

PMOC MONTHLY REPORT

Honolulu Rail Transit Project

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

July 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

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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/6 stations)
 - Segment II (Kamehameha Highway) – Pearl Highlands to Aloha Stadium (4 miles/3 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

- Overall project is approximately 35.3% complete as of May 2015. The planned completion at this time is approximately 48% (based on S-curve late plan).
- Overall design of the project is approximately 85.4% complete as of May 2015. The planned completion at this time is approximately 94.5% (based on S-curve late plan). 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 construction of the project is approximately 26.7% complete as of May 2015. The planned completion at this time is approximately 40.0% (based on S-curve late plan). Section 2.1.3 and Appendix B of this report provide the status of the current design and construction contracts. The following table provides the summary level status of the primary construction contracts:

Description	% Complete*		Schedule Status
	Actual	Planned	
West Oahu /Farrington Highway (WOFH) DB Contract	66.9%	77.6%	4-6 months behind
Kamehameha Highway Guideway (KHG) DB Contract	37.6%	78.7%	7 months behind
Maintenance and Storage (MSF) DB Contract	75%	80%	6 days behind
Core Systems Design-Build-Operate-Maintain (DBOM) Contract	23%**	26%	3 months behind***
Airport Advanced Utilities Construction Contract	9%	17%	5 months behind

*As of May 2015

**Based on expenditures. All others are based on Earned Value.

***Contract schedule is to be re-baselined to incorporate new milestone dates due re-procurement of Westside Stations Group and use of DB for the eastside guideway and stations.

1.3 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	\$11,500,000
	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	35.3% (as of May 29, 2015)	
	Based on Earned Value*	35.3%	

*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 the state and federal lawsuits as well as protested procurements.	See PMOC Monthly Report Section 1.4 for status.
Funding Shortfall	Section 5307 funds will not be made available and GET receipts continue to be an issue.	See PMOC Monthly Report Section 1.4 for status.
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.
Hawaii Electric Company (HECO)	50-foot clearance requirement for facility maintenance including pole replacement	See PMOC Monthly Report Section 1.4 for status.
Next Quarterly Meeting:	August 18, 2015	

1.4 PMOC Issues or Concerns

- Budget – HART's current Estimate at Completion (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 revising 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 contingency). However, these numbers have not been updated and do 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 included in the EAC.

- Funding – HART collected \$65 million in tax revenue for the quarter that ended in March 2015. The amount was \$9 million above quarterly projections based on HART's financial plan, which is encouraging. HART has indicated that it will not have access to \$210 million in Section 5307 funds for the project. HART and the City must identify substitute funding to address the loss of these funds in an update of the Financial Plan, which was originally due to FTA in July 2015. However, HART requested a time extension on the due date of the Financial Plan because of the timing required on the final action on the GET. HART requested an extension to December 15, 2015. FTA indicated that the Financial Plan should be submitted by September 15, 2015. This Financial Plan should be based on the most current information available. HART has indicated that they intend to take advantage of low interest rates and an improved borrowing plan to save an estimated \$60-75 million in borrowing costs.

- GET Extension - The Hawaii State Legislature passed House Bill 134, which would extend the City and County of Honolulu's current 0.5% surcharge on the state's General Excise Tax (GET) for the rail transit project for an additional five years through 2027. The legislative session closed on May 17, 2015. Preliminary estimates are that the GET extension could generate approximately \$1.8 billion in revenue. The Governor signed the bill on July 14, 2015. The City Council will need to amend an ordinance to enact the tax extension. The City Council cannot enact the measure before July 1, 2015 (start of Fiscal Year) but must take action by July 1, 2016. If passed by the City Council, the Mayor must then sign the measure.

- 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:
 - Review of contract general terms and conditions to eliminate unique conditions and ambiguities that result in added costs
 - Significant revision of the project's contract packaging strategy to simplify interface and create cost reduction opportunities through contractor proposed innovations
 - 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 related 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's Decision Milestone Matrix. Nevertheless, it is still 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 (MPS) is undergoing significant 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. HART then transmitted a work-in-progress (draft) MPS to the PMOC for review prior to the July 2015 progress meeting. A cursory review of the draft MPS was performed by the PMOC and comments were provided verbally to support HART’s ongoing MPS development. PMOC review comments included: some out of sequence progress activities were identified; there was limited incorporation of schedule contingency; and, most importantly, a one year gap in the longest critical path.

Both HART and the PMOC have emphasized that the MPS remains under development and refinement. HART subsequently transmitted a revised draft MPS to the PMOC on July 24, 2015. The PMOC is currently reviewing the latest MPS submittal. The longest critical path has been corrected as well as most of the errors and warnings generated in the schedule file log.

- 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 to determine whether to use federal 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. If federal funds are to be used, clarification is needed to determine the anticipated period that the facility would be utilized by HART.
- 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 its collective bargaining agreement that has different wage scales and allows payment to its labor forces biweekly. HART is coordinating to resolve this with HECO.
 - 50-foot Clearance Issue – HECO and HART have continued high-level meetings to discuss numerous issues including the offset issue. HECO has now indicated that the clearance is required to accommodate future pole replacement. The proposed use of a telescoping bucket truck would only mitigate some but not all line maintenance issues. This may have a tremendous impact on both schedule and cost. Resolution of this issue affects ongoing DB contracts as well as the future DB contracts.

