

# HONOLULU RAIL TRANSIT PROJECT



## August 2016 MONTHLY PROGRESS REPORT

# HART

HONOLULU AUTHORITY for RAPID TRANSPORTATION

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For projects funded through the FTA Full Funding Grant Agreements (FFGAs) program, the FTA and its Project Management Oversight Contractor (PMOC) use a risk-based assessment process to review and validate a project sponsor's budget and schedule. This risk-based assessment process is a tool for analyzing project development and management. Moreover, the assessment process is iterative in nature; any results of an FTA or PMOC risk-based assessment represent a "snapshot in time" for a particular project under the conditions known at that same point in time. The status of any assessment may be altered at any time by new information, changes in circumstances, or further developments in the project, including any specific measures a sponsor may take to mitigate the risks to project costs, budget, and schedule, or the strategy a sponsor may develop for project execution. Therefore, the information in the monthly reports will change from month to month, based on relevant factors for the month and/or previous months.

**REPORT FORMAT AND FOCUS**

This report is submitted in compliance with the terms of FTA Contract No. DTFT60-09-D-00012, Task Order No. 2. Its purpose is to provide information and data to assist the FTA as it continually monitors the grantee's technical capability and capacity to execute a project efficiently and effectively, and hence, whether the grantee continues to be ready to receive federal funds for further project development.

This report covers the project and quality management activities on the Honolulu Rail Transit Project managed by the Honolulu Authority for Rapid Transportation (HART) with HART as the grantee and partially financed by the FTA FFGA.

**ON THE COVER:**

Left: Guideway along Kamehameha Highway looking west bound.

Upper right: Kamehameha Highway Guideway along Kamehameha Highway near Aloha Stadium.

Lower right: Rail Operations Center (aka Maintenance and Storage Facility) site.

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LIST OF ACRONYMS

AB	AnsaldoBreda	DCCC	Design Criteria Conformance Checklists
ACHP	Advisory Council on Historic Preservation	DCN	Design Change Notice
ACS	Access Control System	DDC	Department of Design and Construction
AFE	Authorized for Expenditure	DES	Department of Environmental Services
AGS	Airport Guideway and Stations	DFF	Direct Fixation Fastener
AHJV	Ansaldo Honolulu Joint Venture	DFIM	Design Furnish Install Maintain
AIS	Archaeological Inventory Survey	DFM	Department of Facility Maintenance
APTA	American Public Transportation Association	DHHL	Department of Hawaiian Homelands
ARRA	American Recovery and Reinvestment Act	DHR	Department of Human Resources
ASG	Airport Station Group	DIT	Department of Information Technology
ASU	Airport Section Utilities	DKSG	Dillingham and Kaka'ako Station Group
ATC	Automated Train Control	DLIR	Hawai'i Department of Labor and Industrial Relations
ATO	Automated Train Operation	DLNR	Department of Land and Natural Resources
AVA	Anil Verma Associates, Inc.	DOE	Department of Education
BA	Buy America	DOH	Department of Health
BAC	Buy America Compliance	DOL	Department of Labor
BACM	Buy America Compliance Matrix	DPM	Deputy Project Managers
BAFO	Best and Final Offer	DPP	Department of Planning and Permitting
BCS	Balanced Cantilever System	DPR	Department of Parks and Recreation
BFS	Budget and Fiscal Services	DPS	Department of Public Safety
BLS	Bureau of Labor Statistics	DS	Downstream
BMP	Best Management Practice	DTS	Department of Transportation Services
BOD	Board of Directors	DVT	Design Verification Test
BPS	Baseline Project Schedule	EAC	Estimate at Completion
BUE	Bottom-Up Estimate	ECP	Environmental Compliance Plan
BUEG	Back-up Emergency Generator	E/E	Elevator/Escalator
CAM	Construction Access Milestone	EK	East Kapolei
CAR	Corrective Actions	EMC	Electromagnetic Compatibility
CCGS	City Center Guideway and Stations	EMF	Electromagnetic Forces
CCO	Contract Change Order	EMI	Electromagnetic Interference
CCTV	Closed Circuit Television	EMP	Environmental Management Plan
CDC	Compendium of Design Criteria	EOR	Engineer of Record
CDL	Commercial Driver License	EOS	Electrically Operated Switch
CDR	Conceptual Design Review	ESA	Engineering Services Agreement
CE&I	Construction Engineering and Inspection	FAA	Federal Aviation Administration
CEL	Certifiable Elements List	FAI	First Article Inspection
CIC	Communication Interface Cabinet	FAT	Factory Acceptance Tests
CIL	Certifiable Items List	FCN	Field Change Notice
CIP	Cast-in-place	FD	Final Design
CJA	Condon- Johnson & Associates	FDAS	Fire Detection Alarm System
CM	Construction Manager	FDC	Field Design Change
CMP	Corrugated Metal Pipe	FEIS	Final Environmental Impact Statement
CMS	Contract Management System	FFC	Fixed Facility Contractors
CMU	Concrete Masonry Unit	FFGA	Full Funding Grant Agreement
CNMMP	Construction Noise Mitigation and Monitoring Plan	FHSG	Farrington Highway Station Group
CO	Certificate Occupancy	FHWA	Federal Highway Administration
COI	Conflict of Interest	FISC	Fleet and Industrial Supply Center
COMMS	Communications	FLSWG	Fire Life Safety Working Group
CONRAC	Consolidated Rental Car Facility	FOCN	Fiber Optic Communication Network
COR	Corporation Counsel	FPO	Federal Preservation Officer
CP	Consulting Party	FTA	Federal Transit Administration
CPM	Critical Path Method	FTE	Full-Time Equivalent
CPO	Chief Procurement Officer	FWS	Fish and Wildlife Service
CPP	Contract Packaging Plan	GAT	Great Aleutian Tsunami
CROE	Construction Right-of-Entry	GBS	Gap Breaker Station
CSC	Core Systems Contract	GDR	Geotechnical Data Report
CSCC	Construction Specification Conformance Checklists	GEC	General Engineering Consultant
CSL	Cross Hole Sonic Logging	GET	General Excise Tax
CSOC	Core Systems Oversight Consultant	GIS	Geographic Information System
CSSP	Construction Safety & Security Plan	GPR	Ground Penetrating Radar
CTS	Communications Transmission System	GSA	General Services Administration
CWR	Continuous Welded Rail	GT	General Terms
CWRM	Commission on Water Resource Management	HA	Hazard Analysis
CZM	Coastal Zone Management	HABS	Historic American Buildings Survey
DAGS	Department of Accounting & General Services	HAER	Historic American Engineering Record
DB	Design-Build	HALS	Historic American Landscape Survey
DBB	Design-Bid-Build	HART	Honolulu Authority for Rapid Transportation
DBE	Disadvantaged Business Enterprise	HCC	Honolulu Community College
DBEDT	Department of Business, Economic Development and Tourism	HCDA	Hawaii Community Development Authority
DBOM	Design-Build-Operate-Maintain	HCSD	Hawai'i Capital Special District
DCAB	Disability and Communication Access Board	HDCC	Hawaiian Dredging Construction Company

HDOE	Hawai'i Department of Education	NOI	Notice of Intent
HDOH	Hawai'i Department of Health	NPDES	National Pollutant Discharge Elimination System
HDOT	Hawai'i Department of Transportation	NPS	National Park Service
HDOT-A	Hawai'i Department of Transportation Airports Division	NR	National Register
HDPE	High-density polyethylene	NRHP	National Register of Historic Places
HECO	Hawaiian Electric Company	NSM	Negotiation Strategy Memo
HFD	Honolulu Fire Department	NTP	Notice to Proceed
HHF	Historic Hawai'i Foundation	NTS	Network Time Server
HHFDC	Hawaii Housing Finance & Development Corporation	O&M	Operations and Maintenance
HHPRB	Hawai'i Historic Places Review Board	OCC	Operations Control Center
HIE	Hawaii Independent Energy	OCIP	Owner-Controlled Insurance Program
HILT	Hawaiian Islands Land Trust	OIBC	O'ahu Island Burial Council
HIOSH	Hawaii Occupational Safety and Health Division	OIL	Open Items List
HP	Historic Preservation	OMPO	Oahu Metropolitan Planning Organization
HPC	Historic Preservation Committee	ORCC	Operational Readiness Conformance Checklists
HPCA	Historic Preservation Certification Application	OSB	Operations and Servicing Building
HPD	Honolulu Police Department	OSHA	Occupational Safety and Health Administration
HPF	Historic Preservation Fund	OTS	O'ahu Transit Services
HRHP	Hawai'i Register of Historic Places	OTW	Oceanic Time Warner
HRI	Hitachi Rail Italy	OTWC	Oceanic Time Warner Cable
HTRP	Honolulu Rail Transit Project	P3	Public-private partnership
HRU	Hitachi Rail USA, Inc.	PA	Programmatic Agreement
HTI	Hawaiian Telcom	PAIS	Programmatic Agreement Implementation Schedule
HTL	Hazard Tracking Log	PARs	Preventative Actions
HVAC	Heating, Ventilation and Air Conditioning	PB	Parsons Brinckerhoff, Inc.
I&T	Inspection & Testing	PDR	Preliminary Design Review
IAMR	Interstate Access Modification Report	PE	Preliminary Engineering
ICCS	Integrated Communications Control System	PGC	Pacific Guardian Center
ICD	Interface Control Documents	PHA	Preliminary Hazard Analysis
ICE	Independent Cost Estimate	PHPR	Pearl Highlands Park and Ride
ICM	Interface Control Manual	PICM	Project Interface Control Manual
ICWG	Interim Certification Working Group	PIG	Permitted Interaction Group
IDS	Intrusion Detection System	PIM	Project Interface Manager
IFB	Issued for Bid	PLA	Project Labor Agreement
IFC	Issued for Construction	PLO	Priority-Listed Offerors
IJ	Isolation Joint	PM	Project Managers
INMS	Integrated Network Management System	PMC	Project Management Consultant
IP	Implementing Procedures	PMIM	Project Management and Interface Management
ITP	Inspection and Test Plan	PMOC	Project Management Oversight Contractor
ITS	Intelligent Transportation Systems	PMP	Project Management Plan
JTMS	Joint Traffic Management System	PMSC	Program Management Support Consultant
JU&O	Joint Use & Occupancy	PPE	Personal Protective Equipment
JUOA	Joint Use and Occupancy Agreement	PRTCC	Pre-revenue Testing Conform Checklist
JV	Joint Venture	PSG	Platform Screen Gate
KCDD	Kaka'ako Community Development District	PSGS	Platform Screen Gate System
KCH	Kanehili Cultural Hui	PSIT	Pre-shipment Inspection Test
KHG	Kamehameha Highway Guideway	PT	Post Tensioning
KHSG	Kamehameha Highway Station Group	PUP	Property Utilization Plan
KIWC	Kiewit Infrastructure West Company	PV	Passenger Vehicle
KKJV	Kiewit/Kobayashi Joint Venture	QA	Quality Assurance
LCC	Leeward Community College	QAM	Quality Assurance Manager
LEED	Leadership in Energy and Environmental Design	QAP	Quality Assurance Plan
LPR	License Plate Reader	QC	Quality Control
LRV	Light Rail Vehicle	QMP	Quality Management Plan
MIM	Manufacture-Install-Maintain	QMS	Quality Management System
MITT	Multimodal Integration Technical Team	QTF	Quality Task Force
MMIS	Maintenance Management Information System	R&R	Revise & Re-submit
MMP	Mitigation Monitoring Program	RAC	Rail Activation Committee
MOS	Minimum Operable Segment	RAMP	Real Estate Acquisition and Relocation Management Plan
MOT	Maintenance of Traffic	RCMP	Risk and Contingency Management Plan
MOU	Memorandum of Understanding	RCP	Reinforced Concrete Pipe
MOW	Maintenance of Way	RE	Resident Engineer
MPS	Master Project Schedule	READ	Real Estate Acquisition Database
MPSS	Master Project Schedule Summary	RFC	Request for Change
MPV	Multiple Purpose Vehicle	RFI	Request for Information
MS4	Municipal Separate Storm Sewer System	RFID	Requests for Interface Data
MSE	Mechanically Stabilized Earth	RFMP	Rail Fleet Management Plan
MSF	Maintenance and Storage Facility	RFPP	Request for Proposals
MTM	Modern Track Machineries	RFQ	Request for Qualifications
NCE	Non-Conformance Evaluation	ROC	Rail Operations Center
NCR	Non-Conformance Report	ROD	Record of Decision
NDC	Notice of Design Change	ROE	Right of Entry
NEPA	National Environmental Policy Act	ROW	Right-of-Way
NHL	National Historic Landmark	RR	Risk Register

RSD	Revenue Service Date	TOD	Transit-Oriented Development
RTM	Requirements Traceability Matrix	TPO	Thermoplastic Olefin
RTSA	Regional Transit Stabilization Agreement	TPSS	Traction Power Sub-Station
S&S	Safety and Security	TSA	Transportation Security Administration
S1	Segment 1	TSI	Transportation Safety Institute
SAIS	Supplemental Archaeological Inventory Survey	TVA	Threat & Vulnerability Assessments
SCADA	Supervisory Control and Data Acquisition	TVM	Ticket Vending Machine
SCAP	Stream Channel Alteration Permit	TWF	Train Wash Facility
SCC	Standard Cost Category	UCA	Utility Construction Agreement
SHPD	State Historic Preservation Division	UFCRA	Utility Facilities Relocation and Cost Reimbursement Agreement
SIC	Sandwich Isle Communications	UH	University of Hawai'i
SIT	System Integration Testing	UHWO	University of Hawai'i West O'ahu
SLAN	Station Local Area Network	UL	Underwriters Laboratories
SOG	Slab on Grade	UPS	Uninterrupted Power Supply
SOI	Secretary of the Interior	USACE	U.S. Army Corps of Engineers
SOW	Scope of Work	USDOT	U.S. Department of Transportation
SP	Special Provisions	VE	Value Engineering
SQP	Supplemental Quality Plan	VECP	Value Engineering Cost Proposal
SSC	Safety Security Certification	VRC	Vertical Raceway Column
SSCP	Safety and Security Certification Plan	VRCS	Voice Radio Communication System
SSCWG	Safety and Security Certification Working Group	VRF	Variable Refrigerant Flow
SSI	Sensitive Security Information	WA	Work Area
SSMP	Safety and Security Management Plan	WHS	Waipahu High School
SSRC	Safety and Security Review Committee	WL	West Loch
SSSP	Site Safety Security Plan	WLO	West Loch
STCC	Specification/Testing Conform Checklists	WOEDA	West Oahu Economic Development Association
SWPPP	Storm Water Pollution Prevention Plan	WOFH	West O'ahu/Farrington Highway
T&M	Time and Material	WOSG	West O'ahu Station Group
TAP	Transportation Alternatives Program	WSS	West Side Stations
TC	Train Control	WSSG	West Side Station Group
TCCR	Train Control and Communications Room	WTB	Wheel Truing Building
TCE	Temporary Construction Easement	WTC	Waipahu Transit Center
TCO	Temporary Certificate Occupancy	WYL	West Yard Lead
TCP	Traffic Control Plan	YCB	Yard Control Bungalow
TCS	Train Control System	YOE	Year of Expenditure
TES	Traction Electrification System		
TIGER	Transportation Investment Generating Economic Recovery		
TIP	Transportation Improvement Program		
TOC	The Outdoor Circle		



## PROGRESS REPORT SUMMARY OF CHANGES

The following is a brief summary of changes that have occurred from the previous month's report. For more information and detail, please refer to the respective pages in the report.

### Project Contingency

- \$2.2M contingency drawdown during July 2016. Please see pages 15-16.

### Project Funding

- The General Excise Tax surcharge amount received has increased by \$56.3 million. Please see pages 17-18.
- The total amount of cash received has increased by \$56.3 million. Please see pages 17-18.

### Schedule

- The Interim Revenue Service Date in the Master Project Schedule Summary (MPSS) has shifted from Sept. 24, 2018 to Dec. 31, 2020. Please see pages 20-21.
- West O'ahu/Farrington Highway (WOFH) contract completion has been updated from July 1, 2016 to Nov. 16, 2016 to reflect Contract Change Order No. 00106. Please see pages 20-21.
- Pearl Highlands Transit Center and Ramp H1R1's procurement start has shifted by one month from Sept. 15, 2016 to Oct. 17, 2016. Please see pages 20-21.
- City Center Guideway and Stations' potential construction Notice to Proceed (NTP) has been revised from May 15, 2017 to Aug. 29, 2017. Please see pages 20-21.

### Contract Status

- Contracts in Procurement
  - HART issued a notice of award to Starn O'Toole Marcus & Fisher, A Law Corporation for the Complex Real Property Negotiations and Litigation Support Contract. Please see page 22.
  - HART issued a notice of award to Imanaka Asato, LLLC for the Outside Counsel for Land Court Petition Services Contract. Please see page 22.
  - DBB-602 UH West Oahu Temporary Park & Ride and Campus Road 'B' has been included in the Remaining Contracts table. Please see page 22.
  - The projected contract substantial completion date for DB-550 City Center Guideway and Stations has been changed from NTP+50 months to TBD, pending further review of scope. Please see page 22.
  - The FD-440 Airport Station Group Final Design and Support contract substantial completion date has been corrected as an incorrect date had previously been listed. Please see page 110.
- Core Systems Contract (CSC)
  - The projected substantial completion date has shifted from July 2024 to October 2024. Please see page 23.
- Fare Collection System
  - Weighted value and planned value percentages have been included. Please see page 30.
- West O'ahu/Farrington Highway Guideway (WOFH)
  - Based on discussions with KIWC, HART is working on executing a bilateral time extension with KIWC for a new substantial completion date. Please see page 31.
  - The current contract value has increased due to a change order. Please see page 31.
- Kamehameha Highway Guideway (KHG)
  - HART is currently investigating options to mitigate delays with the KHG contract. HART's position with these mitigation actions is that the projected substantial completion will be May 2017. Please see page 42.

- Ramp H2R2
  - The projected substantial completion date has shifted from April 2017 to May 2017. Please see page 46.
- Airport Section Guideway and Utilities Final Design and Support
  - A projected substantial completion date of April 2017 for contract FD-430 (Design) has been included. Please see page 50.
- Airport Section Utilities (ASU) Construction
  - The current contract value has decreased due to a change order. Please see page 52.
- Airport Station Group (ASG) Final Design and Support
  - A projected substantial completion date of October 2016 for contract FD-440 (Design) has been included. Please see page 54.
  - The earned value percentage has been corrected. Please see page 55.
- City Center Section Guideway and Utilities Final Design and Support
  - A projected substantial completion date of April 2018 for contract FD-530 (Design) has been included. Please see page 56.
- Dillingham and Kaka’ako Station Group (DKSG) Final Design and Support
  - A projected substantial completion date of October 2016 for contract FD-550 (Design) has been included. Please see page 58.
  - The earned value percentage has been corrected. Please see page 59.

#### **Safety and Security**

- A table for the “Hazard Tracking Log” has been included. Please see page 77.

# 1 EXECUTIVE SUMMARY

## KEY ACTIVITIES THIS MONTH

### Project Overview

Nine miles of the system’s elevated guideway is up, with crews having built more than 420 columns and stressed nearly 400 spans throughout the West O’ahu/Farrington Highway (WOFH) and Kamehameha Highway Guideway (KHG) sections. In the Kamehameha Highway rail corridor alone, more than 140 columns have been installed and more than 115 spans have been stressed in Pearl City and Aiea.

### HART Executive Director/Chief Executive Officer

On Aug. 18, the HART Board of Directors accepted the resignation of HART Executive Director/Chief Executive Officer (CEO), Daniel Grabauskas. Subsequently, Michael D. Formby, a HART Board member and Director of Transportation Services (DTS) for the City and County of Honolulu, was appointed as Acting Executive Director of HART. Formby served as an ex-officio voting HART Board member because of his position as DTS Director, and he resigned from the HART Board upon accepting the Acting Executive Director position with HART.

Prior to joining Mayor Kirk Caldwell’s cabinet in 2013, Formby served as the Interim Director of Transportation in 2010, where he oversaw the management of the Airports, Harbors and Highways Divisions. He was the Deputy Director of the State of Hawaii Harbors Division from 2007 to 2010. Formby is an attorney with more than 20 years of litigation experience and has taught at the William S. Richardson School of Law and Hawaii Pacific University. He also previously served on the State of Hawaii, Land Use Commission.

The HART Board has also appointed a permitted interaction group to search for qualified candidates to fill the position of HART Executive Director and CEO.



Daniel Grabauskas



Michael Formby

### Recovery Plan

In August, a delegation of city and HART officials traveled to San Francisco, California for a meeting with Federal Transit Administration (FTA) officials to discuss a recovery plan for the Honolulu rail project. CCGS options are being evaluated to address the shortfall in revenue needed to construct the full FFGA scope.

“As emphasized by FTA Acting Administrator Carolyn Flowers, the FTA is a partner with us on the rail project,” said HART Board Chair Colleen Hanabusa. “Having all the stakeholders at the table to discuss how best to build a functional rail project for the people of Hawai’i was key.”

The FTA previously required HART to submit a Recovery Plan by the end of the year. During the meetings, the Hawai’i delegation reaffirmed the City’s commitment to build to Ala Moana and secure funding to complete the minimum operable segment (MOS).

“Our federal partners made it clear that ending the project at Middle Street is unacceptable and would risk the full \$1.55 billion committed to the city through the FFGA (Full Funding Grant Agreement),” said City Council Chair Ernie Martin. Based on the FTA’s inability to provide additional federal funds at this time, the City requested additional time to submit its recovery plan (mid-2017) and awaits a response from the FTA.

“We need the legislature’s support to invest in a better future with us and to recognize the role rail will play in improving the quality of life for the people of Hawai’i,” said Council Transportation Chair Joey Manahan.

### Cost:

Project Costs Summary Through July 29, 2016		
	Current Budget (\$M)	Incurred To Date (\$M)
Project Budget	\$4,484.8	\$2,269.4
Project Contingency	\$463.8	\$0.7
Finance Charges*	\$173.1	\$0.0
<b>TOTAL</b>	<b>\$5,121.7</b>	<b>\$2,270.1</b>

\* \$173.1 million represents the project debt financing costs that are federally eligible. The total estimated debt financing costs of the project is \$215 million, per the FFGA Financial Plan.

### Schedule:

Project Progress* Through July 29, 2016				
	Actual		Early Plan	Late Plan
Overall Project Progress	51.5%		83.1%	77.7%
Overall Construction Progress	44.9%		78.9%	72.2%
Overall Design Progress	90.0%		100%	100%
Overall Utilities Progress	46.6%		100%	100%

\* The progress charts reflect early program expectations regarding the type of contract, timing of award, design, and execution of the nine western stations, eastern guideway and stations, and utilities work. These contracts have been repackaged and rescheduled to later dates and once the overall schedule is rebaselined, the cost curves will be revised to reflect the contract approved dates at that time. With the extension of the GET, the curves are under review.

**Overview:**Core Systems Contract (CSC)

The CSC contractor (Ansaldo Honolulu Joint Venture) is continuing with Final Design. Qualification and design verification tests are ongoing. AHJV continues to pull Train Control cabling at the Yard Control Bungalow (YCB). Train Control device installation in the Maintenance and Storage Facility (MSF) is continuing. Car Shell and Truck Manufacturing and Final Assembly activities are ongoing. (See Section 4.1.A for details)

Elevators and Escalators Manufacture-Install-Maintain Contract

The Elevator/Escalator contractor has completed final design for the West O'ahu Station Group (WOSG), Farrington Highway Station Group (FHSG) and Kamehameha Highway Station Group (KHSG) stations. The contractors for FHSG, WOSG and KHSG must provide an acceptable schedule in order for the manufacturing of the equipment to be released. (See Section 4.1.B for details)

West O'ahu/Farrington Highway (WOFH) Contract

The progress schedule through July 2016 reflects more than six months of delay to the substantial completion date, primarily from the LCC portable classrooms, parking lot, station's access structure and track construction activities. This schedule has been under review to analyze the numerous unilateral logic and duration changes made by Kiewit Infrastructure West Company (KIWC).

The contractor is continuing to focus their efforts on the emergency walkways, rail and third rail installations, and civil and traffic signal works, with work ongoing on these elements in August 2016. Several areas of the project were inspected, punch list generated and partial acceptance/substantial completion letters issued. (See Section 4.2.A for details)

Maintenance and Storage Facility (MSF) Contract

All construction activities for the Train Wash Facility (TWF), Maintenance of Way (MOW), and Wheel Truing Building (WTB) have been completed and the final punch was generated. The elevator installation in the Operations and Servicing Building (OSB) is complete. Substantial completion was granted for July 2, 2016, with the final punchlist, building and equipment commissioning and other required items, as summarized in the critical path issues, to be completed for final acceptance. (See Section 4.2.D for details)

Kamehameha Highway Guideway (KHG) Contract

HART is currently investigating options to mitigate delays with the KHG contract. HART's position with these mitigation actions is that the projected substantial completion will be May 2017, although KIWC's current progress schedule reflects the guideway structure completion in June 2017 and the remaining roadway civil work being completed by June 2018. This schedule, as well as all previous updates submitted by KIWC to-date, has not been accepted by HART. HART continues to monitor lower than planned KIWC production rates as it relates to potential schedule impacts. (See Section 4.3.A for details)

Airport Section Utilities (ASU) Construction Contract

The Airport Section Utilities contract work is proceeding along Kamehameha Highway, the Airport area, and the Nimitz Off-Ramp area. Probing work at the proposed shaft locations have been conducted to verify the locations of existing abandoned utilities, and some have resulted in the discovery of several additional utility conflicts. These unforeseen utilities are being addressed in the change process. Alternatively, scope that have been determined to be unresolved due to lack of response from the 3<sup>rd</sup> parties or have significant time impacts, will be processed as a credit to the project. HART is coordinating with the contractor on the remaining scope of work, with respect to the latest schedule. (See Section 4.4.B for details)

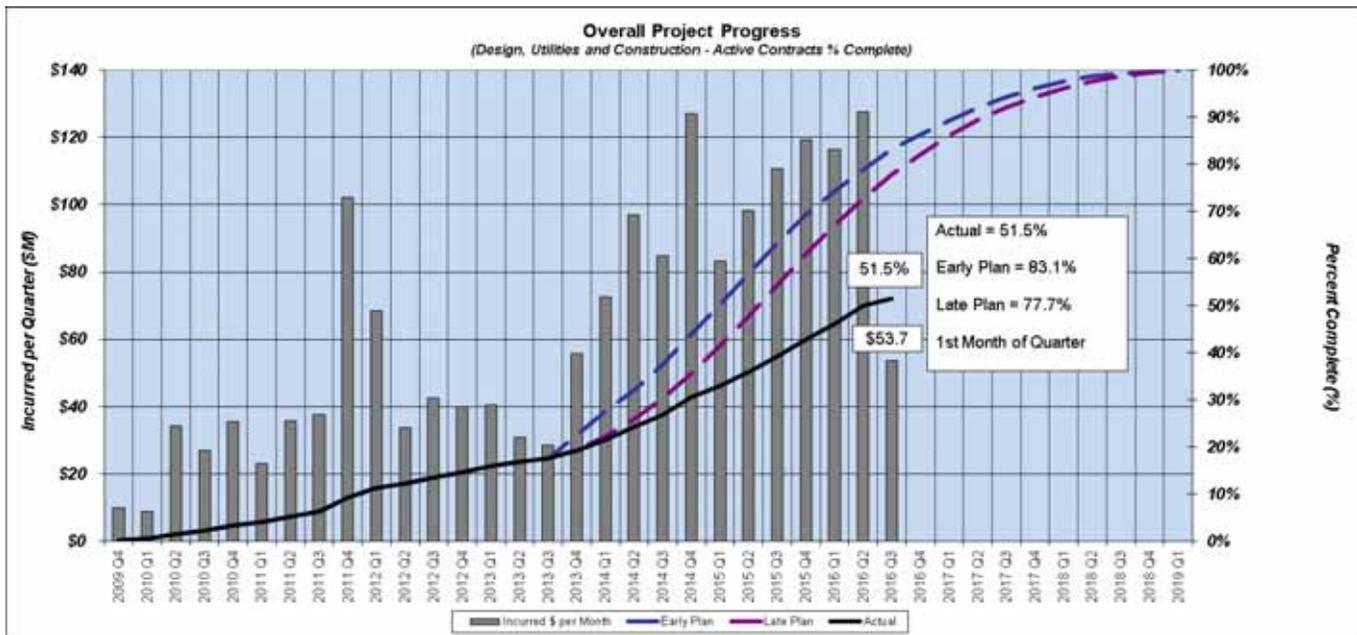
## 2 OVERALL PROJECT PROGRESS AND FINANCIALS

### 2.1 Project Progress (data as of July 29, 2016)

The progress charts reflect early program expectations regarding the type of contract, timing of award, design, and execution of the nine western stations, eastern guideway and stations, and utilities work. These contracts have been repackaged and rescheduled to later dates and once the overall schedule is rebaselined, the cost curves will be revised to reflect the contract approved dates at that time. With the extension of the GET, the curves are under review.

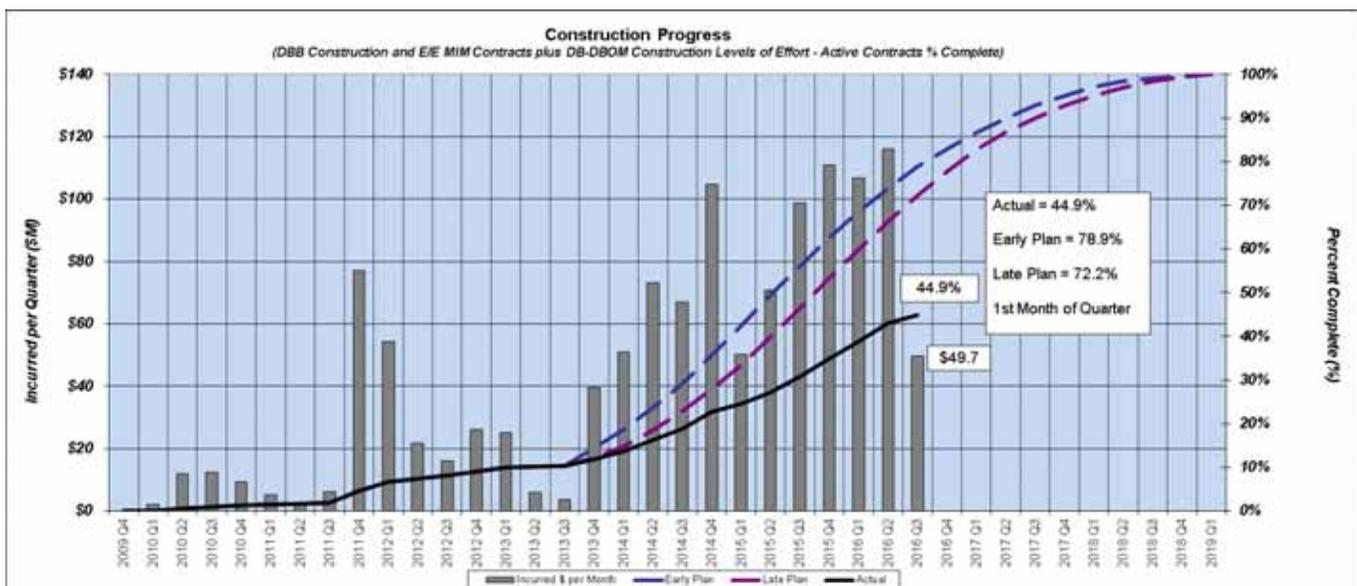
- Note:
- Actual = Actual cost of work performed, based on invoiced-to-date amount.
  - Early Plan = Earliest dates activities can begin and finish, based on logic and durations used in the schedule.
  - Late Plan = Latest dates activities can begin and finish and not have an impact on completion date, based on logic and durations used in the schedule.

Figure 1. Overall Project Progress (% Complete)



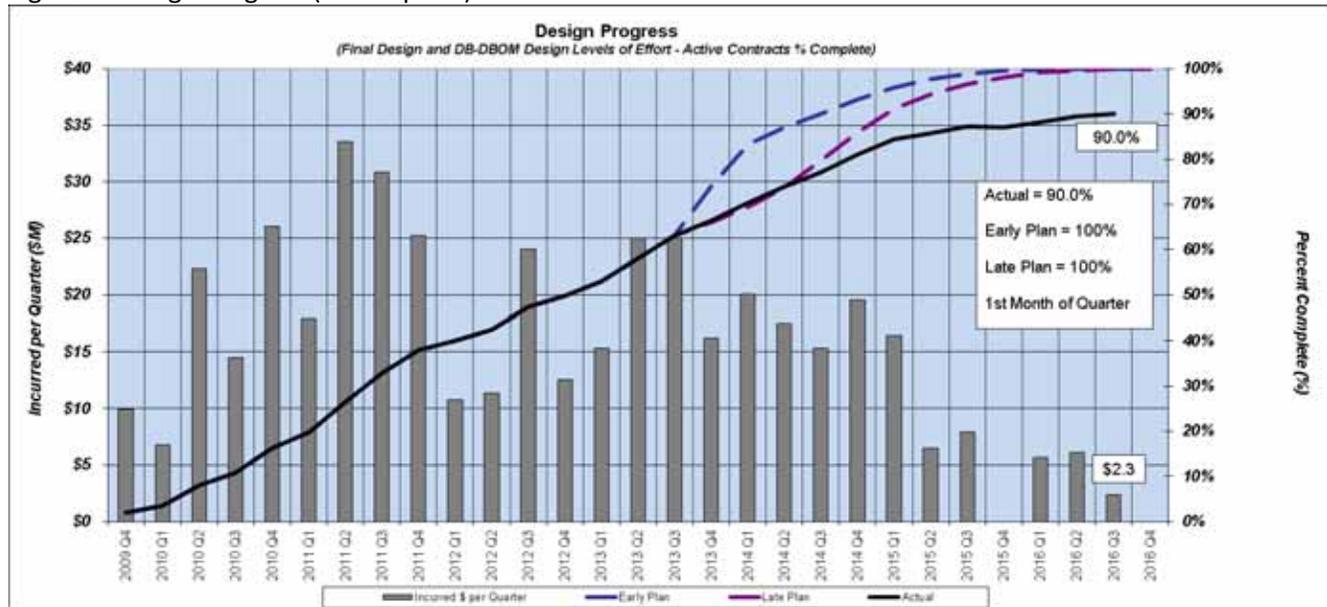
At present “overall” project progress is based on the weighted value progress of the individual construction and design contracts (Design-Build [DB], Design-Bid-Build [DBB], Design-Build-Operate-Maintain [DBOM], Elevator/Escalator Manufacture-Install-Test-Maintain [MIM], Final Design [FD] and DB-DBOM design levels of effort), not including City or non-design consultant labor. Overall Project Progress reflects all project elements as budgeted.

Figure 2. Construction Progress (% Complete)



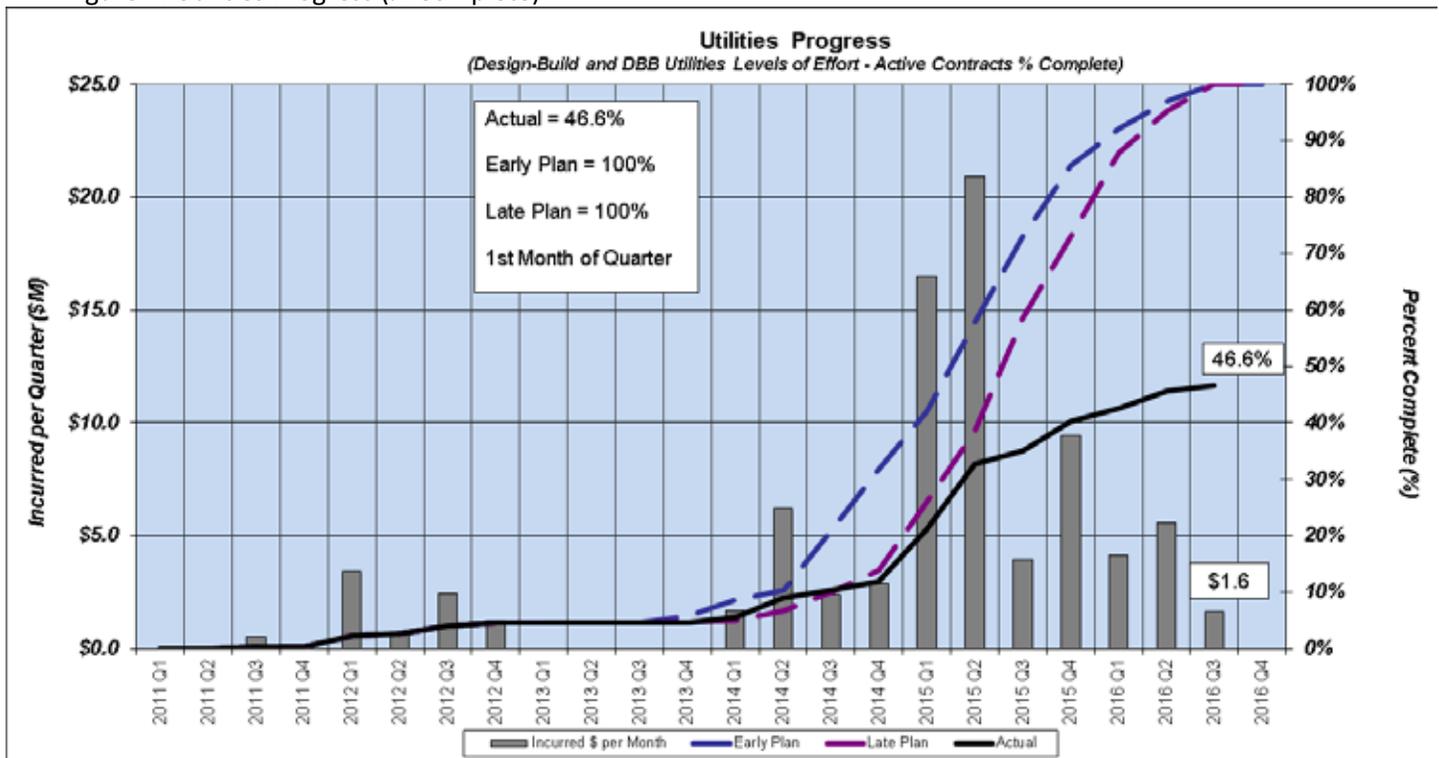
Overall construction progress is based on the weighted average progress of the individual DBB and E/E MIM construction contracts and the DB-DBOM construction levels of effort, not including consultant construction engineering and inspection (CE&I) services.

Figure 3. Design Progress (% Complete)



Overall design progress is based on the weighted average progress of the individual FD contracts and the design levels of effort of the DB and DBOM construction contracts, not including City or non-design consultant labor.  
Note: Design responsibility will be transferred to DB, once DB packages are awarded. Deductive change orders will be issued to correct the total contract amount.

Figure 4. Utilities Progress (% Complete)



Overall utilities progress is based on the weighted average progress of the DB and DBB utilities levels of effort.

**2.2 Project Budget (data as of July 29, 2016)**

*Total Incurred Cost = \$2,270.1M  
(previous report = \$2,200.4M)*

- FFGA Project Budget = **\$5,121.7M**
  - Current Project Budget - \$4,484.8M
  - Current Project Contingency - \$463.8M
  - Project Finance Charges - \$173.1M
- Total Incurred Cost = **\$2,270.1M** (50.6% of current project budget)
  - July 2016 Incurred Cost = \$69.7M
- The Project Budget is being updated to reflect current program expectations and will be finalized in collaboration with the Federal Transit Administration (FTA). The Project Management Oversight Contractor’s (PMOC’s) predicted Estimate at Completion (EAC) value, not including finance costs, was \$7.623 billion, based on FTA’s Beta Range model.

**2.3 Project Contingency (data as of July 29, 2016)**

*Note: Contingency management and cost contingency details, including a breakdown of Project contingency drawdowns, are discussed in further detail in Appendix B.*

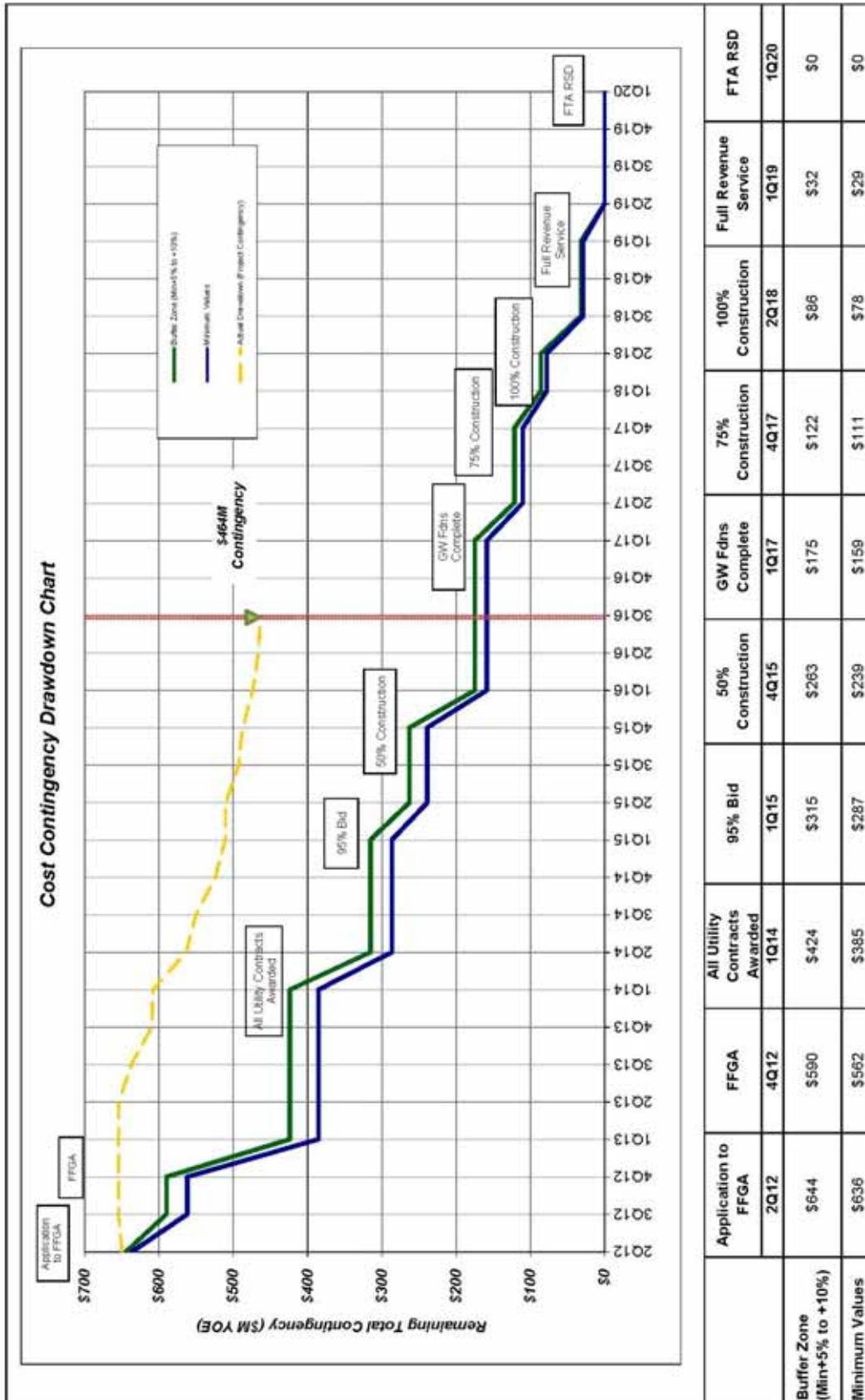
*Current Contingency Balance = \$463.8M  
(previous report = \$466.0M)*

- Current Project Contingency Balance = **\$463.8M**
  - Contingency drawdown to date – \$179.8M (27.9% of baseline project contingency budget)
  - \$2.2M contingency drawdown during July 2016. Please see Appendix B for more details.

