of utilizing DB procurement strategy for the Airport and City Center guideway and stations sections.
 - Overall utilities installed on the project are approximately 12.2% as of January 2015.
 - Overall construction of the project is approximately 24.1% complete as of January 2015.
 - Appendix B of this report provides the status of the current design and construction contracts.

1.3 PMOC Issues or Concerns

The following key issues or concerns have been identified:

- Project Controls:
 - Budget – HART’s current Estimate at Complete (EAC) indicates that the Project cost will most likely exceed the FFGA budget primarily due to the AIS, federal lawsuit delays, subsequent impact of current market conditions, and several other items that are anticipated to be an additional cost to the project. HART is reviewing the project budget and will update the EAC accordingly.
 - Contingency – HART indicates a forecasted amount of \$303 million remaining in contingency (\$11.5 million in unallocated and \$291.8 million in allocated). However, this does not fully reflect impacts of the Westside Stations bids, the updated cost estimate for the Airport/City Center Guideway Contract, and several items that have been included in the EAC.
 - Funding – HART has indicated that it will not have access to \$210 million in Section 5307 funds for the project. In addition, GET Surcharge revenues are under forecasted amounts by approximately 3.7%, or \$40 million to date. HART, and the City, will need to identify substitute funding and address this shortfall in an update of its Financial Plan, which is due to FTA in July 2015. The primary option that is being considered is an extension of the GET Surcharge. HART also will take advantage of low interest rates and an improved borrowing plan to save an estimated \$60-75 million in borrowing costs.
 - Cost Containment/Cost Reduction Measures – The PMOC has discussed the project cost on a monthly basis with HART in an effort to ensure that cost issues are proactively addressed. HART has recently implemented Cost Containment and Cost Reduction measures in an effort to mitigate the cost increase. These efforts include:
 - Significant revision of their contract packaging strategy
 - Development of a detailed cost reduction matrix that focuses on the remaining construction contracts (Value Engineering)
 - Review of interface milestones to help relieve schedule compression where possible
 - Review of various options relate to financing of the project
 - Identification of items that could be considered Operations & Maintenance costs
 - Development of a HART Decision Milestone Matrix.

The PMOC will continue to hold Cost Containment Workshops with HART on a monthly basis to review the Cost Reduction Measures Matrix and HART Decision Milestone Matrix. However, it is anticipated that the Project cost will most likely exceed the FFGA budget. Therefore, in addition to the matrices, HART should begin initiating plans that identify a course of action, such as Secondary Mitigation Measures, and start to implement them.

- Schedule – Master Project Schedule will require revision as a result of the re-packaging of the remaining contracts. A preliminary update of the MPS was provided to the PMOC in March 2015. The PMOC will await an MPS update before performing a detailed review. HART indicated that a revised MPS will be available in May 2015.
- Procurement –
 - Farrington Highway Stations Group – Bids were received on March 3, 2015. The apparent low bid was \$78.9 million. HART received a bid protest notification from the second low bidder on March 11, 2015. HART’s determination on the bid protest is pending.
 - West Oahu Stations Group – Invitation for Bids (IFB) will be issued in April 2015.
 - Kamehameha Highway Station Stations Group – IFB will be issued in August 2015.
 - Airport Guideway and Stations DB Contract – This contract will include a two-part Request for Proposals (RFP). Part I will be issued April 7, 2015. Part II will be issued in July 2015. NTP is anticipated for February 2016.
 - City Center and Stations DB Contract – This contract will include a two-part RFP. Part I will be issued August 2015. Part II will be issued in October 2015. NTP is anticipated for June 2016.
 - Design Contracts – HART has limited the designers’ activity for the Airport/City Center Guideway and Utilities Contract and Eastside Stations Group to supporting preparation of the eastside DB contracts.
 - Pearl Highlands Parking Structure DB Contract – HART has deferred this procurement with the next solicitation action scheduled for July 2015.
 - H2R2 Ramp – HART issued an addendum and pushed the bid date to April 28, 2015 pending a decision from HDOT and FHWA on the Interstate Access Modification Report.
 - Fare Collection Technical Support Consultant – Request for Qualification (RFQ) will be issued in March 2015. Request for Proposal (RFP) for the Fare System is anticipated to be released late April, but is contingent upon an MOU with the City.
- HART intends to build an interim park-n-ride facility at the University of Hawaii West Oahu Station. This facility would be in use until the developer completes the structure over the Kaloi Channel that allows for access to the permanent location of the park-n-ride facility. HART is evaluating the issue of either using federal funds or local funds to build the interim facility. UH-West Oahu intends to use the interim facility for campus parking after HART no longer has need for the facility. However, it is not known how long the interim facility will be in use before the permanent facility can be constructed. Clarification is needed to determine the anticipated period that the facility would be utilized by HART if federal funds are to be used.

- Hawaiian Electric Companies (HECO)
 - HECO has a collective bargaining agreement that has different wage scales and allows payment to its labor forces biweekly, which does not satisfy Davis-Bacon. HECO has requested a waiver at the state and federal level on collective bargaining agreement that has different wage scales and allows payment to its labor forces biweekly. HART is coordinating to resolve this with HECO.
 - HART, HECO, and their consultants are completing detailed power consumption analyses.
 - The cost for activation of the Traction Power Substations was not initially included in the project estimate. A change order will be required to address this cost, which is still being assessed. This issue has been partially captured in HART's EAC.
 - 50-foot Offset Issue –
 - Testing of the telescoping bucket truck continues, and HECO has indicated that initial results are favorable. HART is still working with HECO on the mechanism to acquire the truck.
 - HART has acknowledged that under-grounding of portions of the overhead power lines will likely be required along limited lengths of the guideway. HECO provided HART with a report from their consultant regarding the potential extents of under-grounding. HECO's preliminary estimate has not been validated by HART. HART has indicated that some costs have been included in the EAC to cover HECO undergrounding, additional HECO work in City Center, and service connections. However, the PMOC strongly recommended that HART prepare an independent cost estimate for all additional HECO-related costs given their potential order of magnitude.

1.4 Core Accountability Items

Project Status: FFGA		Original at FFGA	Current Estimate
Cost	Cost Estimate	\$5,122,000,000	\$5,122,000,000**
Contingency	Unallocated Contingency	\$101,900,000	\$56,100,000
	Total Contingency (Allocated plus Unallocated)	\$643,600,000	\$303,000,000
Schedule	Revenue Service Date (RSD)	1/31/2020	1/31/2020
Total Project Percent Complete	Based on Expenditures	32.0% (January 2015)	
	Based on Earned Value*	32.0%	

*Overall project progress is based on the weighted value progress of the individual construction and design contracts.