HART has acknowledged that under-grounding of portions of the overhead power lines will likely be required along limited lengths of the guideway. HART has assembled a Task Force Committee to review all options to help mitigate clearance issues. HECO provided HART with a report from its consultant

regarding the potential extents of under-grounding. HECO's preliminary estimate has not been validated by HART at this time. 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.

This is currently HART's most significant risk to the project. This issue must be resolved by fall 2015, so HART can incorporate the final configuration into the City Center Guideway and Stations DB Contract. If HART is required to underground all affected lines, it would have a significant impact on the project costs. HART has indicated that they have incorporated some exposure into their EAC for this, but not enough to cover the full cost if the HECO clearance preferred solution requires complete undergrounding.

2.0 BODY OF REPORT

2.1.1 Project Status

- Overall project is approximately 35.3% complete as of May 2015. The planned completion at this time is approximately 48% (based on S-curve late plan).
- Overall design of the project is approximately 85.4% complete as of May 2015. The planned completion at this time is approximately 94.5% (based on S-curve late plan). 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 construction of the project is approximately 26.7% complete as of May 2015. The planned completion at this time is approximately 40.0% (based on S-curve late plan). Section 2.1.3 and Appendix B of this report provide the status of the current design and construction contracts.

2.1.2 Status of Procurement

- Farrington Highway Station Group Construction – Invitation for Bids (IFB) was issued in December 19, 2014. Bids were received on March 3, 2015. The contract was awarded to the lowest bidder, Hawaiian Dredging Construction Company, Inc., on June 10, 2015 in the amount of \$78,999,000.
- West Oahu Stations Group – Invitation for Bids (IFB) was issued in April 2015. Bids were received on June 16, 2015. Nan, Inc. was the lowest bidder at \$56.1M. Nan’s request to withdraw its bid was rejected upon review of its supporting documents claiming there was a “mistake in bid.” HART does not see an error in their apparent low bid and may hold \$2.5 million from their bid bond if they don’t sign the contract.
- 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). RFP Part I (qualifications) responses are due July 21, 2015. Part II responses (price and technical) will be due in January 2016. HART added a clause to the RFP Part I that required the proposers to submit an intent-to-bid, which were due June 10, 2015. HART indicated that they have received an intent-to-bid from three interested offerors.
- 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 canceled this solicitation on July 1, 2015 and they will begin actively investigating a Public Private Partnership (PPP). HART informed the PMOC there might be a protest from the proposers due to the cancelation. The proposers have until July 9, 2015 to file a protest.
- H2R2 Ramp – Contract was awarded in May 2015 to Royal Contracting for \$5.2 million.
- Fare Collection Technical Support Consultant – Proposals were received on April 27, 2015. Two proposals were received. An additional notice of request for qualifications

was issued on May 28, 2015. No further responses were received. An exception to the three proposal requirement was approved. HART is evaluating the two proposals received.

- Fare Collection System - Request for Proposal (RFP) was originally anticipated to be released in May 2015 but is contingent upon an MOU with the City. No firm date for releasing the RFP has been provided by HART.

2.1.3 Status of Primary Construction Contracts

- West Oahu/Farrington Highway (WOFH) Design-Build (DB) Contract –
 - Contract is approximately 67% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 77%.
 - The contract is approximately six 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, but rejected by HART. HART requested that the schedule be resubmitted by KIWC via the Change Order process to quantify any extended overhead or escalation that may have resulted due to delays beyond KIWC's control. It is anticipated that the substantial completion milestone will be modified to reflect the delay.
 - Approximately three-miles of guideway have been erected.
 - Overall quality of the contract is good.
- Kamehameha Highway Guideway (KHG) DB Contract –
 - The contract is approximately 37% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 78%.
 - 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 to quantify any extended overhead or escalation that may have resulted due to delays beyond KIWC's control.
 - Guideway erection is scheduled to begin in August 2015. However, there are HECO transmission line clearance issues associated with the guideway that may delay the shaft and guideway erection.
 - 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 75.0% complete based on earned value (design and construction activities). The planned earned value at this time is approximately 80%.
 - Building structures are essentially complete with interior buildout continuing.

- Contract substantial completion date has slipped 6 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.
 - Overall quality of the contract is good.
- Airport Advanced Utilities Construction Contract –
 - Contract is approximately 9% based on Earned Value. The planned earned value at this time is approximately 17%.
 - Some construction activities began in May 2015. Work was scheduled to begin in March 2015 but was delayed due to issues with Navy right of entry (ROE) for construction. HART received construction right of entry from the Navy on June 22, 2015.