Figure 5. Project Contingency Budget

Project Contingency Budget		
Contingency	SCC Code	Budget (\$M)
Unallocated Contingency	90.01	\$101.9
Allocated Contingency	90.02	\$540.1
Allowances	90.03	\$1.6
<b>Baseline FFGA Project Contingency Budget</b>	<b>90.01 - 90.03</b>	<b>\$643.6</b>
Contingency drawdown through May 2016 Report	90.01 - 90.03	(\$174.1)
Contingency drawdown June 2016 Report	90.01 - 90.03	\$0.2
Contingency drawdown July 2016 Report	90.01 - 90.03	(\$3.7)
Contingency drawdown August 2016 Report	90.01 - 90.03	(\$2.2)
Contingency drawdown to date	90.01 - 90.03	(\$179.8)
<b>Current FFGA Project Contingency</b>	<b>90.01 - 90.03</b>	<b>\$463.8</b>

Figure 6. Draft Cost Contingency Drawdown Chart



Note: Contingency management and cost contingency details, including a breakdown of Project contingency drawdowns, are discussed in further detail in Appendix B.

Date as of 7/23/16 - July '16 Reporting Period

2.4 Project Funding (data as of July 29, 2016)

Figure 7. Planned vs. Received Project Funding

Planned vs. Received Project Funding				
Funding Source	Pre-FFGA Project <sup>1</sup>	FFGA Project Period		Total Project
	2007 - 2009 Actuals Received	Planned <sup>2</sup> (\$YOE M)	2009 - Present Actuals Received	2007 - Present Actuals Received
	[A]		[B]	[C] = A + B
Beginning Project Cash Balance <sup>3</sup>	0	298	298	n/a
Interest Income on Cash Balance	7	3	2	9
FTA Section 5309 New Starts Revenue <sup>4</sup>	0	1,550	569	569
FTA Section 5307 Formula Funds <sup>5</sup>	0	210	0	0
ARRA Funds	0	4	4	4
Net General Excise Tax (GET) Surcharge revenues FY2010-FY2022 <sup>5</sup>	378	3,291	1,377	1,755
<b>Total</b>	<b>385</b>	<b>5,356</b>	<b>2,250</b>	<b>2,337</b>

<sup>1</sup> GET and Interest Income received during Pre-Preliminary Engineering (pre-PE) phase prior to entry into PE

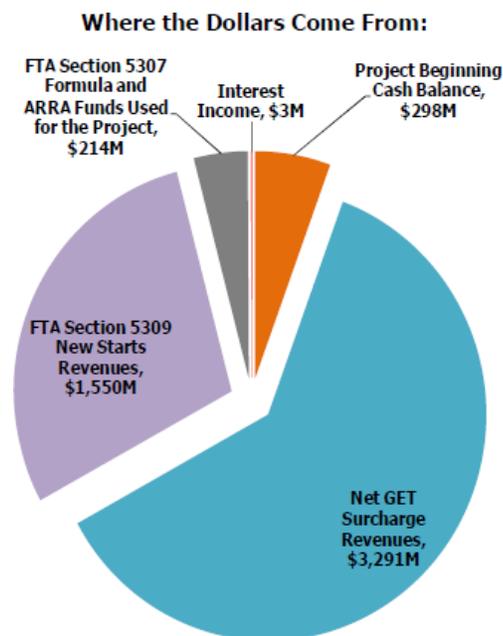
<sup>2</sup> FFGA Financial Plan, Table A-1 *Capital Plan Cash Flows*.

<sup>3</sup> Beginning Project Cash Balance at Entry into Preliminary Engineering (PE) on October 16, 2009 (the FFGA Project start date) = Pre-PE GET, investment and miscellaneous income minus pre-PE expenditures. The \$298 million is included in the Pre-FFGA actual amounts received between 2007-2009 of \$378 million.

<sup>4</sup> New Starts Funds Obligated Through Federal Fiscal Year 2014 Totals \$806.3 Million

<sup>5</sup> On January 27, 2016 the City Council of Honolulu passed Bill 23 which extended the GET surcharge to December 31, 2027. The planned amounts for funding will be adjusted in a future Monthly Progress Report to reflect the extension of the GET surcharge.

Figure 8. Project Funding Sources (YOE \$M)



Source: FFGA Financial Plan, p. 2-1

- General Excise Tax (GET) Surcharge (data as of July 29, 2016)
  - \$1,377M = amount received since the Project’s entry into FTA’s Preliminary Engineering phase of project development.
    - \$1,420M = Projected Net GET Surcharge Revenue for FYs 2010-1Q 2017, as stated in FFGA Financial Plan (Table A-1 *Capital Plan Cash Flows*)
    - GET receipts are currently running 4% short of Projections to date, or \$44M behind.
  - \$56.3M = GET surcharge received in July 2016.
  
- Full Funding Grant Agreement (FFGA)
  - \$6.6M = New Starts drawdown processed in July 2016, but not received until August 2016.
  - \$13M = New Starts drawdown processed in July 2016, but not received until August 2016.

*Total Cash Received Since PE = \$2,250M*  
 (previous report = \$2,193M)

*GET Received Since PE = \$1,377M*  
 (previous report = \$1,320M)

*GET Received Since 2007 = \$1,755M*  
 (previous report = \$1,698M)

Figure 9. New Starts Drawdown by Federal Fiscal Year (data date as of July 30, 2016)

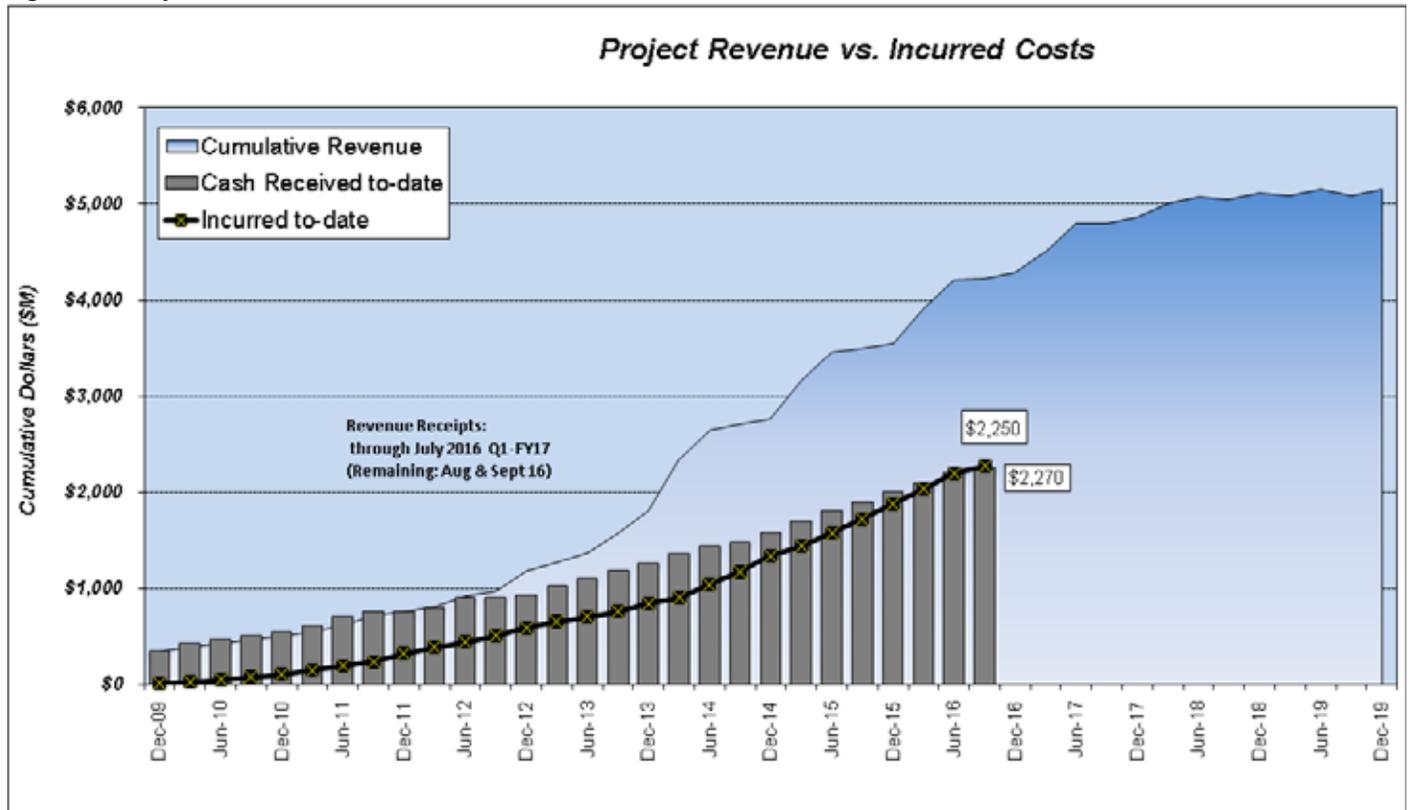
New Starts Grant Information by Federal Fiscal Year (Amounts in italics are pending)				
Federal Fiscal Year Allocation	FTA Obligated Amounts	Actual Drawdown Amounts to Date	Available Balance	FFGA Base Case Cash flow
2008	\$15,190,000	\$15,190,000	\$0	
2009	\$19,800,000	\$19,800,000	\$0	
2010	\$30,000,000	\$30,000,000	\$0	
2011	\$55,000,000	\$55,000,000	\$0	\$20,607,242
2012	\$200,000,000	\$200,000,000	\$0	\$99,382,758
2013	\$236,277,358	\$236,277,358	\$0	\$258,280,277
2014	\$250,000,000	\$19,422,756	\$230,577,244	\$441,719,724
<i>2015 (pending award of grant)</i>	<i>\$250,000,000</i>	\$0	<i>\$250,000,000</i>	\$250,000,000
<i>2016 (pending award of grant)</i>	<i>\$250,000,000</i>	\$0	<i>\$250,000,000</i>	\$250,000,000
<i>2017 (pending appropriation and award of grant)</i>	<i>\$243,732,642</i>	\$0	<i>\$243,732,642</i>	\$230,010,000
<b>Total</b>	<b>\$1,550,000,000</b>	<b>\$575,690,114</b>	<b>\$974,309,886</b>	<b>\$1,550,000,000</b>

2.5 Project Revenue and Costs

(data as of July 29, 2016)

*Ending Cash Balance 7/31/16 = \$71.9M*  
*(previous report = \$94.7M)*

Figure 10. Project Revenue versus Incurred Costs



Planned Funding levels as per the June 2012 FFGA Finance Plan  
Data date for Revenue & Incurred Cost = July 29, 2016

Figure 11. Cash Balance Summary

	JULY	FY17 YTD Cumulative
<b>Beginning Cash Balance 07/01/16</b>	94,658,681	94,658,681
Expenditures:		
Operating Expenditures	(1,190,627)	(1,190,627)
Capital Expenditures	(77,896,147)	(77,896,147)
<b>Expenditures Total:</b>	<b>(79,086,774)</b>	<b>(79,086,774)</b>
Receipts:		
GET Surcharge	56,309,373	56,309,373
FTA Drawdown	0	0
Interest	34,162	34,162
Other (rental, refunds, copy fees, etc.)	13,344	13,344
<b>Receipts Total:</b>	<b>56,356,878</b>	<b>56,356,878</b>
<b>Ending Cash Balance 07/31/16</b>	<b>71,928,785</b>	<b>71,928,785</b>

Note: Project Cost Reports can be found in Appendix C.

### 3 SCHEDULE

(data as of July 29, 2016)

#### OVERVIEW

- HART continues to assess the potential construction Notice to Proceed (NTP) date for Kamehameha Highway Stations Group (KHSB), the third western station construction contract. KHSB's construction NTP date is yet to be determined due to access issues with preceding contractor's work. If granted NTP in Fall 2016, the KHSB substantial completion date will be no earlier than second quarter of 2019, which will delay the Core Systems' Interim Opening related contract work.

The deferred KHSB NTP impacts the Interim Opening date from September 2018 to no earlier than June 2020.

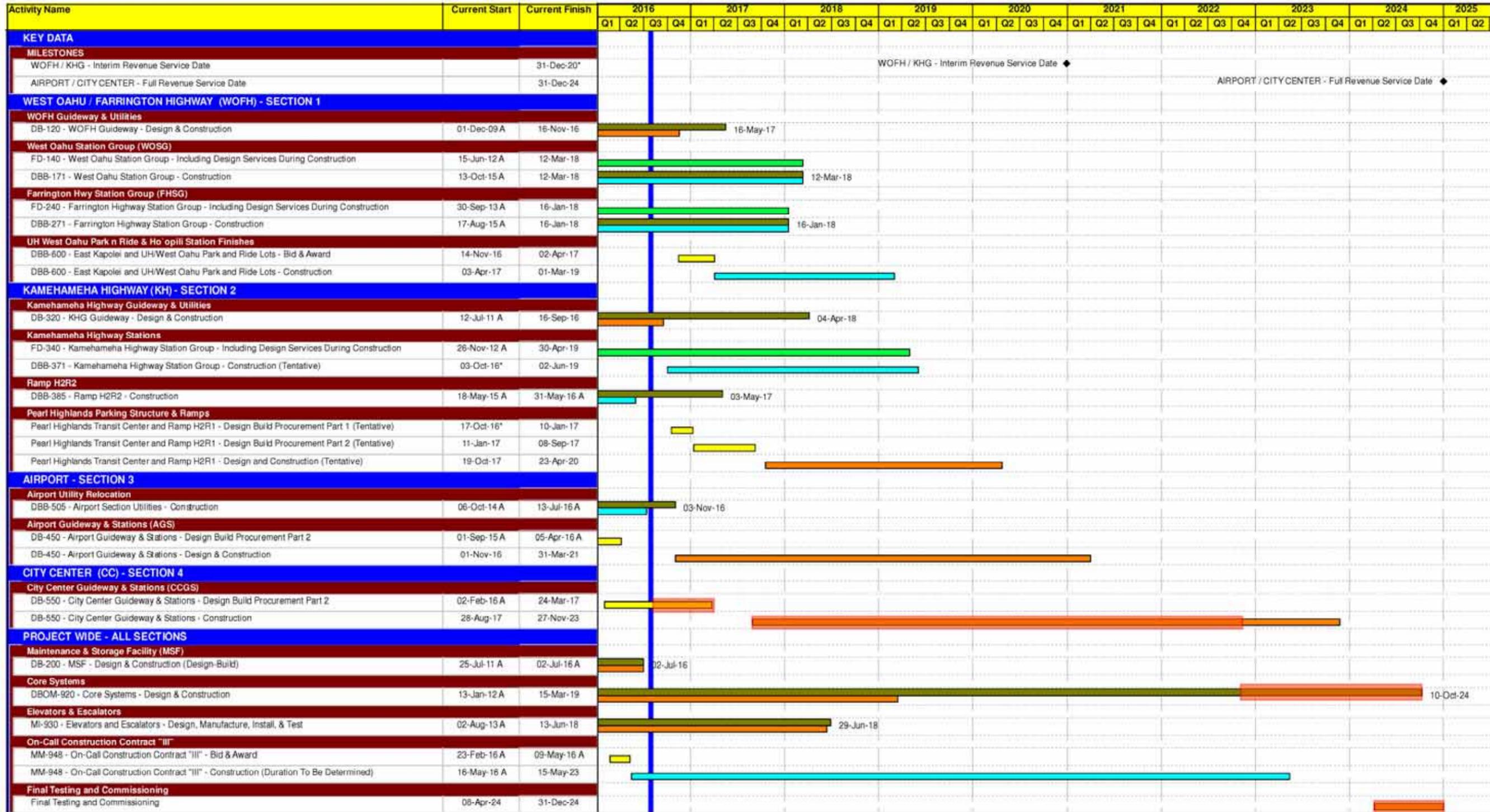
- The Airport Guideway and Stations' (AGS) construction NTP is currently scheduled for November 2016, once funding issues are resolved.
- The City Center Guideway and Stations' (CCGS) potential construction NTP has been updated to August 2017, as per its contract Addendum No. 11. With the CCGS on the critical path of the program, the forecast for CCGS' facilities construction completion is November 2023, and systems installation and testing is forecasted to December 2024 with contingency. Further revision to the NTP is needed to allow current funding issues' resolution.
- CCGS options are being evaluated to address the shortfall in revenue needed to construct the full FFGA scope.
- HART continues to closely monitor, review and manage all active construction packages. Previously reported delays continue to be addressed by the project teams. See contract pages for further details.

#### KEY ISSUES

- WOFH construction progress is behind the approved schedule for the LCC station area civil and structural work by six months.
- HART is assessing KHG's latest contractor's schedule with guideway construction progress behind approved schedule by 18 months.
- WOSG and FHSG stations' construction has begun at Ho'opili and West Loch Stations. WOSG baseline schedule is not yet approved, but HART's internal assessments indicate several months of delays. The first FHSG progress schedule is being reviewed and reflects several months of delay beyond contract substantial completion as well.
- Ramp H2R2 construction progress is behind by 12 months due to delayed construction start from Hawai'i Department of Transportation (HDOT) required soil remediation.
- ASU construction is behind the approved schedule by two months due to various delays, including differing site conditions.
- The overall critical path to full Revenue Service is the CCGS guideway and stations' construction, core systems installation, testing and commissioning.

Figure 12. H RTP Master Project Schedule Summary (MPSS)

The Master Program Summary Schedule reflects currently approved schedule end dates for contracts that have been awarded, and planned dates for future contracts. It is stuated against the FFGA Baseline MPS. Active contracts' end dates will not change, unless a change order is issued. For the contractors' forecasts of active contracts end dates, see Contract Status section (Section 4).



PROGRAM CRITICAL PATH

**HART**  
HONOLULU AUTHORITY FOR RAPID TRANSPORTATION

- Design Build
- Construction
- Design
- Bid/Award
- Contractor Forecast
- Milestone

Honolulu Rail Transit Project  
As of: 29-Jul-16

MPS Summary  
Design & Construction Contracts

## 4 CONTRACT STATUS

**Contracts in Procurement** (For a list of awarded contracts, please see Appendix D)

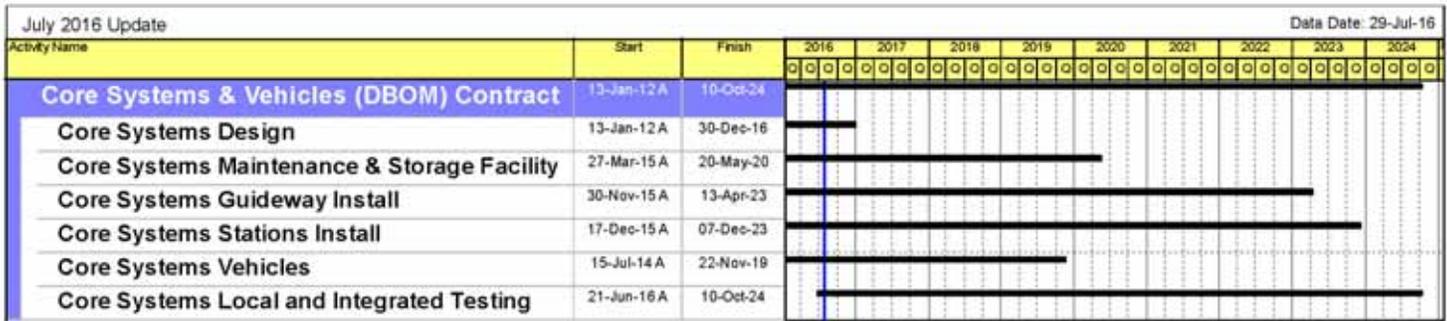
### OVERVIEW

- **Awarded Contracts:**
  - On Aug. 10, 2016, HART issued a notice of award to Starn O’Toole Marcus & Fisher, A Law Corporation in the amount of \$600,000 for the Complex Real Property Negotiations and Litigation Support Contract.
  - On Aug. 31, 2016, HART issued a notice of award to Imanaka Asato, LLC in the amount of \$1,200,000 for the Outside Counsel for Land Court Petition Services Contract.
  
- **Active Procurements:**
  - Art-in-Transit: HART is in negotiations or will commence negotiations with the highest-ranked artists for each of the stations. HART has begun award of the Art-in-Transit contracts.
  - City Center Guideway and Stations (CCGS) Design-Build RFP: RFP Part 2 was issued on Feb. 2, 2016. The proposals are not yet due.
  - Program Management Contractor Contract RFQ: The RFQ was issued on May 9, 2016. Proposals were received on July 14, 2016, and are currently being evaluated.
  
- **Upcoming Procurements:**
  - Procurements for UH West O’ahu Temporary Park and Ride and UH West O’ahu Campus Road “B” Design-Bid-Build Contract; Pearl Highlands Garage, Transit Center and Ramp H2R1; Core Systems Back-up Generators; and East Kapolei and UH West O’ahu (permanent) Park and Ride are under evaluation.

Remaining Contracts						
Contract Code	Contract Name	Advertise Date	Bids Due/Part 1 Proposals Due	RFP Part 2 Proposals Due	Issue NTP	Projected Contract Substantial Completion Date
AP00	Art-in-Transit	May 9 '13	-	-	TBD	TBD
DB-650	City Center Guideway and Stations	Aug 04 '15	Nov 18 '15	TBD	TBD	TBD
MM-902	Program Management Contractor Contract	May 09 '16	Jul 14 '16	-	TBD	Dec 31 '22 + 3 year option
DBB-600	East Kapolei and UH/West O'ahu Park and Ride Lots	Nov 14 '16	Feb 15 '17	-	Apr 03 '17	Mar 01 '19
DBB-602	UH West Oahu Temporary Park & Ride and Campus Road 'B'	TBD	TBD	-	TBD	TBD
DB-276	Pearl Highlands Transit Center and Ramp H2R1 Design-Build Contract	TBD	TBD	-	TBD	TBD
MI-940	Core Systems Back-up Generators	TBD	TBD	-	TBD	TBD



**SCHEDULE:**



	Final Design Submitted Documents	Final Design Approved Documents	Target Completion Date
Passenger Vehicles	100%	90.9%	3 <sup>rd</sup> Q 2016
Communications	48.5%	39.6%	4 <sup>th</sup> Q 2016
ATC/SCADA	99%	98%	3 <sup>rd</sup> Q 2016
TES	100%	100%	Completed
Fire Detection	66.7%	58.3%	3 <sup>rd</sup> Q 2016
PSGS	95.5%	90.9%	3 <sup>rd</sup> Q 2016

\* Target Completion Date for Communications and Fire Detection is for the first segment. Second segment completion date is to be determined.

**CRITICAL PATH SUMMARY:**

- The Core Systems schedule and subsequent Substantial Completion date has been revised to reflect the issuance of revised construction access dates for the west side nine (9) stations and the anticipated construction schedule for the east side construction. AHJV has begun the process of updating their baseline schedule to incorporate the new access dates.
- Continue to oversee construction activities with the CSC installation subcontractor.
- Passenger Vehicle final assembly continues on the second and third trains.

**WORK PROGRESS:**

Activities this Month:

**Weighted Value:** 36.5% [(Total Achieved thru July 2016 (\$207.85 million) + Projected August 2016 Period (\$11.5 million))/Total Contract Including Executed Change Orders (\$600.8 million)].

**Design:**

- Automated Train Control (ATC)/Supervisory Control and Data Acquisition (SCADA) – Documents Received: 4, Documents Returned: 20
- Communications – Documents Received: 6, Documents Returned: 9
- Traction Power – Documents Received: 47, Documents Returned: 8
- Fire Detection – Documents Received: 0, Documents Returned: 1
- Platform Screen Gates – Documents Received: 4, Returned: 4
- Passenger Vehicles – Documents Received: 22, Documents Returned: 19

Look Ahead:

**Design:**

- Continue Final Design of all subsystems.

**Manufacturing:**

- Passenger Vehicle Manufacturing – Continue car shell fabrication in Italy.
- Continue final assembly activities on Train 2 and Train 3.
- PV Truck Fabrication – Continue truck frame and bolster fabrication activities in Italy.
- Continue manufacturing of automated train control, traction power, and other systems equipment.

**Installation, Testing and Commissioning:**

- Installation and testing of communications system cabling and devices in MSF buildings.

Activities this Month (continued):

**Manufacturing:**

- Performed oversight of passenger vehicle (PV) assembly activities at Hitachi Rail factory in Pittsburg, CA. Equipment installation work on the second and third train is ongoing.
- All four (4) car shells for train #4 are now in Pittsburg for final assembly.
- The first four truck frames has been shipped from Nuova Comafer in Italy to Pittsburg, CA.
- The main components of all eight (8) DRS fabricated truck frames and bolsters have been assembled at the final assembly facility in Pittsburg.

**Installation, Testing and Commissioning:**

- All yard Blue Light Stations have been installed.
- Installation of ATC cables in MSF is 60% complete.
- Installation of ATC Devices in MSF is 75% complete.
- Traction Electrification System (TES) installation in the MSF is 98% complete.
- MSF Traction Power Sub-Station (TPSS) energization completed.
- AHJV completed loop resistance testing in the MSF.
- AHJV continues to pull train control cabling in the YCB.
- Complete the jacking and leveling of the Waipahu TPSS.
- Completed functional testing of the Train Wash Facility, using Train #1.

Look Ahead (continued):

- Installation and testing of communications devices in MSF yard.
- Completion of MSF yard conduit installation.
- Conduct Type and Routine test on first train.
- Continue installation of TES cabling.
- Continue installation of Train Control cabling and devices in MSF.
- Installation of Operations Control Center (OCC) technical room equipment.
- Functional testing of Wheel Truing Building (WTB).
- Prepare for TES and Train Control (TC) cabling installation mock-up cable installation on guideway.

**KEY ISSUES:**

- Revisions to the station and guideway Construction Access Milestone (CAM) dates require evaluation of interfacing work schedules.
- Vehicle Production and Testing is an ongoing monitored risk. HART continues to work closely with AHJV and Hitachi Rail to ensure good progress at the Truck Fabrication and Final Assembly facilities.
- Communications System design completion is delayed. HART continues to work closely with AHJV to identify key issues and to implement the corrective action plan to bring design and qualification testing to closure.

**QUALITY MANAGEMENT:**

- HART and AHJV performed a Joint Quality Assurance Audit of PV Final Assembly at Hitachi Rail USA (HRU) in Pittsburg, CA, on June 28-30, 2016.

Testing		
Subsystem	Test Completed	Date Completed
PSGS	PSGS Design Verification Tests at Farmington, CT.	Aug. 5, 2016

Passenger Vehicle – Oversight		
Facility	Activity	Date Completed
Pittsburg, CA	On-site inspector in place to oversee and report on Hitachi Rail Final Assembly activities.	Ongoing

CSC NCR Log			
	TOTAL	CLOSED	OPEN
AHJV & Subs	30	28	2
Hitachi Rail	697	521	176
<b>TOTAL</b>	<b>727</b>	<b>549</b>	<b>178</b>

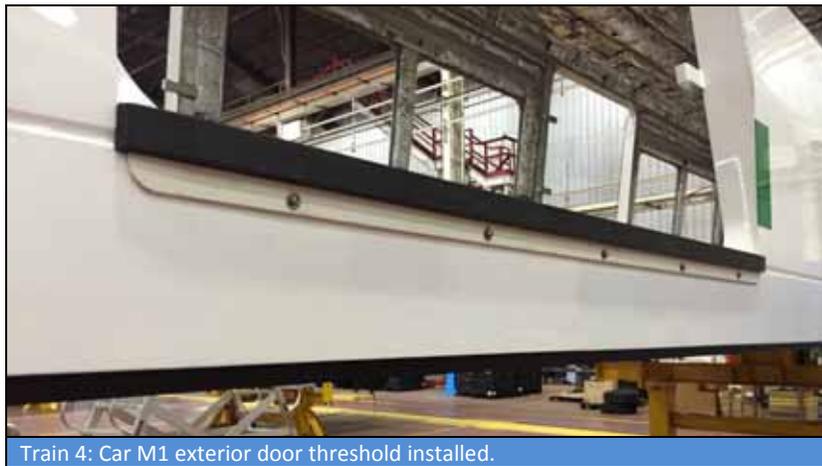
**PROJECT PICTURES:**



Train 3: Car M1 roof-top assembly.



Train 3: Car E1 interior work in progress.



Train 4: Car M1 exterior door threshold installed.

**B. Elevators and Escalators Manufacture-Install-Maintain (MIM)**

**Contract No.:** MI-930

**Contractor:** Schindler Elevator Corporation

**Contract Start Date:** August 2013

**Contract Substantial Completion:** June 2018

**Projected Substantial Completion:** The June 2018 completion date will change to a later date predicated on the award of the DB contracts for the east portion of the guideway.



**Project Description:** Furnish / install / test / maintain all elevator and escalator equipment located at the 21 stations.

**Project Overview:** The manufacturing of the FHSG will be released in September as the construction schedule has been accepted by HART. The release to begin manufacturing of the WOSG equipment will be in October, and the KHSO equipment will be scheduled once an acceptable construction schedule with the respective contractor has been completed.

**COST INFORMATION:**

<b>Original Contract:</b> \$50,982,714	<b>Incurred-to-Date:</b> \$6,290,580
<b>Current Contract Value<sup>1</sup>:</b> \$51,999,035	<b>Incurred in July:</b> \$140,824

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$1,016,321</b>



The progress chart reflects early program expectations. When the overall schedule is rebaselined and Construction Access Milestone dates are revised, the cost curve will be revised.

**SCHEDULE:**

- Elevators' schedule for the FHSG, WOSG and KHSG stations will be published once the respective station baseline schedules are accepted and all access dates are transmitted to Schindler. Elevators' schedule for the remaining 12 eastside stations will be published when their contracts are awarded and schedules are accepted.

**CRITICAL PATH ISSUES:**

- Coordination with station contractors on construction interface milestones.
- Re-bidding of the Airport and City Center sections of guideway with stations as Design-Build contracts will impact the completion of the Elevator Escalator contract.

**WORK PROGRESS:**Activities this Month:

**Weighted Value: 12.3%**; Planned Value: 65.5%

- Final Design is approximately 41% complete, as 9 of the 21 stations are ready to be released for manufacturing once the contractor's schedules are approved.
- All draft equipment drawings for the 21 stations have been submitted for review and have been accepted.
- Design is complete on the three FHSG stations, three WOSG stations, and the three KHSG stations.
- Permits for the installation of all elevators and escalators for the FHSG, KHSG and the WOSG have been issued. These permits are for installation only, not operation.

Look Ahead:

- Release for manufacturing for the Farrington Highway Station Group will occur in September; the West O'ahu Station Group elevators and escalators is expected to occur in October 2016, once the construction schedule is approved by HART. KHSG will be released for construction later this year, once a schedule has been accepted by HART.

**KEY ISSUES:**

- The release to allow manufacturing for FHSG is expected to occur in September 2016. WOSG will be released in October, once the construction schedule is approved. The release of the equipment required for KHSG will be dependent on the Notice to Proceed (NTP) of the KHSG contract. Final completion of the equipment requirements for the four stations included in the DB contract for Airport Guideway and Stations will be subject to the final design of the DB. This work will resume with the issuance of the NTP for this contract. The eight stations included in the City Center Guideway and Stations contract is also on hold pending contract award of the DB contract for this work. Both of the DB solicitation packages contain the size and configuration of the elevators and escalators purchased for these twelve remaining stations.

**C. Fare Collection System**

**Contract No.:** MI-900

**Contractor:** INIT, Innovations in Transportation Inc.

**Contract Start Date:** April 2016

**Contract Substantial Completion:** September 2021

**Projected Substantial Completion:** 60 days after full rail revenue service date

**Project Description:** The fare collection system is a joint HART and City and County of Honolulu (DTS, DIT, BFS) project that will consist of a multi-model, closed loop, account based smart card system. The Fare System Vendor will be responsible for design, manufacture, testing, installation and operation of the entire system inclusive of hardware and software.

The rail portion of the project will consist of Ticket Vending Machines (TVMS) and fare gates at stations that accept smart cards which can also be used for payment on board TheBus and facilitate a seamless transfer between modes. Equipment and software to be used by both HART and the City and County will include transaction processing, fare equipment monitoring, and customer service systems, as well as a Data Warehouse. TheBus equipment will consist of stand-alone smart card readers on board.

**Project Overview:** The Fare Collection Systems award was made on March 18, 2016 to INIT. NTP was issued April 18, 2016. An MOU for capital cost sharing with the City was executed on July 11, 2015, and an MOU for Operations and Maintenance was executed on March 10, 2016. A Fare Systems technical consultant contract was awarded on Sept. 24, 2015, to CH2M Hill to support design review, testing and installation. Conceptual design documents have been reviewed and CDR (Conceptual Design Review) completed and approved on Aug. 22, 2016.

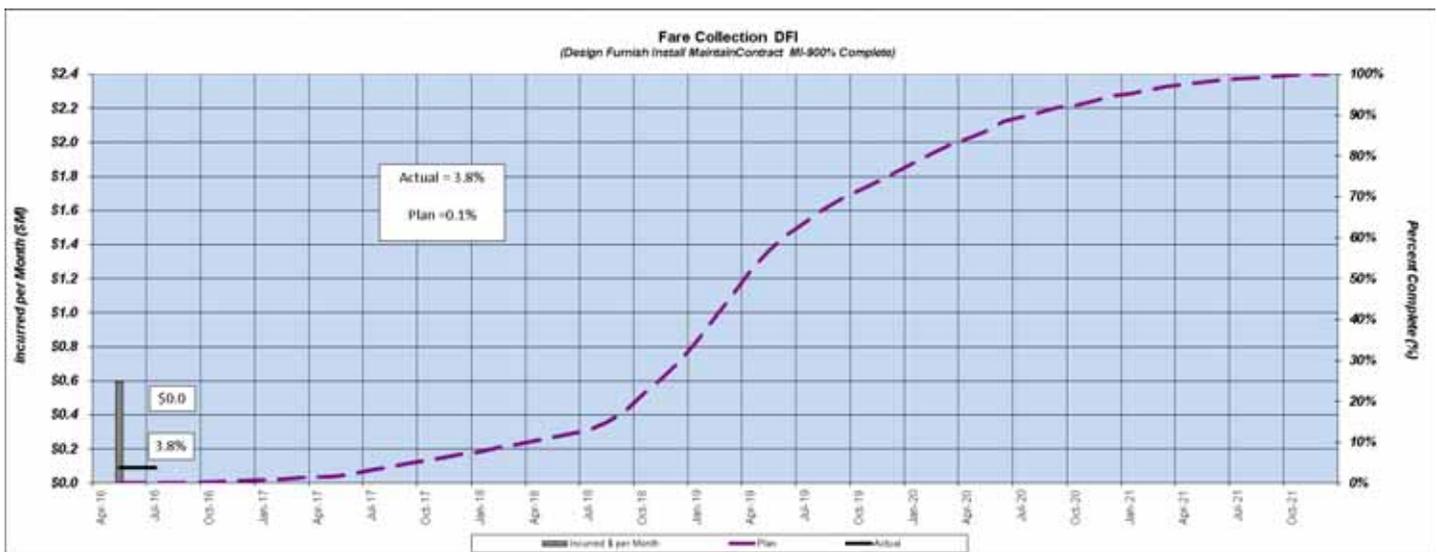
**COST INFORMATION:**

<u>Original Contract:</u>	<u>\$15,464,198</u>	<u>Incurred-to-Date:</u>	<u>\$593,840</u>
<u>Current Contract Value<sup>1</sup>:</u>	<u>\$15,464,198</u>	<u>Incurred in July:</u>	<u>\$0</u>

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$0</b>



**SCHEDULE:**

July 2016 Update			Data Date: 29-Jul-16																							
Activity Name	Start	Finish	2016				2017				2018				2019				2020				2021			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Fare Systems Contract</b>	11-Aug-15 A	30-Sep-21																								
Fare Systems Contract - Bid & Award	11-Aug-15 A	14-Apr-16 A																								
Fare Systems Contract	18-Apr-16 A	30-Sep-21																								
Substantial Completion - Fare Systems		30-Sep-21																								

**CRITICAL PATH ISSUES:**

- Preliminary Design Review (PDR) Acceptance by Dec. 31, 2016.

**WORK PROGRESS:**

Activities this Month:

**Weighted Value: 7%;** Planned Value: 7%

- Completed final review and acceptance of Conceptual Design.
- Developed Scope of Work (SOW) and Independent Cost Estimate (ICE) for card branding.
- Developed PDR workshop agendas.
- Established baseline fare model.
- Ongoing business rules document development.

Look Ahead:

- Conduct PDR workshops and begin review of first PDR documents package.
- Kick off card branding work.
- Establish new fare policy Permitted Interaction Group (PIG) and review potential fare policy options for modeling.

**KEY ISSUES:**

- Starting and completing three design reviews on time in order to maintain schedule with final design milestone acceptance by May 2017.

4.2 Section I – West O’ahu/Farrington Highway: East Kapolei to Pearl Highlands

A. West O’ahu/Farrington Highway Guideway (WOFH)

Contract No.: DB-120

DB Contractor: Kiewit Infrastructure West Company (KIWC)

Contract Start Date: December 2009

Contract Substantial Completion: November 2016

Projected Substantial Completion: March 2017



**Project Description:** Design and construction of 6.8 miles of rail alignment, starting at the East Kapolei Station and ending at the Pearl Highlands Station.

**Project Overview:** Progress continues on track installation, road restoration work, LCC Station foundations and traffic signals. Segment erection and final set has been completed along the entire guideway. Several areas of the project were inspected, punch lists generated and partial acceptance/substantial completion letters issued. The project’s key quality issues continue to focus on segment repairs, column pedestal repairs, and NCR closeout.

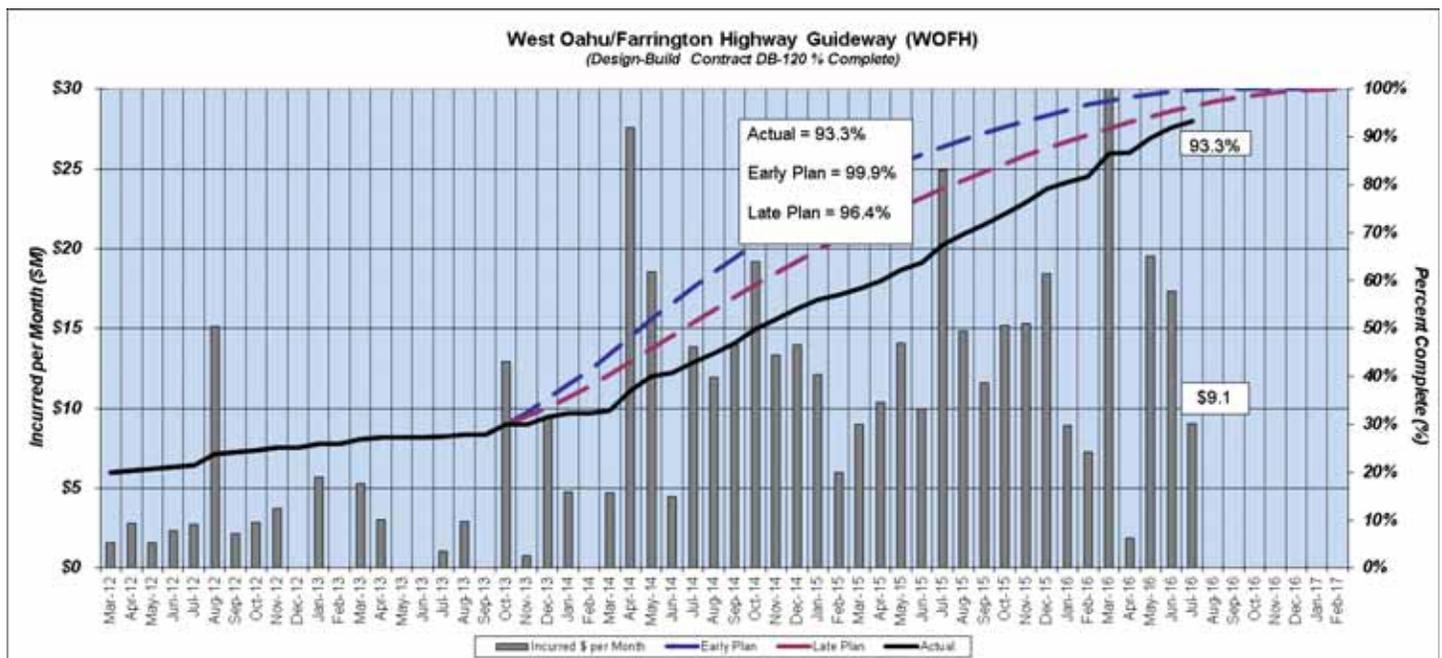
**COST INFORMATION:**

Original Contract:	\$482,924,000	Incurred-to-Date:	\$606,930,718
Current Contract Value <sup>1</sup> :	\$650,355,787	Incurred in July:	\$9,067,208

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$8,446,121
DBE % Attained:	1.75%

July Change Orders		
Change No.	Description	Amount (\$)
CCO 101	RTD Standard & Directive Drawings Rev 1.0	\$47,745
<b>Cumulative to Date</b>		<b>\$167,431,787</b>



In August, KIWC submitted pay application # 90 for July 2016 billing to HART for review.

**SCHEDULE:**

As of the July 2016 progress update, substantial completion beyond November has been delayed by 6 months due to the work scheduling of all LCC construction activities, including KIWC’s unilateral stoppage of work for a period of time.