**Does not reflect HART's current EAC, which has not been validated and does not include all known potential costs.

Major Issues	Status	Comments/Planned Action
Potential Cost & Schedule Delays	HART has experienced delays and has incurred costs as a result of both the state and federal lawsuits.	<ul style="list-style-type: none"> • Budget – HART’s current Estimate at Complete (EAC) indicates that the Project cost will most likely exceed the FFGA budget primarily due to the AIS, federal lawsuit delays, subsequent impact of current market conditions, and several other items that are anticipated to be an additional cost to the project. HART is reviewing the project budget and will update the EAC accordingly. <p>The PMOC has discussed the project cost and schedule on a monthly basis with HART in an effort to ensure that cost and schedule issues are proactively addressed. HART has recently implemented Cost Containment and Cost Reduction measures in an effort to mitigate the cost increase.</p> <p>The PMOC will continue to hold Cost Containment Workshops with HART on a monthly basis to review the Cost Reduction Measures Matrix and HART Decision Milestone Matrix. However, it is anticipated that the Project cost will most likely exceed the FFGA budget. Therefore, in addition to the matrices, HART should begin initiating plans that identify a course of action, such as Secondary Mitigation Measures, and start to implement them.</p> <ul style="list-style-type: none"> • Schedule – Master Project Schedule will require revision as a result of the re-packaging of the remaining contracts. A preliminary update of the MPS was provided to the PMOC in March 2015. The PMOC will await an MPS update before performing a detailed review. HART indicated that a revised MPS will be available in May 2015.
Funding Shortfall	Section 5307 funds will not be made available and GET receipts continue to be an issue.	<ul style="list-style-type: none"> • HART has indicated that it will not have access to \$210 million in Section 5307 funds for the project. In addition, GET Surcharge revenues are under budget by approximately 3.7%, or \$40 million to date. HART will need to identify substitute funding and address this shortfall in an update of its Financial Plan. The primary option that is being considered is an extension of the GET Surcharge. HART also will take advantage of low interest rates and an improved borrowing plan to save an estimated \$60-75 million in borrowing costs.
Post-Rod Changes	HART is considering several proposed design changes that may require additional environmental review.	FTA and HART hold bi-weekly meetings to discuss the status of any potential changes. HART has submitted or will submit information on each proposed change for FTA to determine the level of documentation required to assess impacts and subsequent mitigation measures.

Major Issues	Status	Comments/Planned Action
Hawaii Electric Company (HECO)	50-foot offset requirement	<ul style="list-style-type: none"> • 50-foot Offset Issue – Testing of the telescoping bucket truck continues, and HECO has indicated that initial results are favorable. HART is still working with HECO on the mechanism to acquire the truck. • HART has acknowledged that under-grounding of portions of the overhead power lines will likely be required along limited lengths of the guideway. HECO provided HART with a report from their consultant regarding the potential extents of under-grounding. HECO’s preliminary estimate has not been validated by HART. HART has indicated that some costs have been included in the EAC to cover HECO undergrounding, additional HECO work in City Center, and service connections. However, the PMOC strongly recommended that HART prepare an independent cost estimate for all additional HECO-related costs given their potential order of magnitude.
Date of Next Quarterly Meeting:	April 22, 2015	

2.0 BODY OF REPORT

2.1 Grantee's Capabilities and Approach

2.1.1 Technical Capacity and Capability (TCC)

HART has gone through a considerable number of organizational changes since the FFGA was executed in December 2012. Project staff has begun updating the project's numerous plans and procedures to reflect these changes. The PMOC met with HART to discuss the timing of each plan that will require updating as a result of the organization and procedural changes that have occurred.

The PMOC has recommended that HART review their staffing and consider changes to streamline the organization. HART has begun reviewing the project organization to determine if changes can be made to be more effective. HART's update of the management plans must incorporate any organizational changes that have been made to date or any proposed changes. It is critical that any changes be documented in the various management plans immediately.

The acquisition of URS by AECOM was finalized October 17, 2014. HART has determined the AECOM acquisition of URS has created a Conflict of Interest (COI) that URS has been unsuccessful in resolving. HART subsequently issued a notice of termination letter to URS on March 10, 2015. URS will continue to provide services under a firewall arrangement until HART has re-procured and awarded a contract to a replacement contractor and remaining work is transitioned to the replacement contractor. AECOM will be retained by HART to develop the bridging documents (design) needed for Airport/City Center Guideway DB contract.

2.1.2 Project Controls for Scope, Quality, Schedule, Cost, Risk, and Safety

Schedule

- **Preliminary Engineering (PE):** FTA approved entrance into PE on October 16, 2009
- **Record of Decision (ROD):** ROD was issued on January 18, 2011.
- **Final Design (FD):** FTA approved entrance into FD on December 29, 2011.
- **Full Funding Grant Agreement (FFGA):** Executed on December 19, 2012.
- **Grantee Target Start of Revenue Operations for Full Alignment:** July 2019
- **FFGA Revenue Service Date (RSD):** January 31, 2020

Cost

- HART's current Estimate at Complete (EAC) indicates that the Project cost will most likely exceed the FFGA budget primarily due to the AIS, federal lawsuit delays, subsequent impact of current market conditions, and several other items that are anticipated to be an additional cost to the project. HART is reviewing the project budget and will update the EAC accordingly.
- The current estimated contingency is not sufficient to complete the project. HART is currently assessing the remaining contract strategy including implementation of primary risk mitigations measures and value engineering to reduce project cost

impacts. HART should begin initiating plans that identify a course of action, such as Secondary Mitigation Measures, and start to implement them.

Quality

- The contractor damaged (cracked) two precast segments during erection of the WOFH guideway structure. These segments were incorporated into a single span of the structure, but a review and analysis must be completed to determine whether repairs can be completed or if the segments must be replaced. HART indicated that KWIC will replace the two precast segments instead of repairing them. This work has begun.
- Following is a summary of Non-Conformance Reports (NCR) that have been issued on the project:

Contract	Description	NCRs		
		Issued	Closed	Open
DB-120	West Oahu/Farrington Highway	296	211	85
DB-200	Maintenance and Storage Facility	24	23	1
DB-320	Kamehameha Highway Guideway	40	32	8
DBOM-920	Core Systems Contract	13	13	0

It should be noted that the increase in Open NCRs for the WOFH DB Contract is primarily the result of items identified in the precast yard and the concrete consolidation issues with drilled shafts. However, KIWC has developed measures to correct these NCRs and help prevent issues in the future.

System Safety and Security

- HART Design Conformance Checklists including CELs/CILs for active projects is going through the Safety and Security Review Committee (SSRC) for approval. However, Construction Conformance and Testing Verification is lagging.
- HART must update the Safety and Security Roadmap on a monthly basis and provide it to the PMOC a week prior to our Monthly Meeting.
- HART is in the process of updating Safety and Security Management Plan (SSMP), Safety and Security Certification Plan (SSCP) and Construction Safety Plan (CSP) to conform to pending update of the PMP.
- HART is revising their Contract Packaging Plan and will update the Airport, Navy and System-wide Threat and Vulnerability Analysis (TVA) to conform to pending update of the Contract Packaging Plan.
- HART Safety Open Concerns List is being updated on a monthly to include any open items from the active contracts.
- HART will be receiving LRVs during the 1st Quarter of 2016. Prior to any dynamic testing, HART must provide HDOT with all design, construction and inspection verification and meet the requirements of their SOA Program Plan before HDOT will approve HART for interim testing. HART is working on vehicle certification planning activities to comply with the HDOT Program Plan.

Real Estate

The PMOC had identified some issues regarding progress of HART's real estate activities:

- The number of outstanding parcels remains significant:
 - HART has closed 75 of 237 properties needed.
 - HART has completed 97 of 237 appraisals.
- Acquisitions are improving but are still behind schedule. It appears that some parcels may require condemnation. HART proposed the use of irrevocable right of entry documents (Right of Entry, Possession and Use Agreement) to gain control of a parcel prior to condemnation. This approach is a modification of the current procedures, and they have updated the RAMP to include this approach. FTA provided concurrence on the use of a right of entry provides sufficient interest to justify the construction.
- All private property site access for guideway is complete for KHG. KIWC has identified 14 permanent easement locations for relocated utilities. HART is working with KIWC to resolve these easements, but they are becoming critical and could impact construction work.
- HART has several easements pending from U.S. Navy for the Airport Section, particularly needed for the Airport Utility contractor. These easements are critical and could impact construction work. HART is working with the Navy to complete the documentation as quickly as possible.