2.1.4 Status of Core Systems Contract

Core System Description	Status
General	
Overall	<p>Contract is approximately 23% complete based on expenditures (design, manufacturing, and construction activities). The planned completion at this time is approximately 26% (based on late plan S-curve).</p> <p>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.</p>
Design	<p>Following are the approximate levels of design completion</p> <ul style="list-style-type: none"> • LRVs – 93% (Interim Design), 7% (Final Design) • Train Control – 88% (Interim Design), 92% (Final Design) • Traction Power – 100% (Interim Design), 96% (Final Design) • Communications – 100% (Interim Design), 32% (Final Design) • Fire Detection – 100% (Interim Design), 55% (Final Design) • PSG, UPS, MPV – N/A (Interim Design), 72% (Final Design) <p>(Note: HART reports earned value only for the overall contract, not for design of the individual components.)</p>
Construction	Limited construction work (MSF signal house) began in June 2015; significant construction activity will not begin until fall 2015.
Schedule	AHJV revised its baseline contract schedule 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 the CSC schedule. The revised baseline schedule will not be available for three months. HART wants to ensure that they provide AHJV with milestone dates for their schedule update that should not change.
Staffing	Several key personnel positions are vacant. AHJV needs to move quickly to address these vacancies and fill the open positions with experienced staff.
NTP Delay Claim	AHJV has asserted that it has had a 9-month delay in starting work due to CSC protest. HART settled the NTP delay claim for \$8.5 million. AHJV's NTP delay claim amount was originally for \$9 million.
System Performance Design	There are some concerns with AHJV's method for calculating headways and round-trip times. Alignment changes from Airport and City Center Fixed Facility Contractors may affect system performance. A full analysis must still be completed.
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 February 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 July 2015. Shipment of the first LRV to Honolulu is scheduled for February 2016.

Core System Description	Status
Buy America	HART performed a Buy America Audit of the LRVs. HART intends to report the percentage based on the trainset, not type of car (End and Middle). Based on the trainset, the US content is 63%. Based on the type of car, the percentages are 64% (E car) and 62% (M car), which satisfy the minimum 60% US content for rail vehicles under Buy America.
Ship America	AHJV is negotiating terms with a carrier to transport the LRVs from Italy to US mainland and from US mainland to Hawaii. Once that agreement is finalized, HART will provide confirmation to FTA. AHJV received approval from the US Maritime Agency to ship the first 4 vehicles from a non US carrier.
Traction Electrification Subsystem	
Middle Street AM Antenna	HART has identified an alternate location to relocate the AM Antenna. ROW is working to execute the agreement and relocate. Shielding is no longer necessary.
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.
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 have concluded.
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.

2.1.5 Real Estate Acquisition

- Currently, there are no ROW actions impeding construction work, although the ROW team continues to seek site access or full acquisition to ensure no delay to construction. HART is working to obtain all ROW and parcels that are necessary for construction. The PMOC will continue to closely monitor progress of the ROW actions to help any avoid impacts to construction.
- It appears that some parcels may require condemnation. The number of outstanding parcels remains significant:
 - HART has closed 74 of 224 properties needed.
 - HART has completed 127 of 224 appraisals.
- 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. However, the use of the irrevocable right of entry has been delayed due to concerns expressed by owners regarding liability arising from third parties. This approach is a modification of the current procedures, and HART has updated the RAMP to include this approach.
- Eminent Domain – Five cases were forwarded by staff to the HART Board of Directors on May 21, 2015 to support the schedule for the Airport Guideway and Stations DB contract. The HART Board approved the resolution, which allowed staff to forward the matter for consideration by the Honolulu City Council. HART anticipates bringing the matter on the five cases back to the HART board on July 30, 2015. Another 20 cases were forwarded on June 25, 2015 for condemnation to support the schedule for the City Center Guideway and Stations DB contracts. The HART Board approved the resolution that allows staff to forward the matter for consideration by the Honolulu City Council. HART anticipates bringing these cases back to the HART board at their August 2015 meeting. HART continues to negotiate with each property owner in an attempt to reach mutual agreement. However, HART has indicated that there are several more parcels that may be proposed to the HART Board of Directors for condemnation to support east DB contracts.
- All private property site access for the guideway is complete for KHG. KIWC has identified 3 permanent easement locations for relocated utilities. HART is working with KIWC to resolve these easements, and while they are critical there is not currently an impact on construction work.
- High turnover of HART's real estate consultant staff had a negative impact on production. However, it has been noted that the consultant staffing has stabilized. The PMOC will continue to monitor ROW production.
- Negotiations for parcel acquisitions were delayed because project staff could not obtain definitive answers for certain technical questions (e.g. legal descriptions of the takings; how utilities will be addressed on the project.) However, HART has improved communication and coordination between the ROW and engineering and construction staffs by assigning a liaison.

2.1.6 Third Party Agreements and Coordination

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 for the Kamehameha Highway Guideway with the Stadium Authority. This clears the way for guideway construction to begin in the area. HART is negotiating with the Stadium Authority for the park-and-ride construction right of entry.
- University of Hawaii Right of Entry – University of Hawaii (UH) requested that the HART contractor enter into a separate right of entry to construct on University property. University maintains that the current ROE with HART only addresses preliminary work, does not cover on-site construction, and that the University can refuse to admit the contractor. KIWC and UH are close to finalizing the ROE for the Leeward Community College, which will serve as the model for all other ROEs with UH
- U.S. Navy – On June 22, 2015, the Navy issued HART a License Agreement, which is a construction right of entry to complete work on Navy property or on Navy facilities such as utility lines. Work has commenced. HART continues close coordination with the Navy.