July 2016 Update				Data Date: 29-Jul-16					
Activity Name	Start	Finish	2016			2017			
			Q2	Q3	Q4	Q1	Q2	Q3	
<b>W. Oahu/Farrington Highway Guideway</b>									
<b>Foundations</b>	23-Apr-12 A	16-May-17	Contractor Forecast Dates: Dates not approved until HART signoff.						
<b>Drilled Shafts</b>	23-Apr-12 A	20-Dec-16							
<b>Columns</b>	21-May-12 A	17-Dec-15 A							
<b>At Grade</b>	01-Oct-14 A	05-Feb-16 A							
<b>Guideway</b>	01-Oct-14 A	20-Dec-16							
<b>Precast Segment Erection</b>	02-May-14 A	27-May-16 A							
<b>Balanced Cantilever Segments</b>	10-Sep-14 A	25-Apr-16 A							
<b>Trackwork</b>	20-Oct-14 A	16-May-17							
<b>Direct Fixation Trackwork</b>	20-Oct-14 A	29-Jul-16							
<b>Third Rail</b>	14-Dec-15 A	21-Mar-17							
<b>WOFH Project Finish Work, Demob, Punchlist</b>	18-May-16 A	16-May-17							
WOFH Project Finish Work, Demob, PunchList	18-May-16 A	15-May-17							
WOFH Substantial Completion		16-May-17							

**CRITICAL PATH ISSUES:**

- In late February/early March 2016, KIWC (at risk) resumed LCC construction work activities. The portable classroom turnover to the University occurred on May 2, 2016. Demolition of the existing portables started in mid-May. KIWC’s most recent progress schedule shows the project to be completed six months beyond contractual substantial completion.

**WORK PROGRESS:**

WOFH Construction Status as of 8/17/16									
Utility Status	Qty to Date	Final Qty	% Complete	Structure Element	*** Total to Date	Planned to Date		Total Qty	% Complete
						Accepted Schedule *	Revised Schedule **		
Water Line	9,028	9,348	97%	Shafts	309	309	309	309	100%
Sewer Line	550	570	96%	Columns	283	283	283	283	100%
Fuel Line	340	340	100%	Segment Casting	3,209	3,209	3,209	3,209	100%
Gas line	1,591	1,591	100%	Spans Stressed	274	274	274	274	100%
Drainage Line	4,191	5,166	81%	Track work	277	278	278	278	99.6%
Elec/Telecom	16,889	21,374	79%	Third Rail	277	278	278	278	99.6%
Street Lights	6,335	8,357	76%	Mill & Overlay	27,353	N/A	N/A	27,643	99.0%
Traffic Sig/ITS Duct bank	8,552	10,802	79%	* Accepted Schedule was submitted in 2013.					
System Sites	1,683	7,046	24%	** The planned values are based on KIWC’s pending July schedule revision dated August 24, 2015. Revised schedule reflects a 6-month delay in completion.					
ITS Systems Devices	821	4,121	20%	*** Total quantity for the construction items has been revised to reflect the latest Issued for Construction number of shafts, columns, segments and spans.					

Activities this Month:

**Weighted Value: 94%** [(Total Achieved to July 2016 (\$609.5 million) + August 2016 Period (\$10 million))/Total Contract Including Executed Change Orders (\$658.7 million)]. Planned Value: 97.3%

**Utility Relocation**

- KIWC continues to work with third party utilities to relocate utilities conflicts to facilitate station and traffic signal construction.

Look Ahead:

**Design Progress**

- KIWC will continue to work toward completing the last design package – Guideway Conflicts.

**Column**

- KIWC will continue work correcting punch list items.

**Guideway Segment Erection**

- KIWC will continue work correcting punch list items.

Activities this Month (continued):

**Track Construction**

- KIWC continues to construct concrete plinths, install CWR (Continuous Welded Rail) and third rail from Spans 249 – 266.

**KIWC/Third-Party Coordination**

- HECO and KIWC continued to resolve station and traffic signal utility relocation conflicts.

**Civil Structures**

- KIWC continues with median restoration constructing drain inlets, curb and gutter, and sidewalks. Installing irrigation from Fort Weaver Road to Waipahu High School.

**Station Contractor Interfaces**

- KIWC, FHSG, MSF and WOSG are holding Interface closeout meetings to resolve current design and construction conflicts.

**Traffic Signals**

- KIWC is working on installing the traffic signals, per the unilateral change order executed by HART.

Look Ahead (continued):

**Utility Relocation**

- KIWC will continue to relocate utility conflicts to facilitate traffic signal improvements.

**Balanced Cantilever Structure**

- KIWC will continue work correcting punch list items.

**Track Construction**

- KIWC will continue work to complete the construction of concrete plinths, installation of CWR, and third rail.
- Continue to correct punch list items.

**KIWC/Third-Party Coordination**

- Continue to resolve utility conflicts with third parties.

**Civil Structures**

- KIWC will continue with road restoration work.

**Traffic Signals**

- KIWC will continue traffic signal installations.

**LCC Station Access Structure**

- KIWC will continue with the construction of the access structure footings and walls.
- Installing future utility conduits.

**KEY ISSUES:**

- **Closeout and Coordination** – As the project approaches substantial completion, KIWC has continued coordination with station contractors and HART on project closeout documentation requirements, including QA-QC final acceptance checklists. As-built and record drawings are currently being reviewed. Per the contract, written agreements are being executed between HART and KIWC to document partial occupancy requirements where other HART contractors require access to complete their work.
- **Shared Access** – Nan Inc., was given access to East Kapolei and UH West O’ahu.

**SUBSTANTIAL COMPLETION:**

- No progress to report this month.

**QUALITY MANAGEMENT:**

- KIWC continues to follow their established quality processes through quality monitoring and audits.
- **Closing Out NCRs** – KIWC has been working to correct, validate, and close out NCR’s during this period. 0 NCRs were closed this period.
- **NCR 549 – Corroded Longitudinal Post Tensioning (PT) Tendons** – After investigation, KIWC found possible vacuum grouting repair work not applicable to PT tendons at Spans 33, 38, 45 and 51. KIWC’s schedule is three fold. First, they plan to replace the tendons with grout mixture issues by the middle of September. Second, they plan to sound all of the tendons by the middle of September. Lastly, they will prepare a full scale tendon mock-up and test it to failure in the beginning of September.

Weekly meetings of the Tendons Task Group from KIWC (management, construction and quality staff), HNTB/FIGG (Engineer of Record, Field Engineers), CE&I (Resident Engineer, Office Engineers, CCM), and HART (management, engineering and quality staff) were held at the KIWC Field Office to discuss the tendons structural integrity and reliability. HART has engaged the services of WJE materials consultant to review the tendon corrosion problem.

- **NCR 553 – Track Shim Material** – Currently, KIWC is gathering shims to have tested. Both KIWC and HART will test the shims to ensure they are in conformance with the Specifications. KIWC is also contacting the manufacturers to ensure that their certifications are in conformance with the Specifications.

WOFH NCR LOG		
Total NCRs Issued To Date	CLOSED	OPEN
554	548	6

PROJECT PICTURES:



Completed rail in the farm field.



LCC access structure.



LCC access structure foundation.

**B. West O’ahu Station Group (WOSG)**

**Contract No.:** DBB-171

**Contractor:** Nan, Inc.

**Contract Start Date:** October 2015

**Contract Substantial Completion:** March 2018

**Projected Substantial Completion:** March 2018

**Project Description:** The West O’ahu Station Group Construction contract includes services to build three (3) transit stations along Kualaka’i Parkway and Farrington Highway. The stations are East Kapolei (EK), UH West O’ahu (UHWO) and Ho’opili Stations. In addition to the transit stations, operational ancillary buildings, traction power substation and adjacent areas are included in this project.



**Project Overview:** The contractor was issued Notice-to-Proceed (NTP) on Oct. 13, 2015. Contractually, the projected substantial completion is March 2018. However, once the baseline schedule is accepted and updates received, it is expected that the forecast will change.

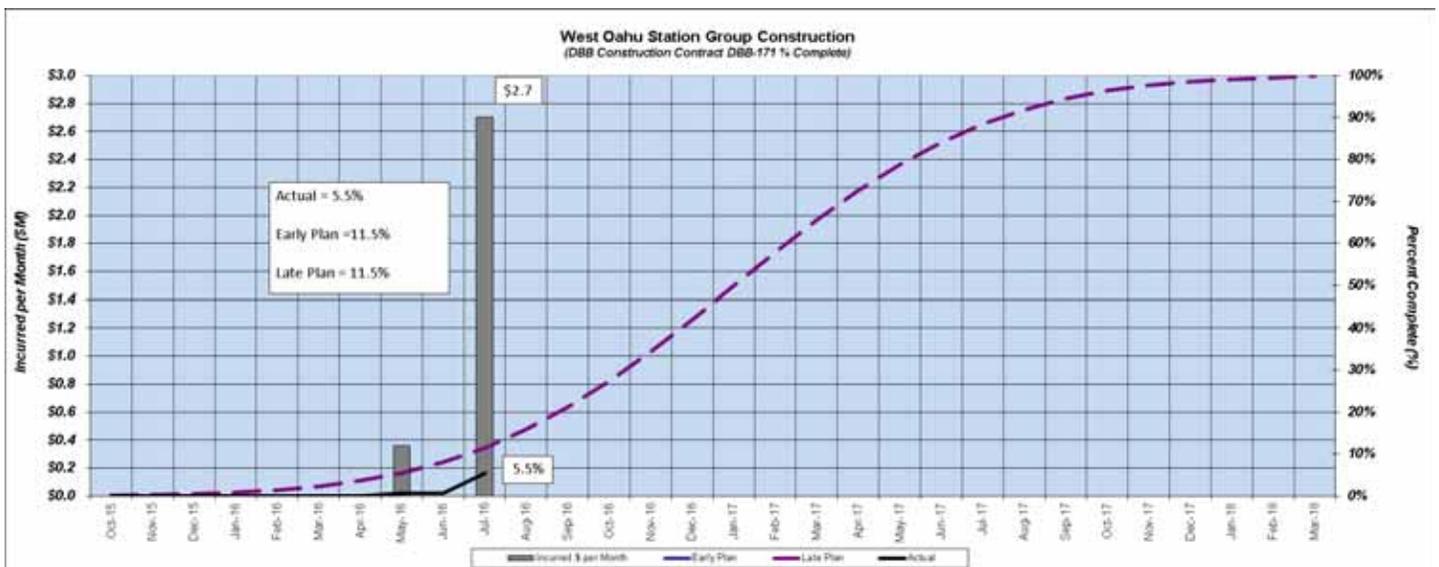
**COST INFORMATION:**

<u>Original Contract:</u>	<u>\$56,088,470</u>	<u>Incurred-to-Date:</u>	<u>\$3,064,070</u>
<u>Current Contract Value<sup>1</sup>:</u>	<u>\$56,088,470</u>	<u>Incurred in July:</u>	<u>\$2,702,270</u>

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

July Change Orders/Amendments		
Change No./Amend	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$0</b>



**SCHEDULE:**

- Baseline schedule to be approved under the condition that the outstanding comments be resolved before any further pay requests be submitted by the contractor. The baseline schedule requires added details in order to be complete, as per contract requirements. Once the baseline is approved, the updated WOSG schedule will be published in future progress reports.

**CRITICAL PATH ISSUES:**

- Construction access to the platforms at Ho’opili, UH West O’ahu and East Kapolei.
- Contractor to coordinate for shared access.
- De-energization of the 46kV to accommodate the drilled shaft work. Relocation of the 46kV line at UH West O’ahu Station to be done upon completion of the drilled shaft work.
- Construction of Traction Power Sub-Station (TPSS) foundation and Train Control and Communications Room (TCCR)/Uninterrupted Power Supply (UPS) room to meet the program schedule needs.
- Providing infrastructure for power to Ho’opili.
- Falsework for platform box girders formwork.

**WORK PROGRESS:**

Activities this Month:

**Weighted Value: 4%**; Planned Value: 5%

- The baseline schedule to be approved with the condition that comments need to be addressed before any further pay requests will be approved.
- Contractor has been doing formwork and falsework in preparation of footings and platform girder construction at the Ho’opili Station site. Resolving issues with as-built conditions, such as discrepancies in elevation of the hammerhead and guideway curbs that require formwork alternatives to be evaluated.
- Initial negotiation meeting held with the contractor. Contractor to submit negotiation documents, which include revisions to their cost proposal.
- Issues regarding the changes to the Ho’opili TCCR/TPSS are being resolved to allow the contractor to proceed with Field Change Notice (FCN) work.
- Contractor has begun drilled shaft work at UH West O’ahu, after the approval of the method shaft.
- Traffic signal work has begun at UH West O’ahu.

Look Ahead:

- East Kapolei release of liability to be completed for access to the site. Mobilization at the site.
- Formwork to be constructed for the platform box girder at Ho’opili.
- Approving the baseline schedule, with condition to address the contractual requirement comments.
- Production shaft to continue at UH West O’ahu.

**KEY ISSUES:**

- 46kV relocation at UH West O’ahu. 100% design approval has been given to the Designer/HART. HECO to begin the design of the poles and schedule relocation work. Contractor has requested the line to be de-energized in order to complete the drill shaft work.
- Executing change orders to incorporate the Issued for Construction (IFC) set and other design changes into the contract, as deemed appropriate.

**QUALITY MANAGEMENT:**

WOSG NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
0	0	0

**C. Farrington Highway Station Group (FHSG)**

**Contract No.:** DBB-271

**Contractor:** Hawaiian Dredging Construction Company, Inc.

**Contract Start Date:** August 2015

**Contract Substantial Completion:** January 2018

**Projected Substantial Completion:** TBD



**Project Description:** The Farrington Highway Station Group construction contract includes services to build three (3) transit stations along Farrington Highway. The stations are West Loch (WLO), Waipahu Transit Center (WTC) and Leeward Community College (LCC) Station. The station work includes operational ancillary buildings, a traction power substation at WLO, kiss and ride lots, and parking lots.

**Project Overview:** The contractor was issued Notice-to-Proceed (NTP) on Aug. 17, 2015. Hawaiian Dredging Construction Company (HDCC) introduced one (1) Value Engineering Cost Proposal (VECP) concept– Augercast piles at the Waipahu Transit Station. HDCC and HART continue to work collectively to negotiate time, cost and to address technical concerns. It is anticipated that the VECP will be accepted by HART. HDCC continues construction at WLO. Survey and preconstruction work continues at WTC, and foundation work by the guideway contractor (Kiewit) continues at LCC.

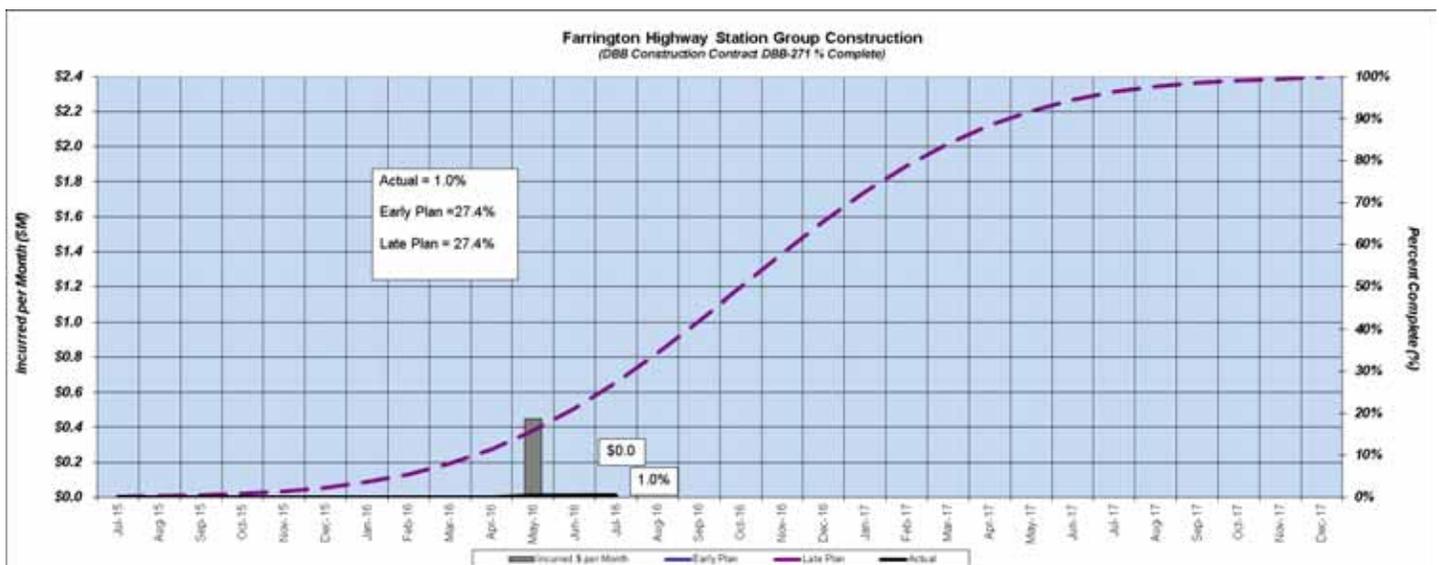
**COST INFORMATION:**

<u>Original Contract:</u>	<u>\$78,999,000</u>	<u>Incurred-to-Date:</u>	<u>\$450,000</u>
<u>Current Contract Value<sup>1</sup>:</u>	<u>\$79,784,600</u>	<u>Incurred in July:</u>	<u>\$0</u>

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

July Change Orders/Amendments		
Change No./Amend	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$785,600</b>



**SCHEDULE:**

July 2016 Update		Data Date: 29-Jul-16												
Activity Name	Start	Finish	2016				2017				2018			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Farrington Highway Station Group</b>	31-Aug-15 A	16-Jan-18												
West Loch Station	31-Aug-15 A	15-Sep-17												
Waipahu Transit Center Station	17-Dec-15 A	16-Jan-18												
Leeward Community College Station	04-Jan-16 A	16-Jan-18												
Substantial Completion - Farrington Highway Station Group	16-Jan-18	16-Jan-18												

Note: Dates updated using the Contractor's baseline schedule

**CRITICAL PATH ISSUES:**

- Access to LCC - HDCC will need to re-baseline the project schedule when new access dates to LCC are determined.
- Timing of the VECP and how the work will impact the project schedule and projected substantial completion may affect the critical path if the VECP is incorporated into the contract.

**WORK PROGRESS:**

Activities this Month:

**Weighted Value:** 0.57%; **Planned Value:** 25%

- HDCC is working on addressing technical comments regarding the VECP. Several scoping meetings have been held to bring cost differences in line.
- HART is working with CE&I staff to quantify additional scope of work added in revisions to the plan sets.
- The contractor continues work at WLO Station with drilled shaft installation, settlement control, waterline and sewer line work, and conduit duct bank installation at the ancillary building.

Look Ahead:

- Drilled shaft work at WLO will continue.
- Underground utility work.
- Quantification of changes from the Bid set and addendum compared to revision sets is ongoing.
- Vertical raceway column (VRC) ductbank installation.
- Installation of waterline at Zippy's.
- Installation of ground grid at the WLO Train Control and Communications Room (TCCR) Building.
- Preliminary survey work for WTC Station.

**KEY ISSUES:**

- Quantification of change work included in plan revisions versus Issued for Bid (IFB) plus addendum, and how those changes are incorporated into HDCC's contract.
- Access to the site for LCC is pending. HART is working with HDCC to mitigate impacts.
- Review and approval of critical submittals is ongoing.
- Past due monthly schedule updates need to be brought to current data date, so progress payments can be made. Ongoing efforts to come to agreement on how access delays should be documented in the schedule.

**QUALITY MANAGEMENT:**

FHSNG NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
3	1	2

**D. Maintenance and Storage Facility (MSF)**

**Contract No.:** DB-200

**Contractor:** Kiewit/Kobayashi Joint Venture (KKJV)

**Contract Start Date:** July 2011

**Contract Substantial Completion:** July 2016

**Project Description:** The MSF contract consists of the Operations and Servicing Building (OSB), Maintenance of Way (MOW), Train Wash Facility (TWF) and Wheel Truing Building (WTB). In addition to the four (4) facility buildings, MSF includes rail procurement, special trackwork, ties, third rail and other track material for the four guideway segments on the project.



**Project Overview:** Substantial Completion effective July 2, 2016 as revised under Change Order No. 047 was granted.

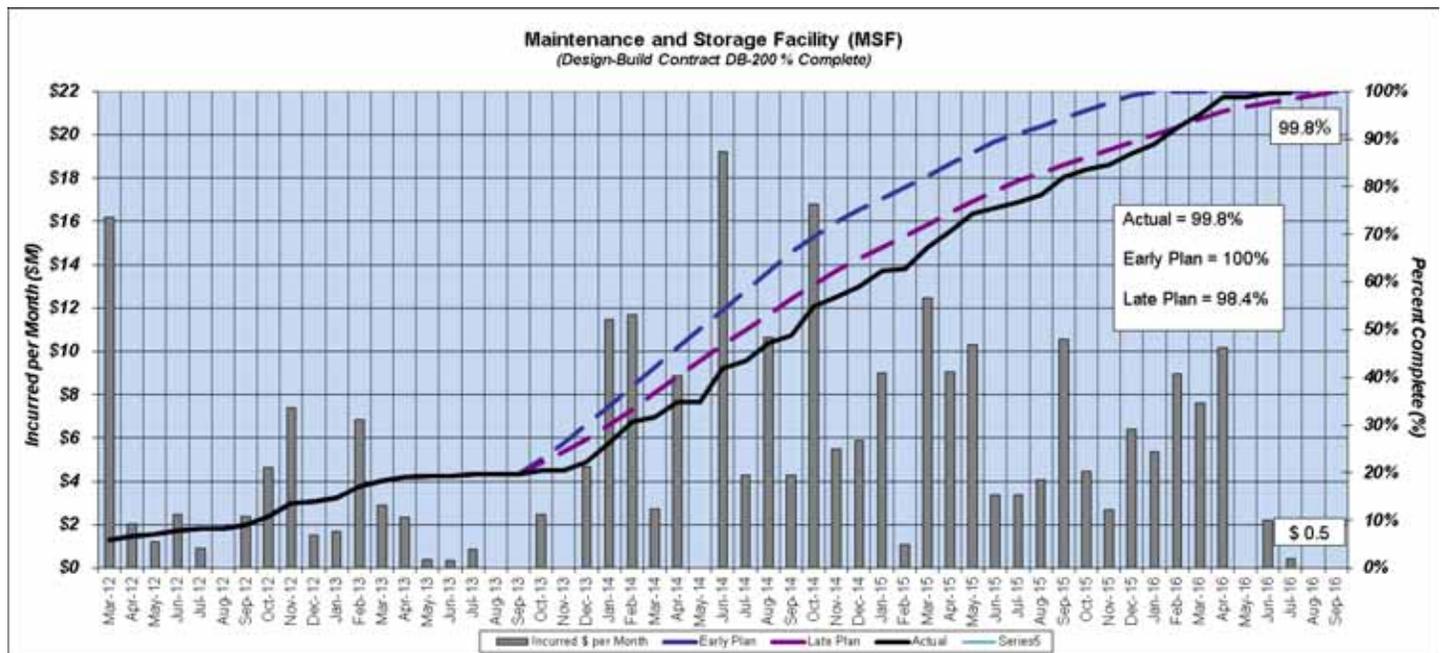
**COST INFORMATION:**

<u>Original Contract:</u>	\$195,258,000	<u>Incurred-to-Date:</u>	\$274,180,830
<u>Current Contract Value<sup>1</sup>:</u>	\$274,858,568	<u>Incurred in July:</u>	\$ 452,089

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$551,698
DBE % Attained:	0.28%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$79,600,568</b>



**SCHEDULE:**



**CRITICAL PATH ISSUES:**

- Coordination with KKJV continues for the equipment and systems commissioning, punchlist completion, outstanding submittals, training, O&M manuals, and turnover of spare parts and equipment for final acceptance.

MSF Construction Status 99% Complete Overall as of 8/15/16	
Element	% Complete*
OSB	99.7%
MOW Building	99.7%
WTB	99.7%
TWF	99.7%
Rail	99.8%
Paving	100%

\*Not including testing and commissioning.

**WORK PROGRESS:**

Activities this Month:

**Weighted Value: 99.76%** [(Total Achieved to July (\$274 million) + Projected August 2016 Period (\$600 Thousand)/Total Contract Including Executed Change Orders (\$275 million)]. Planned Value: 99.9%

**Yard/Utilities**

- Removal of the temporary fence, including the erosion and sediment control is complete.

**Operations and Servicing Building (OSB)**

- Installation of the hydraulic lifts is complete.

**Maintenance of Way (MOW)**

- Completed.

**Wheel Truing Building (WTB)**

- Completed.

**Train Wash Facility (TWF)**

- Completed.
- Train Wash Testing was performed.

**Rail Procurement and Installation**

- Completed.

**Administration**

- Assisting with the completion of final documents for final acceptance of the MSF project.

**Look Ahead:**

**Yard/Utilities**

- Submitting final documents for training, O&M manuals, etc. for project close-out.

**OSB**

- Testing of the hydraulic lifts, pending delivery of train bogies by CSC.
- Submitting final documents for training, O&M manuals, etc. for project close-out.

**MOW**

- Submitting final documents for training, O&M manuals, etc. for project close-out.

**WTB**

- Submitting final documents for training, O&M manuals, etc. for project close-out.

**TWF**

- Submitting final documents for training, O&M manuals, etc. for project close-out.

**KEY ISSUES:**

- **Final Acceptance** – KKJV is working on completing equipment and building commissioning, final punchlist, submittals, training, O&M manuals, spare parts, and equipment turnover for final acceptance.
- **LEED Commissioning** – Commissioning of HVAC, domestic water, and building lighting controls was onsite this month and performed the commissioning tests for MSF. The completion requires the fiber optic communication network by CSC. A work-around of the fiber optic communication network is in process to allow for the completion of the commissioning tests on the MSF project.

**QUALITY MANAGEMENT:**

- Overall quality of the contract is good.

MSF NCR Log		
Total NCRs Issued to Date	CLOSED	OPEN
32	32	0

**PROJECT PICTURES:**



Landscape – Removal of temporary perimeter LCC.



MOW – Punchlist activities.



OSB – Hydraulic lift installation.



TWF – Train wash testing.

### 4.3 Section II – Kamehameha Highway: Pearl Highlands to Aloha Stadium

#### A. Kamehameha Highway Guideway (KHG)



**Contract No.:** DB-320  
**Contractor:** Kiewit Infrastructure West Company (KIWC)  
**Contract Start Date:** June 2011  
**Contract Substantial Completion:** September 2016  
**Projected Substantial Completion:** May 2017

**Project Description:** Kamehameha Highway Guideway DB Contract (KHG) consists of 3.9 miles and starts 400 feet east of the Pearl Highlands Station and terminates 1,400 feet beyond the Aloha Stadium Station. KHG work scope is made up of utility relocations, traffic signal improvements, highway widening, drilled shaft foundations, columns and aerial structure.

**Project Overview:** Construction of the remaining 2 drilled shaft foundations is based on the resolution of overhead conflict 943. Columns have been constructed from the WOFH project limits to the area just past Ka’ahumanu St., and from Hekaha St. to Honomanu St. Additionally, columns have been constructed from the west side of Salt Lake Blvd. to the end of the alignment. Heading #2 truss has completed erecting 412R and is in the process of being demobilized.

HART and KIWC continue to work at senior management levels to ensure current utility relocation schedules are being maintained.

HART is currently investigating options to mitigate delays with the KHG contract. HART’s position with these mitigation actions is that the projected substantial completion will be May 2017, although KIWC’s progress schedule shows the guideway structure completion in June 2017 and the remaining roadway/civil work being completed by June 2018.

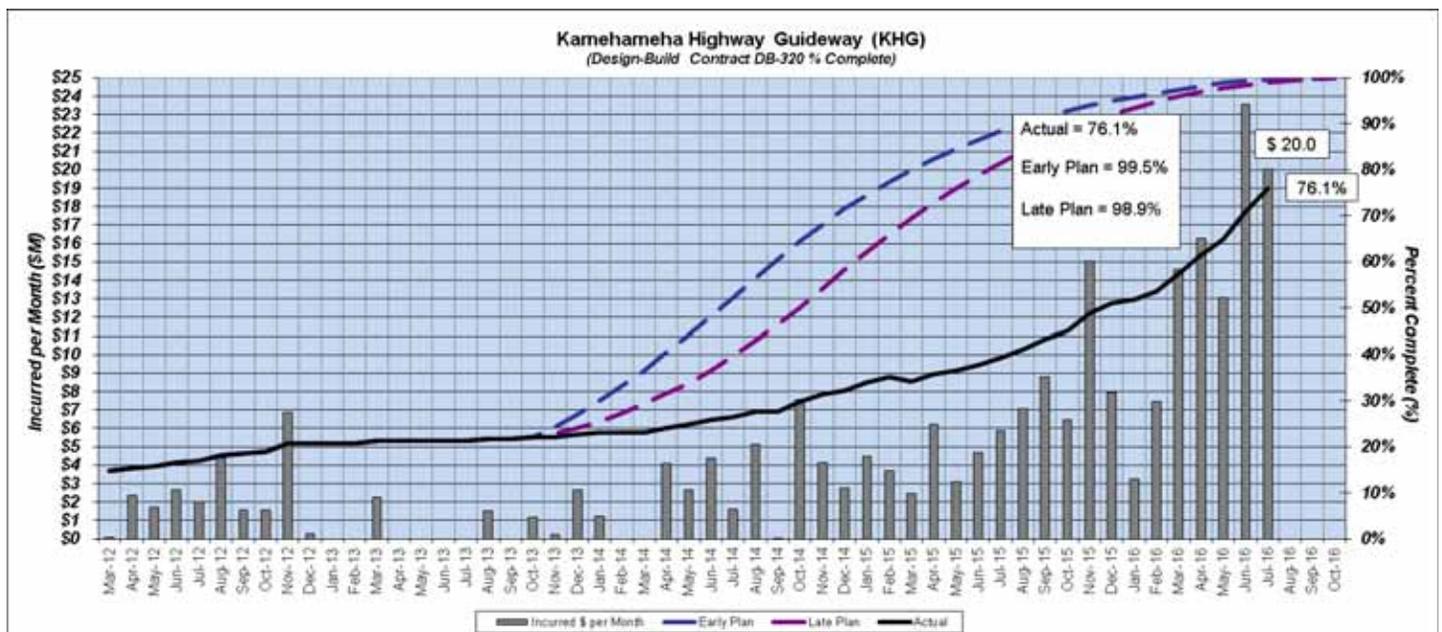
#### COST INFORMATION:

<b>Original Contract:</b>	<b>\$372,150,000</b>	<b>Incurred-to-Date:</b>	<b>\$296,348,421</b>
<b>Current Contract Value<sup>1</sup>:</b>	<b>\$390,292,368</b>	<b>Incurred in July:</b>	<b>\$20,046,039</b>

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$308,468
DBE % Attained:	0.08%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$18,142,368</b>

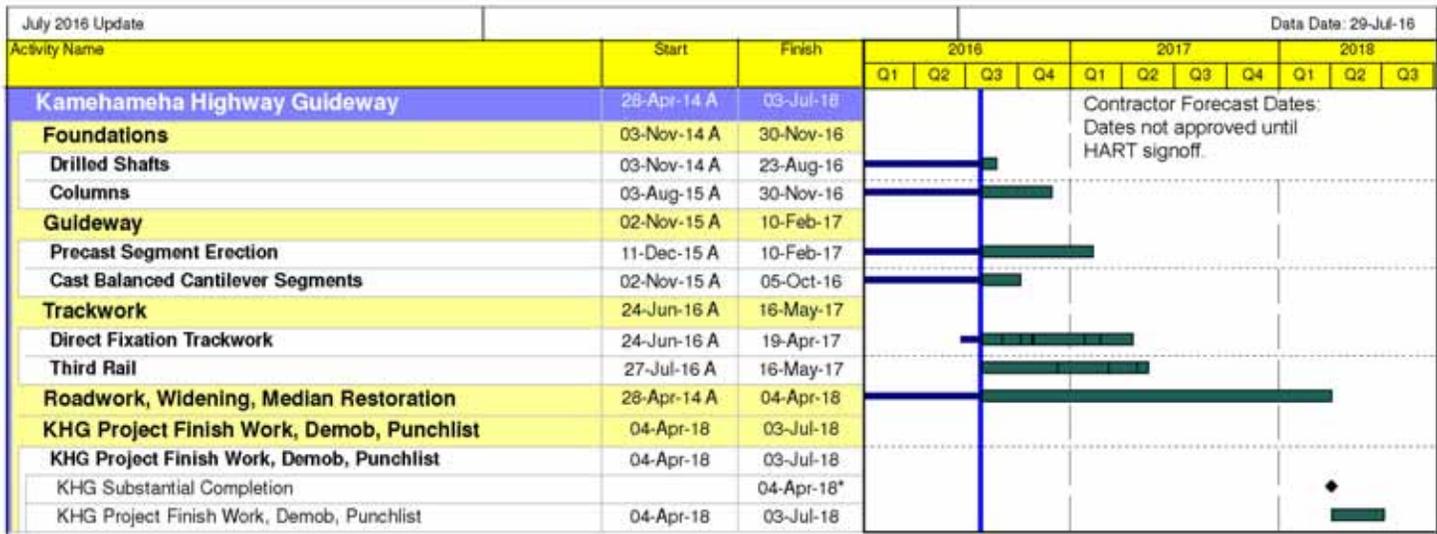


Pay Application #64 for July 2016 billing has been submitted by KIWC and is in review with HART. Pay application #63 for June 2016 billing has been approved for payment.

**SCHEDULE:**

KIWC submitted a schedule revision in December 2014 with a data date of October 2014, which showed a revised Substantial Completion date of April 4, 2017. HART provided review comments to the schedule and has requested re-submittal via Request for Change (RFC) due to the change to the contractual substantial completion date. Until then, the schedule is deemed unaccepted. Subsequently, in September 2015, KIWC submitted a re-baselined August 2015 schedule via an RFC for contract time extension. The re-sequencing of the guideway and road work contains significant unilateral changes in durations, logic, as well as activity modifications, and cannot be accepted. The re-baselined August 2015 schedule shows the guideway structure forecasted to be complete in April 2017 with completion of the roadway civil construction and the overall project in September 2017; this reflected a potential 12 month delay to the contractual substantial completion date. HART is currently investigating options to mitigate delays with the KHG contract. HART’s position with these mitigation actions is that the projected substantial completion will be May 2017, although the current progress schedule shows guideway to be completed in June 2017 and overall project schedule to be completed in June 2018.

KIWC continues to have challenges meeting schedule due to various factors including lower productivity and resource sharing between the KHG and WOFH projects, and self-directed work stoppage for traffic signal and civil work.



**CRITICAL PATH ISSUES:**

- HECO schedule forecast at utility conflicts 11-920-M1 and 11-923-E1 are affecting KIWC span by span operations schedule. HART is tracking these issues and notes that its criticality needs to be established.
- KIWC’s latest progress schedules have been forecasting 9 additional months of civil work due to changing Walls 2, 3 and 4 from mechanically stabilized earth (MSE) to cast-in-place (CIP), and longer construction duration. Consequently, HART has removed construction of Walls 2, 3 and 4 from the KHG contract via RFCR 43.

**WORK PROGRESS:**

KHG Construction Status as of 8/17/16									
Utility Status	Qty to Date	Final Qty	% Complete	Structure Element	Total to Date	Planned to Date		Total Qty	% Complete
						Accepted Schedule*	Revised Schedule**		
Water Line	4,362	4,362	100%	Shafts	184	186	186	186	98.9%
Gas Line	12,641	12,641	100%	Columns	146	169	162	169	86.4%
Sewer Line	492	492	100%	Segment Casting	2,029	2,029	2,029	2,029	100%
Drainage Line	710	1,469	48%	Spans Stressed	118	166	91	166	70.5%
Elec/Telecom	15,961	19,455	82%	Track work	0	156	19	166	0%
System Sites	10%	N/A	10%	Third Rail	0	0	19	166	0%
Signals/ITS/Lights	13,587	18,486	74%	Mill & Overlay Roadway	0	N/A	N/A	N/A	0%

\* Accepted Schedule was submitted in 2013.  
 • Forecasted delays for track work extended the guideway completion by 3 weeks from prior updates.  
 \*\* These quantities are based on KIWC’s pending August 2015 schedule revision dated Sept. 23, 2015. Revised schedule reflects a 12 month delay in completion.

Activities this Month:

**Weighted Value: 79%** [(Total achieved to July 2016 (\$296.3 million) + August 2016 projection (\$18.7 million))/Total Contract including executed Change Orders (\$398.5 million)]. Planned Value: 99.4%

**Shaft/Column/Segments**

- 184 of 186 shafts have been installed; 98.9% of all shafts have been completed.
- 146 of 169 columns have been constructed.
- 2,029 of 2,029 segments have been cast.
- Balanced Cantilever superstructure east and west of the H-1 overpass continues.
- 306 Balanced Cantilever traveler has been completed and demobilized. 307 traveler now working on closure pour between 306 and 307. Thirty-eight (38) of forty (40) segments cast.
- Initiated construction of drilled shaft 400L.
- Heading #1 truss is in production erecting Span 379.
- Heading #2 truss is being demobilized.
- Heading #3 truss is in production erecting Span 331.

**Utility Relocation Progress**

- The relocation of HECO electrical lines and Hawaiian Telcom, Oceanic Time Warner and Intelligent Transportation Systems (ITS) duct banks is occurring in various phases along the alignment.
- Systems Site #10 and #24 work is ongoing.

**Roadway Widening**

- Center median construction in Phase 1 has been initiated.

**Precast Yard**

- KIWC has completed casting of all segments.

Look Ahead:

**Design Progress**

- KIWC is working to complete final design. To date, 45 of 49 drawing packages have been issued for construction.

**Shaft/Column/Segments**

- Column construction continues eastbound from the area around Hekaha St. and Honomanu St.
- 401L shaft construction to begin.
- Construction of straddle bents 400 and 401.

**Utility Relocation**

- Acquisition of ROE for utility relocations is being pursued by HART and KIWC jointly, and meetings with property owners are ongoing.

**Balanced Cantilever Structure**

- Preparation for closure pour between 306 and 307.

**Roadway Widening**

- KIWC plans to start center median construction in Phase 10.

**KEY ISSUES:**

- **HECO/HDOT Utility Priorities** – HECO design for utility conflict 11-920-M1 has been completed and approved by HART. HART is awaiting construction schedule from HECO.
- **Access Coordination between Contracts** – Coordination between contractors is ongoing and requires turnover of guideway work to follow-on station contractors.
- **Civil Roadway Work** – HART is considering removing portions of this work to reduce extended overhead costs and time impacts to the KHG contract.

**QUALITY MANAGEMENT:**

- **Quality Process** – KIWC continues to follow an established quality process and have not encountered any significant new findings through quality audits.
- **Longitudinal Tendons** – Due to WOFH NCR 509, longitudinal tendons have been monitored for possible indications of rust. HART to review KIWC’s inspection procedures and observe inspection of tendon anchorages for corrosion, prior to grouting.
- **Drilled Shaft Quality** – KIWC currently has 1 open NCR due to velocity reduction exceeding 20%. KIWC has been reviewing their means and methods for placing concrete to reduce the issue with velocity reduction.

KHG NCR Log		
Total NCRs Issued to Date	CLOSED	OPEN
197	178	19

PROJECT PICTURES:



Column 308 installing falsework, Phase 4.



Iron workers installing rebar, Column 340, Phase 4.



Installing form for shear keys in Spans 357 and 358, Phase 9.



Heading #1 epoxy Span 370, Phase 10.



Launch to Span 375, Phase 11.



Installing forms for hammerhead at Column 409, Phase 13.

**B. Ramp H2R2**

**Contract No.:** DBB-385  
**Contractor:** Royal Contracting Co. Ltd.  
**Contract Start Date:** May 2015  
**Contract Substantial Completion:** May 2016  
**Projected Substantial Completion:** May 2017



**Project Description:** Ramp H2R2 is an off-ramp from the H2 Interstate which will connect the north bound H2 Interstate to east bound Kamehameha Highway. The off-ramp terminates just west of the intersection of Kamehameha Highway and Waihona Street.

**Project Overview:** Royal Contracting was awarded this project on May 4, 2015, and issued NTP on May 18, 2015. Start of construction was delayed due to unforeseen HDOT required soil remediation and submittal of required documentation. The contractor has projected a substantial completion of May 2017. The contractor was formally notified to commence construction on March 21, 2016.

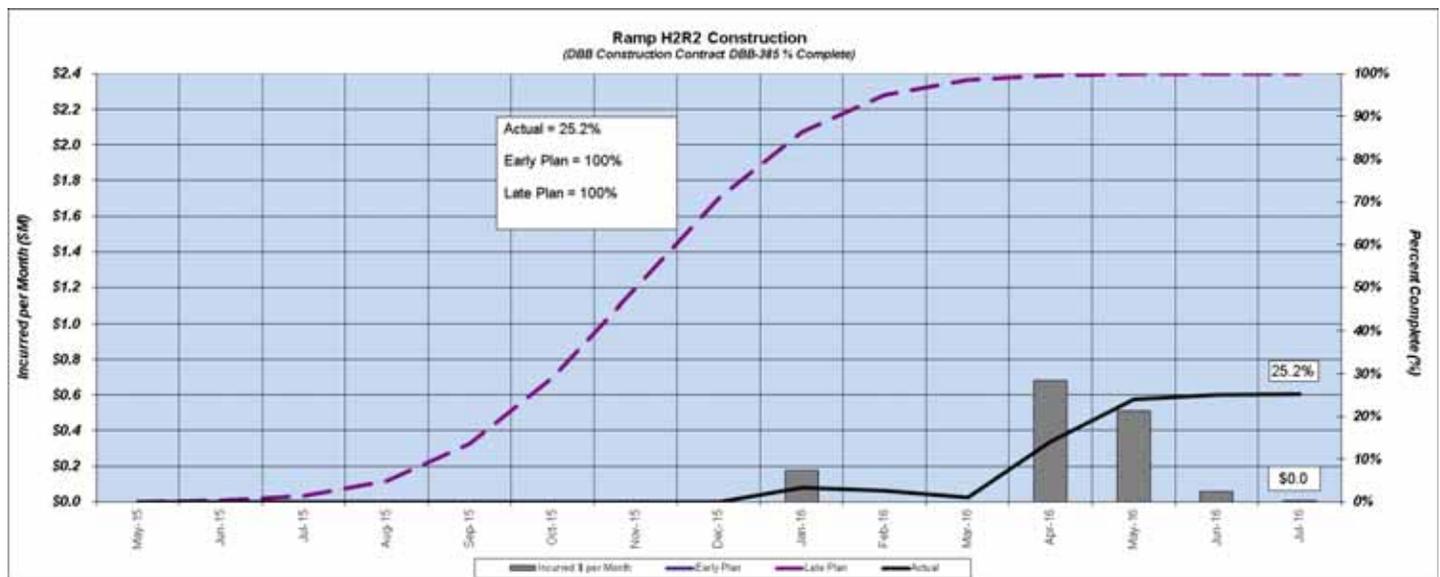
**COST INFORMATION:**

Original Contract:	\$5,203,646	Incurred-to-Date:	\$1,311,578
Current Contract Value <sup>1</sup> :	\$5,203,646	Incurred in July:	\$6,242

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$159,032
DBE % Attained:	3.06%

July Change Orders/Amendments		
Change No./Amend	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$0</b>



The progress chart reflects early program expectations. When the overall schedule is rebaselined, the cost curve will be revised.