2.1.3 Compliance with Applicable Statutes, Regulations, Guidance and FTA Agreements

National Environmental Policy Act (NEPA)

- Proposed Design Changes/Refinement – HART is considering several proposed design refinements that may require additional environmental review. FTA and HART hold bi-weekly meetings to discuss the status of any potential changes. HART has submitted or will submit information on each proposed change for FTA to determine the level of documentation required to assess impacts and subsequent mitigation measures.

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 includes 21 stations. The alignment is elevated, except for a 0.6-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 (7 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 104,300 weekday boardings at the RSD in the year 2020 and 119,600 weekday boardings in the year 2030. The project is currently the subject

of extensive Transit Oriented Development (TOD) planning corridor-wide. Key areas include Ala Moana, Kakaako, Chinatown/Downtown, Pearl City, Waipahu, and Kapolei. The initial fleet will include 80 “light metro” rail vehicles.

2.2.1 Status of Design/Construction Documents

The status of each contract is provided in Appendix B. The table in Section 1.2 provides a summary of Design Percent Complete on all contracts provided for the project. Final Design work and engineering activities are still proceeding on all other contracts that have been awarded to date. Overall design of the project is approximately 82% complete as of January 2015. However, this percent complete may change as a result of utilizing DB procurement strategy for the Airport and City Center guideway and stations sections.

2.2.2 Status of Third-Party Agreements

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

Agreement	Status	Target	Section	Notes/Remarks	Purpose/Description
University of Hawaii (UH) Master Agreement	Pending	July 2015	WOFH, KHG, City Center	Final negotiations are underway. Will secure Right of Construction as not to delay the project.	Needed for columns located on UH property; the master agreement will encompass all campuses that HART project interfaces with
UH - West O'ahu (UHWO) Construction Right of Entry	Pending	April 2015	WOFH	In negotiations.	Column construction for the WOFH D/B contract within the West Oahu campus. Sub-agreement will also include the UHWO park-and-ride
Leeward Community College (LCC) Construction Right of Entry	Pending	March 2015	WOFH	In negotiations.	Column construction for the WOFH D/B contract within the LCC campus
DR Horton Final Easement Agreement	Pending	June 2015	WOFH	Document in process with DR Horton	Column construction for the WOFH D/B contract in the Ho`opili area
Honolulu Community College (HCC) Construction Right of Entry	Pending	July 2015	City Center	In negotiations.	Column construction for the City Center section
Department of Land and Natural Resources (DLNR) Easement	Pending	April 2015	WOFH	Easement documents in process	Column construction for the WOFH D/B contract
Aloha Stadium / Department of Accounting & General Services (DAGS) Easement	Pending	June 2015	KHG	Easement in process	Column construction for the KHG D/B contract and the construction of the park-and-ride lot
OCCC/Hawaii Department of Public Safety Agreement Dillingham Blvd	Pending	March 2015	City Center	Finalizing requirements.	Required due to parking space reduction at OCCC for roadway widening.
DAGS	Pending	March 2015	City Center	Awaiting final design requirements for the guideway.	
U.S. Navy / General Services Administration (GSA)	Pending	March 2015	Airport	Easements and fee taking are being processed by the Navy. Under new directive Navy will charge for all licenses and easements.	For column construction of the Airport section and the Pearl Harbor Station
U.S. Post Office Honolulu Processing Center	Pending	March 2015	Airport	In negotiations.	Easement needed for column construction of the Guideway in the Airport

Agreement	Status	Target	Section	Notes/Remarks	Purpose/Description
Federal Court House/GSA	Pending	March 2015	City Center	Awaiting final design requirements for the guideway	Easement needed for column construction of the Guideway in the Airport
Pacific Guardian Center	Pending	December 2015	City Center	Awaiting final design requirements for the guideway and Downtown station.	Required for the column construction for City Center Guideway and Downtown station
Howard Hughes Corporation – Joint Development Agreement	Pending	December 2015	City Center	Awaiting final design requirements for the guideway and Kaka’ako station.	Required for the column construction for City Center Guideway and Kaka’ako station
Sam House Development LLC – Joint Development Agreement	Pending	December 2015	City Center	Awaiting final design requirements for the guideway and Ala Moana Center station.	Required for the column construction for City Center Guideway and Ala Moana Center station
GGP Ala Moana LLC – Joint Development Agreement	Pending	December 2015	City Center	Awaiting final design requirements for the guideway and Ala Moana station.	Required for the column construction for City Center Guideway and Ala Moana Center station

NOTE: ROW – Right of way
ROE – Right of entry

- The following agreements are critical and will impact the project if not completed in the near term:
- Aloha Stadium Construction Right of Entry (CROE) – The CROE has been executed with the Stadium Authority. This clears the way for guideway construction to begin in the area.
- University of Hawaii Right of Entry – University required that HART’s contractor enter into a separate agreement to construct on University property. The university maintains that the current agreement with HART only addresses preliminary work and does not cover on-site construction.
- U.S. Navy / General Services Administration – HART has several easements pending from the U.S. Navy for the Airport Section, particularly needed for the Airport Utility contractor. These easements are critical and could impact construction work. HART is working with the Navy to complete the documentation as quickly as possible. The target completion is March 2015.

2.2.3 Delivery Method

As a result of project delays, HART has revised the Contract Packaging Plan (CPP). The revised strategy will impact numerous aspects of the project including the schedule. The current strategy includes the following contracts:

- Farrington Highway Stations Group – Bids were received on March 3, 2015. The apparent low bid was \$78.9 million. HART received a bid protest notification from the second low bidder on March 11, 2015. HART’s determination on the bid protest is pending.
- West Oahu Stations Group – Invitation for Bids (IFB) will be issued in April 2015.
- Kamehameha Highway Station Stations Group – IFB will be issued in August 2015.
- Airport Guideway and Stations DB Contract – This contract will include a two-part Request for Proposals (RFP). Part I will be issued April 7, 2015. Part II will be issued in July 2015. NTP is anticipated for February 2016.
- City Center and Stations DB Contract – This contract will include a two-part RFP. Part I will be issued August 2015. Part II will be issued in October 2015. NTP is anticipated for June 2016.
- Design Contracts – HART has limited the designers’ activity for the Airport/City Center Guideway and Utilities Contract and Eastside Stations Group to supporting preparation of the eastside DB contracts.
- Pearl Highlands Parking Structure DB Contract – HART has deferred this procurement with the next solicitation action scheduled for July 2015.
- H2R2 Ramp – HART issued an addendum and pushed the bid date to April 28, 2015 pending a decision from HDOT and FHWA on the Interstate Access Modification Report.
- Fare Collection Technical Support Consultant – Request for Qualification (RFQ) will be issued in March 2015. Request for Proposal (RFP) for the Fare System is anticipated to be released late April, but is contingent upon an MOU with the City.