2.1.7 Environmental mitigation measures

- 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 Management Plan (PMP) 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. Following is the status of the key management plan updates:

Plan	Status	Note
Project Management Plan (PMP)	Approved for FFGA but update is pending	PMP will be available for review in July 2015 without detailed budget and schedule information. HART will incorporate this information when it becomes available (tentatively 4 th Quarter of 2015).
Contract Packaging Plan (CPP)	Approved for FFGA but update is pending	CPP must still be updated to reflect MPS and EAC changes.
Risk and Contingency Management Plan (RCMP)	Approved for FFGA but update is pending	PMOC received HART's response to our comments of the DRAFT RCMP on June 10, 2015. These responses are under review.
Financial Plan	Approved for FFGA but update is pending	Financial Plan would not be available now until the 4 th Quarter of 2015 since they need to await final action on the GET extension before they can update the plan. FTA requested the plan by

		September 15, 2015.
Real Estate Acquisition and Management Plan (RAMP)	Approved for FFGA but update is pending	DRAFT RAMP has been reviewed; FINAL RAMP will be available in July 2015

2.3 Management Capacity and Capability (MCC)

HART has gone through a considerable number of organizational changes since the FFGA was executed in December 2012. The PMOC has recommended that HART review its 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. Project staff has also begun updating the project's numerous plans and procedures to reflect these changes. HART's update of the management plans must incorporate any organizational changes that have been made to date or any proposed changes. It has become critical that any changes be documented in the various management plans immediately.

The new HART Director of Design and Construction started on July 6, 2015. The HART Project Manager for KHG and the HART Deputy Director of Traffic and Utilities did not renew their Personal Service Contracts with HART effective July 1, 2015. HART has temporarily backfilled these positions. The HART Project Manager for WOFH will also serve as Project Manager for KHG, and the Deputy Director of Traffic and Utilities position has been filled on an interim basis by the PMSC. Both positions are on an interim basis until qualified candidates are hired.

2.4 Project Cost

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 – \$1.538 billion (through May 2015)

The following table presents the FFGA budget and expenditures to date. The Estimate at Completion (EAC) for each SCC will be provided once HART re-baselines their budget.

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	186,056,864
10.04	Guideway: Aerial structure	1,175,328,184	1,022,380,670	152,947,514	17,378
10.08	Guideway: Retained cut or fill	8,077,393	7,492,943	584,450	139,401,336
10.09	Track: Direct fixation	86,332,027	79,437,204	6,894,823	46,638,150
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	4,043,013
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	4,043,013
30	SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	99,425,456	92,535,013	6,890,443	64,848,121
30.02	Light Maintenance Facility	8,161,279	7,591,887	569,392	1,390,906
30.03	Heavy Maintenance Facility	40,906,889	38,099,138	2,807,751	18,211,841
30.04	Storage or Maintenance of Way Building	8,382,270	7,797,460	584,810	3,552,120
30.05	Yard and Yard Track	41,975,018	39,046,528	2,928,490	41,693,254
40	SITework & SPECIAL CONDITIONS	1,103,867,264	980,569,426	123,297,838	444,380,715
40.01	Demolition, Clearing, Earthwork	34,695,802	29,980,157	4,715,645	1,406,285
40.02	Site Utilities, Utility Relocation	350,694,801	299,449,755	51,245,046	73,433,145
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	7,228,935	6,590,542	638,393	2,034,728
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	30,841,906	26,979,122	3,862,784	9,107,113
40.05	Site structures including retaining walls, sound walls	8,637,582	7,998,960	638,622	2,507,754
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	4,046,510
40.08	Temporary Facilities and other indirect costs during construction	410,969,241	386,517,624	24,451,617	351,795,180
50	SYSTEMS	247,460,781	221,284,483	26,176,298	25,113,602
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	13,770,088
50.05	Communications	59,889,234	53,691,339	6,197,895	9,881,696
50.06	Fare collection system and equipment	10,221,753	9,159,277	1,062,476	(1,131,901)
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	724,442,315

SCC	SCC Description	FFGA Budget	Base Cost	Allocated Cont.	Incurred
60	ROW, LAND, EXISTING IMPROVEMENTS	222,188,386	197,397,947	24,790,439	83,249,257
60.01	Purchase or lease of real estate	201,658,907	179,360,664	22,298,243	74,565,542
60.02	Relocation of existing households and businesses	20,529,479	18,037,283	2,492,196	8,683,715
70	VEHICLES	208,501,186	186,829,020	21,672,166	23,276,865
70.02	Heavy Rail	186,061,066	166,721,385	19,339,681	16,547,379
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	697,261,222
80.01	Preliminary Engineering	95,120,484	94,055,262	1,065,222	102,606,160
80.02	Final Design	257,934,908	228,321,632	29,613,276	157,321,628
80.03	Project Management for Design and Construction	385,825,694	366,458,463	19,367,231	286,014,515
80.04	Construction Administration & Management	218,155,752	199,656,728	18,499,024	67,477,137
80.05	Professional Liability and other Non-Construction Insurance	52,138,030	46,549,724	5,588,306	21,394,511
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	76,135,125	67,641,006	8,494,119	18,631,546
80.07	Surveys, Testing, Investigation, Inspection	24,955,327	21,759,335	3,195,992	23,777,510
80.08	Start up	73,560,706	65,996,664	7,564,042	20,038,215
90	Subtotal (10 - 80)	4,846,763,750	4,305,164,589	541,599,161	1,528,229,659
	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	1,528,229,659
	FINANCE CHARGES	173,058,242			0
	Total Project Cost (10 - 100)	5,121,693,162	4,305,164,589	643,470,331	1,528,229,659
	Provisional Request for Payment				10,294,102
	Total Project Cost (10 - 100)	5,121,693,162	4,305,164,589	643,470,331	1,538,523,761

HART's current Estimate at Completion (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.