**SCHEDULE:**

July 2016 Update			Data Date: 29-Jul-16							
Activity Name	Start	Finish	2016				2017			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Construction - H2R2 Ramp	18-May-15 A	03-May-17								
Construction - H2R2 Ramp	18-May-15 A	03-May-17								
Substantial Completion - H2R2 Ramp		03-May-17								

Contractor Forecast Dates:  
Dates not approved until HART signoff.

**CRITICAL PATH ISSUES:**

- No additional time to be added for unforeseen condition at 30-inch corrugated metal pipe (CMP) to extend projected substantial completion to May 2017. HART was able to mitigate delay by choosing an alternative compaction method in one small area adjacent to the CMP.
- A change order is in process to the contract documents that extends the contract completion 124 days as a result of an approved time impact analysis resulting from an unforeseen condition encountered in the beginning of the project (contaminated soils).

**WORK PROGRESS:**

Activities this Month:

**Weighted Value: 25%;** Planned Value: 99%

- Royal continues to provide required submittals for review and acceptance.
- Royal continues to provide project baseline schedule updates as the project progresses.
- Embankment placement.
- Surcharge settlement monitoring.
- Direction was provided to the contractor by field change notice (FCN) to complete temporary street light installation along H2, which was successfully completed on Aug. 2, 2016.

Look Ahead:

- Continue earth moving activities.
- Continue export of fill material.
- Continue surcharge settlement monitoring.

**KEY ISSUES:**

- The Engineer of Record (EOR) is currently assessing the streetlights at station locations 10+00 and 12+80, addition of guard rail to the H2R2 off-ramp, modifying the fence detail at the top of the retaining wall, and assessing how those elements will affect the existing retaining wall design if implemented. This work requires HDOT approval prior to implementation into the contract. The design is currently in final draft and is being reviewed by CE&I staff prior to final review and acceptance by HART staff.
- EOR is assessing a design issue related to the storm drain that may need to be modified at Station 13+30, and are to provide a re-design in coordination with HDOT for approval.

**QUALITY MANAGEMENT:**

Ramp H2R2 NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
<b>1</b>	<b>0</b>	<b>1</b>

**C. Kamehameha Highway Stations Group (KHSB)**

**Contract No.:** DBB-371

**Contractor:** Nan, Inc.

**Contract Start Date:**

Notice to Commence Administrative Work: April 2016

Notice to Commence Investigative/Pre-Construction Work at Pearl Highlands: July 2016

Full Notice to Proceed (NTP): To be issued

**Contract Substantial Completion:** NTP+32 months

**Projected Substantial Completion:** TBD



**Project Description:** The Kamehameha Highway Station Group construction contract includes services to build three (3) transit stations along Kamehameha Highway. The stations are Pearl Highlands Station, Pearlridge Station, and Aloha Stadium Station. In addition to the transit stations, operational ancillary buildings, bus stops/transit centers, park-and-ride lots, kiss-and-rides, pedestrian crossing improvements, Train Control and Communications Rooms (TCCRs), and landscaping of the station sites are included.

**Project Overview:** The contractor was issued a Notice to Commence Administrative Work on April 1, 2016, and since then has been submitting RFIs as well as management and qualification based technical submittals. A Notice to Commence Investigative/Pre-Construction Work at Pearl Highlands was issued on July 11, 2016, and the contractor is awaiting to obtain the remaining permits at the Pearl Highlands Station site. A key issue remains the determination of when to officially issue NTP to the contractor. This issuance is contingent on the contractor getting full or shared access to the Pearl Highlands, Pearlridge, and Aloha Stadium Station sites. Coordination meetings with the WOFH and KHG guideway contractors remain ongoing to ensure the proper transfer of site access.

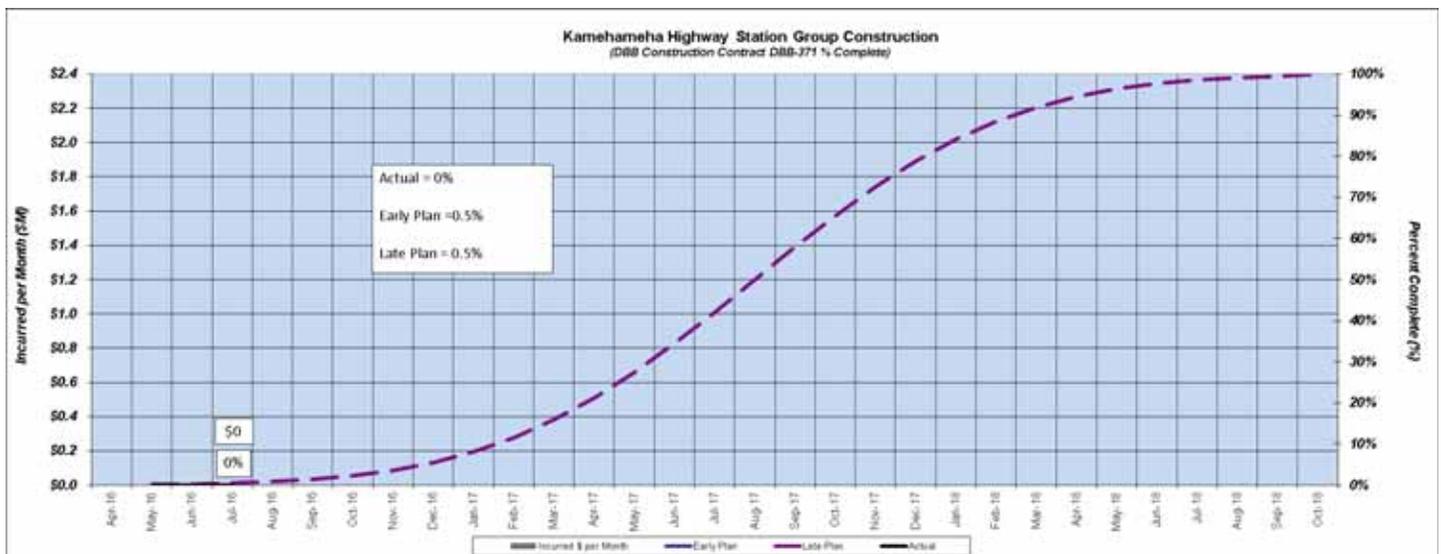
**COST INFORMATION:**

Original Contract:	\$115,805,845	Incurred-to-Date:	\$0
Current Contract Value <sup>1</sup> :	\$115,805,845	Incurred in July:	\$0

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

July Change Orders/Amendments		
Change No./Amend	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$0</b>



**SCHEDULE:**

- The KHSB schedule will be published once the baseline schedule is accepted.

**CRITICAL PATH ISSUES:**

- Issuing full NTP to begin contractor mobilization onto site.
- Working with the WOFH and KHG guideway contractors to get full site access to all stations.
- Executing a Contractor Change Order to incorporate Issued for Construction drawings and specifications (CCO 00001) into the contract.

**WORK PROGRESS:**

Activities this Month:

**Weighted Value: 0%**, Planned Value: 0%

- Submittals and RFIs are being submitted and are being responded to.
- Held and attended various construction interface meetings with the WOFH and KHG guideway contractors.
- Completed pre-construction/investigative work at the Pearl Highlands Station site.
- Clarified scope and updated pricing for Contractor Change Order (CCO 00001) to incorporate Issued for Construction drawings and specifications.
- Held various meetings and submitted Baseline Project Schedule.
- The contractor rescinded all Value Engineering proposals. The proposed use of structural steel in lieu of cast-in-place (CIP) concrete was not approved by HART designers due to concerns with future maintenance inspections and repairs required for structural steel.

Look Ahead:

- Submit interface definition points.
- Continuing coordination with the guideway contractors for full site access at the Pearl Highlands Station and Pearlridge Station sites.
- Continue interface with existing HART contractors (CSC, E/E, and Fare Collection) as well as with the WOFH and KHG guideway contractors for access to Pearl Highlands, Pearlridge, and Aloha Stadium sites.
- Third party utility coordination with the KHG guideway contractor, Hawaiian Telcom (HTI), Hawaiian Electric Company (HECO), and Oceanic Time Warner (OTW).
- Continue Maintenance of Traffic (MOT) discussions with HART and Hawai'i Department of Transportation (HDOT) for Temporary Traffic Control options at the Pearl Highlands and Pearlridge Station sites.
- Begin negotiations for CCO 00001.
- Finalize Baseline Project Schedule.

**KEY ISSUES:**

- Guideway contractor turning over station areas.
- Submitting and accepting all contractual documents prior to construction.
- Coordinating with the KHG contractor and third party utilities to monitor the installation of new utilities and the completion of utility relocations near the Pearlridge Station site.

**QUALITY MANAGEMENT:**

KHSB NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
0	0	0

### 4.4 Section III – Airport: Aloha Stadium to Middle Street Transit Center Station

#### A. Airport Section Guideway and Utilities

**Contract No.:** FD-430

**Contractor:** AECOM Technical Services, Inc., Final Design Consultant (Engineer of Record)

**Contract Start Date:** January 2012

**Currently in Construction:**

- Airport Section Utilities (DBB-505 - Nan Inc.):
  - Contract start date: July 2014

**Construction Completed:**

- Airport 7-Piers (DBB-525 – Hawaiian Dredging):
  - Project acceptance on May 2, 2015; project closed out in April 2016

**Projected Substantial Completion:** April 2017, based on closeout activities of Airport Section Utilities DBB construction contract.



**Project Description:** The Airport Segment Guideway and Utilities contract consists of 5.2 miles of elevated transit guideway serving four (4) passenger stations, in addition to roadway widening, utility relocation, and other improvements to create space for these transit facilities. Two construction contracts have been split out and expedited from the larger Airport Section package. These two contracts are the expedited Airport Section Utilities (ASU) and expedited Airport 7-Piers (A7). For both of these expedited contracts, the design has been completed and construction is in progress (ASU) or completed (A7). The remaining scope of design has been terminated and will be completed under a design-build procurement.

**Project Overview:** The services under this contract are now limited to engineering support during construction, and as-needed support to HART for the Airport Guideway and Stations DB contract.

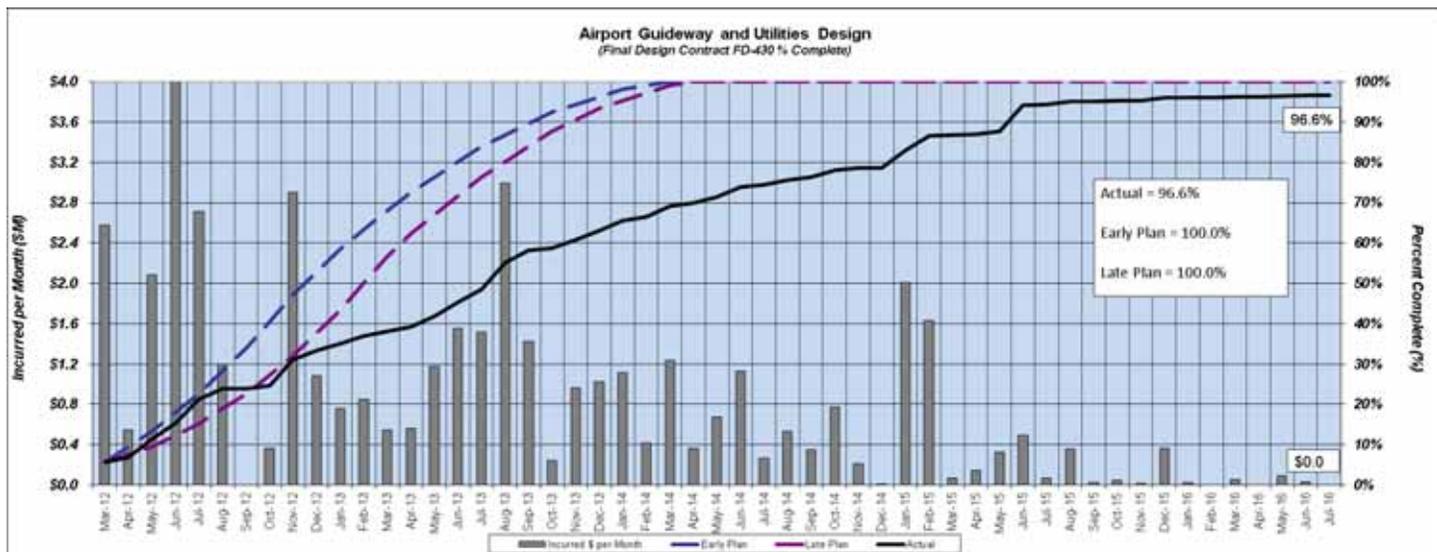
**COST INFORMATION:**

Original Contract:	\$38,840,960	Incurred-to-Date:	\$41,647,169
Current Contract Value <sup>1</sup> :	\$43,134,472	Incurred in July:	\$0

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$162,813
DBE % Attained:	0.42%

July Change Orders/Amendments		
Change No./Amend	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$4,293,512</b>



The progress chart reflects early program expectations. When the overall schedule is rebaselined, the cost curve will be revised.

Except for the work contained in the ASU and A7 contracts discussed above, final designs will not be completed under this contract due to the change in delivery method from DBB to DB.

**SCHEDULE:**

July 2016			Data Date: 29-Jul-16																						
Activity Name	Start	Finish	2016		2017			2018			2019			2020			2021			2022			2023		
			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Airport Guideway &amp; Stations (AGS)</b>	07-Apr-15 A	31-Mar-21																							
Airport Guideway & Stations - Design Build Procurement Part 1	07-Apr-15 A	11-Aug-15 A																							
DB-450 - Airport Guideway & Stations - Design Build Procurement Part 2	01-Sep-15 A	05-Apr-16 A																							
DB-450 - Airport Guideway & Stations - Design & Construction	01-Nov-16	31-Mar-21																							

**CRITICAL PATH ISSUES:**

- N/A.

**WORK PROGRESS:**

Activities this Month:

- Current earned value is approximately 97%.
- Design services concluded with notice of award of AGS DB.
- Supported Airport Section Utilities DBB construction.

Look Ahead:

- Support Airport Section Utilities DBB construction.
- Provide as-needed support for Right-of-Way (ROW) acquisition in the Airport Section.

**KEY ISSUES:**

- N/A.

**B. Airport Section Utilities Construction**

**Contract No.:** DBB-505

**Contractor:** Nan, Inc.

**Contract Start Date:** July 2014

**Contract Substantial Completion:** July 2016

**Projected Substantial Completion:** September 2016



**Project Description:** The Airport Utilities contract consists of relocation of a portion of utilities and some utility facilities that will be impacted by the construction of the HART aerial guideway and associated facilities between Aloha Stadium and Middle Street Transit Center. Specifically, the work involves construction of utility relocations affecting underground and overhead communications lines, Navy-owned electrical lines, fuel lines, gas lines, water lines, storm sewer lines, sanitary sewer lines and street light lines and poles/fixtures; HECO work is excluded from this contract. The work also includes installation of ITS (Intelligent Transportation Systems) facilities, to maintain traffic during construction, and other site improvements. Erosion control measures, temporary planting, permanent irrigation facilities and restoration of existing facilities are also incorporated into the contractor’s scope of work.

**Project Overview:** Nan, Inc. continues with utility relocation work along Kamehameha Highway. The current substantial completion date is being revised from July 13, 2016 to Sept. 11, 2016 in a change order. An approval of modified Traffic Control Plans has allowed the contractor to have more time to perform work during the day. Nan is also working closely with the Navy on utility issues discovered in the field, including unclaimed / unidentified power lines along Kamehameha Highway, and DOT-A regarding utilities along Aolele Street. Several work items are being removed from Nan’s scope of work due to unresolved conflicts with the Navy and potential significant cost and schedule impacts. The underground utility work in the field was completed by the end of August. Partial paving work has begun along Kamehameha Highway.

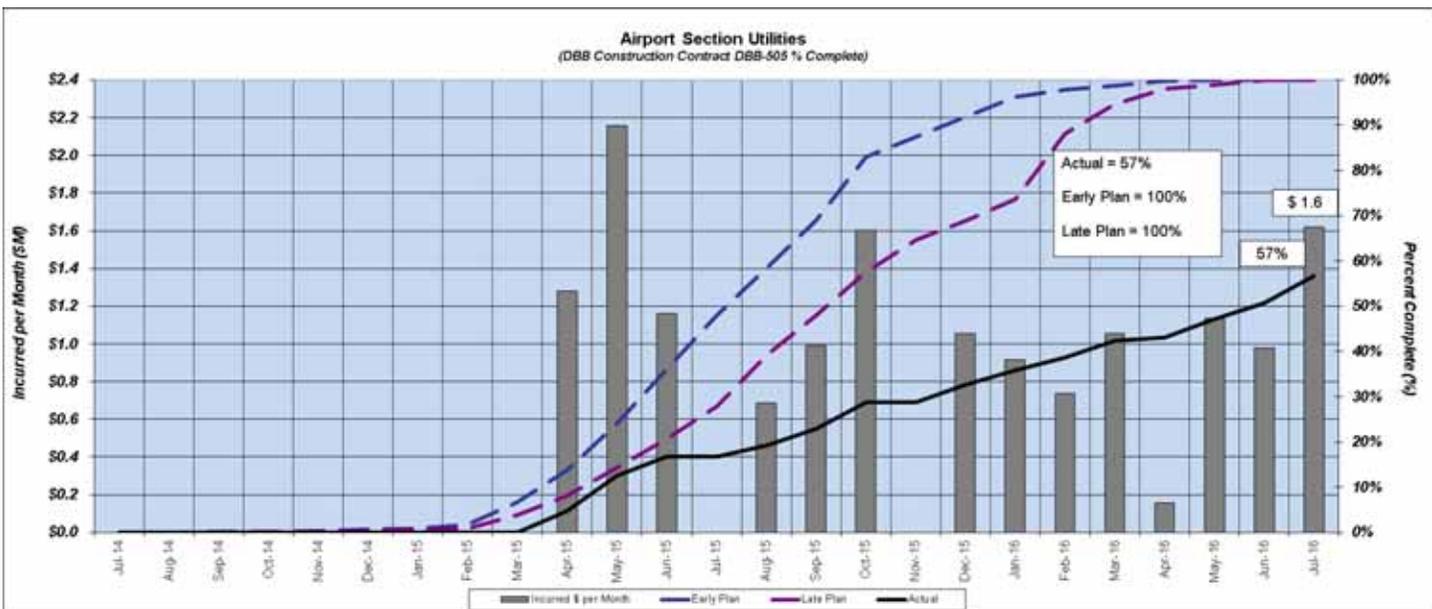
**COST INFORMATION:**

<u>Original Contract:</u>	<u>\$27,993,290</u>	<u>Incurred-to-Date:</u>	<u>\$15,531,901</u>
<u>Current Contract Value<sup>1</sup>:</u>	<u>\$27,285,704</u>	<u>Incurred in July:</u>	<u>\$1,621,195</u>

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$36,094
DBE % Attained:	0.13%

July Change Orders		
Change No.	Description	Amount (\$)
CCO 0009	Delete HDOT –A Utility	(\$106,119)
CCO 0010	Added Potholing Piers 434L & 434	\$7,014
<b>Cumulative to Date</b>		<b>(\$707,585)</b>



The progress chart reflects early program expectations. When the overall schedule is rebaselined, the cost curve will be revised.

**SCHEDULE:**

July 2016 Update			Data Date: 29-Jul-16																				
Activity Name	Start	Finish	2016			2017			2018			2019			2020			2021			2022		
			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>Airport Utility Relocation</b>	05-Jan-12 A	03-Nov-16																					
FD-430 - Airport Utilities - Design	05-Jan-12 A	16-Dec-13 A																					
Airport Utilities - Bid & Award	17-Dec-13 A	30-Jun-14 A																					
DBB-505 - Airport Section Utilities - Construction	06-Oct-14 A	03-Nov-16																					

Contractor Forecast Dates:  
Dates not approved until  
HART signoff.

**CRITICAL PATH ISSUES:**

- Negotiating outstanding project change orders.

**WORK PROGRESS:**

Activities this Month:

**Weighted Value: 55%;** Planned Value: 75%

- Nan, Inc. continues to provide monthly updates that incorporate the revised milestone dates for Substantial Completion and Contract Completion resulting from the Navy Delay impact (CO 05). Current schedule update incorporates both scope adjustments and a delay impact which are being reviewed to assess the likelihood of completing base work in September 2016.
- Utility work was completed by the end of August, with paving work to follow. Paving has been completed in the Nimitz area, while underground utility work is being finalized along Aolele Street, near the Airport.

Look Ahead:

- Completing installation of a drain line and 16” waterline, both located along Aolele Street.
- Complete Hickam parapet street light reconstruction.
- Conclude all scope adjustments due to schedule constraints, additional need for rights to enter property for utility relocation, third party stakeholders, or hazardous material abatement issues.
- The CE&I II team is preparing for project close out and continues to process change orders.

**KEY ISSUES:**

- HART is processing a time extension to modify the current contract substantial and final completion dates.

**QUALITY MANAGEMENT:**

- Overall quality of the contract is good.

Airport Utilities NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
19	19	0

**C. Airport Station Group (ASG)**

**Contract No.:** FD-440

**Contractor:** AECOM Technical Services, Inc., Final Design Consultant (Engineer of Record)

**Contract Start Date:** November 2012

**Construction Docs Bid-Ready:** N/A

**Projected Substantial Completion:** October 2016



**Project Description:** Architectural and engineering services for the design of four (4) transit stations serving the Airport Guideway. The four (4) stations comprising the ASG contract are the Pearl Harbor Naval Base Station, the Honolulu International Airport Station, the Lagoon Drive Station, and the Middle Street Station.

**Project Overview:** These four stations have been combined with the guideway into a single Airport Guideway and Stations Design-Build (DB) package.

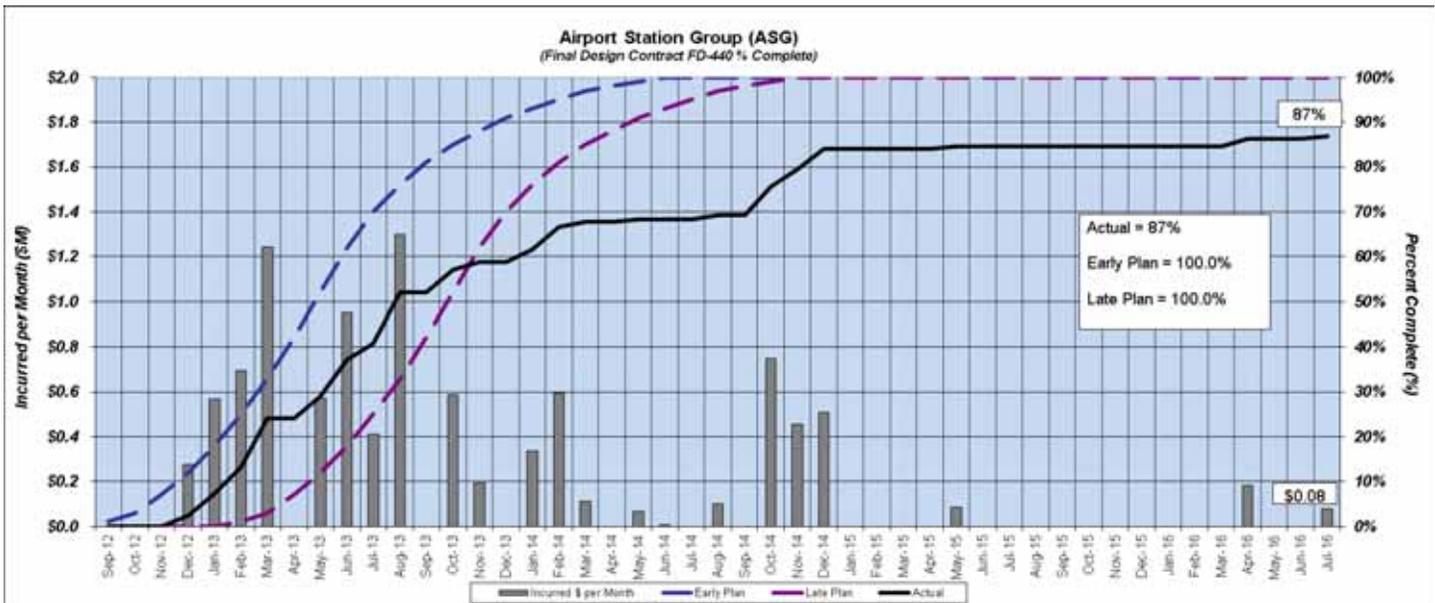
**COST INFORMATION:**

Original Contract:	\$10,177,365	Incurred-to-Date:	\$10,059,820
Current Contract Value <sup>1</sup> :	\$11,573,852	Incurred in July:	\$76,418

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$234,762
DBE % Attained:	2.31%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$1,396,487</b>



The progress chart reflects early program expectations. When the overall schedule is rebaselined, the cost curve will be revised.

Due to the change in procurement strategy from DBB to DB, the design of the Airport Stations Group will not be advanced to completion under this contract.

**CRITICAL PATH ISSUES:**

- N/A.
- 

**WORK PROGRESS:**

Activities this Month:

- Final earned value is at 86%.
- Administrative closeout activities are ongoing.

Look Ahead:

- Future efforts will be administrative only.
- 

**KEY ISSUES:**

- N/A.

### 4.5 Section IV – City Center: Middle Street Transit Center Station to Ala Moana Center

#### A. City Center Section Guideway and Utilities

**Contract No.:** FD-530

**Contractor:** AECOM Technical Services, Inc., Final Design Consultant (Engineer of Record)

**Contract Start Date:** July 2012

**Projected Substantial Completion:** April 2018, based on projected completion of design services for Dillingham Temporary Utilities DBB construction.

**Project Description:** The City Center Guideway and Utilities final design contract consists of 4.2 miles of elevated transit guideway serving eight (8) passenger stations, in addition to roadway widening, utility relocation, and other improvements to facilitate construction of the guideway.



**Project Overview:** This section of the guideway has been combined with eight (8) stations into a single City Center Guideway and Stations (CCGS) Design-Build package. The services remaining under this contract include preparation of early utilities designs, engineering support during construction, and support to HART during procurement(s).

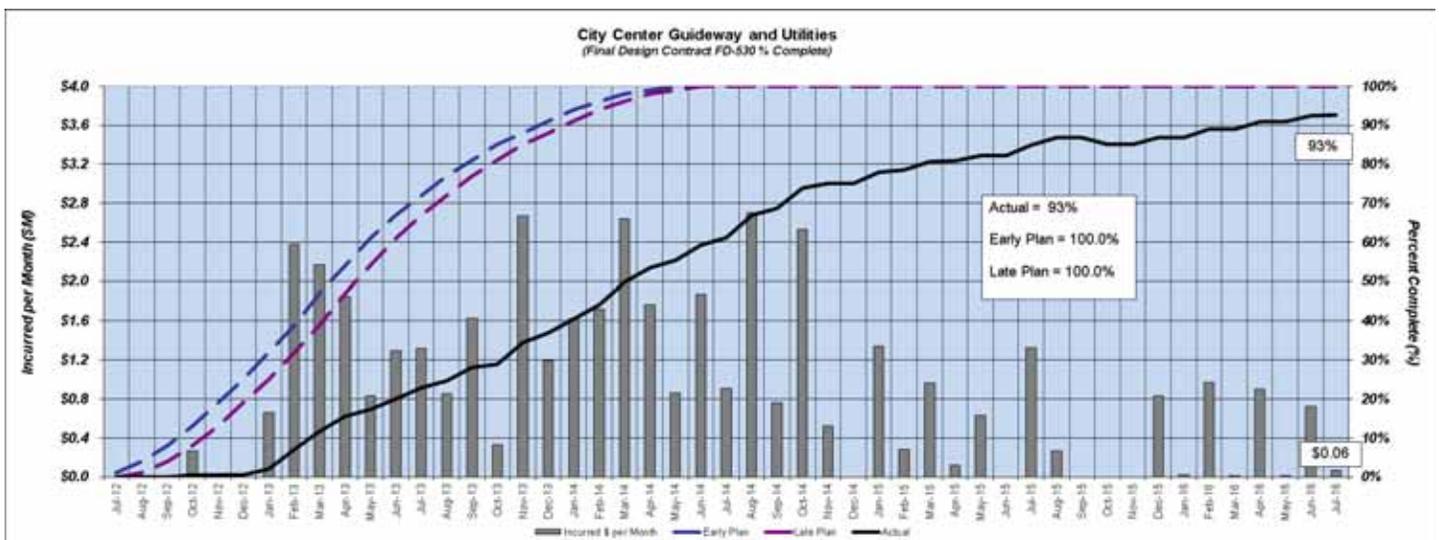
#### COST INFORMATION:

Original Contract:	\$43,948,220	Incurred-to-Date:	\$43,605,272
Current Contract Value <sup>1</sup> :	\$47,097,562	Incurred in July:	\$64,392

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$191,227
DBE % Attained:	0.44%

July Change Orders/Amendments		
Change No./Amend	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$3,149,342</b>



The progress chart reflects early program expectations. When the overall schedule is rebaselined, the cost curve will be revised.

Due to the change in delivery method from DBB to DB, the final design for guideway will not be completed under this contract. Design for early work items, such as utilities, is being progressed.

**SCHEDULE:**

July 2016			Data Date: 29-Jul-16																							
Activity Name	Start	Finish	2016			2017			2018			2019			2020			2021			2022			2023		
			Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
<b>City Center Guideway &amp; Stations (CCGS)</b>	04-Aug-15 A	27-Nov-23																								
City Center Guideway & Stations - Design Build Procurement Part 1	04-Aug-15 A	18-Nov-15 A																								
DB-550 - City Center Guideway & Stations - Design Build Procurement Part 2	02-Feb-16 A	24-Mar-17																								
DB-550 - City Center Guideway & Stations - Construction	28-Aug-17	27-Nov-23																								

**CRITICAL PATH ISSUES:**

- N/A.

**WORK PROGRESS:**

Activities this Month:

- Current earned value is approximately 93%.
- Supplemental design services are progressing for early utilities designs.

Look Ahead:

- Provide as-needed support for ROW acquisition, when acquisition activities resume in the City Center Section.
- Perform supplemental design services for early utilities.

**KEY ISSUES:**

- N/A.

**B. Dillingham and Kaka’ako Station Group (DKSG)**

**Contract No.:** FD-550

**Contractor:** Perkins+Will (P+W), Final Design Consultant (Engineer of Record)

**Contract Start Date:** August 2013

**Construction Docs Bid-Ready:** N/A

**Projected Substantial Completion:** October 2016

**Project Description:** Design of eight (8) stations for the fourth and final phase of the current project that will connect Dillingham Boulevard to Ala Moana Center.



**Project Overview:** The DKSG stations have been combined with the City Center Guideway into a single City Center Guideway and Stations Design-Build package.

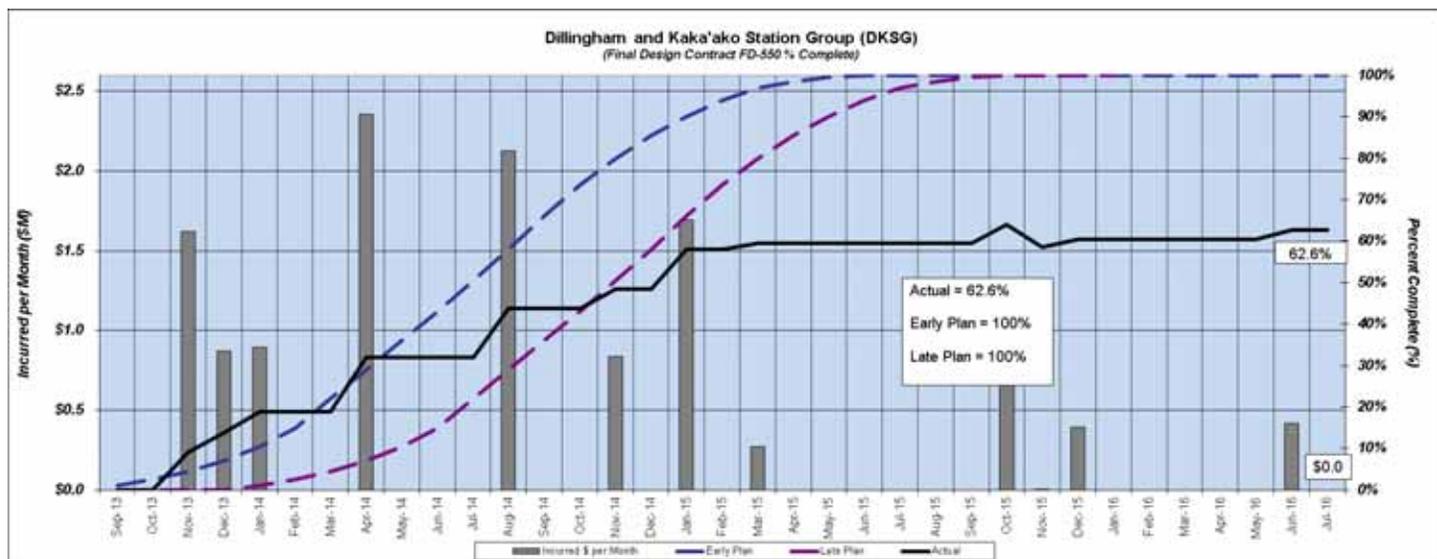
**COST INFORMATION:**

Original Contract:	\$18,321,918	Incurred-to-Date:	\$12,293,535
Current Contract Value <sup>1</sup> :	\$19,631,717	Incurred in July:	\$0

<sup>1</sup>Current Contract Value = Original contract value with Design Allowance + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$1,309,799</b>



The progress chart reflects early program expectations. When the overall schedule is rebaselined, the cost curve will be revised.

Due to the change from a DBB to a DB delivery method, the design for these stations has been suspended and will not be completed under this contract.

**CRITICAL PATH ISSUES:**

- N/A.
- 

**WORK PROGRESS:**

Activities this Month:

- Final earned value is at 63%.
- Administrative closeout activities are ongoing.

Look Ahead:

- Future efforts will be administrative only.
- 

**KEY ISSUES:**

- N/A.

### 4.6 Project-Wide

#### A. Program Management Support Consultant-2 (PMSC-2)

**Contract No.:** MM-901

**Contractor:** InfraConsult LLC

**Contract Start Date:** March 2012

**Contract Completion:** March 2017

**Project Description:** Provide program management support services in the areas of elevated guideway engineering, rail station design, construction management, project management, environmental planning, federal programmatic requirements, and other services for the Honolulu Rail Transit Project.

#### COST INFORMATION:

<u>Original Contract:</u>	<u>\$33,376,897</u>	<u>Incurred-to-Date:</u>	<u>\$43,875,716</u>
<u>Current Contract Value<sup>1</sup>:</u>	<u>\$51,820,920</u>	<u>Incurred in July:</u>	<u>\$706,892</u>

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$0
DBE % Attained:	0%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$18,444,022</b>



#### KEY ISSUES:

- HART exercised its option to extend the PMSC contract for the remaining option year, effective March 8, 2016. The current contract will terminate upon award of contract to the successful offeror of the new Request for Qualifications or one year from March 8, 2016, whichever is earlier.

**B. General Engineering Consultant III (GEC-3)**

**Contract No.:** MM-913

**Contractor:** CH2M HILL

**Contract Start Date:** December 2013

**Contract Completion:** April 2019, with option to extend for up to three (3) additional years

**Project Description:** HART GEC III support services include: schedule and estimating, interface coordination, environmental and planning, design management support services, and program management (aka GEC III contract project management).

**Project Overview:** The GEC III is supporting HART with procurement packages, review of independent cost estimates, evaluation of east segment schedules, and developing Hawaiian Electric Facility avoidance and minimization impact alternatives.

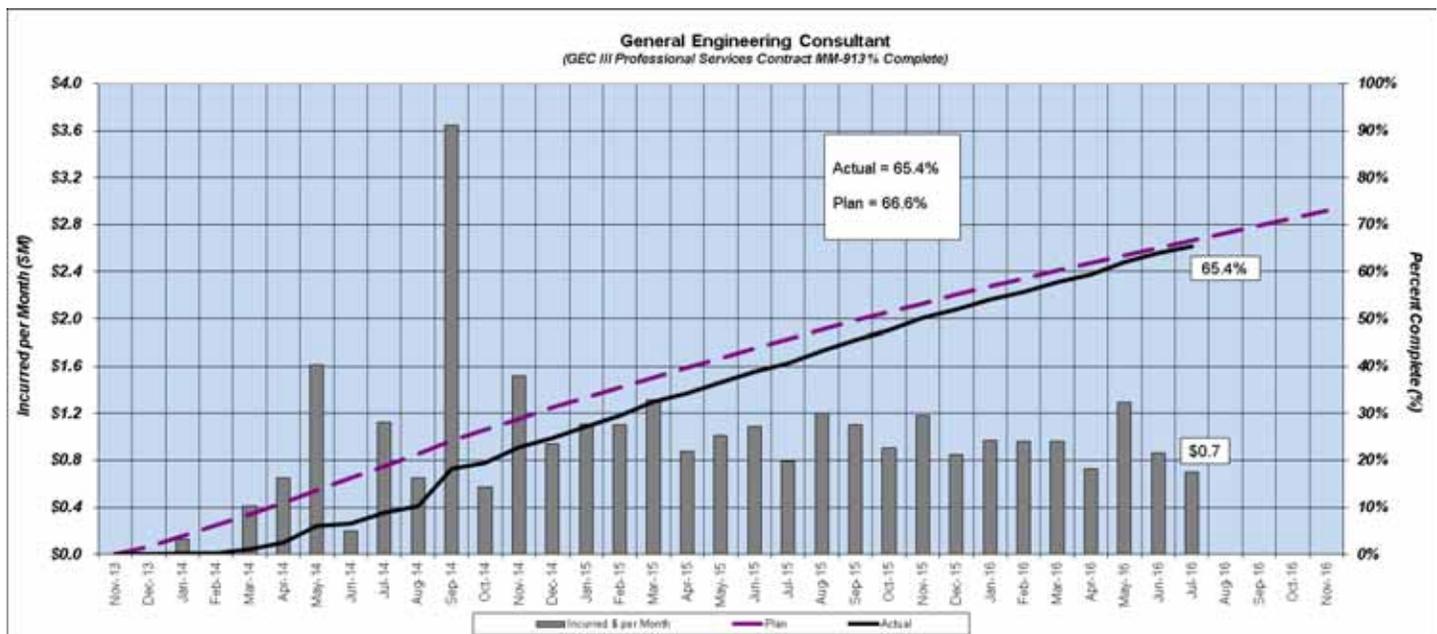
**COST INFORMATION:**

<u>Original Contract:</u>	<u>\$46,143,277</u>	<u>Incurred-to-Date:</u>	<u>\$30,460,903</u>
<u>Current Contract Value<sup>1</sup>:</u>	<u>\$46,541,728</u>	<u>Incurred in July:</u>	<u>\$699,290</u>

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$3,386,089
DBE % Attained:	7.34%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$398,451</b>



**KEY ISSUES:**

- Integrating schedule estimates for interim opening and revenue service opening with financial forecast and estimate to complete of contracted work.
- Participate in task force to develop alternatives to meet clearance requirements for Hawaiian Electric facilities.
- Continue progress on Historic Context Studies and permits.
- Provide support to procurement for City Center Guideway and Stations (CCGS).

**C. Construction Engineering & Inspection West Side Sections**

**Contract No.:** MM-290  
**Contractor:** PGH Wong Engineering, Inc.  
**Contract Start Date:** January 2014  
**Contract Completion:** January 2020

**Project Description:** The West Side Section CE&I (West CE&I) team is providing Construction Engineering and Inspection Services (CE&I) for the West Section, which includes aerial guideway, stations, maintenance & storage facility, and garage & transit center from East Kapolei in West O’ahu to Aloha Stadium, of the 20-mile Honolulu Rail Transit Project (H RTP) for the Honolulu Authority for Rapid Transportation (HART).

The West CE&I team provides HART staff augmentation for construction management and administration services to monitor and observe the design-build and design-bid-build construction work such that the projects are constructed in general conformity with the plans, specifications, and special provisions for the WOFH, KHG, MSF, west section station group’s and PHGT contracts. These CE&I services also include: constructability review, resident engineering, on-site field oversight, project controls, scheduling review, change management, cost control, document controls, contract administration, construction cost estimating, environmental monitoring, surveying, material testing, interface coordination and claims analysis.