2.2.4 Core Systems and Vehicle Status

AHJV will design, furnish, install, test, and commission passenger vehicles, operating systems, auxiliary vehicles and equipment, and appurtances, in support of incremental opening of the System. The following table provides a status of the Core Systems and Vehicle activities associated with the project:

Core System Description	Status
General	
Staffing	AHJV has filled all open positions to date.
Schedule	AHJV revised their baseline contract schedule, and it has been approved. However, re-procurement of Westside Stations Group and use of DB for the eastside guideway and stations will result in another revision to CSC schedule. The revised baseline schedule will be available in 3-4 months after all interface milestones are finalized.
Design Status	<p>Following are the approximate levels of design completion:</p> <ul style="list-style-type: none"> • LRVs – 82% (Interim Design), 5% (Final Design) • Train Control – 94% (Interim Design), 80% (Final Design) • Traction Power – 100% (Interim Design), 83% (Final Design) • Communications – 100% (Interim Design), 18% (Final Design) • Fire Detection – 100% (Interim Design), 47% (Final Design) • PSG, UPS, MPV – N/A (Interim Design), 24% (Final Design)
NTP Delay Claim	AHJV has asserted that it has had a 9-month delay in starting work due to CSC protest. This issue is in mediation, but mediation is delayed awaiting AHJV input to proceed.
Fare Collection System	HART is coordinating with DTS to establish a city-wide fare system. HART intends to utilize fare gates (closed transit system). Request for Qualification (RFQ) will be issued in March 2015. Request for Proposal (RFP) for the Fare System is anticipated to be released late April, but is contingent upon an MOU with the City..
System Performance Design	There are some concerns with AHJV’s method for calculating headways and round-trip times. HART received updated System Performance Documents and continues discussions with AHJV. Alignment changes from Airport and City Center Fixed Facility Contractors may affect system performance. A full analysis must still be completed.
Hawaiian Electric Companies (HECO)	
Estimated Traction Power Demand	HART is to provide HECO with AHJV simulations to estimate power demand based on actual operation scenarios. AHJV submitted revised simulations and discussions with HECO are ongoing.
Activation Dates	HART and HECO are coordinating project schedule and HECO activation start dates for power. The cost for activation of the Traction Power Substations was not included in the project estimate. A change order will be required to address this cost, which is still being assessed. This issue has been partially captured in HART’s EAC.
Service Requests	AHJV has submitted HECO service requests for all system sites. Design coordination is progressing.
Vehicle Subsystem	
Vehicle Schedule	HART is closely monitoring vehicle production in Italy and working with Ansaldo Breda to prepare for final assembly start-up in Pittsburgh, CA. HART met with AHJV in late January 2015 to discuss schedule and activities planned for early 2015. Shipment of the first LRV to Honolulu is scheduled for January 2016.
Car Production	Extrusion of car bodies began in November 2014. Final assembly of the first LRV in Pittsburg, CA is scheduled to begin in June 2015. Shipment of the first LRV to Honolulu is scheduled for January 2016. Vehicle car shell assembly has experienced a delay of 2 weeks due to issues with the start of underframe welding. HART on-site inspector identified corrective actions required to mitigate the deficiency.

Core System Description	Status
4-car Trains	HART now plans to start revenue service with 4-car trains in place of the initial plan of 2-car trains based on FTA's acceptance in December 2013. It is anticipated that HART and AHJV will resolve the commercial terms for change to 4-car trains in May 2015. HART will perform a Buy America Audit of the M (Middle) in March/April 2015.
Vehicle Status Checklist	HART is developing a Vehicle Status Chart to track the production of all 80 LRVs. Chart will be available prior to Quarterly Meeting on April 22, 2015.
Traction Electrification Subsystem	
Uninterruptible Power Supply (UPS)	UPS loads are under discussion between HART and AHJV.
Middle Street AM Antenna	HART designers are investigating options for shielding of communications equipment from Electromagnetic Interference (EMI) due to proximity of AM radio tower near Middle Street. HART is evaluating alternatives to shielding including the potential to relocate the carrier that utilizes the antenna.
O&M Subsystem	
MSF O&M	AHJV has provided preliminary MSF Operations Plans, but will resubmit to better follow HART's O&M Plan and FTA guidelines.
Fire Detection Subsystems	
Fire Detection	Fire Detection configuration is needed for the Operations Service Building (OSB).

Hitachi, LTD has an agreement to purchase AnsaldoBreda and Ansaldo STS from Finmeccania S.P.A. The sale is expected to close later this year. It is not anticipated that the sale will have a negative impact on the project.

2.3 Project Management Plan and Sub-Plans

HART is in the process of updating several of its procedures and management plans. These updates are necessary due to HART organizational changes and the contract packaging changes that are being implemented. It is critical for HART to update these plans and procedures soon. HART has provided target dates for the various management plan updates:

Plan	Date for DRAFT Submittal (Target)	Note
Project Management Plan (PMP)	(April 2015)	PMP will be available for review in April 2015 without detailed budget and schedule information. HART will incorporate this information when it becomes available (tentatively June 2015).
Contract Packaging Plan (CPP)	March 2015	Under PMOC review
Risk and Contingency Management Plan (RCMP)	March 2015	Under PMOC review
Financial Plan	(July 2015)	
Real Estate Acquisition and Management Plan (RAMP)	November 2014	DRAFT RAMP has been reviewed; FINAL RAMP will be available in April 2015

2.4 Project Schedule Status

The Master Project Schedule (MPS) will require revision as a result of the re-packaging of the remaining contracts. A preliminary update of the MPS was provided to the PMOC in March 2015. The PMOC will await an MPS update before performing a detailed review. HART indicated that a revised MPS will be available in May 2015.

HART has engaged the new GEC III consultant and the new CE&I consultants during the MPS refinement process and has received valuable input and validation thus far. Furthermore, the PMOC provided HART a forensic schedule analysis report that indicated various errors, warnings, and general “housekeeping” corrections needing correction. HART project control staff has addressed most of the comments although this process will need to be conducted again after the update of the MPS is available.

Following is the status of the individual contract schedules:

- West Oahu /Farrington Highway (WOFH) Design-Build (DB) Contract – The contract is approximately four months behind schedule. The delay is the result of less than planned production rates and lack of site access. HART and KIWC have been working to mitigate impacts to critical path activities. A revised baseline schedule was submitted by the contractor and it was rejected by HART. HART requested that the schedule be resubmitted by KIWC via the Change Order process.
- Kamehameha Highway Guideway (KHG) DB Contract – The contract is approximately seven months behind schedule. The delay is the result of less than planned production rates and lack of site access. HART and KIWC have been working to mitigate impacts to critical path activities. HART received a revised baseline schedule from the contractor, but it was rejected by HART. HART requested that the schedule be resubmitted by KIWC via the Change Order process.

- Maintenance and Storage (MSF) DB Contract – Contract substantial completion date has slipped 10 calendar days due to weather that impacted construction operations. KKJV and HART are working to mitigate the impacts to the critical path, which are not significant.
- Core Systems Design-Build-Operate-Maintain (DBOM) Contract –AHJV revised their baseline contract schedule, and it has been approved. However, re-procurement of Westside Stations Group and use of DB for the eastside guideway and stations will result in another revision to CSC schedule. The revised baseline schedule will be available in June/July 2015 after all interface milestones are finalized.