2.4.1 Contingency

HART indicates a forecasted amount of \$303 million remaining in contingency (\$11.5 million in unallocated and \$291.8 million in allocated contingency). However, these numbers have not been updated and do 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 included in the EAC.

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.

2.4.2 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 \$1.469 billion in GET funds since 2007.
- HART has received approximately \$1.091 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. HART and the City must identify substitute funding to address the loss of these funds in an update of the Financial Plan, which was originally due to FTA in July 2015. However, HART requested a time extension on the due date of the Financial Plan because of the timing required on the final action on the GET. HART requested an extension to December 15, 2015. FTA indicated that the Financial Plan should be submitted by September 15, 2015. This Financial Plan should be based on the most current information available.

2.5 Project Schedule

The Master Project Schedule is undergoing significant 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. HART then transmitted a work-in-progress (draft) MPS to the PMOC for review prior to the July 2015 progress meeting. A cursory review of the draft MPS was performed by the PMOC and comments were provided verbally to support HART’s ongoing MPS development. PMOC review comments included: some out of sequence progress activities were identified; there was limited incorporation of schedule contingency; and, most importantly, a one year gap in the longest critical path. HART provided information on the assumptions utilized for development of the updated MPS. However, a detailed Basis of Schedule is required to fully support revised production rates, justification of activity durations and contingency, and nomenclature and conventions for the new sequence of work areas along the Airport and City Center alignments.

Both HART and the PMOC emphasized that the MPS remains under development and refinement. HART subsequently transmitted a revised draft MPS to the PMOC on July 24, 2015. The PMOC is currently reviewing the latest MPS submittal. The longest critical path has been corrected as well as most of the errors and warnings generated in the schedule file log.

Reporting against the revised critical milestones will be provided once the MPS update is complete.

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

Period: August 2015 – November 2015		
Activity	Responsibility	Date
Risk Refresh	FTA, HART and PMOC	To be determined
Monthly Progress Meeting (Conference Call)	FTA, HART and PMOC	August 5, 2015
Quarterly Meeting	FTA, HART and PMOC	August 18, 2015
Monthly Progress Meeting	FTA, HART and PMOC	September 9, 2015
Monthly Progress Meeting	FTA, HART and PMOC	October 14, 2015
Monthly Progress Meeting	FTA, HART and PMOC	November 4, 2015

2.6 Quality Assurance/Quality Control (QA/QC)

- 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 KIWC will replace the two precast segments instead of repairing them. On March 31, 2015, KIWC completed the replacement of the two precast segments and Span 67 has been realigned into the guideway.
- WOFH Span 17 Damage and Repair – During the erection in March 2015, four segments were damaged due to unbalanced support from the temporary bearings. KIWC continues to evaluate the extent of the damage, and a root cause analysis and repair procedure alternatives was submitted to HART for review.
- Span 105 Damage and Repair – The span shifted on the jacks while being set in April 2015 into its final horizontal and vertical position. Due to this incident, final span alignment operations were temporarily suspended to re-evaluate the procedures. KIWC has successfully repositioned the span and made necessary repairs of minor spalling. They also have developed a procedure for final span alignment to prevent this issue from reoccurring.
- Following is a summary of Non-Conformance Reports (NCR) that have been issued:

Contract	Description	NCRs		
		Issued	Closed	Open
DB-120	West Oahu/Farrington Highway	383	310	73
DB-200	Maintenance and Storage Facility	26	25	1
DB-320	Kamehameha Highway Guideway	70	43	27
DBOM-920	Core Systems Contract	111	90	21

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. KHG DB contract is experiencing similar concrete consolidation issues with the drilled shafts. However, KIWC has developed measures to correct these NCRs and help prevent issues in the future.

2.7 Safety and Security

- HART Design Conformance Checklists, including CELs/CILs for active projects, are going through the Safety and Security Review Committee (SSRC) for approval. However, Construction Conformance and Testing Verification is lagging.

- HART is in the process of updating the 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 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 its SOA Program Plan before HDOT will approve HART for interim testing. HART is working on vehicle certification planning activities to comply with the HART Certification Plan.
- HART Safety and Security Certification Manager position has been vacant for approximately 2 months. HART Chief Safety and Security Manager and other HART staff are filling the gap while a search for a new candidate is undertaken.
- The Airport 7 Pier Project is nearing completion. HART will perform close out, including final safety certification.

2.8 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 HART's 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.