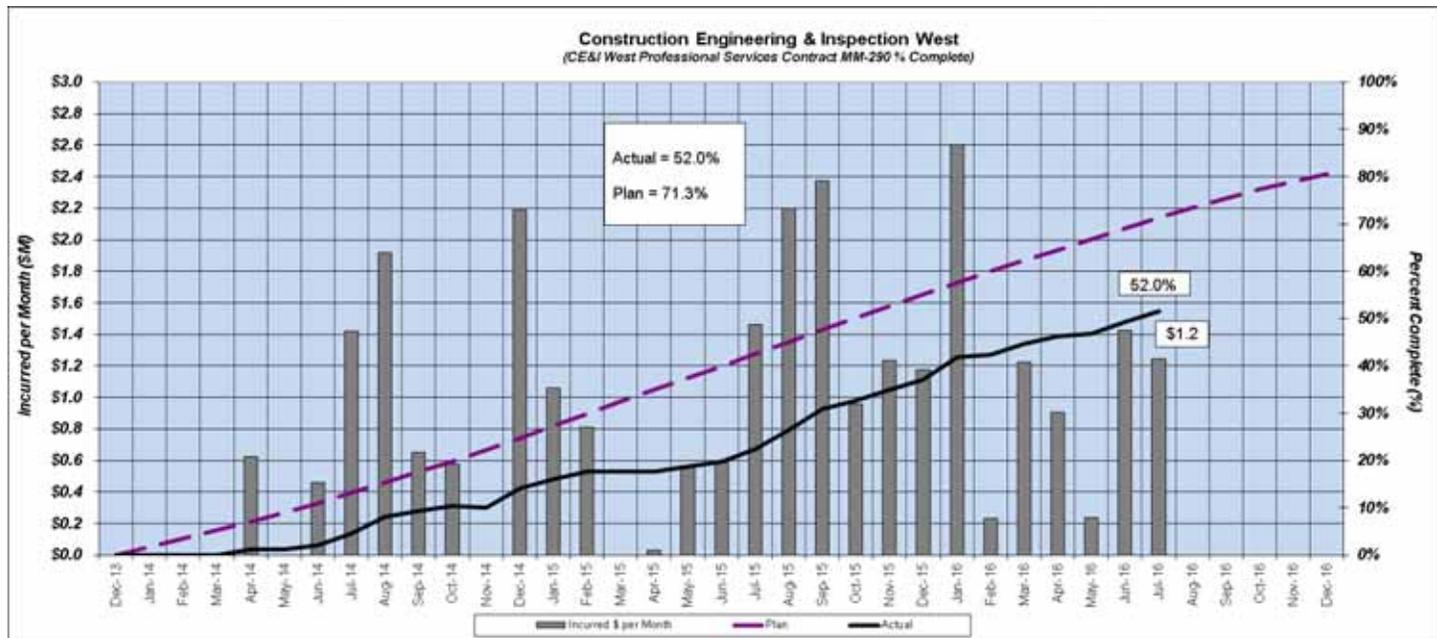
**COST INFORMATION:**

Original Contract:	\$54,232,480	Incurred-to-Date:	\$28,003,077
Current Contract Value <sup>1</sup> :	\$54,232,480	Incurred in July:	\$1,246,367

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$3,315,667
DBE % Attained:	6.11%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$0</b>



**KEY ISSUES:**

- Continued to provide management of and coordination between various west side contracts.
- Shared site access between station construction contractors and the guideway contractor remains an issue.
- Provided additional and extended staffing to support West CE&I efforts. A contract amendment will be required for the additional and extended staffing.

**D. Construction Engineering & Inspection East Side Sections**

**Contract No.:** MM-595

**Contractor:** URS Corporation

**Contract Start Date:** January 2014

**Contract Completion:** December 2015 (MOD no. 1)

**Project Description:** The URS team provided Construction Engineering and Inspection Services (CE&I) for the east section of the Honolulu Rail Transit Project (HRTPT) for the Honolulu Authority for Rapid Transportation (HART).

CE&I services included: constructability review, resident engineering, construction observation, project controls, scheduling, change management, cost control, document controls, contract administration, estimating, environmental monitoring, surveying, material testing, interface coordination, geographic information system (GIS) support and claims analysis. The primary role of the URS team was to inform the HART project manager of any significant omissions, substitutions, defects, and deficiencies noted in the work of the contractor and the corrective action that has been directed by HART to be performed by the contractor.

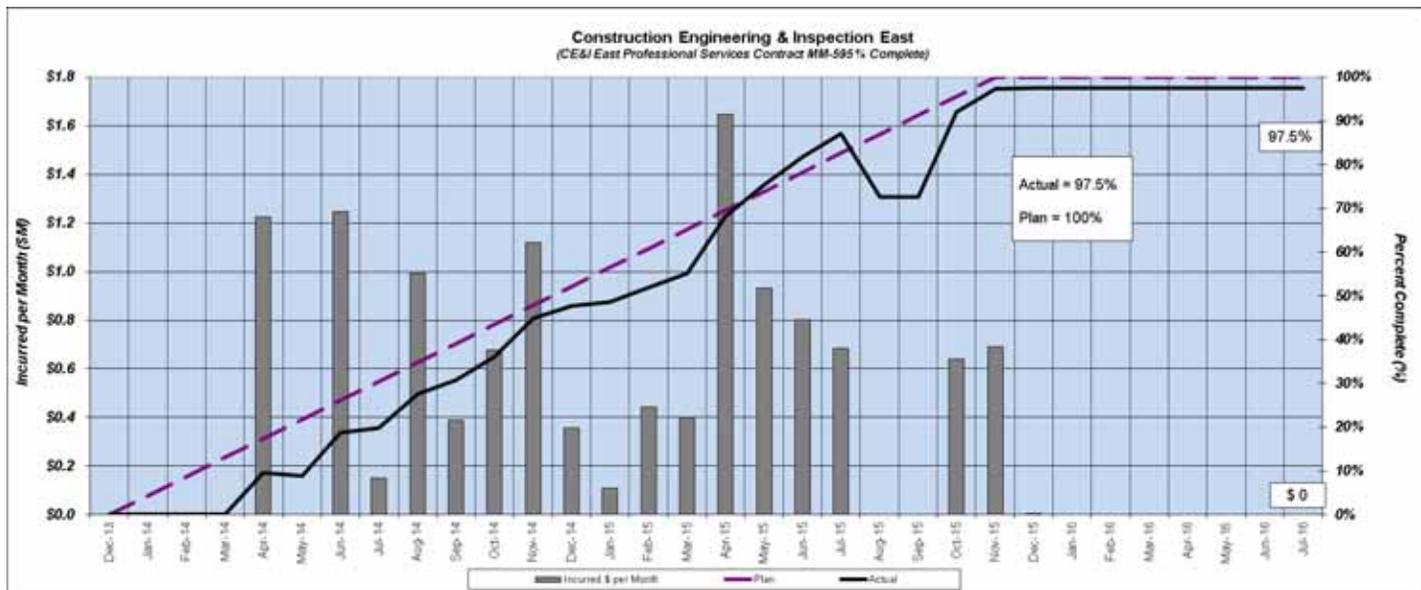
**COST INFORMATION:**

Original Contract:	\$63,083,417	Incurred-to-Date:	\$12,382,150
Current Contract Value <sup>1</sup> :	\$12,706,100	Incurred in July:	\$0

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$1,580,725
DBE % Attained:	10.36%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>(\$50,377,318)</b>



**KEY ISSUES:**

- The new CE&I consultant for the East Section was issued NTP in September 2015. All URS field staff was successfully transitioned off of the project in October 2015. The URS contract was administratively closed out in April. Final cost information will be reflected in a future Progress Report. Subsequently, this contract page will be removed from future Progress Reports.

**E. Construction Engineering & Inspection (CE&I) II Contract**

**Contract No.:** MM-596

**Contractor:** Stantec Consulting Services Inc.

**Contract Start Date:** September 2015

**Contract Completion:** December 2019

**Project Description:** The Stantec team is responsible for the Construction, Engineering and Inspection (CE&I) services for the East Section of the Honolulu Rail Transit Project (H RTP) for the Honolulu Authority for Rapid Transportation (HART). The Stantec team is providing services from the preconstruction phase through construction closeout. HART East Section CE&I II services include: constructability review, resident engineering, construction observation, project controls, scheduling, change management, cost control, document controls, contract administration, estimating, environmental monitoring, material testing, interface coordination, and claims analysis for the Airport Guideway and Stations design-build contract, City Center Guideway and Stations design-build contract, Airport Section Utilities Construction contract, Elevators and Escalators Design-Furnish-Install-Maintain contract (construction phase only), and construction observation for the On-Call II and III work. The primary role of the Stantec team is to inform the HART Project Manager of any significant omissions, substitutions, defects, and deficiencies noted in the work of the contractor and the corrective action that has been directed by HART to be performed by the contractor.

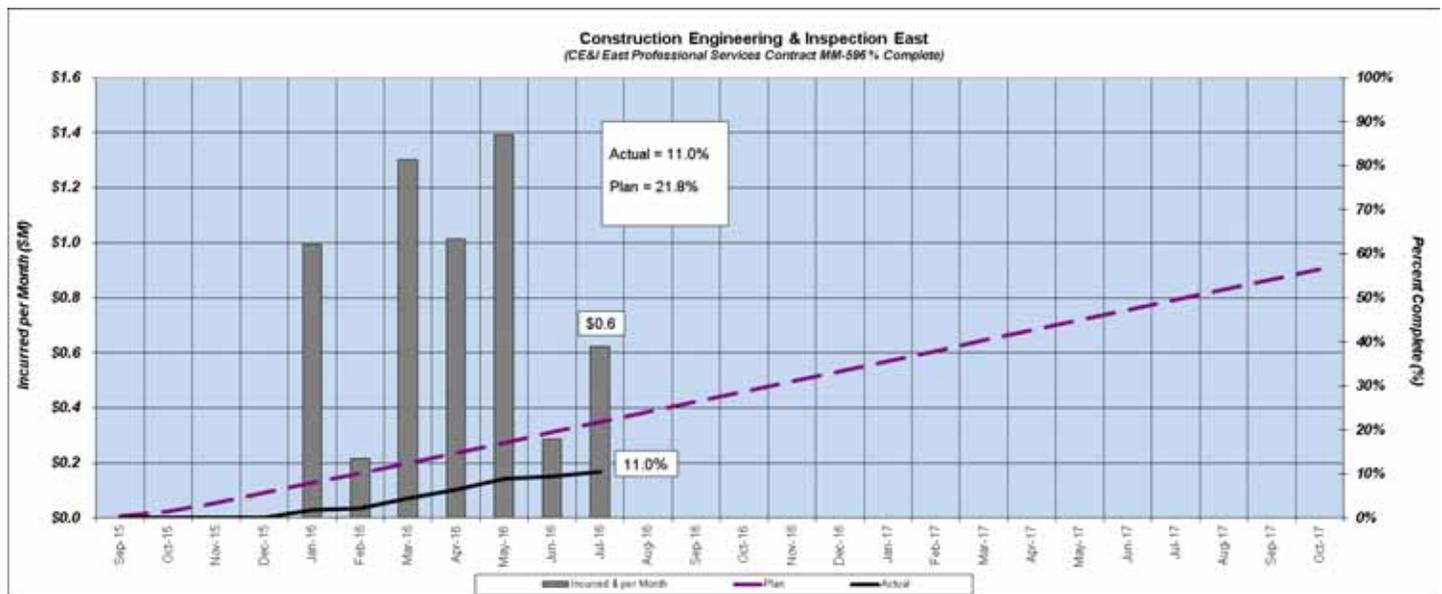
**COST INFORMATION:**

<u>Original Contract:</u>	<u>\$55,036,130</u>	<u>Incurred-to-Date:</u>	<u>\$5,830,050</u>
<u>Current Contract Value<sup>1</sup>:</u>	<u>\$55,036,130</u>	<u>Incurred in July:</u>	<u>\$624,493</u>

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$1,608,486
DBE % Attained:	2.93%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$0</b>



**KEY ISSUES:**

- The final Independent Cost Estimate (ICE) for the CCGS DB contract was provided to HART on August 5, 2016, which included the final disposition on the review comments provided by the GEC and HART Project Controls.
- The project team continues to provide schedule and cost analysis for the HECO 138KV impact on CCGS DB.
- The project team continues to support HART with review of CCGS DB construction options under the current budget challenges.
- The project team has started the initial pre-construction planning activities for the AGS DB in anticipation of HART executing the contract and issuing an NTP.

**F. Core Systems Contract Oversight Consultant**

**Contract No.:** MM-962

**Contractor:** Lea+Elliott, Inc.

**Contract Start Date:** February 2014

**Contract Completion:** September 2019

**Project Description:** Provide professional services for design and construction management and testing/commissioning oversight of the Core Systems Design-Build-Operate-Maintain (DBOM) contract. The major systems of the Core Systems DBOM contract are the vehicles, automated train control (ATC) system, traction electrification system, communications system, and platform screen gate system (PSGS). Services include review and approval of design submittals, manufacturing oversight, installation oversight, operation/maintenance design oversight and support, system testing/acceptance, and contract close-out.

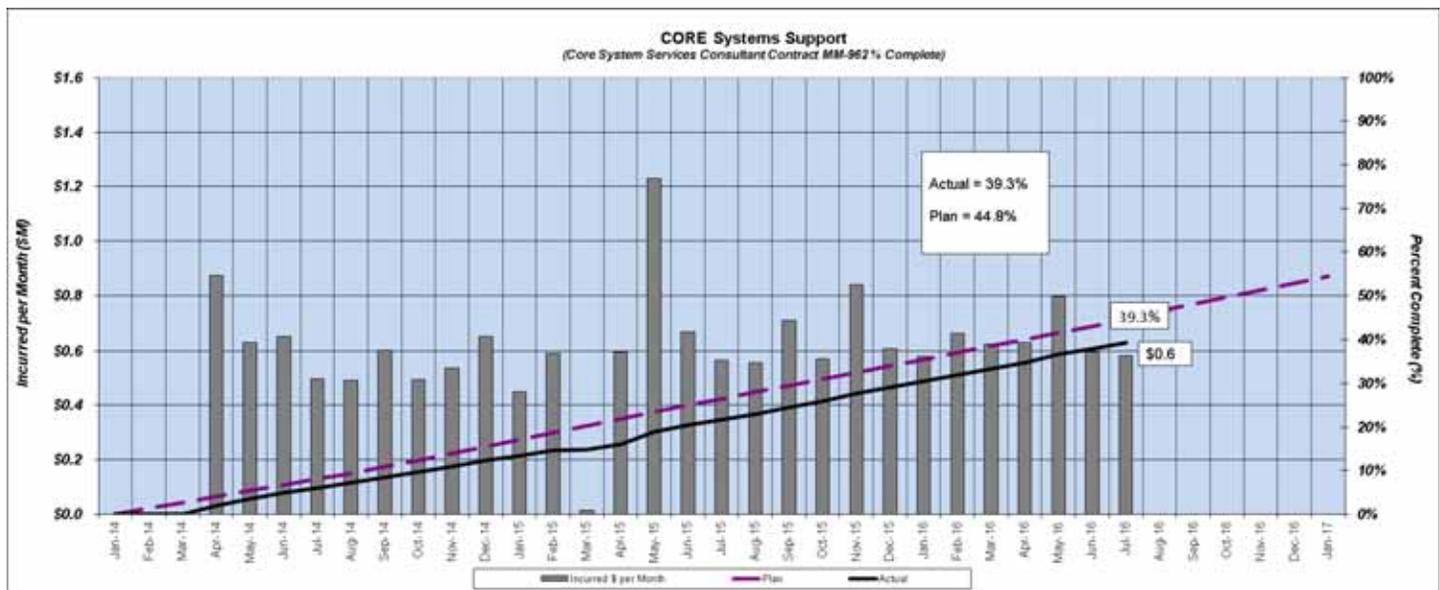
**COST INFORMATION:**

<u>Original Contract:</u>	<u>\$43,988,989</u>	<u>Incurred-to-Date:</u>	<u>\$17,301,205</u>
<u>Current Contract Value<sup>1</sup>:</u>	<u>\$43,988,989</u>	<u>Incurred in July:</u>	<u>\$580,532</u>

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$410,355
DBE % Attained:	0.93%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$0</b>



**KEY ISSUES:**

- Coordination with other contractors on construction access milestones.
- Review and acceptance of procedures for factory acceptance tests.
- Design review completion with respect to manufacturing, fabrication and test schedule.

**G. On-Call Construction Contractor**

**Contract No.:** MM-945

**Contractor:** Royal Contracting Co. Ltd.

**Contract Start Date:** August 2014

**Contract Completion:** July 2019

**Projected Substantial Completion:** The On-Call Contract is Task Order based with each Task Order having a specific Substantial Completion date.

**Project Description:** The On-Call Contract performs tasks not generally covered in the general construction contracts. These activities include demolition of structures; repairs to existing HART facilities; relocation of trees and other minor facilities such as bus stops, street lighting, etc.; minor civil/utility work, and repair of third-party facilities such as road repair/patching as requested by HDOT in the HART right-of-way and as allowed by third-party agreements. The intent of the On-Call Contract is to provide HART a contractual tool to address those required work items not easily addressed by the general contractors working to specific scopes.

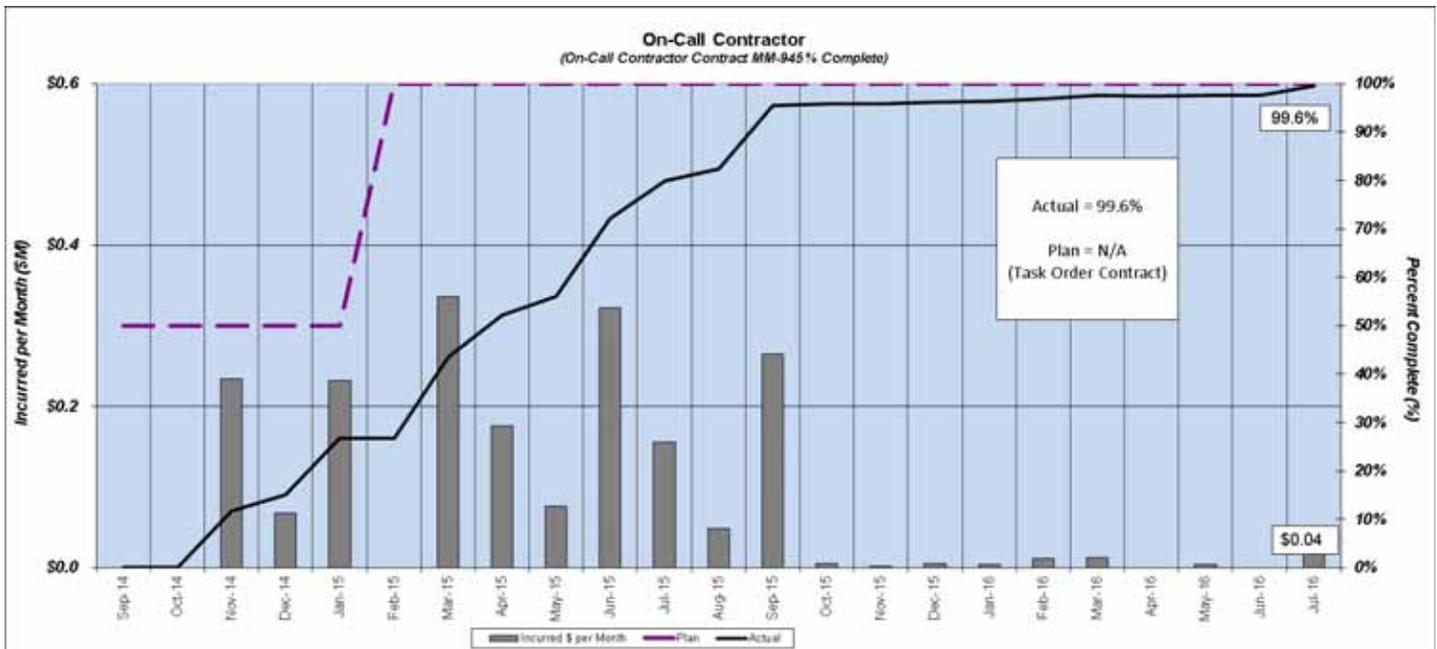
**COST INFORMATION:**

Original Contract:	\$1,000,000	Incurred-to-Date:	\$1,991,790
Current Contract Value <sup>1</sup> :	\$2,000,000	Incurred in July:	\$39,322

<sup>1</sup>Current Contract Value = Original contract value + executed Change Orders

DBE Participation	
Actual DBE Participation:	\$460,025
DBE % Attained:	23%

July Change Orders		
Change No.	Description	Amount (\$)
None	---	---
<b>Cumulative to Date</b>		<b>\$1,000,000</b>



**KEY ISSUES:**

- The On-Call Contractor has successfully completed all authorized work.
- The On-Call Contractor is in the process of being closed. All required work on this contract was completed in July 2016.

## 5 OVERALL PROJECT-WIDE ACTIVITIES

### 5.1 Permits

- **Permits Submitted and In-Progress**
  - HART submitted the Federal Aviation Administration form 7460-1 application for construction on and near the Honolulu International Airport.
  - HART submitted the Notice of Cessation for the Rail Operation Center's National Pollutant Discharge Elimination System (NPDES) permit for construction.
- **Permits and Approvals Granted**
  - HART received a project-wide Coast Guard Bridge Permit advanced approval for all project stream crossings.
  - HART received the permit for construction related to the West O'ahu Station Group (WOSG) including East Kapolei, UH West O'ahu, and Ho'opili Stations.
  - Kiewit is authorized to represent HART under the Kamehameha Highway Guideway NPDES permit for construction and for dewatering/hydrotesting.
- **Look Ahead**
  - Upcoming significant permit activity:
    - HART will prepare the Community Noise Permit continuance application for the West O'ahu Farrington Highway (WOFH) construction activities.
    - HART will prepare the Community Noise Variance application for construction activities in the City Center section.
    - HART will submit an extension for the Nationwide Permit No. 6 to the United States Army Corps of Engineers.

### 5.2 Hawai'i Department of Transportation (HDOT) Agreements

- **Activities this Month**
  - Transfer of funds for the full MOU amount has been included in the draft Transportation Improvement Program (TIP) Amendment #10, 11 and 12, split between FY16 through FY18. The Federal Highway Administration (FHWA) fund transfer of \$3M for FY16 has been approved and accepted by FTA.
  - A draft amendment to the WOFH Master Agreement and Joint Use and Occupancy agreement (JUOA) has been sent to HDOT for review and comment. The amendment addresses maintenance responsibilities and reimbursements.
  - A draft amendment to the KHG, AGS, CCGS Master Agreement is being developed. Currently, there is an approximate ½ mile gap in the Joint Use and Occupancy area along Kamehameha Highway in the vicinity of Aloha Stadium. The amendment would provide a continuous JUOA segment, allowing HART to take on responsibility for street usage permits and maintenance during the construction of the Aloha Stadium Station and Airport guideway construction.
- **Look Ahead**
  - Execution of the Airport and City Center Joint Use and Occupancy Agreements.
  - Execution of the West O'ahu Farrington Highway Master Agreement and Joint Use and Occupancy Agreement Amendment 1.
  - Execution of Amendment 1 to the Master Agreement for the sections to and from: Kamehameha Highway Guideway, Airport Guideway and City Center Guideway.

5.3 Utility Agreements

Utility Agreements Status Matrix

Utility Owner	Status	WOFH		KHG		Airport		City Center		
		ESA	UCA	ESA	UCA	UCA	COMBINED ESA	UCA		
AT&T (Corporation)	Executed	05/11/11	12/20/11	5/18/12	Including with ESA	Not Required	12/26/13	Draft sent to AT&T		
	NTP	05/12/11	12/21/11							
	Amd 01	07/01/11	HRS Ch 104	Draft sent to AT&T						
AT&T (Government Solutions)	Executed			12/26/13		Not Required	12/26/13	Combined with AT&T Corp		
	NTP									
Chevron	Executed	12/04/09		11/04/11						
	NTP	12/22/09		11/15/11						
	Amd 01	07/01/11								
Hawaiian Telcom	Executed	05/20/10	11/17/14	05/10/12	12/31/14	05/28/15	09/27/13	Draft sent to HTI for review		
	NTP	06/14/10	11/18/14							
	Amd 01	07/01/11		04/13/15		Drafted for add'l scope and HRS Ch 104 under review				
	Amd 02	05/10/12								
	Executed							Temp OH Pending Signature		
	NTP									
HECO		Design Services	Construction Services	Design Services	Construction Services	Design Services	Construction Services	Design Services	Construction Services	
	Executed	11/20/13	11/29/13	11/20/13	11/29/13	11/20/13	Draft agreement under review.	11/25/13	HECO revision to include Temp Poles	
	NTP	11/20/13	11/29/13	11/20/13	11/29/13	11/20/13		11/25/13		
	Amd 01									
	Memorandums of Understanding	08/07/14 – Construction Drawings								
		05/01/15 - Access								
		05/15/15 - Derrick Truck								
		06/23/15 - Master Agreement								
		06/09/15 - MSF Advanced Construction								
		09/16/15 - Right of Entry								
10/12/15 – Clearance (West)				11/10/15 - Dillingham Blvd Materials						
07/13/16 – KHG Vertical Clearance										
Power Quality - Pending										
Oceanic Time Warner Cable	Executed	12/08/09	12/21/11	01/09/12	06/02/14	12/19/14	04/03/13	Draft sent to OTWC for review		
	NTP	12/22/09					04/04/13			
	Amd 01	07/01/11	02/27/14		HRS Ch 104	HRS Ch 104				
	Amd 02	10/07/13	HRS Ch 104							
	Executed							Temp OH awaiting signature		
	NTP									
Pacific Lightnet/Wavecom	Executed	04/28/10	03/12/12	02/15/12						
	NTP	04/29/10	03/13/12	02/16/12						
	Amd 01	07/01/11	HRS Ch 104							
Sandwich Isle Communications	Executed	05/20/10		04/20/12						
	NTP	06/08/10								
	Amd 01	07/01/11								
Hawai'i GAS	Executed	12/18/09	06/30/11	06/01/12	04/14/14	08/19/14	09/27/13	05/08/15		
	NTP	12/22/09	07/12/11			08/20/14		05/11/15		
	Amd 01	07/01/11	10/17/14		08/28/14	HRS Ch 104		HRS Ch 104		
	Amd 02		05/09/16		10/23/15					
	Amd 03				HRS Ch 104					

Utility Agreements Status Matrix

Utility Owner	Status	WOFH		KHG		Airport		City Center	
		ESA	UCA	ESA	UCA	UCA	COMBINED ESA	UCA	
Level 3/TW Telecom	Executed	12/02/09		02/14/12	Oceanic to relocate for TW Telecom		10/11/12		Draft sent to TW Telecom
	NTP	12/22/09		02/16/12					
	Amd 01	07/01/11							
	Amd 02								
Tesoro	Executed			02/15/12	09/12/13		08/27/13		
	NTP			02/16/12		09/03/13			
	Amd 01				09/12/14				
	Amd 02				05/13/15				
	Amd 03				HRS Ch 104				

Legend:      = Action this month      COR = Corporation Counsel      UCA = Utility Construction Agreement  
     = Not applicable      ESA = Engineering Services Agreement      UFR CRA = Combined Engineering and Construction Utility Agreement

General

- Coordinating with Board of Water Supply to provide stray current information and maintenance plans.

WOFH

- All WOFH agreements have been executed.

KHG

- All KHG agreements have been executed.

AIRPORT

- All engineering utility agreements for the Airport section have been executed.

CITY CENTER

- All engineering utility agreements for the City Center section have been executed.
- HART reviewed AT&T comments and the revised draft Construction Agreement was sent back to AT&T for review.
- HART has submitted the Utility Construction Agreement for City Center to OTWC for review/comments.
- HART has submitted a draft of the Utility Construction Agreement to TW telecom for review/comments.
- Looking Ahead:
  - Execute Oceanic City Center UCA.
  - Execute Hawaiian Telcom City Center UCA.
  - Execute AT&T City Center UCA.

HECO

- **Davis-Bacon requirements** – HECO has a collective bargaining agreement that has different wage scales and allows payment to its labor forces bi-weekly, which does not satisfy Davis-Bacon. Based on the State of Hawaii Department of Labor and Industrial Relations correspondence, HECO has begun the process to pay their employees weekly. HECO has submitted a rate conformance request that has so far been denied by the United States Department of Labor (DOL), although HECO has appealed. HECO and HART are still awaiting a final decision from the DOL for the applicable rates.
- **HECO 46kV Substation near MSF area** – HECO indicated a need in the 2019 timeframe for a new dedicated 46kV substation to feed the MSF area due to requirements in the HECO Rule 13 for line extensions and substations. HART is reviewing the various options with HECO.
- **Additional Clearances** – HECO requires the need for additional horizontal working clearances from overhead line conductors to the guideway for their 138kV and 46kV overhead lines along portions of all guideway segments.

- **Horizontal Working Clearances Analysis** – For Airport and City Center, HART and HECO have agreed to underground the overhead 138kV lines. HART’s designers are progressing to a preliminary engineering design with feedback from HECO. For WOFH and KHG, HECO has successfully tested two new bucket trucks (not in their fleet) that can do the 46kV work with less than their required working clearance. This would mitigate the need to relocate 90% of the 46kV poles/lines that do not meet their required working clearances.
- **Alternative Equipment** – For WOFH and KHG, HECO has proposed that HART purchase (9) new Altec bucket trucks to mitigate the 46kV clearance. HART is reviewing this. HECO and HART will continue to look for alternative equipment that could possibly mitigate the 138kV working clearance areas.

**5.4 Right-of-Way (data as of Aug. 1, 2016)**

**BUDGET**

	Baseline Budget	Expended	Remaining Budget Balance	Estimate to Completion	Forecast Variance
Acquisition	\$ 201.70	\$ 91.80	\$ 109.90	\$ 96.80	\$ 13.10
Relocation	\$ 20.50	\$ 14.40	\$ 6.10	\$ 12.10	\$ (6.00)
<b>Total (Million)</b>	<b>\$ 222.20</b>	<b>\$ 106.20</b>	<b>\$ 116.00</b>	<b>\$ 108.90</b>	<b>\$ 7.10</b>

Note

- \* Administrative overhead costs aggregated with the Acquisition and Relocation numbers
- \* Estimate to complete based on offers, appraisals or assessed values

**ACQUISITIONS**

Figure 13. Right-of-Way Status for the Parcels [data provided by Real Estate Acquisition database (READ)]

	Current No. of Parcels Needed (a)	Current Square Feet Needed (b)	No. of Completed Acquisitions (c)	Square Feet of Completed Acquisitions (d)	No. of Acquisitions Not Completed & Site Access Obtained (e)	Square Feet of Acquisitions Not Completed & Site Access Obtained (f)
W.Oahu/Farrington	35	9,808,840	24	7,428,687	11	2,380,153
Kamehameha	13	3,027,319	7	2,535,173	6	492,146
Airport	50	1,007,392	10	242,062	34	673,331
City Center	121	841,358	33	198,491	17	34,194
<b>GRAND TOTAL</b>	<b>219</b>	<b>14,684,909</b>	<b>74</b>	<b>10,404,413</b>	<b>68</b>	<b>3,579,824</b>

*During design development, the real estate requirements have been adjusted to accommodate the design refinements. Parcel requirements are adjusted as design is finalized.*

**Footnotes:**

- (a) & (b) Current No. of Parcels Needed, Square Feet Needed - Parcels identified as needed by the project.
- (c) & (d) No. of Completed Acquisitions, Square Feet of Completed Acquisitions - Acquisitions are closed and the right to access and construct is obtained for 56 private owners and agreements on 18 government parcels.
- (e) & (f) No. of Acquisitions Not Completed & Site Access Obtained, Square Feet of Acquisitions Not Completed & Site Access Obtained - Acquisitions may not be completed, but the right to access and construct has been obtained.

**KAMEHAMEHA**

- Priority:
  - On-going support for negotiations with Aloha Stadium Authority to obtain right of entry for the construction of the station park-and-ride. HART has obtained the right of entry to construct the guideway.

**AIRPORT**

- Priorities:
  - On-going negotiations with TMKs 1-1-002-001, 1-1-004-035, 1-1-004-039, 1-1-016-017, 1-2-013-020 and 1-2-013-021.
  - Continue working with the Federal government to complete documentation for easements.

- In order to support the Airport Guideway and Stations Design-Build contract and to maintain the project schedule, eminent domain proceedings were authorized by the HART Board and the Honolulu City Council for several parcels. However, negotiations are still continuing with all private property owners in the Airport section in an attempt to reach mutual agreement.

**CITY CENTER**

At the direction of the HART Board in executive session at its regular June 16, 2016 meeting, the Right-of-Way Section is temporarily suspending certain acquisition transactions beyond the planned Middle Street Station, including any new eminent domain actions and negotiations that have not resulted in a signed agreement amongst the parties. The following status is as of Aug. 1, 2016.

- Priority:
  - On-going support for negotiations with UH Honolulu Community College to secure construction right of entry.

**RELOCATIONS**

Figure 14. Relocation Status for the Occupants (data provided by READ)

	Active Relocations	Relocations Completed	Total Relocations
W.Oahu/Farrington	0	25	25
Kamehameha	1	4	5
Airport	2	9	11
City Center	12	59	71
<b>Grand Total:</b>	<b>15</b>	<b>97</b>	<b>112</b>
○ Relocations are pursuant to the Uniform Relocation Act. ○ Relocations are reported by the number of displacees. ○ During design development, the relocation requirements have been adjusted to accommodate the design refinements. Relocation requirements are adjusted as design is finalized.			

**AIRPORT**

- Priority:
  - Monitoring on-going relocation for TMK 1-1-016-016.
- Look Ahead:
  - Anticipate completion of relocation for TMK 1-1-016-006.

**CITY CENTER**

At the direction of the HART Board in executive session at its regular June 16, 2016 meeting, the Right-of-Way Section is temporarily suspending certain acquisition transactions beyond the planned Middle Street Station, including any new eminent domain actions and negotiations that have not resulted in a signed agreement amongst the parties. However, relocations are continuing at the option of the displacee, if the suspended relocation will result in harm to the displacee. The following status is as of Aug. 1, 2016.

- Priority:
  - Continuing to vacate TMK 2-3-007-045 through the judicial process.
- Look Ahead:
  - Anticipate completion of relocation for TMKs 2-1-050-001, 2-1-050-062 and 2-3-007-027.

**INTER-GOVERNMENTAL AGREEMENTS / THIRD-PARTY AGREEMENTS**

Figure 15. Inter-Governmental Agreement / Third-Party Agreement Status – These are agreements between HART and other government entities, with the exception of D.R. Horton. Completed agreements are in grey, agreements to be executed are in white.

Inter-Governmental Agreements / Third-Party Agreements				
Agreement	Status	Target	Section	Notes/Remarks
<b>City Agreements</b>				
DFM – Dept. of Facility & Maintenance (Kamehameha Hwy/Makalapa Manor)	Executed		Airport	Jurisdictional transfer from DFM to HART in place.
DPR - Dept. of Parks & Recreation (MSF drainage)	Executed		WOFH	Consent to construct in place.
<b>State Agreements</b>				
UH - University of Hawai'i Master Agreement	On Hold		WOFH, KHG, City Center	Construction is not impacted as the ROE for right to access and construct will be executed for each campus.
UH – University of Hawai'i Pre-Construction Right of Entry and Amendment	Executed		WOFH, KHG, City Center	Consent to construct in place.
UH - West O'ahu (UHWO) Construction Right of Entry for Station	Executed		WOFH	Consent to construct in place.
UH - Leeward Community College (LCC) Construction Right of Entry for Guideway	Executed		WOFH	Consent to construct in place.
UH - Leeward Community College (LCC) Construction Right of Entry for Station	Executed		WOFH	Consent to construct in place.
UH - Urban Gardens Construction Right of Entry	Executed		KHG	Consent to construct in place.
UH – Urban Gardens Conveyance to HDOT(H)	Pending	Oct 2016	KHG	In process.
UH - Honolulu Community College (HCC) Construction Right of Entry for Guideway & Station	Pending	May 2017	City Center	In negotiations. Concerted effort is being made to finalize.
DLNR – Dept. of Land and Natural Resources Kapolei Right of Entry	Executed		WOFH	Consent to construct in place to be followed by execution of the easement agreement.
DLNR - Dept. of Land & Natural Resources Kapolei Easement Agreement	Pending	Jan 2017	WOFH	Easement agreement in process. Construction not impacted.
DLNR – Keehi Lagoon Right of Entry	Executed		Airport	Consent to construct in place to be followed by execution of the easement agreement.
DLNR – Keehi Lagoon Easement Agreement	Pending	Jan 2017	Airport	Easement Agreement in process. Construction not impacted.
DLNR – City Center Right of Entry	Pending	May 2017	City Center	In process.
DLNR – City Center Easement Agreement	Pending	May 2017	City Center	In process.
DOE – Dept. of Education Master/Construction Agreement for Waipahu H.S.	Executed		WOFH	Set-aside from DLNR to HART in process.
DOE/DLNR Right of Entry for Waipahu High School	Executed		WOFH	DLNR Consent to construct in place with DOE concurrence.
Aloha Stadium / Department of Accounting & General Services (DAGS) MOU for guideway & station	Executed		KHG	MOU in place.

Inter-Governmental Agreements / Third-Party Agreements				
Agreement	Status	Target	Section	Notes/Remarks
Aloha Stadium / Department of Accounting & General Services (DAGS) Right of Entry for guideway	Executed		KHG	Consent to construct in place to be followed by execution of the easement agreement.
Aloha Stadium / Department of Accounting & General Services (DAGS) Easement for guideway	Pending	Jan 2017	KHG	Easement Agreement in process.
Aloha Stadium / Department of Accounting & General Services (DAGS) Right of Entry for station park and ride	Pending	Aug 2016	KHG	In negotiations. Awaiting results of 8/26/16 Aloha Stadium Board meeting.
Aloha Stadium / Department of Accounting & General Services (DAGS) Easement for station park and ride	Pending	Jan 2017	KHG	Process Easement Agreement.
HDOT(H) – Dept. of Transportation Highways Master Agreement	Executed		WOFH	Master Agreement in place.
HDOT(H) – Dept. of Transportation Highways Master Agreement - Amendment	Pending	Oct 2016	WOFH	In review.
HDOT(H) (A) - Master Agreement for KHG, Airport and City Center	Executed		KHG, Airport, City Center	Master Agreement in place.
HDOT(H) – Joint Use & Occupancy (JU&O) Sub-agreement	Executed		WOFH	Consent to construct in place.
HDOT(H) – Joint Use & Occupancy (JU&O) Sub-agreement	Executed		KHG	Consent to construct in place.
HDOT(H) – Joint Use & Occupancy (JU&O) Sub-agreement	Pending	Jan 2017	Airport	In process.
HDOT(H) – Joint Use & Occupancy (JU&O) Sub-agreement	Pending	May 2017	City Center	In process.
HDOT(A) – Dept. of Transportation Airports Joint Use & Occupancy (JU&O) Sub-agreement for Airport Division parcels	Executed		Airport	Consent to construct in place.
HDOT(A) - Easement Agreement for Airport Division parcel	Pending	Jan 2017	Airport	Process Easement Agreement.
HDOT(Har) – Dept. of Transportation Harbors Easement Agreement	Pending	May 2017	City Center	In process.
HDOT(Har) – Dept. of Transportation Harbors Right of Entry	Pending	May 2017	City Center	In process.
DHHL - Dept. of Hawaiian Home Lands Master Agreement	Executed		WOFH, MSF	Master Agreement in place.
DHHL – Dept. of Hawaiian Home Lands License	Executed		WOFH, MSF	Consent to construct in place.
OCCC - Dept. of Public Safety, Oahu Community Correctional Center, Easement Agreement	Pending	May 2017	City Center	In process.
OCCC - Dept. of Public Safety, Oahu Community Correctional Center, Right of Entry	Pending	May 2017	City Center	Draft Right of Entry under review.
HCDA -HI Community Development Authority Pre-construction Right of Entry	Approved		City Center	Verbal approval granted by the HCDA Board in 6/2016.
HCDA -HI Community Development Construction ROE & License Agreement, & Final Disposition	Pending	May 2017	City Center	Coordination is ongoing.
DAGS – Dept. of Accounting & General Services / HI Housing Finance & Development Corp (HHFDC) Right of Entry	Pending	May 2017	City Center	Consent to construct in process to be followed by execution of the Easement Agreement.
DAGS / HHFDC Easement Agreement	Pending	May 2017	City Center	Process Easement Agreement.
DAGS – City Center Right of Entry	Pending	May 2017	City Center	To be processed.

Inter-Governmental Agreements / Third-Party Agreements				
Agreement	Status	Target	Section	Notes/Remarks
DAGS – City Center Easement Agreement	Pending	May2017	City Center	To be processed.
<b>Federal Agreements</b>				
U.S. Navy Licenses	Executed		WOFH, KHG, Airport	Consent to construct in place. Formal notification is forthcoming, however, immediate access is granted.
U.S. Navy Easement Agreements	Pending	Aug 2016	WOFH, KHG, Airport	Navy completing documentation.
U.S. Navy Pearl Harbor Station Acquisition of Fee Transfer	Executed		Airport	Quitclaim deed received.
U.S. Post Office (USPS) Honolulu Processing Center acquisition	Pending	Jan 2017	Airport	Requesting USPS to finalize & execute access agreements.
U.S. Gov't/General Services Administration (GSA)/Federal Courthouse Master Agreement to include Security & Landscape Plan	Pending	May 2017	City Center	Master agreement under review.
U.S. Gov't/GSA/Federal Courthouse License (Right of Entry) & Temporary Construction Easement (TCE) Agreements	Pending	May 2017	City Center	In final review.
U.S. Gov't/GSA/Federal Courthouse Quitclaim Easement Document	Pending	May 2017	City Center	Easement document under review.
<b>Other Agreements</b>				
D.R. Horton Agreement for Construction	Executed		WOFH	Consent to construct in place to be followed by execution of the easement agreement.
D.R. Horton Final Easement Agreement	Pending	Jan 2018	WOFH	Easement Agreement in process and subject to owner's development plans.