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

Period: April 2015 – July 2015		
Activity	Responsibility	Date
Quarterly Meeting	FTA, HART and PMOC	April 22, 2015
Monthly Progress Meeting	FTA, HART and PMOC	May 13, 2015
Monthly Progress Meeting	FTA, HART and PMOC	June 10, 2015
Quarterly Meeting	FTA, HART and PMOC	TBD

2.5 Project Cost Status

The grantee’s Base Cost Estimate (BCE) dated March 19, 2012 is \$5.122 billion in Year-of-Expenditure (YOE) dollars, including \$644 million in allocated and unallocated contingency (or 15.0% of the BCE) and \$173 million in financing costs. Of the \$644 million in total contingency, \$101 million is unallocated. The current Project Budget is as follows:

Source	Amount
Base Cost Estimate	\$4,305 billion
Total Contingency	\$0.644 billion
Finance Charges	\$0.173 billion
Total Project Cost	\$5.122 billion

Total Expenditures to Date – \$1.388 billion (through January 2015)

2.5.1 Standard Cost Category (SCC)

The FFGA SCC Workbook is submitted as a separate electronic file. The following table presents the FFGA budget, expenditures to date, and Estimate at Completion (EAC) for each SCC.

SCC	SCC Description	FFGA Budget	Base Cost	Allocated Cont.	Incurred
10	GUIDEWAY & TRACK ELEMENTS	1,275,328,962	1,114,305,144	161,023,818	131,790,527
10.04	Guideway: Aerial structure	1,175,328,184	1,022,380,670	152,947,514	92,854,750
10.08	Guideway: Retained cut or fill	8,077,393	7,492,943	584,450	0
10.09	Track: Direct fixation	86,332,027	79,437,204	6,894,823	38,935,777
10.11	Track: Ballasted	3,550,634	3,293,724	256,910	0
10.12	Track: Special (switches, turnouts)	2,040,724	1,700,603	340,121	0
20	STATIONS, STOPS, TERMINALS, INTERMODA	506,165,689	421,804,742	84,360,947	3,439,172
20.01	At-grade station, stop, shelter, mall, terminal, platform	7,333,599	6,111,333	1,222,266	0
20.02	Aerial station, stop, shelter, mall, terminal, platform	353,476,148	294,563,457	58,912,691	0
20.06	Automobile parking multi-story structure	79,690,518	66,408,765	13,281,753	0
20.07	Elevators, escalators	65,665,424	54,721,187	10,944,237	3,439,172
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	99,425,456	92,535,013	6,890,443	54,745,769
30.02	Light Maintenance Facility	8,161,279	7,591,887	569,392	929,461
30.03	Heavy Maintenance Facility	40,906,889	38,099,138	2,807,751	15,554,303
30.04	Storage or Maintenance of Way Building	8,382,270	7,797,460	584,810	1,899,430
30.05	Yard and Yard Track	41,975,018	39,046,528	2,928,490	36,362,575
40	SITWORK & SPECIAL CONDITIONS	1,103,867,264	980,569,426	123,297,838	368,169,360
40.01	Demolition, Clearing, Earthwork	34,695,802	29,980,157	4,715,645	241,537
40.02	Site Utilities, Utility Relocation	350,694,801	299,449,755	51,245,046	33,150,453
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	7,228,935	6,590,542	638,393	1,759,424
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	30,841,906	26,979,122	3,862,784	6,836,521
40.05	Site structures including retaining walls, sound walls	8,637,582	7,998,960	638,622	1,195,589
40.06	Pedestrian / bike access and accommodation, landscaping	48,262,816	41,073,897	7,188,919	50,000
40.07	Automobile, bus, van accessways including roads, parking lots	212,536,181	181,979,369	30,556,812	3,345,146
40.08	Temporary Facilities and other indirect costs during construction	410,969,241	386,517,624	24,451,617	321,590,690
50	SYSTEMS	247,460,781	221,284,483	26,176,298	15,952,918
50.01	Train control and signals	91,492,532	81,982,556	9,509,976	2,250,972
50.02	Traffic signals and crossing protection	12,524,011	10,458,227	2,065,784	0
50.03	Traction power supply: substations	32,873,934	29,500,927	3,373,007	342,747
50.04	Traction power distribution: catenary and third rail	36,426,286	32,878,150	3,548,136	8,018,935
50.05	Communications	59,889,234	53,691,339	6,197,895	6,472,065
50.06	Fare collection system and equipment	10,221,753	9,159,277	1,062,476	(1,131,801)
50.07	Central Control	4,033,031	3,614,007	419,024	0
Construction Subtotal (10 - 50)		3,232,248,152	2,830,498,808	401,749,344	574,097,746

SCC	SCC Description	FFGA Budget	Base Cost	Allocated Cont.	Incurred
60	ROW, LAND, EXISTING IMPROVEMENTS	222,188,386	197,397,947	24,790,439	81,946,203
60.01	Purchase or lease of real estate	201,658,907	179,360,664	22,298,243	75,096,819
60.02	Relocation of existing households and businesses	20,529,479	18,037,283	2,492,196	6,849,384
70	VEHICLES	208,501,186	186,829,020	21,672,166	21,203,394
70.02	Heavy Rail	186,061,066	166,721,385	19,339,681	14,473,908
70.06	Non-revenue vehicles	16,011,166	14,346,923	1,664,243	6,729,486
70.07	Spare parts	6,428,954	5,760,712	668,242	0
80	PROFESSIONAL SERVICES	1,183,826,026	1,090,438,814	93,387,212	651,455,688
80.01	Preliminary Engineering	95,120,484	94,055,262	1,065,222	101,098,184
80.02	Final Design	257,934,908	228,321,632	29,613,276	144,458,731
80.03	Project Management for Design and Construction	385,825,694	366,458,463	19,367,231	270,478,015
80.04	Construction Administration & Management	218,155,752	199,656,728	18,499,024	61,294,118
80.05	Professional Liability and other Non-Construction Insurance	52,138,030	46,549,724	5,588,306	21,315,763
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	76,135,125	67,641,006	8,494,119	16,670,297
80.07	Surveys, Testing, Investigation, Inspection	24,955,327	21,759,335	3,195,992	19,850,159
80.08	Start up	73,560,706	65,996,664	7,564,042	16,290,421
90	Subtotal (10 - 80)	4,846,763,750	4,305,164,589	541,599,161	1,328,703,031
	UNALLOCATED CONTINGENCY	101,871,170	0	101,871,170	0
100	Subtotal (10 - 90)	4,948,634,920	4,305,164,589	643,470,331	1,328,703,031
	FINANCE CHARGES	173,058,242			0
	Total Project Cost (10 - 100)	5,121,693,162	4,305,164,589	643,470,331	1,328,703,031
	Provisional Request for Payment				59,035,994
	Total Project Cost (10 - 100)	5,121,693,162	4,305,164,589	643,470,331	1,387,739,025

2.5.2 Contingency

HART's current forecast indicates a balance of uncommitted contingency of \$303 million (\$11.5 million in unallocated and \$291.8 million in allocated). However, this does not reflect impacts of the Westside Stations bids, the updated cost estimate for the Airport/City Center Guideway Contract, and several items that have been reflected in the EAC.

2.5.3 Funding Sources

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

Source	Amount
General Excise Tax (GET)	\$3.358 billion
Section 5309	\$1.550 billion
Section 5307	\$0.210 billion
American Recovery and Reinvestment Act (ARRA)	\$0.004 billion
Total	\$5.122 billion

Following is the status of HART's GET receipts:

- HART has received approximately \$1.404 billion in GET funds since 2007.
- HART has received approximately \$1.026 billion in GET funds since Preliminary Engineering, which began in October 2009.