HART will continue to update the Cost Reduction Measures matrix and Decision Milestone Matrix on a regular basis (at least monthly). The PMOC will continue to hold Cost Containment Workshops with HART on a monthly basis to review the Cost Reduction Measures Matrix and

HART's Decision Milestone Matrix. Nevertheless, it is still anticipated that the Project cost will most likely exceed the FFGA budget.

It is anticipated that another Risk Refresh will be completed once the updated MPS is available and the EAC has been updated.

2.9 Action Item Table

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
1	Provide HECO chronology of 50-foot offset requirement	HART	May-14	Jul-15		Open
2	Resolve issue with AHJV regarding cost savings associated with change to 4-car trains	HART	Mar-14	Jul-15	Jul-15	Closed – HART is receiving a \$5.2M credit for resolution of the 4-car train change. Memo provided to FTA/PMOC.
3	Resolve HECO issue with Davis-Bacon requirements	HART/FTA	Mar-14	On-going		Open – HECO waiver is pending. HART provided MOU to PMOC.
4	Updates resulting from Risk Refresh:					
4a	Update the Contract Packaging Plan	HART	Aug-14	Jul-15		In progress – Draft provided to PMOC but changes may be incorporated on updated estimate and schedule
4b	Re-baseline Financial Plan	HART	Apr-14	Sept-15		In progress
4c	Re-baseline budget	HART	Apr-14	Dec-15		In progress (EAC will be available in July, but an approved re-baseline budget will not occur until late 2015.)
4d	Re-baseline MPS	HART	Apr-14	Jul-15	Jul-15	Closed – PMOC is reviewing
4f	Update RCMP (including Hold Points and Secondary Mitigation Measures)	HART	Sept-13	Jun-15		In progress – PMOC provided review comments; conference call may be scheduled to address comments and HART's responses.
5	MPS Workshop	HART/PMOC	Feb-15	TBD		To be scheduled when Preliminary Update of MPS is available.
6	Draft Project Management Plan	HART	Mar-15	Jul-15		Preliminary Draft provided to PMOC in April; DRAFT PMP pending updates of estimates and MPS.
7	Include construction safety statistics in the HART Monthly Report	HART	Apr-15	Jun-15	Jul-15	Closed – Included in June 2015 HART Monthly Report
8	Provide OP 54 (Readiness for Revenue Operations) checklist/roadmap	FTA/PMOC	Apr-15	Jun-15		PMOC to provide sample report.

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
9	Provide confirmation that Ship America requirements will be satisfied	HART	May-15	Jul-15	Jul-15	HART provided correspondence from the US Maritime Administration providing approval to ship the first 4 LRVs on non-US flag vessel.
10	Provide updated Post-ROD documentation matrix	HART	Jul-15	Jul-15		Open
11	Provide WOSG Bid Abstract	HART	Jul-15	Jul-15	Jul-15	Closed
12	Provide US Maritime Agency notice which allows AHJV to ship the first 4 cars from non-US carrier	HART	Jul-15	Aug-15	Jul-15	Closed
13	Provide refined HART cost estimate for Airport/City Center Guideway & Stations DB contracts	HART	Jul-15	Jul-15		Open
14	Provide HART letter to DOL regarding Davis Bacon issue	HART	Jul-15	Jul-15		Open

3.0 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

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. 4d. 3/18/14		\$40,993,274	\$31,876,299	95.5%	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	\$16,863,355	36.5%	2.47%	Dec 2013	Mar 2019
Notes/Issues:		<ul style="list-style-type: none"> ▪ None at this time 									
MM-290	Construction Engineering and Inspection (West)	PGH Wong Engineering, Inc	\$54,232,480			\$54,232,480	\$10,140,764	18.7%	1.53%	Jan 2014	Jan 2020
Notes/Issues:		<ul style="list-style-type: none"> ▪ None at this time. 									
MM-595	Construction Engineering and Inspection (East)	AECOM/URS Corporation	\$63,083,417			\$63,083,417	\$9,590,233	15.2%	1.65%	Jan 2014	Dec 2018
Notes/Issues:		<ul style="list-style-type: none"> ▪ 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	\$8,309,814	18.9%	0.43%	Feb 2014	Aug 2019
Notes/Issues:		<ul style="list-style-type: none"> ▪ None at this time. 									
DB-120	West Oahu/Farrington Highway DB	KIWC	\$482,924,000	\$140,682,472	22.5%	\$623,606,472	\$401,695,380	64.4%	1.11%	Nov 2009	Jul 2016
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 six 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. 									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
DB-200	Maintenance and Storage Facility DB	Kiewit/Kobayashi JV	\$195,258,000	\$79,550,008	40.7%	\$274,808,008	\$204,477,328	74.4%	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 6 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	\$16,486,363	4.4%	\$388,636,363	\$142,197,251	35.7%	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	Ansaldo/Honolulu JV	\$573,782,793	\$21,243,044	3.7%	\$595,139,998	\$130,060,739	21.9%	0.029%	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. HART and AHJV negotiated the 4-car train credit for \$5.2M and also negotiated the NTP delay claim for \$8.5M in July 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 2-3 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	\$4,043,013	7.9%	0%	May 2013	Jul 2018
Notes/Issues:		<ul style="list-style-type: none"> ▪ None at this time. 									
FD-140	West Oahu Station Group Construction FD	URS, Inc.	\$7,789,000	\$2,777,305	34%	\$10,014,305	\$9,052,950	91.3%	0%	Jun 2012	Dec 2016
Notes/Issues:		<ul style="list-style-type: none"> ▪ West Oahu Stations Group – IFB was issued in April 2015. Bids are due June 16, 2015. 									
FD-240	Farrington Highway Station Group FD	HDR, Inc. / URS	\$9,300,696	\$5,017,093	54%	\$14,198,045	\$12,546,293	89.4%	4.7%	Jan 2011	Dec 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"> 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 rejected the protest and the bidder filed an appeal with the DCCA. A hearing is scheduled for May 28, 2015. HART is proceeding with award of the contract in June 2015 and issuing NTP in July 2015. 									
FD-340	Kamehameha Highway Station Group Construction FD	Anil Verma, Inc.	\$8,702,592	\$352,176	3.9%	\$9,011,768	\$8,219,319	91.2%	37.96%	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	\$3,769,872	9.7%	\$42,610,832	\$40,098,433	94.1%	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 was issued in April 2015 with responses due June 9, 2015. However, HART has extended the response period 6 weeks to allow for JV teams to form. Part II responses (price and technical) will be due in January 2016. Some of HART's staff have expressed concern whether viable teams are forming. HART will check with DCCA to see if any new JV teams have applied for a contracting license. Revised engineer's estimate exceeds the FFGA budget. 									
FD-440	Airport Station Group Construction FD	AECOM	\$10,177,365	\$1,244,840	12.2%	\$11,402,205	\$9,801,978	86.0%	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%	\$46,183,523	\$38,685,248	83.8%	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. 									
FD-550	Dillingham and Kaka'ako Station Group Construction FD	Perkins & Will	\$18,321,918	\$0	0%	\$18,974,447	\$10,677,500	59.5%	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	\$3,436,102	12.1%	0%	Jul 2014	Jun 2016
	Notes/Issues:	<ul style="list-style-type: none"> Work was scheduled to begin in March 2015 but has been delayed until at least June 2015 due to issues with NAVY right of entry. 									