## 6 MANAGEMENT AND ADMINISTRATIVE UPDATES

### 6.1 Safety and Security (S&S)

#### 6.1.1 S&S Certification Documents

Key HART S&S Certification Documents			
S&S Project Plans, PHAs, Core Systems SSHA and O&SHA, and TVA			
Documents	REV #	Date Approved	Comments
<b>Documents Approved</b>			
<b>HART SAFETY AND SECURITY</b>			
1. Safety & Security Management Plan (SSMP)	Rev 5	10/16/2015	SSRC approved and signed, update underway
2. Safety & Security Certification Plan (SSCP)	Rev 4. B	12/14/2015	SSRC approved and signed, update underway
3. WOFH SSCP	Rev 0	10/22/2014	SSRC approved - No future updates: HART SSCP is in affect
4. Construction S&S Plan (CSSP)	Rev 3	10/06/2015	SSRC approved and signed
5. Security Sensitive Information (SSI) Plan	Rev 0	12/15/2015	SSRC approved and signed
6. Project Preliminary Hazard Analysis (PHAs)	Rev 2. A	9/3/2015	Rev 2A - DRAFT annual update completed 9/3/2015
a. MSF – Yard and Shop	Rev 2. A	2/24/2016	SSRC approved
b. Alignment	Rev 2. A	3/23/2016	SSRC approved
c. Tracks	Rev 2. A	2/24/2016	SSRC approved
d. Stations	Rev 2. A	3/23/2016	SSRC approved
7. TES Back-Up Generator System HA	Rev A	5/25/2016	SSRC Approved
8. Threat & Vulnerability Assessments (TVAs)	Rev 1	1/16/2015	Update on hold - pending East Alignments re-design
<b>HART CORE SYSTEMS</b>			
9. Core Systems Contract (CSC) PHAs (DBOM)	Rev G		For SSRC approval (CMS # 575) – Tabled until September
10. Central ATC O&SHA	Rev C	9/23/2015	SSRC approved (CMS # 874)
11. Wayside/ATC System HA	Rev C	6/22/2016	SSRC approved (CMS# 835)
12. Wayside ATC SSHA	Rev B	6/22/2016	SSRC approved (CMS# 836)
13. Wayside ATC O&SHA	Rev D	9/23/2015	SSRC approved (CMS # 850)
14. Passenger Train ATC System HA	Rev C		SSRC approval (CMS # 751) – Tabled until September
15. Passenger Train ATC SSHA	Rev E	2/24/2016	SSRC approved (CMS # 853)
16. Passenger Train ATC O&SHA	Rev F	2/24/2016	SSRC approved (CMS # 873)
17. UPS O&SHA	Rev C	2/24/2016	SSRC approved (CMS # 1092)
18. FDAS SSHA	Rev C	4/27/2016	SSRC approved (CMS # 1216)
19. FDAS O&SHA	Rev B	2/24/2016	SSRC approved (CMS # 1217)
20. SCADA SSHA	Rev C	6/22/2016	SSRC approved (CMS# 854)
21. SCADA O&SHA	Rev E	5/25/2016	SSRC Approved (CMS # 887)
<b>Documents Pending Approval</b>			
<b>HART SAFETY AND SECURITY</b>			
22. Project Preliminary Hazard Analysis (PHAs)	Rev 2. A		Rev 2A - DRAFT annual update completed 9/3/2015
e. Traction Power	Rev 2. A		Update on-hold - pending approval of TES SSHA and O&SHA
f. Train Control	Rev 2. A		Update on-hold - pending approval of ATC SSHA & O&SHA
g. Vehicles	Rev 2. A		Update on-hold - pending approval of PT SSHA & O&SHA
h. Communications	Rev 2. A		Update on-hold - pending approval of Comms SSHA and O&SHA
23. Elevator/Escalators System HA	Rev A		Under Development
24. Project OHAs	Rev A		Under development
<b>HART CORE SYSTEMS</b>			
25. Technologies PHAs	Rev D		7/12/2016 – CSC R&R (CMS # 545)
26. Passenger Train Fire Hazard Analysis (FHA)	Rev C		6/22/2016 – CSC R&R (CMS# 749)
27. Passenger Train SSHA	Rev A		8/31/2015 - CSC R&R (CMS # 1273)
28. Passenger Train O&SHA	Rev A		10/26/2015 - CSC R&R (CMS # 1320)
29. TES SSHA	Rev B		11/03/2015 - CSC R&R (CMS # 884)
30. TES O&SHA	Rev B		11/03/2015 - CSC R&R (CMS # 1099)
31. PSGS SSHA	Rev B		10/05/2015 - CSC R&R (CMS # 938)
32. PSGS O&SHA	Rev B		3/3/2016 - AAN Re-submit, (CMS # 880)
33. Communications SSHA	Rev B		01/7/2016 - CSC R&R, (CMS # 1205)
34. Communications O&SHA	Rec C		1/27/2016 - CSC R&R (CMS # 1206)
35. MOW Support Vehicles O&SHA	Rev A		Under development

6.1.2 S&S Design Criteria Conformance Checklist (DCCC) – Civil Contracts

Design Criteria Conformance Checklist (DCCC)						
Civil Contracts						
Verification Status						
Design Phase				Construction / Installation /Testing		
Contracts: FD, DB, DBOM	% Verified	+ / - % Change	Comments: Design SSRC Approval Date	% Verified	+ / - % Change	Comments: C/I/T SSRC Approval Date
<b>WOFH / KHG Interim Revenue Service Date</b>						
<b>Civil Contracts Under Construction</b>						
DB-200, MSF	98%		1/28/2015	71%	+5%	Verification underway
DB-120, WOFH Guideway - 38 total - Sub CEL/CIL Packages	99%		36 Sub - CELs/CILs SSRC approved	63%	+14%	Verification underway
DB-320, KHG Guideway - 40 total - Sub CEL/CIL Packages	98%		36 - Sub CELs/CILs, SSRC approved	44%	+17%	Verification underway
FD-340, Ramps - H2R2	100%	N/A	5/27/2015			Verification Underway
FD-140, West Oahu Station Group	99%		3 stations - 12/09/2015			Pre-construction activities
FD-240, Farrington Hwy Station Group	100%	N/A	3- station - 12/09/2015			Pre-construction activities
FD-340, Kamehameha Highway Station Grp	100%	N/A	3 Stations - 8/26/2015			Pre-construction activities
MI-930, Elevators (Stations)	25%		Verification underway			
MI-930, Escalators (Stations)	41%		Verification underway			
MI-900 Fare Collection System			For SSRC Approval in SEP			
<b>Civil Contracts Under Design / in Pre-bidding or Pre-Award Phases</b>						
DB-275, Pearl Highlands PS/BTC			Base DCCC under review			
FD-600, West Oahu Park & Ride			Base DCCC under review			
AP00 Art-in-Transit, 12 artists/contracts			SSRC approved 5/25/16			
<b>Airport / City Center Final Revenue Service Date</b>						
<b>Civil Contracts Under Construction</b>						
FD-430, Airport Section 7-Piers	100%	N/A	6/17/2015	100%	N/A	8/26/2015
FD-430, Airport Section Utilities	100%	N/A	6/25/2014	51%	-	Verification underway
<b>Civil Contracts Under Design / in Pre-bidding or Pre-Award Phases</b>						
DB-450, Airport Guideway			DCCC update under review	-	-	
DB-450, Stations Group			DCCC update under review	-	-	
DB-550, City Center Guideway			DCCC update under review	-	-	
DB-550, CCG & Stations Group			DCCC update under review	-	-	

6.1.3 S&S Design Criteria Conformance Checklist (DCCC) – Core Systems Contracts

Design Criteria Conformance Checklist (DCCC)						
Core Systems Contracts						
Verification Status						
Design Phase				Construction / Installation /Testing		
Contracts: FD, DB, DBOM	% Verified	+ / - % Change	Comments: Design SSRC Approval Date	% Verified	+ / - % Change	Comments: C/I/T SSRC Approval Date
<b>WOFH / KHG Interim Revenue Service Date</b>						
<b>DBOM-920 Core Systems Contracts Under Design Procurement - Production - Manufacture - Installation</b>						
Yard Control Bungalow (YCB) CSC - Civil	86%		Verification underway			
Passenger Trains (PT)	90%		Verification underway			
Traction Electrification System (TES)	97%		Ready for SSRC approval			
MOW Vehicles – 8 support vehicles			Designer input underway			
Fire Detection Alarm System (FDAS)			Designer input underway			
Communication System			Designer input underway			
Automatic Train Control (ATC)	96%		SSRC approved 4/27/2016			
Supervisory C & D Acquisition (SCADA)	96%		SSRC approved 4/27/2016			
Platform Screen Gate System (PSGS)			Designer input underway			
TES-Back-up Generator (BUG)	N/A	N/A	No CDC Requirements	N/A	N/A	N/A
<b>Airport / City Center Final Revenue Service Date - All above applies – Design changes are as needed</b>						

6.1.4 S&S Certification “Open Items List” & “Hazard Tracking Log” Status

“Open Items List”						
“Open Items” - Design/Construction and Verification Issues						
Month - 2016	Total #	Total # Open	Total # Closed	% Closed Overall	# Closed In Month	% Closed In Month
May	242	44	193	80%	1	1%
June	248	41	207	84%	12	5%
July	249	42	207	84%	1	1%
Aug	250	41	209	84%	2	1%

“Hazard Tracking Log”						
Hazards Identified During Design / Construction Phases						
Month - 2016	Total #	Total # Open	Total # Closed	% Closed Overall	# Closed In Month	% Closed In Month
Aug	101	36	65	64%		

6.1.5 S&S Construction Specification Conformance Checklists (CSCC) - Civil Contracts

Construction Specification Conformance Checklists (CSCC)				
Civil - Contracts				
Verification Status				
Construction - Installation – Start-up & Testing Phases				
Contracts	% Verified	+ / - % Change	Comments	
<b>WOFH / KHG Interim Revenue Service Date</b>				
<b>Civil Contracts Under Construction</b>				
DB-200, MSF and Rail Yard	88%	+2%	Verification underway – IC Certificate issued	
DB-120, WOFH Guideway	77%	+5%	Verification underway	
DB-320, KHG Guideway	47%	+5%	Verification underway	
DBB-385, H2R2 Ramps	27%	+27%	Verification underway	
DBB-171, West O’ahu Station Group (WOSG)			Pre-construction activities	
DBB-271, Farrington Hwy Station Group (FHSG)			Pre-construction activities	
DBB-371, Kamehameha Hwy Stations Grp (KHSG)			Pre-construction activities	
MI-930, Elevators & Escalators, WOSG			Pre-install activities	
MI-930, Elevators & Escalators, FHSG			Pre-install activities	
MI-930, Elevators & Escalators, KHSG			Pre-install activities	
<b>Civil Contracts Under Design or in Pre-bidding or Pre-Award Phases</b>				
AP00 Art-in-Transit, 12 Artists/contracts			Draft Base CSCC under PM review	
DB-275, Pearl Highlands PS/ Bus Transit Center			TBD – waiting for 100% conformed specifications	
MI-900 Fare Collection System			Base CSCC SSRC approved 4/27/2016	
DBB-600, West O’ahu Park & Ride			TBD – waiting for 100% conformed specifications	
<b>Airport / City Center Final Revenue Service Date</b>				
<b>Civil Contracts Under Construction</b>				
DBB-525, Airport Section, 7 - Drilled Shafts	100%	N/A	8/26/2015 SSRC approved –Certification Completed	
DBB-505, Airport Utilities - Construction	63%		Verification underway	
<b>Civil Contracts Under Design or in Pre-bidding or Pre-Award Phases</b>				
DBB-511, Dillingham Utilities & Road Widening			Draft Base CSCC update - pending re-design	
DB-450, Airport Guideway			Draft Base CSCC update - pending re-design	
DB-450, Airport Stations			Draft Base CSCC update - pending re-design	
DB-550, City Center Guideway			Draft Base CSCC update - pending re-design	
DB-550, City Center Stations			Draft Base CSCC update - pending re-design	
MI-930, Elevators & Escalators, Airport Stations			Base CSCC - SSRC approved, 8/26/2015	
MI-930, Elevators & Escalators, City Center Stations			Base CSCC - SSRC approved, 8/26/2015	
AP00 Art-in-Transit, 11 Artists/contracts			Draft Base CSCC under PM review	
MI-900 Fare Collection System			Base CSCC SSRC approved 4/27/2016	

6.1.6 S&S Specification / Testing Conformance Checklists (STCC) - Core Systems

Specification / Testing Conformance Checklists (STCC)			
Core Systems – Contracts			
Verification Status			
Procurement - Production - Manufacture - Installation - Start-up & Testing Phases			
Contracts	% Verified	+ / - % Change	Comments
<b>WOFH / City Center Interim Revenue Service Date</b>			
<b>DBOM-920 Core System Contracts under Design / Procurement - Production - Manufacture - Installation - STCC</b>			
Yard Control Bungalow (YCB) CSC Civil - Contract	59%		Verification underway
MOW Vehicles (8-support vehicles)	63%	+6%	Verification underway
<b>Passenger Trains (PT)/Cars</b>			
1) General Requirements - Applies to all PTs	7%	+3%	Verification underway
2) PT-001- Certification (E-1, E-2, M-1, M-2 Cars)			Verification on hold pending delivery of trucks
3) PT-001- Interim Cert - for Dynamic Testing			
4) PT-002 – Certification (E-1, E-2, M-1, M-2 Cars)			
5) PT-002- Interim Cert – for Dynamic Testing			
6) PT Certification for Pre-Revenue Service (STCC)			Base STCC under development
<b>Traction Electrification System (TES)</b>			
1) General Requirements TES - Project Wide	37%	+3%	Base STCC pending Sept SSRC approval, verification underway
2) MSF - Rail Yard	31%		Base STCC pending Sept SSRC approval, verification underway
3) Functional Track - WOFH Guideway			Base STCC pending Sept SSRC approval
4) WOFH and KHG Guideways			Base STCC pending Sept SSRC approval
<b>Uninterrupted Power Supply (UPS)</b>			
1) General Requirements UPS -Project Wide	62%	+49%	Base STCC pending Sept SSRC approval, verification underway
2) MSF-UPS	50%	+50%	Base STCC pending Sept SSRC approval, verification underway
3) Segment 1 - UPS, WOFH & KHG	23%	+23%	Base STCC pending Sept SSRC approval, verification underway
<b>Communication Systems</b>			
1) General Requirements Comm- Project Wide	50%		SSRC approved 6/22/2016
2) MSF and Rail Yard Communications			SSRC approved 6/22/2016
3) KHG and WOFH Communications			SSRC approved 6/22/2016
<b>Fire Detection Alarm System (FDAS)</b>			
1) General Requirements FDAS - Project Wide	61%	+61%	Base STCC pending Sept SSRC approval, verification underway
2) MSF - FDAS	59%	+59%	Base STCC pending Sept SSRC approval, verification underway
3) Segment 1 – FDAS, WOFH & KHG	15%	+15%	Base STCC pending Sept SSRC approval, verification underway
<b>Platform Screen Gate System (PSGS)</b>			
1) General Requirements PSGS -Project Wide	30%	+10%	Base STCC pending Sept SSRC approval
2) Segment 1 – PSGS, WOFH & KHG			Base STCC pending Sept SSRC approval
<b>Traction Power Generators Back-up System</b>			
			SSRC approved 3/23/2016
<b>Train Control System (TCS)</b>			
			Base STCCs under development
<b>Supervisory Control &amp; Data Acquisition (SCADA)</b>			
			Base STCCs under development
<b>System Integration Testing (SIT)</b>			
			Draft base SIT STCCs on hold – SIT Plan being revised
<b>Operational Requirements</b>			
Ops Readiness Conform Checklists (ORCC)	27%	+3%	Base ORCC - SSRC approved 12/09/2015, verification underway
Pre-revenue Testing Conform Checklist (PRTCC)			TBD
<b>Airport &amp; City Center Final Revenue Service Date</b>			
<b>Passenger Trains (PT)/Cars</b>			
1) PT-008-20 Certification (E-1, E-2, M-1, M-2 Cars)			Base STCC - SSRC approved 12/09/2015
2) PT-008-20- Interim Cert - for Dynamic Testing			Base STCC - SSRC approved 12/09/2015
3) PT-011-20 Cert for Pre-Revenue Service			Base STCC under development
<b>Traction Electrification System (TES)</b>			
1) Airport and City Center Guideways			Base STCC pending Sept SSRC approval
<b>Uninterrupted Power Supply (UPS)</b>			
1) Segment 2 – UPS, Airport	20%	+20%	Base STCC pending Sept SSRC approval
2) Segment 3 – UPS, City Center	19%	+19%	Base STCC pending Sept SSRC approval
<b>Communication Systems</b>			
1) Airport Communications			Base STCC SSRC approved 6/22/2016
2) City Center Communications			Base STCC SSRC approved 6/22/2016
<b>Fire Detection Alarm System (FDAS)</b>			
1) Segment 2 – FDAS, Airport			Base STCC pending July SSRC approval
2) Segment 3 – FDAS, City Center			

Specification / Testing Conformance Checklists (STCC)			
Core Systems – Contracts			
Verification Status			
Procurement - Production - Manufacture - Installation - Start-up & Testing Phases			
Contracts	% Verified	+ / - % Change	Comments
<b>Platform Screen Gate System (PSGS)</b>			
1) Segment 2 – PSGS, Airport			Base STCC pending Sept SSRC approval
2) Segment 3 – PSGS, City Center			Base STCC pending Sept SSRC approval
<b>Traction Power Generators Back-up System</b>			SSRC approved Base STCC 3/23/2016
<b>Train Control System (TCS)</b>			Base STCCs under development
<b>Supervisory Control &amp; Data Acquisition (SCADA)</b>			Base STCCs under development
<b>System Integration Testing (SIT)</b>			Draft base SIT STCCs on hold – SIT Plan being revised
<b>Operational Requirements</b>			
<b>Ops Readiness Conform Checklists (ORCC)</b>			Base ORCC - SSRC approved 12/09/2015
<b>Pre-revenue Testing Conform Checklist (PRTCC)</b>			Base PRTCC under development

6.1.7 Interim Certification Verification Status

Active Interim Certification (IC) - Verification Status			
Construction - Installation – Start-up & Testing Phases			
Contracts	% Verified	+ / - % Change	Comments
<b>IC -Requirements</b>			
1. PT-001 Delivery - OSB, M-5 Track, ORCC, MOW-MVP	96%		IC - Certificate issued – 4 open items
2. MOW Building Early Occupancy IC Certificate	96%		IC - Certificate issued – 1 open item
3. MSF Civil IC – Facilities and Trackwork	88%	+2%	IC - Certificate issued – 32 open items
<b>Verification yet to Start</b>			
4. Test Track – Rail Yard, TES/IT/ORCC - IC			IC checklists under review
5. PT-001 Truck (Bogies) Delivery - IC			IC checklist SSRC approved 1/27/2016
6. PT-002 Delivery - IC			PT-002 IC checklist SSRC approved 1/27/2016
7. Functional Track – WOFH, PT-001, TES, ORCC, & IT			Interim Cert checklists under development

6.1.8 Twelve (12) Month Certification Projected Milestones and Work Priority:

12 Month Certification Projected Milestones												
Contract and Interim Certification (IC)	Next 30-90 days			Next 90-180 days			Next 180-270 days			Next 270-365 days		
	Sept 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017	Feb 2017	Mar 2017	Apr 2017	May 2017	Jun 2017	July 2017	Aug 2017
1. YCB Civil Certification (CSC)	X											
2. FD-430 & DBB-505, Airport Utilities Civil Certification		X										
3. Test Track – Rail Yard – TES IC				X								
4. Eight (8) MOW Vehicles Final Certification				X								
5. PT-001 Truck (Bogies) Delivery - IC					X							
6. PT-002 Delivery – IC					X							
7. PT-001, IC to enter Dynamic Testing							X					
8. PT-002, IC to enter Dynamic Testing							X					
9. DB-120, WOFH Guideway Civil Certification							X					
10. Functional Track – IC Test Track							X					
11. DB-320, KHG Guideway Civil Certification								X				
12. FD-340 & DBB-385 Ramp H2R2 Civil Certification									X			

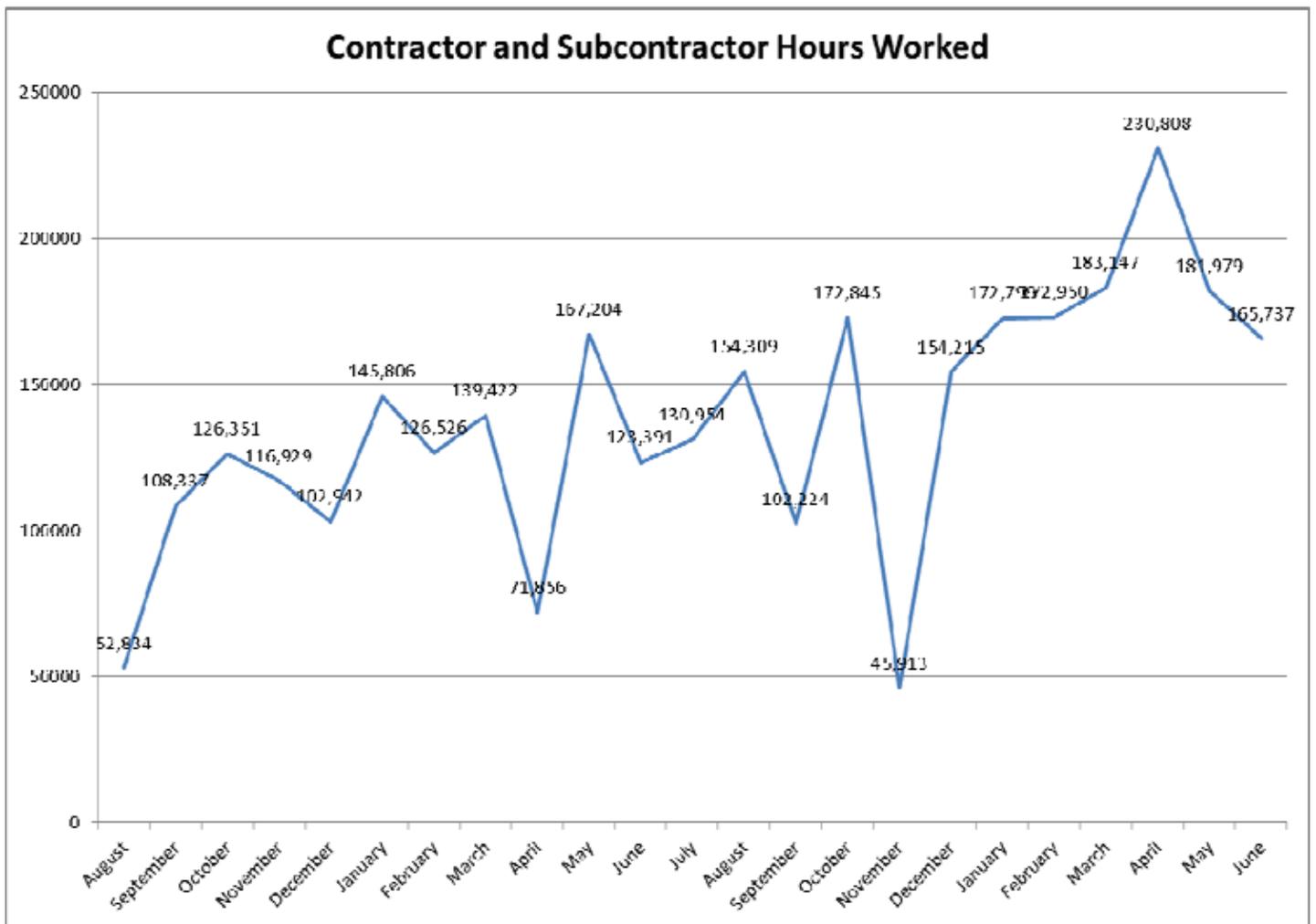
6.1.09 S&S Certification Certificates Issued to Date

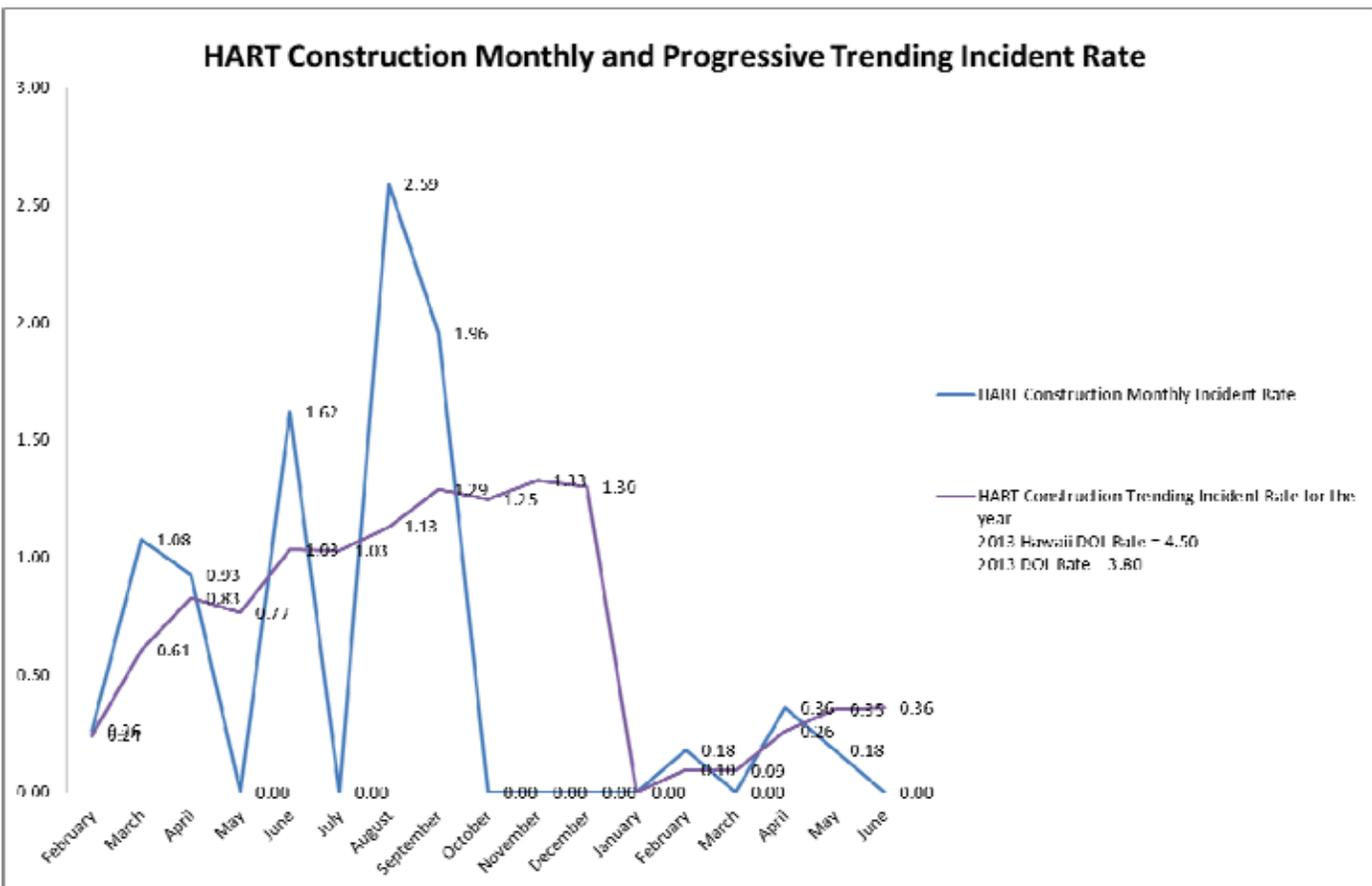
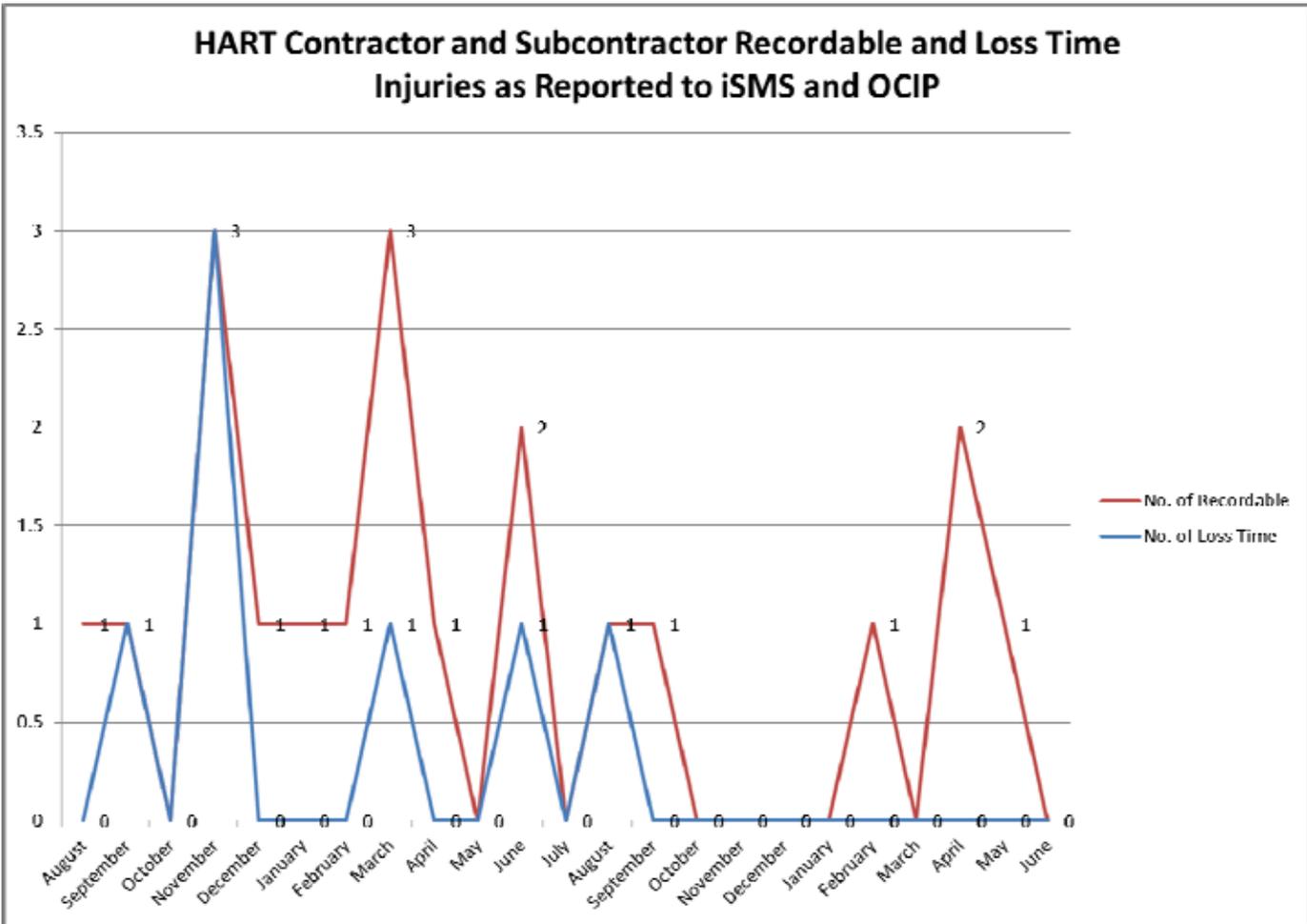
<i>S&amp;S Certification Certificates Issued to Date</i>		
<i>Contracts / Interim Certification (IC) Certificates Issued</i>	<i>Date Signed</i>	<i>Comments</i>
1. FD-430 / DBB-525 Airport 7-Piers Civil Cert Certificate	9/21/2015	SSRC approved
2. Three (3) – MOW Vehicles Delivery & M-7, M-2, M-1 MSF Tracks – IC Certificate	2/4/2016	SSRC approved
3. MSF Yard M-4 and M-6 Tracks – IC Certificate	3/10/2016	SSRC approved
4. PT-001 Delivery, OSB, M-5/M-4 Tracks, ORCC, MOW MPV - IC Certificate	3/29/2016	SSRC approved
5. Five (5) – MOW Vehicles Delivery – IC Certificate (Vehicles Only)	5/20/2016	SSRC approved
6. MOW Facility Early Occupancy – IC Certificate (Administrative Areas Only)	5/23/2016	SSRC approved
7. MSF Civil IC Certificate - Tracks and Facilities	7/6/2016	SSRC approved

6.1.10 Construction Safety and Security

Project-Wide Incident Activity					
Event Type	Total Number of Events since 1/1/2007	Total Number of Events for July 28, 2016- August 25, 2016	Loss Type	Date	Event Description
Environment	15	0			
Loss or Damage	41	1	a) Minor Loss	a) 8/5/2016	a) WOFH: VAC truck struck a signal pole knocking it down.
*Reportable Occupational Injury/Illness	0	0			
Security	64	1	a)Minor Loss	a)8/5/2016	a) WOSG: Ho'opili site broken into and locks cut on 2 containers. Nothing stolen.
**Loss Time Occupational Injury/Illness	8	1	a)Minor Loss	a) 7/28/16	a) CE&I West: Worker reported to ER with back injury from being rear ended by 3rd party vehicle, and was sent home for 3 days.
Road/Vehicle - Driving	86	2	a)Minor Loss b)No Loss	a)7/28/16 b)8/5/16	a) CE&I West: Worker rear ended by 3rd party vehicle while stopped at a crosswalk. b) KHG: 3rd party vehicle lost control and drove into a parked forklift. No damage.
Service Strike	88	1	a)Minor Loss	a)8/25/2016	a) AU: Struck irrigation conduit while excavating 16" waterline. Repaired.
*Reportable incidents: Requires OSHA to be notified within 8 hours, and includes the death of an employee or hospitalization of three or more employees. **Loss Time Injury: Time away from work due to injury.					

	2014			2015			2016		
	Hours worked	No. of Recordable	No. of Loss Time	Hours worked	No. of Recordable	No. of Loss Time	Hours worked	No. of Recordable	No. of Loss Time
January				145,806	1	0	172,799	0	0
February				126,526	1	0	172,950	1	0
March				139,422	3	1	183,147	0	0
April				71,856	1	0	230,808	2	0
May				167,204	0	0	181,979	1	0
June				123,391	2	1	165,737	0	0
July				130,954	0	0			
August	52,834	1	0	154,381	1	1			
September	108,337	1	1	102,224	1	0			
October	126,351	0	0	172,845	0	0			
November	116,929	3	3	45,913	0	0			
December	102,942	1	0	154,215	0	0			
<b>Total</b>	<b>507,393</b>	<b>6</b>	<b>4</b>	<b>1,534,735</b>	<b>10</b>	<b>3</b>	<b>1,107,420</b>	<b>4</b>	<b>0</b>
OSHA Annual Incident Rate				1.3					
Work Hours for WOFH, KHG, MSF, Air Port, CORE System as reported to OCIP and certified.									





### KEY ISSUES

- Core Systems lost their full-time Ansaldo/H-JV Safety and Security Certification point of contact in Honolulu that poses a concern of certification expertise and experience at the Core Systems contactor level, and will impose a hardship to the HART Safety and Security Department efforts until a full-time, qualified/certified replacement is on AHJV staff. A discussion will occur in September on the status of the replacement manager.
- Ansaldo/H-JV's deliverable schedule for the MOW Vehicles DCCC "Means of verification" has significantly slipped as communicated at the weekly CSC certification coordination meetings. Slow DCCC verification progress on the MOW vehicles is becoming a concern. HART S&S just received 4 of the 8 DCCC checklists. All 8 MOW vehicles are on island and undergoing STCC verification efforts.
- The rail shims remain an outstanding issue. An extensive number of the 3/16" shims along WOFH Guideway are cracking and shim heights are exceeding the 2" allowable height. An investigation is underway and HART requested an analysis of why the shims are cracking. In addition, Ansaldo is performing a 3<sup>rd</sup> party independent review to identify any track construction concerns and potential long term maintenance issues.
- Rusting and/or failing tendons in WOFH span segments have been identified. KIWC has been put on notice. The condition is being investigated to avoid impacting the loading capacity of the spans.
- The specification and testing conformance checklist verification effort (% verified) lags behind construction completion percentage due to the fact that a significant percentage of the needed submittals are submitted at the end of the project; such as test reports, O&M manuals, training, and as-built drawings.
- Safety and Security is presently lacking one (1) position (Safety Specialist, OSHA).

## 6.2 Quality Management

- **Overview**
  - The HART Quality Management Plan (QMP) and HART-approved Quality Assurance Plan's (QAPs) of contractors, consultants and suppliers have been prepared by their respective employees and are being implemented as standard operating procedures.
  - Overall quality of the Project is good.
  - Issued Audit Report on Combined QA, Buy America and Environmental Compliance Audit of KIWC for Casting Facility for the KHG contract held on June 20, 2016, and Joint HART/AHJV QA Audit of Hitachi Rail USA, Inc. (HRU) for Final Assembly of Passenger Vehicles held on June 28-30, 2016. Response by HRU to address audit findings is expected by the end of September 2016.
  - Held HART 5<sup>th</sup> Quality Pow Wow on Aug. 24, 2016. Twenty seven (27) members of the Project Quality Team attended. During the meeting, we recognized the MSF Quality Team: KKJV, CE&I, AHJV and Core Systems Oversight Consultant (CSOC).
  - Updated Management System Audits (QA, Environmental and Buy America) Schedule for 2016, as shown on the following pages:



HONOLULU AUTHORITY for RAPID TRANSPORTATION

## COMBINED MANAGEMENT SYSTEM AUDIT SCHEDULE

YEAR: **2016** Rev 7

KEY	Local Audit	Remote Audit	Continental U.S. Audit	International Audit		
CONTRACT PACKAGE NUMBER	DESCRIPTION	CONTRACTOR / CONSULTANT / SUPPLIER	AUDIT NUMBER	DATE SCHEDULED	DATE PERFORMED	DATE CLOSED
SC-HRT-1400049	CSC Support Services	L + E	16-001 QA	2/9 - 2/10	2/9/16	2/19/16
CH-HRT-10H0449	Maintenance and Storage Facility Design-Build (MSF)	KKJV - HI	16-002 QA/BA/E	3/15 - 3/17	3/15-17/16	4/15/16
CT-HRT-1200106	Core Systems Contract (CSC) & Hitachi Rail Design-Build-Operate-Maintain	Hitachi Rail USA	16-003 QA	6/28 - 6/30	6/28-30/16	
CT-HRT-10H0137	West O'ahu/Farrington Highway Guideway Design-Build (WOFH)	KIWC - HI	16-004 QA/BA/E	4/12 - 4/14	4/14-15/16	6/7/16
CT-HRT-11H0195	Kamehameha Highway Guideway Design-Build (KHG)					
SC-HRT-1400027	General Engineering Consultant (GEC-3)	CH2M Hill	16-005 QA	6/16 - 6/17	6/16-17/16	6/24/16
CT-HRT-1200106	Core Systems Contract (CSC)	AHJV - HI	16-006 QA/E	6/2 - 6/3	6/2-3/16	8/24/16
RFB-HRT-837903	H2R2 Ramp Construction	Royal Contracting	16-007 QA/BA/E	10/18 - 10/20		
CT-HRT-11H0195	KHG Casting Facility	KIWC - HI	16-008 QA/BA/E	7/20 - 7/21	7/20	
CR-HRT-1500503	West Oahu Station Group Construction	NAN, Inc	16-009 QA/BA/E	10/12 - 10/13		
CT-HRT-1500236	Farrington Highway Station Group Construction FHSG	Hawaiian Dredging	16-010 QA/BA/E	9/27 - 9/28		
CT-HRT-11H0195	WOFH and KHG Surveying and Alignments	KIWC - HI	16-011 QA	9/22 - 9/23		
CT-HRT-10H0137						
SC-HRT-14000323	Airport Section Utilities Construction	NAN, Inc	16-012 QA/BA/E	9/15 - 9/16		
DB -	Airport Guideway and Station (Design)	TBD	16-013 QA	TBD		
DB-	City Center Guideway and Station (Design)	TBD	16-014 QA	TBD		
CT-HRT-1300318	Elevator and Escalator - Manufacture, Install and Maintain	US Schindler - HI	16-015 QA/BA	10/4 - 10/6		
		US Schindler - NJ				

Quality Assurance (QA); Buy America (BA); Environmental (E); Safety Security (SS)

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HONOLULU AUTHORITY for RAPID TRANSPORTATION

## COMBINED MANAGEMENT SYSTEM AUDIT SCHEDULE

YEAR: 2016 Rev 7

KEY	Local Audit	Remote Audit	Continental U.S. Audit	International Audit		
CONTRACT PACKAGE NUMBER	DESCRIPTION	CONTRACTOR / CONSULTANT / SUPPLIER	AUDIT NUMBER	DATE SCHEDULED	DATE PERFORMED	DATE CLOSED
SC-HRT-1600008	Airport Section Utilities CE&I East	Stantec	16-016 QA	9/15 - 9/18		
	Airport Section Guideway & Stations CE&I East	Stantec	TBD	TBD		
	City Center Section Guideway & Stations CE&I East					
SC-HRT-1400050	West Side Station Group CE&I	PGH Wong - HI	16-017 QA	10/25 - 10/27		
	West Oahu Farrington Highway and Kamehameha Highway Guideways CE&I					
	Elevator and Escalator - CE&I					
	Pearl Highlands Parking Structure/Bus Transit Center CE&I					
	UH West O'ahu Park-and-Ride and Ho'opili Station Finishes CE&I					
CT-HRT-1200106	Configuration Management Plan (CMP)	AHJV - HI	16-018 QA	11/3 - 11/4		
CT-HRT-1600152	Kamehameha Highway Station Group Construction	NAN, Inc	16-019 QA/BA/E	11/15 - 11/17		
CCH-100	Honolulu Authority for Rapid Transportation (HART)	HART	16-020 QA/SS	12/06 - 12/13		
DB-	Pearl Highlands Garage Transit Center and H1R2 Ramp	TBD	TBD	TBD		
DB-	Airport Guideway and Stations (Construction)	TBD	TBD	TBD		
DB-	City Center Guideway and Stations (Construction)	TBD	TBD	TBD		
DB	UH West O'ahu Park-and-Ride and Campus Road "B"	TBD	TBD	TBD		

Quality Assurance (QA); Buy America (BA); Environmental (E); Safety Security (SS)

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• Key Issues

HART NCR Log		
Total NCRs Issued To Date	CLOSED	OPEN
<b>46 (Audits)</b>	<b>37</b>	<b>9</b>
<b>1 (Construction)</b>	<b>1</b>	<b>0</b>

- Continue updating, reviewing and approval of appropriate HART Project Baseline Plans and Procedures due to new policies, re-organization, process improvement and lessons learned from the internal audits. Upon approval of revised plans and procedures, training of HART employees and consultants must be performed in order to assure competency and proficiency.
- Resolution of two (2) major WOFH NCRs that needs to be addressed and corrected to prevent recurrence and to mitigate impact on the overall progress of the project. The major NCRs are described below:
  - **NCR 549:** Grouting of six (6) tendons on Spans 33, 38, 45 and 51 were found defective. KIWC’s disposition is to remove and replace the affected tendons, then stress and grout. A pre-activity meeting was held on this work discussing the removal procedure, which includes safety, quality and environmental activities. Removal and replacement work began in late July and is scheduled to finish by September.
  - **NCR 398:** Direct Fixation Fastener (DFF) high-density polyethylene (HDPE) Shims.
- Resolution of one (1) major KHG NCR that needs to be addressed and corrected to prevent recurrence and to mitigate impact to the overall progress of the project. The major NCR is described below:
  - **NCR 199:** To date, there is one (1) Open NCR which is related to the CSL Report; and 184 Drilled Shafts completed (added 2), which indicates that there were few CSL issues encountered lately and the process has improved.
- Erection and finishing of spans, construction of “shear keys” between columns and spans, and construction of concrete walkways on KHG guideway.
- Resolution of one (1) major KHG NCR 199: Drilled Shafts (Cross Hole Sonic Logging Reports) quality and repair.
- Resolution of two (2) major WOFH NCR’s 549 and 398: Removal and replacement of tendons with defective grouts.
- Punch List Inspection of WOFH.
- Installation and welding of rails and turnouts on top of the WOFH and KHG guideways.
- Construction of the KHG Balanced Cantilever segmental spans.
- Manufacturing of Carbody(s) at Hitachi Rail Italy and its subcontractor manufacturing facilities in Italy.
- Final Assembly of Passenger Vehicles in Hitachi Rail facilities in Pittsburg, CA.
- Pre-shipment, Inspection & Testing (I&T) and First Article Inspection (FAI) of wayside core system and passenger vehicles materials, parts and components.
- Punch List Inspection of OSB, WTB, TWF and MOW buildings.
- Perform QA Audit of WOFH and KHG Surveying and Alignments.
- Perform Combined QA, Buy America and Environmental Compliance Audit of Nan, Inc. on the ASU contract.
- Perform QA Audit of CE&I East (Stantec/SSFm) on the ASU contract.
- Closeout QA Audit 16-006 CSC AHJV.