HART has indicated that it will not have access to \$210 million in Section 5307 funds for the project. In addition, GET Surcharge revenues under projections by approximately 3.7%, or \$40 million to date. HART will need to identify substitute funding and address this shortfall in an update of its Financial Plan. The primary option that is being considered is an extension of the GET Surcharge. HART also will take advantage of low interest rates and an improved borrowing plan to save an estimated \$60-75 million in borrowing costs.

2.6 Project Risk

A Risk Refresh Workshop was performed on April 15, 2014. Some of the conclusions and recommendations in the PMOC report included:

- HART's estimate falls short of the predicted FTA cost risk model outcome by \$265 million. HART should review its project estimate and determine how to reduce costs to close this gap. It should be noted that this gap was identified prior to bids being received for the WSSG contract. This gap will increase, but will not be known until updated estimates of the remaining contracts are available.
- The PMOC-recommended amount of secondary mitigation is \$195.5 million.
- Strong controls must be put in place immediately to avoid future rapid contingency reduction. The frequency and the levels of project management to which these statistics are reported should be improved and monitored monthly.
- The PMOC and HART should engage in a focused "cost containment workshop" on a monthly basis to monitor the efforts taken to avoid rapid contingency usage.
- The FFGA RSD of January 2020 can be achieved; however, HART must implement strong schedule and contract management throughout the remainder of the project.

The PMOC has discussed the project cost on a monthly basis with HART in an effort to ensure cost issues are proactively addressed. HART has recently implemented Cost Containment and Cost Reduction measures in an effort to mitigate the cost increase. These efforts include:

- Significant revision of their contract packaging strategy
- Development of a detailed cost reduction matrix that focuses on the remaining construction contracts (Value Engineering)
- Review of interface milestones to help relieve schedule compression where possible
- Review of various options relate to financing of the project
- Identification of items that could be considered Operations & Maintenance costs
- Development of a HART Decision Milestone Matrix.

A DRAFT Cost Reduction Measures Matrix was presented by HART and discussed in detail in March 2015. The matrix does not include several items that were presented at the January 2015 Quarterly Meeting. HART will update the matrix and present it to the FTA and PMOC prior to the April 2015 Quarterly Meeting.

HART has prepared a DRAFT Decision Milestone Matrix, which was reviewed in March 2015. HART must still review and confirm the milestone dates that are incorporated into the matrix. The matrix was to be available for transmittal to FTA by the end of March 2015.

The PMOC will continue to hold Cost Containment Workshops with HART on a monthly basis to review the Cost Reduction Measures Matrix and HART Decision Milestone Matrix. However, it is anticipated that the Project cost will most likely exceed the FFGA budget.

It is anticipated that the another Risk Refresh will be completed once the updated MPS is available and the engineers estimates for the Airport Guideway and Stations DB Contract and the City Center and Stations DB Contract are developed.

2.7 Action Items

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
1	Provide information and resolution on HECO's 50-foot offset requirement	HART	Mar-14	On-Going		On-going – Boom truck equipment was delivered in September 2014 and field testing began in October 2014. HECO evaluating site specific locations where truck may not fully address their requested clearance. HART provided a letter to HECO regarding the lease arrangement of the item.
2	Resolve issue with AHJV regarding cost savings associated with change to 4-car trains	HART	Mar-14	May-15		Open – on-going
3	Resolve HECO issue with Davis-Bacon requirements	HART/FTA	Mar-14	On-going		Open – HECO waiver is pending. HART provided MOU to PMOC.
3	Updates resulting from Risk Refresh:					
4a	Update the Contract Packaging Plan	HART	Aug-14	Apr-15		In progress. Draft submitted to PMOC for review
4b	Re-baseline Financial Plan	HART	Apr-14	July-15		In progress
4c	Re-baseline budget	HART	Apr-14	Apr-15		In progress
4d	Re-baseline MPS	HART	Apr-14	Apr-15		In progress
4f	Update RCMP (including Hold Points and Secondary Mitigation Measures)	HART	Sept-13	Apr-15		In progress – Conference call to be scheduled following receipt of updated RCMP
5	HART to implement plan to address conflict of interest with AECOM acquisition of URS	HART	Jul-14	Mar- 15	Mar-15	Closed
6	Prepare a Decision Matrix to track key milestone events	HART	Jan- 15	Apr-15		In progress – Matrix was discussed at March 2015 meeting
7	Track Cost Containment measures each month at the Cost Containment workshops to evaluate/measure proposed cost containment measures	HART	Jan-15	On-Going		In progress – Matrix was discussed at March 2015 meeting
8	Prepare a Vehicle Status Chart to track the production status of all 80 rail transit vehicles	HART	Jan-15	Apr-15		In progress
9	Provide confirmation of the status of the approval of the Interstate Access Management Report (activity includes HDOT/FHWA action)	HART	Jan- 15	Prior to receipt of Bid		On-going coordination with HDOT/FHWA

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
10	MPS Workshop	HART/PMOC	Feb-15	TBD		To be scheduled when update of MPS is available.
11	Provide General Condition and Special Provisions prior to RFP issuance for Airport Guideway and Stations DB Contract	HART	Feb-15	Apr-15		
12	Draft Project Management Plan	HART	Mar-15	Apr-15		Draft to PMOC before the April 2015 Quarterly Meeting

APPENDICES

Appendix A: Acronym List

AHJV	▪ Ansaldo Honolulu Joint Venture
AIS	▪ Archeological Inventory Survey
APS	▪ Adjusted Project Schedule
ARRA	▪ American Recovery and Reinvestment Act
ASG	▪ Airport Station Group
ATC	▪ Alternative Technical Concept
AUG	▪ Airport Utilities Group
AVI	▪ Automatic Vehicle Indication
AVL	▪ Automatic Vehicle Location
BCE	▪ Base Cost Estimate
BFMP	▪ Bus Fleet Management Plan
CCUG	▪ City Center Utilities Group
CE&I	▪ Construction Engineering and Inspection
CMP	▪ Construction Management Plan
CPM	▪ Critical Path Method
CPP	▪ Contract Packaging Plan
CROE	▪ Construction Right of Entry
CSC	▪ Core Systems Contract
CSSO	▪ Chief Safety and Security Officer
DAGS	▪ Department of Accounting & General Services
DB	▪ Design-Build
DBB	▪ Design-Bid-Build
DBOM	▪ Design-Build-Operate-Maintain
DCCA	▪ Department of Commerce and Consumer Affairs
DHHL	▪ Department of Hawaiian Home Lands
DLIR	▪ Department of Labor and Industrial Relations
DLNR	▪ Department of Land and Natural Resources
DOE	▪ Department of Education
DOT	▪ Department of Transportation
EAC	▪ Estimate at Completion
EIS	▪ Environmental Impact Statement
FD	▪ Final Design
FEIS	▪ Final Environmental Impact Statement
FFGA	▪ Full Funding Grant Agreement
FHSG	▪ Farrington Highway Station Group
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
HCC	▪ Honolulu Community College
HCDA	▪ Hawaii Community Development Authority
HDOT	▪ Hawaii Department of Transportation
HECO	▪ Hawaiian Electric Company
HNTB	▪ Howard, Needles, Tammen & Bergendoff
IFB	▪ Invitation to Bid
ITP	▪ Inspection Test Plans
JU&O	▪ Joint Use & Occupancy
KHG	▪ Kamehameha Highway Guideway