Contract	Description	Contractor	Base Contract Value	Change Orders	Change Order %	Current Contract Value	Expended	% Exp.	DBE	Award Date	Compl. Date
DBB-525	Airport Section Guideway Seven Pier Construction	HDCC/CJA JV	\$3,973,000	\$17,378	0.43%	\$4,481,241	\$3,796,241	85.0%	0%	Sep 2014	Feb 2015
Notes/Issues		<ul style="list-style-type: none"> ▪ Construction activities ongoing. 									

Appendix C: PMOC Team

Name	Position	Background
Tim Mantych, PE	Program Manager	Overall responsibility for the Jacobs PMO program. He has spent 16 years in key management roles on the PMO program, including Program Manager and Task Order Manager, effectively managing oversight services for major capital projects in Regions V and IX.
Bill Tsiforas	Task Order Manager	Responsible for oversight of this task order. He has over 25 years of experience and has served as Task Order Manager and as a systems integration manager in the PMO Program since 2008. His project management experience covers a wide range of transit projects including BRT, monorail, streetcar, light rail, and heavy rail systems. In rail projects and other transportation modes, he has experience in management of project planning, engineering, and architecture service contract, engineering design, and construction management.
Keith Konradi, PE	Civil Engineer	Has extensive over 40 years of experience as a civil engineer and trackwork expert who can provide informed reviews of all issues regarding the design and construction of civil, railroad, and transit. He has specialized in railroad and transit projects, designing new alignments, realignments, profiles, yard, and maintenance facility layouts, connections, and interlockings.
Charles Neathery	Construction Management Manager	Responsible for oversight of construction management activities and project scheduling. He has served on the PMO Program since 1995 in various key positions: Deputy Program Manager, Task Order Manager, Construction Manager, Risk Manager, and Technical Specialist. His heavy civil construction background as a construction contractor Project Manager and as Program and Controls Director combines experience on both sides of the industry as a builder and a manager.
Tim Morris	Cost Estimating Manager	Responsible for oversight of cost estimating and cost control. He brings 34 years of experience in cost estimating. His background includes: construction and project management of heavy civil projects; cost estimating; field engineering; scheduling; project controls; change order negotiations; and procurement.
Dorothy Schulz, PhD	Systems Safety Manager	Responsible for oversight of safety and security activities. She has been Director of Transit Security Practice at Interactive Elements for more than 20 years. She performs safety and security studies and oversights for various agencies. She also performs FTA State Oversight Agency (SOA) audits as well as Safety and Security Readiness Reviews (SSRRs). Dr. Schulz has written and/or reviewed numerous TVAs, PHAs, SSPPs, and SSPs; all require comprehensive understanding of the 882C Standard.
Arun Virginkar	Rail Equipment Engineer	Responsible for oversight of rail vehicle engineering and Buy America compliance. He has been involved with the PMOC Program since 1994. He has experience in contract management, vehicle and systems equipment engineering, operations and maintenance planning, system integration and testing, safety certification plans, and quality and system assurance. He also has specialized experience in Buy America Pre-Award and Post-Delivery audits of car builders.
Bob Merryman	Real Estate Manager	Responsible for oversight of real estate activities on the project. He has 35 years of practical experience in the implementation of the Uniform Act in federally funded projects. In addition, he has written three text books used by FHWA, as well as the one additional course text used by the FTA discussing the implementation of the Uniform Act. He also served as lead investigator on the business retrospective study for the Federal Highway Administration. The information gleaned from this investigation was to develop the most recent revisions to 49 CFR Part 24.
David Sillars, PhD	Risk Assessment Manager	Responsible for oversight of the risk management activities for the project. He has over 35 years of experience in risk and management consulting and transportation research. He assisted FTA with editing and developing the updated MAP-21 Risk and Contingency Management Oversight Procedure (OP 40) and updated FTA risk workbook. He has co-developed and delivered the New Starts risk management training program for the National Transit Institute on behalf of the FTA.