**6.3 Buy America Compliance (49 CFR 661 and 49 CFR 663)**

• Overview and Key Issues

- On Feb. 8, 2016, HART submitted a request for waiver of Buy America requirements for the variable refrigerant flow (VRF) HVAC system for the train control and communications rooms at the stations. We are awaiting FTA’s determination.
- Vehicles: In accordance with FTA clarification on the definition of “post-delivery audit period” as the “time period in the procurement process when the rolling stock’ (first vehicle) ‘is delivered to the recipient until title to the rolling stock’ (last vehicle) ‘is transferred to the recipient or the rolling stock’ (last vehicle) ‘is put into revenue service, whichever is first,” HART intends to conduct a post-delivery audit during the defined “post-delivery audit period,” when actual costs can be verified. We anticipate this to occur on or around first quarter of 2017.

### 6.4 Disadvantaged Business Enterprise (DBE)

- **Activities this Month**

- \$40,103,117 = total dollar participation for all DBEs on all HART contracts from 9/24/07 to 8/31/16
  - 6.77% = DBE utilization on total disbursed FTA funds received to date (\$40,103,117 divided by \$592,749,313)
  - 2.27% = DBE utilization to date on total Project FTA funds (\$40,103,117 divided by \$1,763,903,901)

*Total DBE Participation = \$40.1M  
(previous report = \$39.3M)*

Figure 16. DBE Participation this Month

DBE Participation in August		
DBE Firm	Contract Number	Participation
Lawson & Associates	SC-HRT-1400061 MM-964	\$61,868
ADS System Safety Consulting	SC-HRT-1400061 MM-964	\$81,045
LKG-CMC	SC-HRT-1400049 MM-962	\$17,933
FIC LLC	SC-HRT-1600008 MM-595	\$346,027
Dovetail Consulting	MOU-11-SO-1 MM-930	\$18,985
PSC Consultants	SC-HRT-1400050 MM-290	\$127,232
Element Environmental	SC-HRT-1400050 MM-290	\$105,437
<b>TOTAL FOR THE MONTH</b>		<b>\$758,527</b>

Note: For a full listing of DBE participation to date, please see Appendix F.

### 6.5 Planning and Environment

- **Activities this Month**

- Programmatic Agreement Activities:
  - HART’s Programmatic Agreement (PA) team met with the Hawai’i State Historic Preservation Division (SHPD) on Tuesday, Aug. 9, 2016, as part of ongoing consultation with the division.
  - HART continued coordination with the Navy’s Federal Preservation Officer to prepare final submittals of Big Makalapa and Little Makalapa National Register nominations in August 2016.
  - HART met with the Kāko’o to discuss better management of Consulting Party (CP) concerns on Wednesday, Aug. 24, 2016.
  - The July PA report was finalized and distributed to the Kāko’o.
  - HART initiated implementation of PA Stipulation VII (“Educational and Interpretive Programs, Materials, and Signage”). A strategic plan is being prepared that will identify timelines, goals, defining goals and objectives, and public/community outreach programs. Future consultation with PA Consulting Parties will occur.
- Planning, Environmental, and Cultural Activities:
  - HART researched, prepared and submitted responses to correspondence regarding karst caverns and project safety.
  - HART staff attended an informational forum on the Pueo (short-eared owl) at UH West O’ahu on Aug. 18, 2016.
  - The quarterly Mitigation Monitoring report was completed and sent to FTA.
  - Continued coordination is planned with stakeholder agencies regarding street tree transplanting and mitigation efforts.
  - The preliminary mitigation monitoring measures have been established for the recently awarded Airport Guideway and Stations (AGS) contract.

- HART staff met with the Department of Parks & Recreation at three City parks in Central O‘ahu to conduct inspections for relocated trees.
- Cultural awareness training was provided to staff of Nan, Inc. for construction related to KHSG on July 19, 2016.
- HART relocated 40-foot tall Gold Trees from Leeward Community College to the Rail Operations Center on Aug. 17, 2016.
- HART staff continued coordination with HDOT, Oahu Metropolitan Planning Organization (OMPO) and Department of Transportation Services (DTS) regarding obligation of federal Transportation Alternatives Program (TAP) funds for the Middle Loch Connector, Secure Bicycle Storage, and Chinatown Bicycle Facility projects. Staff is also coordinating with DTS on future TAP projects.
- HART Planning continued to participate in a weekly Multimodal Integration Technical Team (MITT) consisting of HART, DTS, and O‘ahu Transit Services (OTS) planners to work on technical issues supporting bus-rail integration planning.
- HART Planning staff is managing the refinement of the travel demand forecasting model being used in the fare options study.
- Environmental staff continued working on the WOFH contract closeout.
- Environmental staff is working on setting up the AGS contract’s environmental requirements.
- HART submitted revised draft text of FTA letter to FTA for SHPD concurrence of no additional adverse impacts by the Airport and City Center Casting Yards.
- Submitted revised drafts of the following Post-Record of Decision’s (RODs) to FTA for review:
  - Emergency Backup Generators
  - City Center Section-Chinatown Station Post ROD for the Hōlau Market and Ai-Goto Parcels
- HART is coordinating planning and design of Kekaulike Street access to Chinatown Station, and Pearlridge Bus Transit Center interface to Pearlridge Station with DTS.
- HART presented at the Floodplain Managers Conference hosted by State Department of Land and Natural Resources (DLNR), on Aug. 18, 2016.

- **Looking Ahead**

- HART will develop a recommended approach in response to the City Council’s request and funding for project extension studies which will be presented to the HART Board.
- HART will provide preliminary options analysis to inform the Board on further project public-private partnership (P3) potential activities.
- Ongoing coordination with DTS to ensure consistent planning of seamless bus and rail services focusing on rail’s interim opening date.
- Refine and develop bus-rail integration needs for Lagoon Drive, Waimanu Street and Ala Moana locations.
- The next consultation meeting with HART/SHPD is scheduled for Tuesday, September 6, 2016.
- Continue Hawaiian Station Naming Working Group efforts to provide primary Hawaiian station names for 21 stations.
- Continue coordination with DPP, the State, and Hawaii Community Development Authority (HCDA) regarding transit-oriented development.
- Continue to review and meet with contractors regarding proper environmental submittals.
- HART will coordinate the closeout of environmental items related to the KHG contract.
- Prepare and submit Post-ROD Documentation for FTA approval prior to need dates as indicated:
  - Emergency Backup Generators, third quarter 2016
  - City Center Realignment (including the Ala Moana Station relocation), third quarter 2016
  - Airport and City Center Casting Yards, third quarter 2016
  - Prepare and submit separate draft Post-RODs for the following topics for third quarter 2016 and beyond: Additional Project-Wide Right-of-Way, West O‘ahu Park and Ride Lots (including interim Park and Ride at Ho‘opili Station), and the Project revised Phased Openings.
- Continue development of HART’s sustainability program.
- HART will develop a Sustainability Focus Group with to-be-identified stakeholders.

## 6.6 Risk Management

The primary goal of risk management is to maintain a reserved contingency balance throughout the life of the Project that is acceptable to HART and the FTA. Effective management of project risks is necessary to significantly increase the likelihood of delivering a successful project. Risk management is the systematic process of identifying, analyzing, and responding to risk in a timely manner. Risk management is integral to all phases leading up to revenue service opening including: planning, design, construction, systems testing, system operation start up, safety and security certification, and ultimately to project construction closeout.

The HART program has adopted a new Risk Management System that focuses on mitigation strategies to assist the project teams in project delivery. The program has recently performed bottoms up risk assessment for every project in the program. This process evaluated every base cost and schedule for each of the individual projects in the program. A network risk model was created to define how a risk on one project in the program affects other projects in the program. By monetizing the potential impacts of schedule, it assists the project teams in decision support of how to best manage the risk.

Risk assessment discussions with the project teams are held on a regular basis to identify, assess, prioritize, manage and mitigate risk exposure, and develop prudent contingency plans. The Project Risk Register (RR) is the depository for all risks identified for the Project. Every month, risks contained in the RR are reviewed to confirm risks are appropriately identified, identify new risks, and close out risks that no longer pose an issue. HART has begun to train the project managers using the risk management system. There has since been 7 individual project register updates since training has begun. These updates are verified and reviewed by the risk manager prior to being incorporated into the master Risk Database.

The new risk management system quantifies the risk as schedule impact or direct cost impact independently. The schedule impact is then monetized based in the model and based upon the contracts impacted. The top risks to the program are then evaluated on both schedule and cost. The top risks from the most recent risk workshops are:

- Enough available funding to complete the entire program
- HECO East – Utility clearance issues
- HECO West – Utility clearance issues
- Misidentified and unidentified utilities on City Center Guideway and Stations project
- De-energizing the existing overhead 138kv and 46kv lines on Airport Guideway and Stations project
- Late identification of additional 138kv created the additional need for permission to enter property for utility relocation on City Center Guideway and Stations project
- Re-baseline the schedule for the Core Systems Contract
- HECO East Airport Guideway and Stations - Utility Clearance Issues
- Potential change orders in construction for the KHG project
- Potential change orders in construction for the WOGH Guideway project
- Procurement delays for City Center project
- Access for station contractors

As HART implements the risk management system focused on mitigation, monitoring, and control, the PMOC has requested to work with HART to possibly develop a new tracking mechanism or data reporting set to better assist in the oversight of the program.

### **NOTES OF SIGNIFICANCE**

- HART is currently going through an exercise in developing a recovery plan to manage the funding gap.
- Intensive focus continues to be placed on issues involving Hawaiian Electric Co. (HECO) coordination and clearance issue resolution.
- On-call contractor is verifying the Ground Penetrating Radar (GPR) results of the utilities in the City Center section.

- Specifications are being developed for the City Center project to assist the design-builder in pricing unidentified and misidentified utilities.
- Developing agreements with landowners and utilities for access during construction is mitigating potential construction schedule delays.
- Clearance of HECO overhead facilities and HART Guideway and Stations is undergoing evaluation for site specific solutions with respect to the 138kV, 46kV and 12kV transmission lines. The range of solutions to meet physical separation are extraordinary in cost, requiring further study prior to reaching an agreeable solution that is functional and affordable.

#### **AREAS OF FOCUS**

**A) Market Conditions** – The construction market in Hawai'i continues to outpace other major metropolitan US cities. The years 2015 and 2016 are expected to set new records for construction in the state. This translates to increased escalation of about 1% per month from late 2014 through the end of 2016, according to the Rider Levett Bucknall, Quarterly Construction Cost Report. These conditions may impact the supply of experienced craft labor which will in turn affect contractor productivity rates and traffic mobility issues.

Mitigation Progress:

- HART's continuous improvement in estimating methodology has led to more confidence in the likely construction pricing, but continued pricing pressures in the market could still lead to higher than expected price proposals and bids.
- The combined guideway and station packages on the City Center Guideway and Stations contract are still in active procurement.

**B) Utilities** – Utilities continue to be an issue for the project, as they are for most Transit and Rail projects.

Mitigation Progress:

- Resources to relocate HECO facilities are now keeping up with scheduled requests to resolve utility conflicts through improved coordination efforts between agencies at all levels from project management to executive levels.
- Clearance of HECO overhead facilities and HART Guideway and Stations is undergoing evaluation for site specific solutions with respect to the 138kV, 46kV and 12kV transmission lines. The range of solutions to meet physical separation are extraordinary in cost, requiring further study prior to reaching an agreeable solution that is functional and affordable.

**C) Right-of-Way** – There are parcels on the east and west segments that are still in an active acquisition process. The goal is to provide site access to the contractors on the east to avoid associated inefficiencies related to re-sequencing the work plan which would have a negative impact to the revenue service date.

Mitigation Progress:

- Nearly all west side property transactions have been accomplished.
- East side – there are a number of third-party agreements needed on the Airport Section and private parcels on the City Center Section. Cost-to-cure partial property improvement impacts have now been mostly resolved.

**6.7 Community Outreach**

**• Activities this Month**

- HART participated in the annual Pearl City/Aiea Transportation Town Hall meeting, sponsored by State Senator Breene Harimoto, presenting information about rail construction work and its impact on traffic in the area, and answering questions about the project from members of the public.
- The HART Public Outreach team also made a presentation to a manger’s group at the Hawaii State Federal Credit Union and answered questions about construction plans and logistics in the vicinity of the Civic Center Station. HART outreach staff also held an informational meeting at the Pearl City Public Library and answered questions and received feedback from members of the public.

**• Construction Outreach**

- HART held two Business and Community meetings this month, one in Waipahu and a second one in the Pearl City area. These regular meetings are designed to provide business operators and community members along the rail corridor with updated information about construction work and upcoming traffic changes in their areas. The meetings are also designed to provide businesses and community members with the opportunity to provide feedback that helps shape some of HART’s business assistance programs.
- HART continues to provide weekly traffic updates, notifying motorists, elected officials and members of the public of upcoming lane closures due to rail construction and utility work. The advisories are posted on the project website and distributed via email to local media outlets.

*Since the inception of HART, the outreach team has participated in:*

- *1,004 Presentations and Events*
- *560 Neighborhood Board Meetings*

*Prior to the inception of HART, the outreach team participated in:*

- *1,001 Presentations and Events*
- *541 Neighborhood Board Meetings*

Figure 17. Transportation Town Hall



HART’s Kai Nani Kraut presents rail project information at the Pearl City/Aiea Transportation Town Hall meeting at Pearl Ridge Elementary School.

**• Community Input**

- HART’s public outreach team responded to more than 100 public inquiries and comments this month. Inquiries were related to project construction plans, and a majority of the comments urged that the project not stop at Middle Street but continue on to Ala Moana Center.

**• Look Ahead**

Coming in September:

- HART staff members will host an informational meeting at Pearlridge Uptown.

**6.8 Staffing**

**• Overview**

- On Aug. 18, 2016, the HART Board of Directors accepted the resignation of the HART Executive Director/Chief Executive Officer, Daniel A. Grabauskas and appointed Michael D. Formby as Acting Executive Director. Formby was a sitting HART Board member and the Director of the Department of Transportation Services (DTS) for the City and County of Honolulu. Formby resigned from the board and DTS upon appointment as HART Acting Executive Director. As Acting Executive Director, Formby will work with the HART Board to facilitate the search for a rail construction interim Executive Director. The goal is to secure the services of a rail construction interim Executive Director by late October 2016.
- The candidate for the Deputy Director of Operations and Maintenance position has accepted the offer and the hiring action is being processed.
- The Kamehameha Highway Station Group Project Manager started in August.
- Two positions have been added to support the HART Board of Directors: HART Board Staff Assistant and HART Board Clerk.
- A Right-of-Way Agent position has been added.

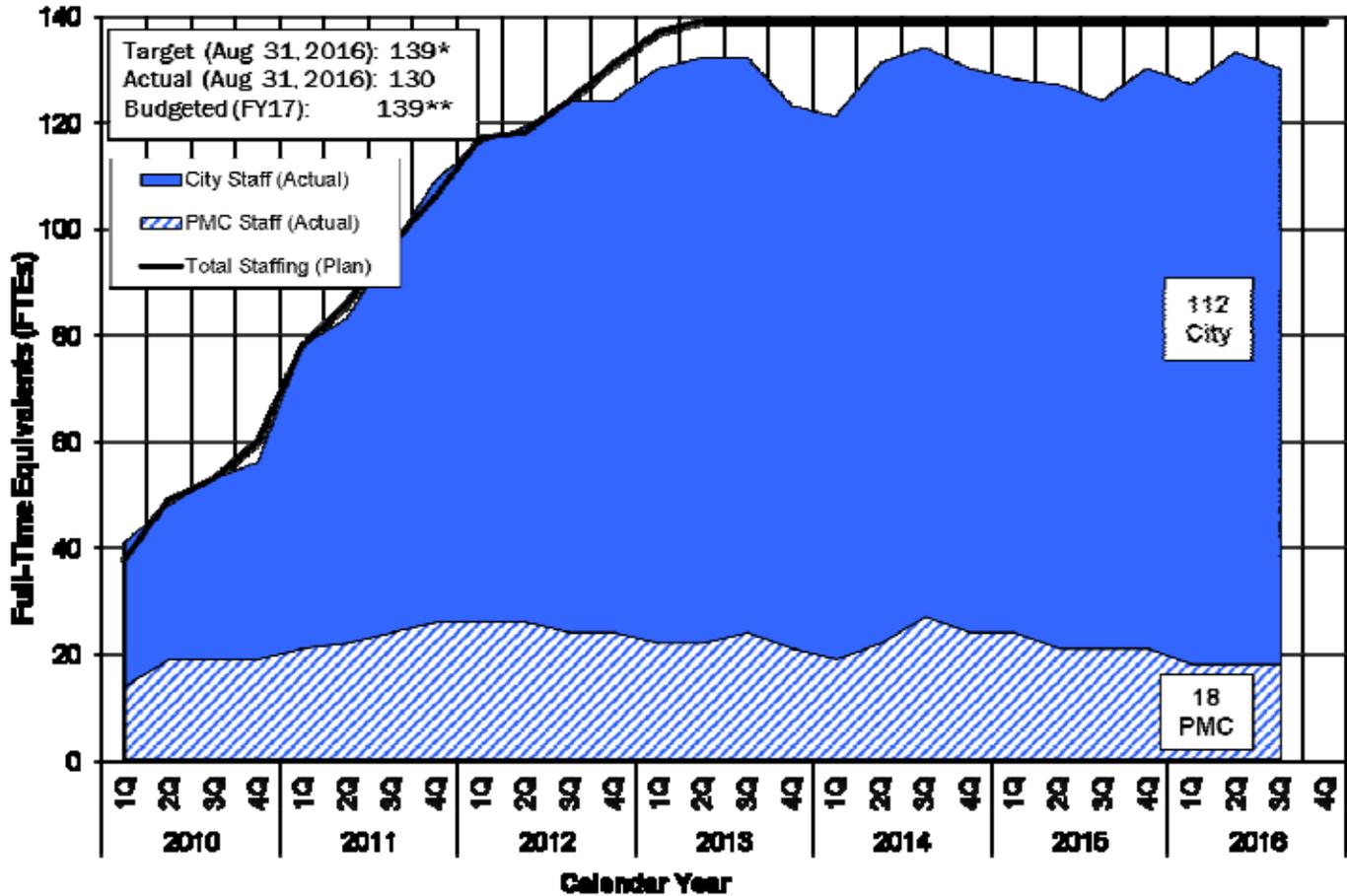
Figure 18. Staffing Activities

Staffing Activities				
Title	Group	New/Existing HART position (City or PMC)	Position Status	Start Month
<b>Design and Construction</b>				
Project Manager (KHSG)	Construction	Existing (City)	Filled	Aug
Mechanical/Electrical Engineer	Core Systems	Existing (City)	Selected	Sept
<b>Budget and Finance</b>				
Financial Analyst	Budget and Finance	Existing (City)	Recruiting	
Accountant	Budget and Finance	Existing (City)	Recruiting	
<b>Quality Assurance</b>				
Quality Assurance Engineer * (Civil)	Quality Assurance	Existing (City)	Recruiting	
<b>Administrative Services</b>				
Information Technology Support Technician	Administrative Services	Existing (City)	Recruiting/Interviewing	
Personnel Clerk	Administrative Services	Existing (City)	Recruiting via Civil Service	
<b>Public Information</b>				
Information Specialist	Public Information	Existing (City)	Recruiting via Civil Service	
<b>Project Controls</b>				
Scheduler	Project Controls	Existing (City)	Recruiting/Interviewing	
CMS Trainer	Project Controls	Existing (City)	Recruiting	
<b>Safety</b>				
Safety Specialist	Safety	Existing (City)	Recruiting/Interviewing	
<b>Operations &amp; Maintenance</b>				
Deputy Director	Operations & Maintenance	New (City)	Selected	Oct
<b>Planning, Permitting &amp; ROW</b>				
Planner VI (Land Use/Sustainability)	Planning	Existing (City)	Recruiting	
Right-of-Way Agent IV	Right-of-Way	New (City)	Recruiting	
<b>Executive Management</b>				
Board Staff Assistant	HART Board	New (City)	Recruiting	
Board Clerk	HART Board	New (City)	Recruiting	

\*Actual hiring level will be commensurate with candidate’s qualifications.

HART prioritizes filling all vacancies with City employees and supplements the City staff with PMC only when necessary and appropriate. HART currently receives direct project support in centralized functions from the following city departments: Honolulu Police Department (HPD), Department of Information Technology (DIT), Department of Budget and Fiscal Services (BFS), Department of Design and Construction (DDC), Corporation Counsel (COR) and Department of Human Resources (DHR); and from the State of Hawai’i Department of Transportation (HDOT) on Consultant Services Contracts. HART is currently working with the Department of Facility Maintenance (DFM) on creating a Memorandum of Understanding (MOU).

Figure 19. Project Staffing (Actual vs. Planned)



\* In accordance with Staffing and Succession Plan Rev 5 (Under Revision)  
 \*\* 138 City positions authorized in FY 2017 HART Operating Budget

The actual number of employees reflects employees hired during this period as well as employees who left the project from both HART and the PMC staffs.

For the latest project organization chart, see Appendix G.

# APPENDICES

## Appendix A. Action Items

The following are Action Items for HART and/or the PMOC, which are reviewed and discussed on a monthly basis.

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
1	Resolve HECO issue with Davis-Bacon requirements	HART/FTA	Mar-14	On-going		Open – HECO waiver is pending.
2	Updates required from Risk Refresh:					
	Contract Packaging Plan	HART	Aug-14	TBD		Pending update of budget and schedule
	Financial Plan	HART	Apr-14	TBD		Pending update of budget and schedule
	Budget	HART	Apr-14	TBD		In progress
	MPS	HART	Apr-14	TBD		In progress
	RCMP	HART	Sept-13	TBD		Pending update of budget and schedule
3	Provide Recovery Plan	HART	Jun-16	Aug-16		
4	AHJC Security Contract	HART	Jul-16	Jul-16	Jul-16	Completed
5	LRV Buy America Calculation Sheet	HART	Jul-16	Aug-16		
6	USPS Mediation Settlement	HART	Jul-16	Aug-16	Jul-16	Completed

## Appendix B. Project Contingency Management General Background and Clarifications

The FFGA Baseline Budget for Project Contingency is approximately \$643.6M and consists of the following elements:

*Current Contingency Balance = \$463.8M*

- 1) Unallocated Contingency – Reserve contingency to address unknown changes to the Project and not currently allocated to a particular work package.
- 2) Project Allocated Contingency – Contingency allocated to each work package to address potential uncertain changes within each respective work package.
- 3) Allowance – A reserve designated for Final Design contracts and committed under the contracts.

The \$643.6M Baseline Budget for Total Project Contingency does not include amounts for Known Changes yet to be finalized at the time the Bottom-Up Estimate (BUE) was prepared.

As the project progresses, budget transfers will be executed, moving budgeted project scope and budgeted contingencies as appropriate to reflect either a realized cost savings, cost overruns, or a transfer of scope. It is expected that project contingency will continue to be drawdown as the overall design is further developed, risks are identified, and construction progress continues to advance. The following list details ways in which project contingency can either increase or decrease:

- 1) The budgeted amount for a contract package is either lower or higher than the actual executed contract amount. Contingency will increase if the budgeted amount is higher than the actual contract amounts which results in a budget surplus, and vice versa if the budgeted amount is lower.
- 2) Increase of a contract amount through the execution of a change order or contract amendment. Contingency is decreased and transferred to the appropriate SCC.
- 3) Transfer of work scope, e.g. utility relocation, between contract packages through a change order. The scope value from one contract is decreased and transferred to Contingency. Contingency is then decreased by the same scope value and transferred to the other contract. Contingency is used as a “holding account” in this instance.
- 4) Revisions to contract packaging. Further evaluation of contract packages may be considered to seek budget savings and/or to mitigate cost or schedule impacts. Budget savings, if any, would be transferred to Contingency.
- 5) Utilization of allowance in design contracts. The allowance amount to be utilized will decrease this contingency category and will be transferred to the appropriate SCC.

### Changes Identified and Project Performance

HART and the PMOC continue to hold a monthly breakout session to review cost containment strategies and changes being considered for each contract. Changes are tracked by three categories which are determined by how well defined a change is and are summarized as Changes Identified in Project Cost reports. HART continually manages the strategy to avoid or mitigate as well as plan the timing of any potential changes. Breakout session discussions focus on opportunities to reduce costs and accelerate contract-scheduled activities to attain key milestones earlier than targeted. The session concludes with an overview of the cost and schedule drawdown curves, if and when changes might occur, in order to assess project performance against total project contingencies and buffer float.

The Risk and Contingency Management Plan (RCMP), Contract Packaging Plan (CPP), Master Project Schedule (MPS), Project Budget and Financial Plan updates are all in progress. The RCMP includes updates to the cost and schedule contingency drawdown curves, which establish minimum and buffer zone levels of cost and schedule contingency in accordance with FTA recommendations. Over the course of the project, if the cost or schedule contingency enter into the buffer zone (the area above the minimum contingency), Project Management will immediately implement actions to maintain the level of contingency appropriate for the project stage.

# HART Project Contingency Drawdown with Details

Data as of 8/26/16

#	Project No.	Project Desc.	Budget, Transfer/Change, Description	Contingency Drawdown Bal.	Contingency Code
<b>July '12 (Bottoms-Up Estimate)</b>					
1)	FD-240	Farmington Highway Stations Group HD	Budget Transfer for Contract Award from Project Scope to Contingency (Contract Allowance)	158,443	00.03 - Contract Allowance
2)	FD-530	Airport Section Viaduct/Utility HD	Budget Transfer for Contract Award from the AS500 HD contract budget	\$3,754,100	00.02 - Allocated Contingency
3)	MA-975	LEED Commissioning Services	Budget Transfer for Contract Award above the LEED Comm. Services contract budget	1,559,633	00.02 - Allocated Contingency
4)	DB-320	Kaunohouli Highway Viaductway DB	Budget Transfer for Contract Award above the R455 DB contract budget	4,220,833	00.02 - Allocated Contingency
5)	DB-120	West Oahu Farmington Highway Viaductway DB	Budget Transfer for this Contingency Drawdown	13,995,330	00.02 - Allocated Contingency
			July '12 Contingency Drawdown	\$8,881,279	
			<b>July '12 - Ending Contingency Balance</b>	<b>\$649.4</b>	
<b>August '12</b>					
1)	FD-140	West Oahu Stations Group HD	Budget Transfer for Contract Award under R0065 HD contract budget	\$1,008,300	00.02 - Allocated Contingency
2)	FD-530	Airport Section Viaduct/Utility HD	Budget Transfer for Contract Award under OCOU HD contract budget	\$5,911,245	00.02 - Allocated Contingency
3)	DB-120	West Oahu Farmington Highway Viaductway DB	Executed Change Order No. 17 - Procedure and Initial Problem Change	12,000,000	00.02 - Allocated Contingency
			August '12 Contingency Drawdown	\$6,086,148	
			<b>August '12 - Ending Contingency Balance</b>	<b>\$654.5</b>	
<b>September '12</b>					
1)	MA	MA	NO Contingency Drawdown	\$0	
			September '12 Contingency Drawdown	\$0	
			<b>September '12 - Ending Contingency Balance</b>	<b>\$654.5</b>	
<b>October '12</b>					
1)	DB-120	West Oahu Farmington Highway Viaductway DB	Executed Change Order No. 21 - Builders Risk Insurance Coverage	152,600	00.02 - Allocated Contingency
			October '12 Contingency Drawdown	152,600	
			<b>October '12 - Ending Contingency Balance</b>	<b>\$654.4</b>	
<b>November '12</b>					
1)	FD-440	Airport Stations Group HD	Budget Transfer for Contract Award under AS5 HD contract budget	\$227,184	00.03 - Contract Allowance
2)	FD-340	Kaunohouli Highway Stations Group HD	Budget Transfer for Contract Award under R455 HD contract budget	\$302,469	00.03 - Contract Allowance
3)	MA-905	General Engineering Consultant	Budget Transfer to align contract budget with committed value	1,420,633	00.02 - Allocated Contingency
			November '12 Contingency Drawdown	\$309,623	
			<b>November '12 - Ending Contingency Balance</b>	<b>\$654.7</b>	
<b>December '12</b>					
1)	FD-400	Airport Section Viaduct/Utility HD	Executed Contract Amendment No. 01 - Design & Engineering Cost Estimates	1,027,000	00.02 - Allocated Contingency
			December '12 Contingency Drawdown	1,027,000	
			<b>December '12 - Ending Contingency Balance</b>	<b>\$654.4</b>	
<b>January '13</b>					
1)	DB-320	Kaunohouli Highway Viaductway DB	Executed Change Order No. 01 - Access to alternative analysis	116,981	00.02 - Allocated Contingency
			January '13 Contingency Drawdown	116,981	
			<b>January '13 - Ending Contingency Balance</b>	<b>\$654.4</b>	
<b>February '13</b>					
1)	DB-120	West Oahu Farmington Highway Viaductway DB	Executed Change Order No. 26 - Bus, Cong Requirements Additional BIDDY at H. Wheeler RD	13,870,378	00.02 - Allocated Contingency
			February '13 Contingency Drawdown	13,870,378	
			<b>February '13 - Ending Contingency Balance</b>	<b>\$652.8</b>	
<b>March '13</b>					
1)	FD-240	Farmington Highway Stations Group HD	Executed Contract Amendment No. 09 - Waipahu Station Sewer	133,856	00.03 - Contract Allowance
2)	DB-200	Maintenance & Storage Facility DB	Executed Change Order No. 06 - Bus, Cong Requirements DB Crossover Insulated Joints	1,464,370	00.02 - Allocated Contingency
			March '13 Contingency Drawdown	1,466,761	
			<b>March '13 - Ending Balance</b>	<b>\$652.3</b>	
<b>April '13</b>					
1)	FD-140	West Oahu Stations Group HD	Executed Contract Amendment No. 01 - Second generator provision	1,881,033	00.03 - Contract Allowance
2)	DB-120	West Oahu Farmington Highway Viaductway DB	Budget Transfer to offset the Cong Requirement for Change Order No. 26	\$1,970,178	00.02 - Allocated Contingency
3)	DB-200	Maintenance & Storage Facility DB	Budget Transfer to offset the Cong Requirement for Change Order No. 06	\$434,000	00.02 - Allocated Contingency
4)	DB-320	Kaunohouli Highway Viaductway DB	Budget Transfer to align current budget to contract schedule of Milestones	\$500	00.02 - Allocated Contingency
			April '13 Contingency Drawdown	\$2,022,706	
			<b>April '13 - Ending Contingency Balance</b>	<b>\$654.3</b>	
<b>May '13</b>					
1)	MA	MA	NO Contingency Drawdown	\$0	
			May '13 Contingency Drawdown	\$0	
			<b>May '13 - Ending Contingency Balance</b>	<b>\$654.3</b>	

# HART Project Contingency Drawdown with Details

DOB as of 8/28/16

Project No.	Project Description	Budget Transfer/Change Description	Contingency Drawdown Total	Contingency Code
<b>June '13</b>				
000	000	June '13 Contingency Drawdown	\$654.3	00
<b>July '13</b>				
Beg. Balance:			\$654.3	
01	01	Enacted Contract Amendment No. 04 - Antenna Engineering Design Services	(\$45,154)	0102 - Allocated Contingency
02	02	Enacted Change Order No. 07 - Archeological Inventory Survey (AIS) Provisional Sum Part 2	(\$3,000,000)	0102 - Allocated Contingency
03	03	Maintenance & Storage Facility CB	(\$553,000)	0102 - Allocated Contingency
04	04	Enacted Change Order No. 08 - Maintenance & Storage Facility Yard Switch Machines	(\$14,426)	0102 - Allocated Contingency
05	05	Maintenance & Storage Facility CB	(\$7,700)	0102 - Allocated Contingency
06	06	Maintenance & Storage Facility CB	(\$944,000)	0102 - Allocated Contingency
07	07	Enacted Change Order No. 11 - Preliminary Design & Supplemental Project Mgt	(\$5,264,106)	0102 - Allocated Contingency
July '13 - Ending Contingency Balance			\$649.1	
<b>August '13</b>				
Beg. Balance:			\$649.1	
01	01	Enacted Change Order No. 30 - Archeological Inventory Survey (AIS) Provisional Part 2	(\$5,000,000)	0102 - Allocated Contingency
02	02	Enacted Change Order No. 32 - Kaka'ia Station Mod/Upgrade	(\$7,381)	0102 - Allocated Contingency
03	03	Enacted Change Order No. 34 - Traditional Cultural Property Construction Partial Suspension	(\$1,199,000)	0102 - Allocated Contingency
04	04	Enacted Change Order No. 36 - Hoop Station Relocation Design	(\$490,615)	0102 - Allocated Contingency
05	05	Enacted Change Order No. 06 - Archeological Inventory Survey (AIS) Provisional Part 2	(\$1,500,000)	0102 - Allocated Contingency
06	06	Enacted Contract Amendment No. 02 - Contract Redesign	(\$504,336)	0103 - Contract Allowance
07	07	Budget Transfer for Contract Award under ERE-1H Contract Budget	(\$3,758,472)	0102 - Allocated Contingency
August '13 Contingency Drawdown			(\$6,864,004)	
August '13 - Ending Contingency Balance			\$643.2	
<b>September '13</b>				
Beg. Balance:			\$643.2	
01	01	Enacted Change Order No. 33 - Provisional Sum 1001 - Joint Use and Occupancy	(\$4,000,000)	0102 - Allocated Contingency
02	02	Enacted Change Order No. 35 - Architectural Design Conflict	(\$130,815)	0102 - Allocated Contingency
03	03	Enacted Change Order No. 12 - ERE-1B Design Escalation	(\$223,500)	0102 - Allocated Contingency
04	04	Enacted Contract Amendment No. 10 - HTP 2 Delay/Design Delay from Core Systems Contract & West Oahu Fanning Highway EB Contract	(\$770,685)	0102 - Allocated Contingency
September '13 Contingency Drawdown			(\$6,124,999)	
September '13 - Ending Contingency Balance			\$637.1	
<b>October '13</b>				
Beg. Balance:			\$637.1	
01	01	Enacted Change Order No. 13 - Ins. Group Requirements/ Flood Access, Modification	(\$29,150)	0102 - Allocated Contingency
02	02	Budget Transfer for Change Order No. 13 for Ins. Group Requirements	(\$26,500)	0102 - Allocated Contingency
03	03	Enacted Change Order No. 37 - Ala Ika Street, Moysa Way at [6] Horizon, E Fanning HWY	(\$2,815)	0102 - Allocated Contingency
04	04	Enacted Change Order No. 05 - Platform Screen Gates Systems	(\$33,001,667)	0101 - Unallocated Contingency
05	05	Budget Transfer for Contract Award under DWS-FC Contract Budget	(\$1,191,700)	0102 - Allocated Contingency
October '13 Contingency Drawdown			(\$34,011,731)	
October '13 - Ending Contingency Balance			\$615.0	
<b>November '13</b>				
Beg. Balance:			\$615.0	
01	01	Enacted Change Order No. 38 - Insurance Coverage Requirement Oct 2013	(\$1,000,000)	0102 - Allocated Contingency
02	02	Budget Transfer for Change Order No. 03 for Ins. Group Requirements	(\$1,000,000)	0102 - Allocated Contingency
03	03	Enacted Change Order No. 014 - Preliminary Design & Supplemental Project Management 2	(\$19,846)	0102 - Allocated Contingency
04	04	Enacted Change Order No. 015 - Yard Layout Revisions/PP Structural Steel Modification	(\$1,423,000)	0102 - Allocated Contingency
05	05	Budget Transfer for Change Order No. 015 for Ins. Group Requirements	(\$33,000)	0102 - Allocated Contingency
06	06	Enacted Contract Amendment No. 01 - Archeological Inventory Survey (AIS) Suspension	(\$53,000)	0102 - Allocated Contingency
07	07	Budget Transfer for Contract Award for HWS-FC1	(\$1,300,300)	0101 - Unallocated Contingency
November '13 Contingency Drawdown			(\$2,920,966)	
November '13 - Ending Contingency Balance			\$610.0	
<b>December '13</b>				
Beg. Balance:			\$610.0	
01	01	Enacted Contract Amendment No. 05 - Union St/Keolu, scope amend	(\$45,026)	0102 - Allocated Contingency
02	02	Enacted Contract Amendment No. 03 - Design relocation of Heico drive and fiber optic line	(\$3,026)	0102 - Allocated Contingency
December '13 Contingency Drawdown			(\$48,052)	
December '13 - Ending Contingency Balance			\$609.8	
<b>January '14</b>				
Beg. Balance:			\$609.8	
01	01	Enacted Contract Amendment No. 06 - Archeological Inventory Survey (AIS) Suspension	(\$3,306,450)	0102 - Allocated Contingency
02	02	Enacted Contract Amendment No. 02 - Soil Resistance Test and Max Sag Calculation	(\$426,153)	0102 - Allocated Contingency
03	03	Budget Transfer for Contract Award less than CEM East contract budget	(\$1,069)	0102 - Allocated Contingency
04	04	Budget Transfer for Contract Award less than CEM East contract budget	(\$1,302,817)	0102 - Allocated Contingency
January '14 Contingency Drawdown			(\$5,096,529)	

# HART Project Contingency Drawdown with Details

Date as of 8/26/16

Project No.	Project Desc.	Budget Transfer/Change Description	Contingency Drawdown (H)	Continuity Code
<b>January '14 - Ending Contingency Balance</b>				
			\$608.3	
<b>February '14</b>				
		<b>Beg. Balance:</b>	\$608.3	
1)	FD-430 Airport Section guideway Utilities ED	Executed Contract Amendment No. 01 - Revised & Sub-Contracted Investigation	(1334.900)	90.02 - Allocated Contingency
2)	FD-430 Airport Section guideway Utilities ED	Budget Transfer for Contract Award - Architectural & Cultural Monitoring contract	(1311.487)	90.02 - Allocated Contingency
3)	WA-910 P&E II	Budget Transfer for Contract Award - Architectural & Cultural Monitoring & Core Systems Support contracts	(144,424.143)	90.02 - Allocated Contingency
4)	WA-920 Architectural & Cultural Monitoring	Budget Transfer for Contract Award - Architectural & Cultural Monitoring contract	(579.761)	90.02 - Allocated Contingency
5)	WA-922 Core Systems Support	Budget Transfer for Contract Award - Core Systems Support contract	(4,308.293)	90.02 - Allocated Contingency
		<b>February '14 Contingency Drawdown</b>	<b>(1532.900)</b>	
<b>February '14 - Ending Contingency Balance</b>				
		<b>Beg. Balance:</b>	\$608.2	
	N/A	No Contingency Drawdown	\$0	
		<b>March '14 Contingency Drawdown</b>	\$0	
<b>March '14 - Ending Contingency Balance</b>				
		<b>Beg. Balance:</b>	\$608.2	
<b>April '14</b>				
1)	FD-140 West Oahu Stations group HD	Executed Contract Amendment No. 04 - East Kapolei Stiff Room P&E Final Submittal	(800.243)	90.03 - Contract Allowance
2)	FD-430 Airport Section guideway Utility ED	Executed Contract Amendment No. 08 - Notices to Proceed & Provisional Sum for Design Support Dumping	(51,542.014)	90.03 - Contract Allowance
3)	FD-200 Maintenance & Storage Facility DB	Executed Change Order No. 016 - Rail Notations	(932.000)	90.02 - Allocated Contingency
4)	FD-200 Maintenance & Storage Facility DB	Executed Change Order No. 017 - Yard Layout Reconfiguration/Automated Train Operation Design	(5,735.000)	90.02 - Allocated Contingency
5)	FD-200 Maintenance & Storage Facility DB	Executed Change Order No. 018 - Rail Material Storage Plan	(9370.000)	90.02 - Allocated Contingency
6)	FD-200 Maintenance & Storage Facility DB	Executed Change Order No. 019 - Train Wash Facility Shortening	\$0	90.02 - Allocated Contingency
7)	FD-120 West Oahu Farmington Highway guideway DB	Executed Change Order No. 040 - Precast Yard Alternative Site	(12,400.638)	90.02 - Allocated Contingency
8)	FD-120 West Oahu Farmington Highway guideway DB	Executed Change Order No. 041 - Revised Track Alignment and Profile	(440.200)	90.02 - Allocated Contingency
9)	FD-330 Kamehameha Highway guideway DB	Executed Change Order No. 042 - Switchback Uses Communications Utility Relocation @ North South Rd	(1,043.042)	90.02 - Allocated Contingency
10)	FD-330 Kamehameha Highway guideway DB	Executed Change Order No. 005 - Rebar Clear Spanning Design Criteria	\$0	90.02 - Allocated Contingency
		<b>April '14 Contingency Drawdown</b>	<b>(117,460.162)</b>	
<b>April '14 - Ending Contingency Balance</b>				
		<b>Beg. Balance:</b>	\$590.7	
<b>May '14</b>				
1)	FD-140 West Oahu Stations group HD	Budget Transfer for Executed contract Amendment No. 05 - Final Design for relocated Hoopi Station	(220.128)	90.02 - Allocated Contingency
2)	FD-330 Kamehameha Highway guideway DB	Executed Change Order No. 028 - APEC work retrain construction and debris removal	(9,976.674)	90.02 - Allocated Contingency
3)	FD-330 Kamehameha Highway guideway DB	Executed Change Order No. 009 - Emergency walkway/insurance corp. Requirements 2013	(5310.000)	90.02 - Allocated Contingency
4)	FD-330 Kamehameha Highway guideway DB	Executed Change Order No. 007 - Reroute P&E to system site 4S	\$26,754	90.02 - Allocated Contingency
5)	WA-915 HOV 3+ Consultant	Budget Transfer for Executed Contract Amendment No. 002 - Increase I&M contract value	(287,391)	90.02 - Allocated Contingency
6)	WA-925 NSF LEED Consultant	Budget Transfer for Executed Contract Amendment No. 001 - LEED measurement and verification plan	(131,916)	90.02 - Allocated Contingency
7)	FD-200 Maintenance & Storage Facility DB	Executed Change Order No. 030 - CSs consolidated changes construction	(122,630.034)	90.01 - Unallocated Contingency
8)	FD-200 Maintenance & Storage Facility DB	Executed Change Order No. 025 - O&S reconfiguration	(370.000)	90.02 - Allocated Contingency
		<b>May '14 Contingency Drawdown</b>	<b>(622,109.196)</b>	
<b>May '14 - Ending Contingency Balance</b>				
		<b>Beg. Balance:</b>	\$588.4	
<b>June '14</b>				
1)	FD-200 Maintenance & Storage Facility DB	Board Approved RPO-00010 - Amendment 1 Non-Rail Escalation	(65,000.000)	90.02 - Allocated Contingency
		<b>June '14 Contingency Drawdown</b>	<b>(65,000.000)</b>	
<b>June '14 - Ending Contingency Balance</b>				
		<b>Beg. Balance:</b>	\$563.4	
<b>July '14</b>				
1)	FD-300 Core Systems Contract Design Build O&M	Executed Change Order No. 008 - Platform Screen Gates Mobilization	(1600.194)	90.02 - Allocated Contingency
2)	RDW Real Estate/Right of Way	Budget Transfer for Contract Award above the Real Estate Map & Survey Budget	(1,542.673)	90.02 - Allocated Contingency
3)	FD-200 Maintenance & Storage Facility DB	Budget Transfer to Project Contingency from remaining "known" changes balance	\$1,007.990	90.02 - Allocated Contingency
4)	FD-120 West Oahu Farmington Highway guideway DB	Budget Transfer to Project Contingency from remaining "known" changes balance	\$1,259.107	90.02 - Allocated Contingency
		<b>July '14 Contingency Drawdown</b>	<b>(321.161)</b>	
<b>July '14 - Ending Contingency Balance</b>				
		<b>Beg. Balance:</b>	\$563.7	
<b>August '14</b>				
1)	FD-330 Kamehameha Highway guideway DB	Executed Change Order No. 010 - Delay in issuance of Notice to Proceed 2 & 3	(11,120.000)	90.02 - Allocated Contingency
2)	FD-140 West Oahu Stations group HD	Executed Amendment No. 002 - Passenger screen gates	(180.233)	90.02 - Allocated Contingency
3)	FD-300 Airport Section Utility Construction DB	Budget Transfer for Contract Award above Airport Section Utility Construction original budget	(12,145.371)	90.02 - Allocated Contingency
4)	WA-948 On Call Hazard Removal Consultant	Budget Transfer due to scope transfer from RDW to Hazard consultant	(410.828)	90.02 - Allocated Contingency
5)	WA-945 On Call Contractor	Budget Transfer for Contract Award above On Call Contractor original budget	(1,130.435)	90.02 - Allocated Contingency
		<b>August '14 Contingency Drawdown</b>	<b>(14,923.166)</b>	
<b>August '14 - Ending Contingency Balance</b>				
		<b>Beg. Balance:</b>	\$559.4	
<b>September '14</b>				
1)	WA-920 Core Contract Contract	Budget Transfer to unallocated contingency as defined in contract in excess than current budget	(150.000)	90.02 - Allocated Contingency
2)	FD-200 Maintenance & Storage Facility DB	Executed Change Order No. 032 - Finalized color of Proprietary (PCP) Suspension	(474.833)	90.02 - Allocated Contingency
3)	FD-200 Maintenance & Storage Facility DB	Executed Change Order No. 026 - Insurance coverage Requirements 2014	(1,111.000)	90.02 - Allocated Contingency
4)	FD-330 Kamehameha Highway guideway DB	Executed Change Order No. 011 - Revised Vehicle Orientation/Construction Safety Security Plan	(1,241.503)	90.02 - Allocated Contingency
5)	FD-330 Kamehameha Highway guideway DB	Executed Change Order No. 012 - Insurance Coverage Program terms 10/13 - 12/31/14	(11,437.000)	90.02 - Allocated Contingency