KHSG	▪ Kamehameha Highway Stations Group
KIWC	▪ Kiewit Infrastructure West Company
KKJV	▪ Kiewit Kobayashi Joint Venture
LCC	▪ Leeward Community College
LEED	▪ Leadership in Energy and Environmental Design (LEED)
MMP	▪ Mitigation Monitoring Program
MOA	▪ Memorandum of Agreement
MOT	▪ Maintenance of Traffic
MOW	▪ Maintenance of Way
MPS	▪ Master Project Schedule
MSF	▪ Maintenance and Storage Facility
NCR	▪ Non-Compliance Report
NEPA	▪ National Environmental Policy Act
NTP	▪ Notice to Proceed
OCCC	▪ Oahu Community Correctional Center
OCIP	▪ Owner Controlled Insurance Program
OP	▪ Oversight Procedure
PA	▪ Programmatic Agreement
PE	▪ Preliminary Engineering
PM	▪ Project Manager
PMC	▪ Project Management Consultant
PMOC	▪ Project Management Oversight Contractor
PMP	▪ Project Management Plan
PSG	▪ Platform Screen Gate
PW	▪ Project-wide
QA	▪ Quality Assurance
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
RFB	▪ Request for Bids
RFP	▪ Request for Proposals
RFQ	▪ Request for Qualifications
ROD	▪ Record of Decision
ROE	▪ Right of Entry
ROW	▪ Right of Way
RSD	▪ Revenue Service Date
SCC	▪ Standard Cost Category
SHPD	▪ State Historic Preservation Division
SOA	▪ State Oversight Agency
SS	▪ Safety and Security
SSCM	▪ Safety and Security Certification Manager
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
UH	▪ University of Hawaii
UPS	▪ Uninterruptible Power Supply
VE	▪ Value Engineering
WOFH	▪ West Oahu/Farrington Highway
WOSG	▪ West Oahu Stations Group
WSSG	▪ Westside Stations Group
YOE	▪ Year of Expenditure

Appendix B: Contract Status

The following table provides the status of various ongoing contracts within this Project:

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
MM-901	Program Management Support Consultant (PMSC-2)	HDR/InfraConsult LLC	\$33,376,897	Amendment No. 4 d. 3/18/14		\$40,993,274	\$27,655,413	82.9%	0%	Mar 2012	Mar 2016
Notes/Issues:											
MM-910	General Engineering Consultant (GEC II)	Parsons Brinkerhoff	\$300,000,000				\$132,000,000		0%	Jun 2011	Pending
Notes/Issues:		Contract closeout is pending.									
MM-913	General Engineering Consultant (GEC III)	CH2M Hill	\$46,143,277			\$46,143,277	\$12,555,166	27.2%	1.42%	Dec 2013	Mar 2019
Notes/Issues:		▪ None at this time									
MM-290	Construction Engineering and Inspection (West)	PGH Wong Engineering, Inc	\$54,232,480			\$54,232,480	\$8,732,010	16.1%	0.92%	Jan 2014	Jan 2020
Notes/Issues:		▪ None at this time.									
MM-595	Construction Engineering and Inspection (East)	AECOM/URS Corporation	\$63,083,417			\$63,083,417	\$6,165,986	9.8%	0.87%	Jan 2014	Dec 2018
Notes/Issues:		▪ HART has determined the AECOM acquisition of URS has created a Conflict of Interest (COI) that URS has been unsuccessful in resolving. HART subsequently issued a notice of termination letter to URS on March 10, 2015. To prevent disruption of services, URS will continue to provide services under a firewall arrangement until HART has re-procured and awarded a contract to a replacement contractor and remaining work is transitioned to the replacement contractor.									
MM-962	Core System Contract Oversight Consultant	Lea + Elliott, Inc	\$43,988,989			\$43,988,989	\$5,883,474	13.4%	0.31%	Feb 2014	Aug 2019
Notes/Issues:		▪ None at this time.									
DB-120	West Oahu/Farrington Highway DB	KIWC	\$482,924,000	\$113,998,382	23.6%	\$619,400,447	\$362,186,350	58.5%	0.75%	Nov 2009	Jul 2016