Appendix D: Project Overview and Map

Date: July 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

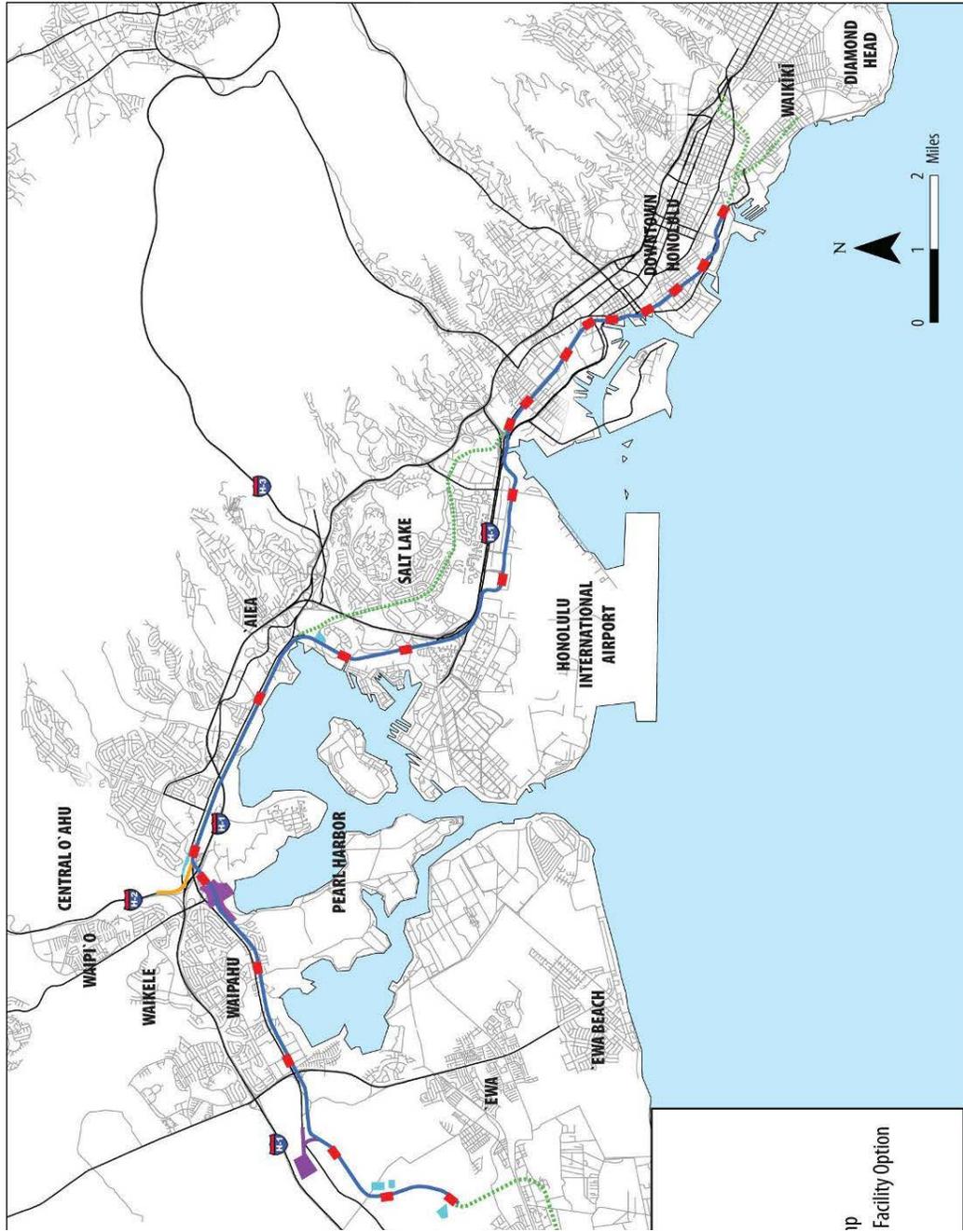
10/09 Approval Entry to PE	03/19 Estimated RSD at Entry to PE
12/11 Approval Entry to FD	03/19 Estimated RSD at Entry to FD
06/12 Request for FFGA	03/19 Estimated RSD at Request for FFGA
12/12 FFGA	01/20 RSD at FFGA

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

\$1.538B Amount of Expenditures at date of this report
35.3% complete (Total Project Expenditures/Total Project Cost)

Honolulu Rail Transit Project Map



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	