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
	Notes/Issues:	<ul style="list-style-type: none"> Agreement called for issuance of all four NTPs within 120 calendar days of December 1, 2009. CCO has been approved by HART Board to resolve compensation associated with NTP and AIS Delays. Resolution does not include some components of escalation, which will be settled on case-by-case basis. Contract is approximately four months behind schedule. The delay is the result of less than planned production rates and lack of site access. HART and KIWC have been working to mitigate impacts to critical path activities. HART received a revised baseline schedule from the contractor, but it was rejected. HART has requested that the schedule be resubmitted via the Change Order process. 									
DB-200	Maintenance and Storage Facility DB	Kiewit/Kobayashi JV	\$195,258,000	\$70,600,008	36.1%	\$274,358,008	\$171,594,297	62.5%	0.08%	Jun 2011	Apr 2016
	Notes/Issues:	<ul style="list-style-type: none"> CCO has been approved by HART Board to resolve compensation associated with NTP and AIS Delays. Resolution does not include some components of escalation, which will be settled on case-by-case basis. Contract substantial completion date has slipped 10 calendar days due to weather that impacted construction operations. KKJV and HART are working to mitigate the impacts to the critical path, which are not significant. 									
DB-320	Kamehameha Highway Guideway DB	KIWC	\$372,150,000	\$11,515,363	3%	\$388,515,363	\$131,817,119	33.9%	0.08%	Jun 2011	Sep 2016
	Notes/Issues:	<ul style="list-style-type: none"> CCO has been approved by HART Board to resolve compensation associated with NTP and AIS Delays. Resolution does not include some components of escalation, which will be settled on case-by-case basis. Contract is approximately seven months behind schedule. The delay is the result of less than planned production rates and lack of site access. HART and KIWC have been working to mitigate impacts to critical path activities. HART received a revised baseline schedule from the contractor, but it was rejected. HART has requested that the schedule be resubmitted via the Change Order process. KIWC is mobilizing a third guideway erection truss to help mitigate the WOFH and KHG delays. 									
DBOM-920	Core Systems Contract	Ansald/Honolulu JV	\$573,782,793	\$29,198,490	5%	\$595,139,998	\$112,735,639	18.9%	0.025%	Nov 2011	Mar 2019
	Notes/Issues:	<ul style="list-style-type: none"> AHJV has asserted that it has had a 9-month delay in starting work due to CSC protest. This issue is in mediation, but mediation is delayed awaiting AHJV input to proceed. HART now plans to start revenue service with 4-car trains in place of the initial plan of 2-car trains based on FTA's acceptance in December 2013. It is anticipated that HART and AHJV will resolve the commercial terms for change to 4-car trains in May 2015. AHJV revised their baseline contract schedule, and it has been approved. However, re-procurement of Westside Stations Group and use of DB for the eastside guideway and stations will result in another revision to CSC schedule. The revised baseline schedule will be available in 3-4 months after all interface milestones are finalized. 									
MI-930	Elevators and Escalators Install & Maintain	Schindler Elevator Corporation	\$50,982,714	\$0	0%	\$50,982,714	\$3,439,172	19.3%	0%	May 2013	Jul 2018
	Notes/Issues:	<ul style="list-style-type: none"> None at this time. 									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
FD-140	West Oahu Station Group Construction FD	URS, Inc.	\$7,789,000	\$1,473,805	19%	\$9,560,305	\$7,958,160	83.2%	0%	Jun 2012	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> Westside Stations Group construction package includes Farrington Highway Station Group, West Oahu Station Group, and Kamehameha Station Group. Procurement was cancelled due to higher than anticipated bids. IFB in April 2015. Revised engineer's estimate exceeds the FFGA budget. West Oahu Stations Group – IFB will be issued in April 2015. 									
FD-240	Farrington Highway Station Group FD	HDR, Inc. / URS	\$9,300,696	\$2,907,349	31%	\$14,198,045	\$12,332,344	86.9%	4.7%	Jan 2011	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> Bids were received on March 3, 2015. FFGA budget for this stations group was \$55 million, and the current Engineers Estimate was \$76 million. The apparent low bid was \$78.9 million. HART received a bid protest notification from the second low bidder on March 11, 2015. HART's determination on the bid protest is pending. 									
FD-340	Kamehameha Highway Station Group Construction FD	Anil Verma, Inc.	\$8,702,592	\$0	0%	\$8,702,592	\$7,866,141	90.4%	35.76%	Nov 2012	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> Revised engineer's estimate exceeds the FFGA budget. Kamehameha Highway Station Stations Group – IFB will be issued in August 2015. 									
FD-430	Airport Section Guideway and Utilities FD	AECOM	\$38,840,960	\$3,711,172	9.5%	\$42,610,832	\$37,769,872	89.0%	0.42%	Dec 2011	Jun 2017
Notes/Issues:		<ul style="list-style-type: none"> Airport Guideway will be combined with Airport Stations into a DB Contract. This contract will include a two-RFP. Part I will be issued April 2015. Part II will be issued in July 2015. NTP is anticipated for February 2016. Revised engineer's estimate exceeds the FFGA budget. 									
FD-440	Airport Station Group Construction FD	AECOM	\$10,177,365	\$0	0%	\$11,402,205	\$9,718,742	85.2%	2.31%	Nov 2012	Jul 2017
Notes/Issues:		<ul style="list-style-type: none"> HART has limited the designers' activity to supporting preparation of the eastside DB contracts. 									
FD-530	City Center Section Guideway and Utilities FD	AECOM	\$43,948,220	\$1,282,803	2.9%	\$45,231,023	\$36,688,628	81.1%	0.44%	Jul 2012	May 2018
Notes/Issues:		<ul style="list-style-type: none"> City Center Guideway will be combined with Dillingham/Kaka'ako Stations Group into a DB Contract. This contract will include a two-RFP. Part I will be issued August 2015. Part II will be issued in October 2015. NTP is anticipated for June 2016. Revised engineer's estimate exceeds the FFGA budget. 									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
FD-550	Dillingham and Kaka'ako Station Group Construction FD	Perkins & Will	\$18,321,918	\$0	0%	\$18,974,447	\$10,396,963	58.0%	0%	Jun 2013	Jul 2018
Notes/Issues:		<ul style="list-style-type: none"> ▪ HART has limited the designers' activity to supporting preparation of the eastside DB contracts. 									
DBB-505	Airport Section Utilities Construction	Nan	\$28,413,973	\$0	0%	\$28,413,973	\$0.00	0%	0%	Jul 2014	Jun 2016
Notes/Issues		<ul style="list-style-type: none"> ▪ Construction activities ongoing. 									
DBB-525	Airport Section Guideway Seven Pier Construction	HDCC/CJA JV	\$3,973,000	\$0	0%	\$3,973,000	\$0.00	0%	0%	Sep 2014	Feb 2015
Notes/Issues		<ul style="list-style-type: none"> ▪ Construction activities ongoing. 									

Appendix C: Procurement Schedule

Contract No.	Type Service	Description	Status	Advertise	Due Date	NTP	Complete
DB-275	Design/Build	Pearl Highlands Parking Structure/Bus Transit Center	Suspended				
DBB-271	Construction	Farrington Highway Stations Group	Bids received; pending protest resolution	Dec 2014	Mar 2015	TBD – pending protest resolution	Jul 2017
DBB-385	Construction	Ramp H2R2	Pending	Jan 2015	Apr 2015	TBD	May 2016
DBB-171	Construction	West Oahu Stations Group	Pending	Apr 2015	Jun 2015	Jul 2015	Nov 2017
DBB-371	Construction	Kamehameha Stations Group	Pending	Aug 2015	Nov 2015	Dec 2015	Aug 2018
DB-450	Design/Build	Airport Guideway and Stations	Pending	Apr 2015	Dec 2015	Feb 2016	Jul 2019
DBB-510	Construction	City Center Utilities	Pending	Jun 2015	Aug 2015	Oct 2015	Mar 2017
DB-550	Design/Build	City Center Guideway and Stations	Pending	Aug 2015	Apr 2016	Jun 2016	Dec 2019

Appendix E: Safety and Security Checklist

Project Overview			
Project Name	Honolulu Rail Transit Project		
Project mode (Rail, Bus, BRT, Multimode)	Rail		
Project phase (Preliminary Engineering, Final Design, Construction, or Start-up)	FD		
Project Delivery Method (Design/Build, Design/Build/Operate Maintain, CMGC, etc.)	DB, DBB and DBOM		
Project Plans	Version	Review by FTA	Status
Safety and Security Management Plan	3.0	Y	Complete
Safety and Security Certification Plan	2.0	Y	Complete
System Safety Program Plan			Submittal date Mar-13
System Security Plan or Security and Emergency Preparedness Plan (SSEPP)		N	TBD
Construction Safety and Security Plan	1.0	Jun-11	Submitted in Mar-11
Safety and Security Authority	Y/N	Status	
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 2013	
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	N	Submission/Approval in 2013	
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y	April 16, 2014	
Has the grantee submitted its safety certification plan to the oversight agency?	N	SOA information	
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N	None issued to date	
SSMP Monitoring			
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?	Y		
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"> • Activation Plan and Procedures • Integrated Test Plan and Procedures • Operations and Maintenance Plan • Emergency Operations Plan 	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
Construction Safety		
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

Federal Railroad Administration		
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	

Appendix D: Project Overview and Map

Date: March 2015
Project Name: Honolulu Rail Transit Project
Grantee: City and County of Honolulu
FTA Regional contact: Catherine Luu
FTA HQ contact: Kim Nguyen

SCOPE

Description The proposed Project is an approximately 20-mile rail alignment extending from East Kapolei to Ala Moana Center.

Guideway The majority of the Project is to be built on aerial structure, but the Project also includes a short at-grade section (0.6 miles).

Stations 21 stations (20 aerial and 1 at-grade)

Support Facility Maintenance and Storage Facility (located near Leeward Community College)

Vehicles 80 light metro rail

Ridership 104,300 weekday boardings in 2019; 119,600 weekday boardings in 2030

SCHEDULE

10/09 Approval Entry to PE	03/19 Estimated RSD at Entry to PE
12/11 Approval Entry to FD	03/19 Estimated RSD at Entry to FD
06/12 Request for FFGA	03/19 Estimated RSD at Request for FFGA
12/12 FFGA	01/20 RSD at FFGA

COST

\$5.348 B Total Project Cost (\$YOE) at Approval Entry to PE
\$5.126 B Total Project Cost (\$YOE) at Approval Entry to FD
\$5.122 B Total Project Cost (\$YOE) at request for an FFGA
\$5.122 B Total Project Cost (\$YOE) at FFGA

\$1.388B Amount of Expenditures at date of this report
32.0% complete (Total Project Expenditures/Total Project Cost)

Honolulu Rail Transit Project Map