# HART Project Contingency Drawdown with Details

Data as of 8/26/16

#	Project No.	Project Desc.	Budget Transfer/Change Description	Contingency Drawdown (k)	Contingency Code
<b>Oct '15</b>					
1)	PD-340	Kaunahana Highway Stations Group PD	Executed Change Amend No. 008 - Interface Coordination	\$492.8	90.02 - Allocated Contingency
2)	PD-340	Kaunahana Highway Stations Group PD	Executed Change Amend No. 009 - Repetition of NIP4		90.02 - Allocated Contingency
3)	PD-340	Serrano Highway Stations Group 2 PD	Executed Change Amend No. 011 - NIP2 Extension		90.02 - Allocated Contingency
4)	PD-340	Serrano Highway Stations Group 2 PD	Executed Change Amend No. 012 - W. Serrano Pad & PSES Foundation		90.02 - Allocated Contingency
5)	PD-140	West Oahu Stations Group PD	Executed Contract Amendment No. 018 - NFP 4 Reimbursement		90.02 - Allocated Contingency
6)	PD-140	West Oahu Stations Group PD	Executed Contract Amendment No. 019 - East Kapolei Bert Deductions		90.02 - Contract Allowance
7)	PD-140	West Oahu Stations Group PD	Executed Contract Amendment No. 006 - General Excise Tax Credit		90.02 - Allocated Contingency
8)	600MM-620	Core Systems Contract Design Build O&M	Executed Change Order No. 018 - Settlement of RFP-CC-000030/Items Legacy Claim (reimburse)	\$5,700,000.00	90.02 - Allocated Contingency
9)	600MM-620	Core Systems Contract Design Build O&M	Executed Change Order No. 019 - Credit for four CR Contracts, eliminates the requirements for mixed fleet operations	\$5,700,000.00	90.02 - Allocated Contingency
			<b>Oct '15 Contingency Drawdown</b>	<b>\$13,292,624</b>	
<b>Nov '15</b>					
1)	605-500	Maintenance & Storage Facility EB	Executed Contract Change Order No. 035 - Flagpole - Changes to Color Scheme	\$489.0	90.02 - Allocated Contingency
2)	605-500	Maintenance & Storage Facility EB	Executed Contract Change Order No. 037 - MIS Reconciliation Credit from COO 0007		90.02 - Allocated Contingency
3)	605-500	Maintenance & Storage Facility EB	Executed Contract Change Order No. 038 - Unpaid Suspension Amounts		90.02 - Allocated Contingency
4)	605-500	Maintenance & Storage Facility EB	Executed Contract Change Order No. 039 - Escalation of Additional Design Services Due to Schedule		90.02 - Allocated Contingency
5)	MM-070	Fare Collection Consultant	Budget Transfer for Contract Award - MM-070 Fare Collection Consultant		90.02 - Contract Allowance
			<b>Nov '15 Contingency Drawdown</b>	<b>\$1,778,328</b>	
<b>Dec '15</b>					
1)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 069 - Utility Relocation at Waianani Depot	\$488.2	90.01 - Unallocated Contingency
2)	605-200	Maintenance & Storage Facility EB	Executed Contract Change Order No. 041 - Rework of site work due to AIS		90.02 - Allocated Contingency
3)	605-200	Maintenance & Storage Facility EB	Executed Contract Change Order No. 086 - W&E Building System Design, M&W Interior Bldg Sys Dev (P2) and O&M Interior Bldg Sys Dev (P2)		90.02 - Allocated Contingency
4)	605-200	Kaunahana Highway Gushway EB	Executed Contract Change Order No. 019 - Reallocate Driveway, Curb Strips, HOV1 additional scope - design, speed		90.02 - Allocated Contingency
5)	PD-500	City Center Subway Utilities PD	Executed Change Amend No. 007 - City Center Energy Billing		90.02 - Allocated Contingency
			<b>Dec '15 Contingency Drawdown</b>	<b>\$1,897,553</b>	
<b>Jan '16</b>					
1)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 010 - Environment Escalation	\$487.3	90.01 - Unallocated Contingency
2)	605-200	Maintenance & Storage Facility EB	Executed Contract Change Order No. 042 - Unpaid Liquidated Damages		90.02 - Allocated Contingency
3)	605-200	Maintenance & Storage Facility EB	Executed Contract Change Order No. 042 - Misc. High Material Quantities		90.02 - Allocated Contingency
4)	605-505	Airport Section Gushway / Fair Construction	Executed Change Order No. 004 - Adjustment for Unpaid Allowances		90.02 - Allocated Contingency
5)	605-505	Airport Section Gushway / Fair Construction	Executed Change Order No. 006 - C&E Elevation Change - Access to Fair - 542-55-05		90.02 - Allocated Contingency
			<b>Jan '16 Contingency Drawdown</b>	<b>\$145,958</b>	
<b>Feb '16</b>					
1)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 020 - Escal. Due to Schedule Impacts P2	\$487.4	90.01 - Unallocated Contingency
2)	600MM-620	Core Systems Contract Design Build O&M	Executed Change Order No. 020 - Airport City Contract Agreement		90.02 - Allocated Contingency
3)	600MM-620	Core Systems Contract Design Build O&M	Executed Change Order No. 021 - F&C Partnership to OHS, P&S, Final		90.02 - Allocated Contingency
			<b>Feb '16 Contingency Drawdown</b>	<b>\$1,723,403</b>	
<b>Mar '16</b>					
1)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 076 - Additional Terms of Existing Structures	\$475.1	90.01 - Unallocated Contingency
2)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 077 - Pre-Cast Vard Extended Lease		90.01 - Unallocated Contingency
3)	605-200	Maintenance & Storage Facility EB	Executed Contract Change Order No. 034 - Credit of COO-16 Rail Material Storage		90.02 - Allocated Contingency
4)	605-200	Kaunahana Highway Gushway EB	Executed Contract Change Order No. 021 - HCOI Fence on Roadway Median, Transfer Pipe at IS Auct/Bank		90.02 - Allocated Contingency
5)	605-200	Kaunahana Highway Gushway EB	Executed Contract Change Order No. 022 - HCOI Single Lane Overpass		90.02 - Allocated Contingency
6)	605-505	Airport Section Utilities	Executed Change Order No. 001 - Asph'd Sub for Lane Lowerment at Villatearup Street and Hines Highway		90.02 - Contract Allowance
7)	605-505	Airport Section Utilities	Executed Change Order No. 002 - Paving at Water Line 4N1013 Contact		90.02 - Contract Allowance
8)	600MM-620	Core Systems Contract Design Build O&M	Executed Change Order No. 004 - Project 00009 - O&M and Builder's Risk O&M		90.02 - Contract Allowance
9)	600MM-620	Core Systems Contract Design Build O&M	Executed Change Order No. 033 - Relocation of Station P&S Schedules		90.02 - Allocated Contingency
10)	600MM-620	Core Systems Contract Design Build O&M	Executed Change Order No. 033 - Relocation of Station P&S Schedules		90.02 - Allocated Contingency
11)	605-140	West Oahu Stations Group PD	Executed Contract Amendment No. 003 - Elevator Modifications		90.02 - Contract Allowance
12)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 091 - RFP-CC-00004-05/2016 Change Requirements		90.02 - Allocated Contingency
			<b>Mar '16 Contingency Drawdown</b>	<b>\$1,006,124</b>	
<b>Apr '16</b>					
1)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 078 - 8th Phase clearance at contract 3,0765-E1	\$473.5	90.02 - Allocated Contingency
2)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 080 - Unknown Utility 2 inch Gas Line		90.02 - Allocated Contingency
3)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 081 - All Excavation in 105,541		90.02 - Allocated Contingency
4)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 082 - RFP-CC-001116 Transit Pipe Removal at Sta 614+61		90.02 - Allocated Contingency
5)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 083 - 6th Vard Modification (RFP-CC-001121)		90.02 - Allocated Contingency
6)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 084 - HT 33555 at 118th Contact 6033.1 (RFP-CC-001126)		90.02 - Allocated Contingency
7)	605-120	West Oahu Farrington Highway Gushway EB	Executed Contract Change Order No. 085 - LOC Contact Construction Impacts (RFP-CC-141)		90.01 - Unallocated Contingency

# HART Project Contingency Drawdown with Details

Details as of 8/26/16

Project #	Project Desc.	Budget / Transfer/Change Description	Contingency Drawdown (H)	Contingency Code
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 088 - LCC Station Access Construction Impacts (RFOC-149)	\$1,484,183	90.01 - Unallocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 087 - RFOC-00133 Kawahoua Material at Outer Building	\$4,109,697	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 088 - RFOC-00133 Leleia at Staff 245	\$318,000	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 089 - RFOC-00134 Staff 211 650x11 Corridor	\$28,975	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 090 - RFOC-00136 Uniontown Impaction Lines at WHS	\$1,616,600	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 091 - Issue 003172 AS Inspection Item Reconciliation	\$19,132	90.09 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 092 - RFOC-00281 RENT Medical HAVO Medical Chaircane Provisions	\$19,329	90.09 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 093 - RFOC-00284 Detail HECO Transformer Pads @ S-Substation	\$8,215	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 094 - RFOC-00284 Detail HECO Transformer Pads @ S-Substation	\$8,215	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 095 - RFOC-00009 Emergency 24' System Drain Line	\$3,000,054	90.01 - Unallocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 096 - WOPH Precast Yard Lease Extension to Jun16	\$191,836	90.01 - Allocated Contingency
185-120	Maintenance & Storage Facility DB	Executed Contract Change Order No. 044 - Extend Real Storage Yard Lease	\$1,130,116	90.01 - Allocated Contingency
185-120	Maintenance & Storage Facility DB	Executed Contract Change Order No. 045 - Patented Hoys, Division of Rail Progression System	\$29,845	90.01 - Allocated Contingency
185-120	Maintenance & Storage Facility DB	Executed Contract Change Order No. 024 - TC Design for Future Platform WWF	\$355,000	90.01 - Allocated Contingency
185-120	Maintenance & Storage Facility DB	Executed Contract Change Order No. 025 - UFS Transformer Window Temperature	\$12,000	90.02 - Allocated Contingency
185-120	Maintenance & Storage Facility DB	Executed Contract Change Order No. 026 - RFOC-00004 Detail HECO Transformer Pads @ S-Substation	\$648,420	90.03 - Contract Allowance
185-120	Maintenance & Storage Facility DB	Executed Contract Change Order No. 003 - First Construction Services	\$79,700	90.02 - Allocated Contingency
185-120	Maintenance & Storage Facility DB	Executed Contract Change Order No. 002 - Elevator Battery Lowering Systems	\$3,292,300	90.02 - Allocated Contingency
185-120	Maintenance & Storage Facility DB	Executed Contract Change Order No. 000 - Impact Associated with HECO	\$4,080,011	90.02 - Allocated Contingency
<b>Apr '16 Contingency Drawdown</b>				
			<b>\$469.5</b>	
<b>May '16</b>				
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 078 - Left Turn Farrington Hwy at Teresitas	\$175,000	90.01 - Unallocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 089 - Division of Station Platform Grades (RFOC00060)	\$451,848	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 100 - RFOC-00126 - Hazmat Transfer Tape Removal at STA	\$18,300	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 023 - Provisional Sum - HECO Utility Conflict	\$807,000	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 024 - Issue 258 HECO Contract 13 943-ET Duoborn-Const	\$590,000	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 027 - RFOC00077 Station Loads and Configuration - Construction	\$6,100,000	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 022 - AS Inspection Sum Reconciliation Issue 00133	\$1,238,524	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 006 - RFOC-00003-H11 Scope Revision - Kamehameha Hwy	\$84,112	90.03 - Contract Allowance
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 000 - Impact Associated with HECO	\$800,000	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 000 - Impact Associated with HECO	\$,715,546	90.02 - Allocated Contingency
<b>May '16 Contingency Drawdown</b>				
			<b>\$469.7</b>	
<b>Jun '16</b>				
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 102 - Hydrology Mitigation at Outer Property	\$107,250	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 103 - Hydro Station Relocation	\$892,414	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 104 - Contaminated Material at Median	\$1,015,000	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 004 - Install TPSS Foundation & Switchgear	\$795,500	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 004 - Install TPSS Foundation & Switchgear	\$3,910,311	90.02 - Allocated Contingency
<b>June '16 Contingency Drawdown</b>				
			<b>\$466.0</b>	
<b>Jul '16</b>				
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 001 - RFD Station B & C (Active Days Nov 1-1)	\$47,745	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 006 - Retoxia Chair-Lift Fence at O56	\$17,700	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 006 - TPSS at Civic Center	\$127,000	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 007 - Additional Meter field work	\$250,000	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 007 - Design Sewer Reconnection at First Hawaiian Eight	\$19,108	90.03 - Contract Allowance
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 008 - Preloading at 1029+45 for Box 476	\$12,103	90.03 - Contract Allowance
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 009 - Detail HCO Airport Division Utility Reconnection	\$36,119	90.03 - Contract Allowance
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 010 - Added Preloading at Piers 4, 5, & 6, 8, & 9	\$17,014	90.03 - Contract Allowance
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Change Order No. 002 - Counterweight cables for 9 machine Room West/MEL1 Station Elevators	\$653,663	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Amendment No. 021 - W0255 Ala Moana Carway Design	\$2,200	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Amendment No. 022 - Extension of W0256 PDM Services	\$13,888	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Amendment No. 023 - Hospital Sepsis System	\$5,694	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Amendment No. 010 - Misc RFDs Items and Reverse Station Common Bids for Elev	\$1,000,000	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Amendment No. 011 - Redesign/Leasing H0602 ramps	\$11,836	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Amendment No. 008 - DB Compliance	\$623,015	90.02 - Allocated Contingency
185-120	West Oahu Farrington Highway guideway DB	Executed Contract Amendment No. 008 - DB Compliance	\$2,250,242	90.02 - Allocated Contingency
<b>Jul '16 Contingency Drawdown</b>				
			<b>\$463.8</b>	

**Appendix C. Project Cost Reports** (data as of July 29, 2016)

Cost reports are run from the HART Contract Management System (CMS)

**Project Costs by Contract**



**Costs Reported as of Month Ending: July 2016**  
**Project Monthly Cost Report by Contract - One Line Summary**  
 7/29/16

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CPP No	Title	A		B	C=A+B		D	E		F
		Original	Changes		COMMITTED	Current*		AFE**	INURRED	
								Incurred To Date	%	
A-RT	ART Contracts	245,000	0	245,000	0	245,000	0	6,200	3%	
CCH-100	Inactive Hart/Qty CCH	15,348,443	0	15,348,443	0	15,348,443	0	14,925,228	97%	
CCH-101	HART/Qty Dept of BFS	105,092	0	105,092	0	105,092	0	0	0%	
CCH-102	HART/Qty DDC Land Division	256,201	0	256,201	0	256,201	0	173,182	68%	
CCH-107	HART/Qty Corporation Counsel (COR)	1,616,253	250,000	1,866,253	250,000	2,500,000	250,000	249,536	13%	
CCH-108	HART / Board of Water Supply (BWS)	928,325	0	928,325	0	928,325	0	928,325	100%	
DB-120	West Oahu/Farrington Hwy Guideway/DB	482,924,000	167,431,787	650,355,787	650,355,787	606,930,718	606,930,718	606,930,718	93%	
DB-200	Maintenance & Storage Facility DB	195,258,000	79,600,568	274,858,568	274,858,568	274,180,830	274,180,830	274,180,830	100%	
DB-320	Kamehameha Hwy Guideway/DB	372,150,000	18,142,368	390,292,368	390,292,368	296,348,421	296,348,421	296,348,421	76%	
DBB-171	West Oahu Station Group DBB	56,088,470	0	56,088,470	0	56,088,470	0	3,064,070	5%	
DBB-185	SPCD - West Side SG Construction	0	0	0	0	0	0	0	0%	
DBB-271	Farrington Highway Station Group DBB	78,999,000	785,600	79,784,600	79,784,600	450,000	450,000	450,000	1%	
DBB-275	SPCD-Pearl Highlands Pkg. Str. Cnstr.	0	0	0	0	0	0	0	0%	
DBB-371	Kamehameha Hwy Stations Grp. DBB	115,805,845	0	115,805,845	0	0	0	0	0%	
DBB-385	Ramp H2R2	5,203,646	0	5,203,646	5,203,646	1,311,578	1,311,578	1,311,578	25%	
DBB-470	SPCD-Airport Station Group Cnstr.	0	0	0	0	0	0	0	0%	
DBB-505	Airport Section Utilities Cnstr. DBB	27,993,290	-707,586	27,285,704	27,285,704	15,531,901	15,531,901	15,531,901	57%	
DBB-510	City Ctr Section Util Cnstr DBB	0	0	0	0	0	0	0	0%	
DBB-520	SPCD-Airport-City Center Gateway Cntr.	0	0	0	0	0	0	0	0%	
DBB-525	Airport Section Gateway 7 Pier DBB	3,373,000	54,843	4,027,843	4,027,843	4,027,843	4,027,843	4,027,843	100%	
DBB-580	SPCD-Dillingham/Kaka'ako SG Cntr.	0	0	0	0	0	0	0	0%	
DBB-600	Park-and-Ride Lots Construction	0	0	0	0	0	0	0	0%	
DBO M-320	Core Systems Design Build O/M	573,782,793	27,037,894	600,820,687	584,905,675	218,662,954	218,662,954	218,662,954	36%	
FD-140	West Oahu Station Group FD	7,789,000	2,411,643	10,200,643	10,062,649	9,489,489	9,489,489	9,489,489	93%	
FD-240	Farrington Highway Stations Group FD	9,300,636	4,994,235	14,294,871	12,091,340	12,606,322	12,606,322	12,606,322	88%	
FD-245	SPCD-Pearl Highlands Pkg. Str. FD	0	0	0	0	0	0	0	0%	
FD-340	Kamehameha Hwy Station Group FD	8,702,592	1,257,636	9,960,228	9,940,890	9,451,210	9,451,210	9,451,210	95%	
FD-450	SPCD-Airport Sect. Guideway/Util FD	38,640,360	4,293,512	42,933,872	43,134,472	41,647,169	41,647,169	41,647,169	97%	
FD-440	SPCD-Airport Station Group FD	10,177,365	1,396,487	11,573,852	10,655,793	10,059,820	10,059,820	10,059,820	87%	
FD-530	SPCD - City Center Guideway/Util FD	43,948,220	3,149,342	47,097,562	44,481,241	43,605,272	43,605,272	43,605,272	93%	
FD-550	SPCD - Dillingham and Kaka'ako SG FD	18,321,318	1,309,799	19,631,117	16,056,412	12,293,535	12,293,535	12,293,535	63%	
FD-600	Park-and-Ride Lots Final Design	0	0	0	0	0	0	0	0%	
HRT-200	HART Labor	52,951,942	0	52,951,942	0	52,951,942	0	52,951,942	99%	

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\* Current Committed = Original Contract + COO/Amendment  
 \*\* AFE = Authorized For Expenditure (Latest NTP Amounts or equal to current commitment Plus Executed Change Orders/Amendments)

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Costs Reported as of Month Ending: July 2016  
**Project Monthly Cost Report by Contract - One Line Summary**  
 7/29/16

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CPP No	Title	A		B	C=A+B		D	E		F
		Original	COMMITTED Changes		Current*	AFE**		INURRED To Date	PERCENT %	
HRT-201	HART ODC Contracts	19,352,584	82,122	19,434,706	412,132	23,385,529			120%	
MM-900	Fare Collection DFI	15,464,198	0	15,464,198	15,464,198	593,840			4%	
MM-930	Elevators & Escalators Install/Maint	50,382,714	1,016,321	51,399,035	6,458,429	6,290,580			12%	
MM-280	SPCD-WOFH/KHSG CE&I(REPA CK&GED) CPFF	0	0	0	0	0			0%	
MM-290	Construction Engng & Insp CEI/West	54,232,480	0	54,232,480	16,650,000	28,003,077			52%	
MM-385	SPCD-Pearl Highlands Garage Ramps CEI CPFF	0	0	0	0	0			0%	
MM-500	SPCD-By MM959 CEI East CPFF	0	0	0	0	0			0%	
MM-525	SPCD-By MM959 CEI East CPFF	0	0	0	0	0			0%	
MM-390	SPCD-By MM959 CEI East CPFF	0	0	0	0	0			0%	
MM-595	SPCD - Const. Engng & Insp. CEI East CPFF	63,083,417	-50,377,317	12,706,100	(85,120,217)	12,382,150			37%	
MM-596	Construction Engng & Insp CEI East 2 CPFF	55,036,130	0	55,036,130	55,036,130	5,830,050			11%	
MM-600	SPCD-UHWO Pkg-Hoopili Stn Fresh CEI CPFF	0	0	0	0	0			0%	
MM-900	Program Mgt Support Const (PM SC-1) CPFF	15,952,569	0	15,952,569	20,700,000	0			0%	
MM-901	Program Mgt Support Const (PM SC-2) CPFF	33,376,897	18,444,023	51,820,920	45,124,813	43,875,716			85%	
MM-905	MM-905 Gen Engng Const EIS/PE CPFF	0	78,564,942	78,564,942	78,564,942	74,157,822			94%	
MM-910	MM-910 Gen Engng Const FD-Construct CPFF	150,000,000	0	150,000,000	150,000,000	149,446,962			100%	
MM-913	MM-913 Gen Engng Reconnect CPFF	46,143,277	398,451	46,541,728	31,344,951	30,460,903			65%	
MM-915	HDOT Traffic Mgmt. Consult. T8M	1,600,000	2,400,000	4,000,000	7,000,000	3,468,025			87%	
MM-920	HDOT Coordination Const WOFH T8M	3,000,000	6,500,000	9,500,000	10,750,000	7,333,463			77%	
MM-921	HDOT Coordination Const KHG T8M	10,000,000	-1,400,000	8,600,000	7,600,000	4,582,312			53%	
MM-922	HDOT Coordination Const Airport T8M	12,000,000	-5,600,000	6,400,000	4,400,000	2,891,430			45%	
MM-923	HDOT Coordination Const City Center T8M	0	0	0	0	0			0%	
MM-925	HDOT Labor - WDFH/KHG Agreements T8M	550,000	2,865,633	3,415,633	4,681,266	1,878,479			55%	
MM-926	HDOT Labor - Airport Agreements T8M	0	0	0	0	0			0%	
MM-930	HDOT State SOA Manager & Consultant T8M	1,272,400	583,142	1,855,542	843,167	921,092			50%	
MM-935	Real Estate Consultant T8M/T1	3,000,000	5,077,665	8,077,665	8,077,165	7,070,427			88%	
MM-937	Real Estate Consultant - Maps/Surv. CPFF	2,988,000	0	2,988,000	1,500,000	1,056,637			35%	
MM-940	Kako'o Consultant T8M/T1	1,000,000	0	1,000,000	500,000	526,643			53%	
MM-941	Kako'o Consultant II CPFF	200,000	0	200,000	200,000	33,333			17%	
MM-945	On-Call Contractor T8M/T1	1,000,000	1,000,000	2,000,000	1,800,000	1,981,790			100%	
MM-946	On-Call Hazmat Removal Contractor T8M/T1	4,575,000	75,000	4,650,000	1,075,000	3,108,990			67%	
MM-947	On-Call Contractor 2 T8M/T1	7,500,000	0	7,500,000	4,500,000	5,626,155			75%	
MM-948	On-call Contractor 3 T8M/T1	20,000,000	0	20,000,000	0	0			0%	

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Costs Reported as of Month Ending: July 2016  
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CPP No	Title	A		B		C-A+B		D		E		F	
		Original	COMMITTED Changes	Current *	AFE**	AFE**	Incurred To Date	Incurred To Date	PERCENT %				
MM-350	DCIP Consultant	1,250,000	0	1,250,000	1,250,000	1,093,906	88%						
MM-351	Owner-Controlled Insurance Program	41,000,000	0	41,000,000	0	33,493,433	82%						
MM-360	Archeological & Cultural Monitoring	1,658,474	0	1,658,474	1,658,474	1,493,039	90%						
MM-362	Core Systems Support	43,988,989	0	43,988,989	3,600,000	17,301,205	39%						
MM-364	Safety and Security Consultant	4,699,573	112,751	4,812,324	4,012,751	3,738,524	78%						
MM-370	Fare Collection Consultant	1,178,300	0	1,178,300	1,178,300	56,515	5%						
MM-375	LEED Commissioning Services for MSF	278,630	39,900	318,530	318,530	170,560	54%						
MM-382	On Call Appraiser	1,000,000	0	1,000,000	0	0	0%						
OTHER	All Project Wide Documents	0	0	0	0	0	0%						
PA-101	Programmatic Agreement Humanities	0	0	0	0	0	0%						
PA-102	Programmatic Agreement HPC	400,000	0	400,000	2,000,000	197,716	49%						
PA-103	Programmatic Agreement HPC Park Inpr	0	0	0	0	0	0%						
ROW	Real Estate / Right-of-Way	115,885,511	0	115,885,511	121,992	113,389,871	98%						
UTIL	Utility Company Contracts	95,637,272	-1,920,761	93,716,512	71,803,181	55,731,840	59%						
<b>Total Project:</b>		<b>3,000,006,465</b>	<b>369,270,000</b>	<b>3,369,276,465</b>	<b>2,674,879,855</b>	<b>2,270,128,152</b>							

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Project Costs by SCC – Level 2



Costs Reported as of Month Ending: July 2016  
 Project Monthly Cost Report by SCC Details

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SCC	Title	BUDGET		COMMITTED		AFE		ESTIMATE AT COMPLETION		INCURRED
		Baseline	Transfers	Current	Current *	AFE**	Changes ID#***	Est. At Completion***	Variance	
<b>1. Subtotal 10 - 80 SCC Costs</b>										
10.01	Guideway & Track Elements	1,114,215,147	45,723,329	1,159,938,476	550,778,923	36,893,861	(968,443)	1,159,938,476	0	455,415,447
10.02	Guideway: At-grade semi-exclusive	0	17,378	17,378	17,378	17,378	0	17,378	0	17,378
10.04	Guideway: Aerial Structure	1,022,380,671	48,163,232	1,065,543,923	465,892,169	27,647,718	(968,443)	1,065,543,923	0	385,364,387
10.05	Guideway: Built-up fill	0	0	0	0	0	0	0	0	4,588,982
10.08	Guideway: Retained Cut or Fill	7,492,944	(1,056,688)	6,436,256	6,436,256	0	0	6,436,256	0	0
10.09	Track: Direct Fixation	79,347,205	2,664,360	82,011,565	74,204,369	9,197,389	0	82,011,565	0	65,413,614
10.11	Track: Ballasted	3,293,724	(595,849)	2,697,875	2,697,875	0	0	2,697,875	0	0
10.12	Track: Special (Switches, turnouts)	1,700,603	1,530,876	3,231,479	1,530,876	30,876	0	3,231,479	0	30,876
20.00	Stations, Stops, Terminals, Intermodal	421,804,740	(1,404,930)	420,400,710	303,677,950	1,801,921	261,478	420,400,710	0	7,542,000
20.01	At-grade station, stop, shelter...	6,111,332	(6,111,332)	0	0	0	0	0	0	0
20.02	Aerial Station, stop, shelter, mall	294,563,457	7,429,453	301,992,910	251,678,915	7,855,600	0	301,992,910	0	1,251,420
20.06	Automobile parking multi-story str	66,408,765	0	66,408,765	0	0	0	66,408,765	0	0
20.07	Elevators, Escalators	54,721,186	(2,722,151)	51,999,035	51,999,035	1,016,321	261,478	51,999,035	0	6,290,580
30.00	Support Facilities: Yards, Shops, Admin	92,535,015	22,875,539	115,410,574	115,410,574	19,066,910	0	115,410,574	0	118,817,050
30.01	Administration Bldg: Office, sales	0	231,250	231,250	231,250	231,250	0	231,250	0	231,250
30.02	Light Maintenance Facility	7,591,888	(9,184)	7,582,704	7,582,704	(4,089)	0	7,582,704	0	7,571,896
30.03	Heavy Maintenance Facility	38,099,138	5,108,688	43,207,806	43,207,806	5,350,776	0	43,207,806	0	45,195,932
30.04	Storage or Maintenance of Way Bul	7,797,460	955,732	8,753,242	8,753,242	1,017,332	0	8,753,242	0	8,826,848
30.05	Yard and Yard Track	39,046,529	16,589,043	55,635,572	55,635,572	12,471,641	0	55,635,572	0	56,991,284
40.00	Sitework & Special Conditions	983,178,121	39,779,809	1,022,957,930	737,114,403	168,412,729	(3,316,504)	1,022,957,930	0	603,825,735
40.01	Demolition, Clearing, Earthwork	29,980,158	(9,066,668)	20,913,490	10,804,041	1,505,797	(155,082)	20,913,490	0	5,218,374
40.02	Site Utilities, Utility/Relocation	239,449,756	(515,106)	238,934,650	196,691,927	4,707,442	306,756	238,934,650	0	137,226,120
40.03	Haz. mat'l, contain'd soil removal	9,199,237	(3,164,433)	6,034,804	7,113,286	2,328,286	(391,304)	6,014,804	0	4,412,217
40.04	Environmental Mitigation	26,979,122	4,990,976	31,970,098	16,557,672	16,864	0	31,970,098	0	11,391,964
40.05	Site structures, retaining walls,	7,998,960	11,000,743	18,999,703	14,661,531	4,734,683	0	18,999,703	0	8,421,047
40.06	Pedestrian/bike access/landscaping	41,073,897	(5,627,874)	35,446,023	5,818,888	479,454	(2,349,213)	35,446,023	0	2,505,654
40.07	Auto, bus, van accessways	181,979,867	(17,392,167)	164,587,200	38,506,351	2,438,835	(965,478)	164,387,200	0	16,603,982
40.08	Temporary Facilities/Indirect Cost	386,517,624	59,774,538	446,292,162	446,340,708	152,207,367	267,817	446,292,162	0	417,996,476
80.07	Surveys, Testing, Investigation, I	0	0	0	0	0	0	0	0	50,000
50.00	Systems	221,284,301	27,911,531	249,195,832	249,499,816	27,475,099	0	249,195,832	0	60,279,767
50.01	Train control and signals	81,982,556	24,381,140	106,363,696	106,363,696	23,961,050	0	106,363,696	0	13,439,784

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Costs Reported as of Month Ending: July 2016  
**Project Monthly Cost Report by SCC Details**

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SCC	Title	A		B		C=A+B		D	E	F	G	H=C-G	I
		Baseline	Transfers	BUDGET	Transfers	Current	Current						
									AFE**	Changes ID't***	Est. #t Completion***	Variance	Incurred To Date
<b>1. Subtotal 10 - 80 SCC Costs</b>													
50.01	Systems	221,284,301	27,911,531	249,195,832	249,499,816	27,475,039	0	249,195,832	0	0	249,195,832	0	60,279,767
50.02	Traffic signals and crossing prot.	10,458,226	(206,890)	10,251,336	0	0	0	10,251,336	0	0	10,251,336	0	0
50.03	Traction power supply: substation	29,500,926	1,816,880	31,317,806	31,317,806	3,495,515	0	31,317,806	0	0	31,317,806	0	6,114,252
50.04	Traction power distribution: cat	32,878,150	5,059,838	37,937,988	33,029,111	7,941,115	0	37,937,988	0	0	37,937,988	0	23,499,266
50.05	Communications	53,691,339	6,133,477	59,824,816	59,824,816	5,573,419	0	59,824,816	0	0	59,824,816	0	17,708,011
50.06	Fare collection system and equipme	9,159,277	(9,112,878)	46,399	15,510,597	(10,350,000)	0	46,399	0	0	46,399	0	(481,546)
50.07	Central Control	3,613,827	(160,036)	3,453,791	3,453,791	0	0	3,453,791	0	0	3,453,791	0	0
60.00	ROW, Land, Existing Improvements	197,397,947	515,616	197,913,563	120,952,326	2,066,815	5,000,000	197,913,563	0	0	197,913,563	0	120,777,113
60.01	Purchase or lease of real estate	179,360,664	237,816	179,598,480	100,256,849	39,015	5,000,000	179,598,480	0	0	179,598,480	0	105,997,693
60.02	Relocation of existing households	18,037,283	277,800	18,315,083	20,695,477	2,027,800	0	18,315,083	0	0	18,315,083	0	14,779,420
70.00	Vehicles	186,829,020	4,645,501	191,474,521	191,474,521	1,446,224	40,000	191,474,521	0	0	191,474,521	0	50,609,174
70.01	Light Rail	166,721,396	5,847,191	172,568,577	172,568,577	1,446,224	0	172,568,577	0	0	172,568,577	0	39,651,228
70.06	Non-revenue vehicles	14,346,923	(1,320,375)	13,026,548	13,026,548	0	40,000	13,026,548	0	0	13,026,548	0	10,957,946
70.07	Spare parts	5,760,711	118,685	5,879,396	5,879,396	0	0	5,879,396	0	0	5,879,396	0	0
80.00	Professional Services	1,087,830,119	39,741,540	1,127,571,659	1,093,710,873	113,556,046	(26,631,364)	1,127,571,659	0	0	1,127,571,659	0	852,170,411
80.01	Preliminary Engineering	94,055,262	24,644,185	118,699,447	109,567,127	20,905,882	0	118,699,447	0	0	118,699,447	0	104,287,410
80.02	Final Design	228,321,632	(3,709,368)	224,612,264	208,598,909	33,864,483	(8,361,661)	224,612,264	0	0	224,612,264	0	175,562,531
80.03	Project Management Design & Cons	363,849,768	(28,315,655)	335,534,113	402,218,547	84,939,428	(17,504,214)	335,534,113	0	0	335,534,113	0	341,299,648
80.04	Constr. Admin. & Management	199,656,728	(34,420,307)	165,236,421	131,252,384	(44,789,988)	0	165,236,421	0	0	165,236,421	0	97,446,813
80.05	Professional Liability & other ins	46,549,724	28,781,938	75,331,662	43,174,657	7,000,500	0	75,331,662	0	0	75,331,662	0	35,546,639
80.06	Legal, Permits, Review Fees ect..	67,641,005	(3,206,464)	64,434,541	39,803,525	6,832,053	0	64,434,541	0	0	64,434,541	0	23,959,153
80.07	Surveys, Testing, Investigation, I	21,759,336	47,250,396	69,009,732	101,279,246	1,574,480	0	69,009,732	0	0	69,009,732	0	35,749,622
80.08	Start up	65,996,664	8,716,816	74,713,480	57,816,477	9,909,409	(775,809)	74,713,480	0	0	74,713,480	0	38,318,597
<b>Subtotal:</b>		<b>4,305,074,410</b>	<b>179,788,856</b>	<b>4,484,863,266</b>	<b>3,362,619,397</b>	<b>370,719,105</b>	<b>(25,615,053)</b>	<b>4,484,863,266</b>	<b>0</b>	<b>0</b>	<b>4,484,863,266</b>	<b>0</b>	<b>2,269,456,697</b>
<b>2. NTP</b>													
NTP	Authorized For Expenditure	0	0	0	0	2,302,722,649	0	2,302,722,649	0	0	2,302,722,649	0	0
NTP	Notice To Proceed	0	0	0	0	2,302,722,649	0	2,302,722,649	0	0	2,302,722,649	0	0
<b>Subtotal:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,302,722,649</b>	<b>0</b>	<b>2,302,722,649</b>	<b>0</b>	<b>0</b>	<b>2,302,722,649</b>	<b>0</b>	<b>0</b>

\* Current Committed = Original Contract + CCO /Amendment  
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 \*\*\* Changes Identified= Pending + Probable + Potential Changes  
 \*\*\*\* Est. At Completion = Original Contract + CCO/Amendments + Changes Identified



Costs Reported as of Month Ending: July 2016  
**Project Monthly Cost Report by SCC Details**  
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SCC	Title	A		B		C=A+B		D	E	F	G	H=C-G	I
		Baseline	Transfers	Current	Current	Current*	AFE**	Changes ID'd***	Est. At Completion***	Variance	Incurred To Date		
<b>3. Contingency</b>													
CRTR	Allocated Contingency	541,889,343	(103,814,142)	437,875,201	6,657,078	3,031,222	328,625,039	437,875,201	0	691,455			
90.02	Allocated Contract Contingency	540,101,329	(106,623,564)	433,477,765	4,031,222	3,031,222	328,658,341	433,477,765	0	691,455			
90.03	Allowances	1,588,014	2,809,422	4,397,436	2,625,855	0	(33,302)	4,397,436	0	0			
90.07	Known Change Contingency	0	0	0	0	0	0	0	0	0			
PRJ	Unallocated Contingency	101,871,170	(75,374,714)	25,896,456	0	0	0	25,896,456	0	0			
90.01	Unallocated Project Contingency	101,871,170	(75,374,714)	25,896,456	0	0	0	25,896,456	0	0			
<b>Subtotal:</b>		<b>643,560,513</b>	<b>(179,789,856)</b>	<b>463,771,657</b>	<b>6,657,078</b>	<b>3,031,222</b>	<b>328,625,039</b>	<b>463,771,657</b>	<b>0</b>	<b>691,455</b>			
<b>4. Finance Charges - Eligible</b>													
OTH	Finance Charges	173,058,243	0	173,058,243	0	0	0	173,058,243	0	0			
100.1	Finance Charges: Project-Eligible	173,058,243	0	173,058,243	0	0	0	173,058,243	0	0			
<b>Subtotal:</b>		<b>173,058,243</b>	<b>0</b>	<b>173,058,243</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>173,058,243</b>	<b>0</b>	<b>0</b>			
<b>FIA TOTAL PROJECT COSTS 5,121,693,166 (0) 5,121,693,166 3,369,276,465 2,676,472,977 303,009,986 5,121,693,166 0 2,270,128,152</b>													
<b>4. Finance Charges - Ineligible Costs</b>													
FINC	Finance Charges	42,000,000	0	42,000,000	0	0	0	42,000,000	0	0			
100.2	FTA Non-Eligible Costs	42,000,000	0	42,000,000	0	0	0	42,000,000	0	0			
<b>Subtotal:</b>		<b>42,000,000</b>	<b>0</b>	<b>42,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42,000,000</b>	<b>0</b>	<b>0</b>			
<b>INELIGIBLE COSTS 42,000,000 0 42,000,000 0 0 0 42,000,000 0 0</b>													
<b>Total Project: 5,163,693,166 (0) 5,163,693,166 3,369,276,465 303,009,986 5,163,693,166 0 2,270,128,152</b>													

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Appendix D. Procurement and Contract Status

Awarded Contracts						
Contract Code	Contract Name	Contractor Name	Advertise Date	Contract Date	Issue NTP	Comm at Substantial Completion Date
DB-120	West O'ahu/Farrington Highway Guideway (WOFH)	Kiewit Infrastructure West Company (KWC)	Apr 03'09	Nov 11'09	Dec 01'09	Nov 15'10
DB-200	Maintenance and Storage Facility (MSF)	Kiewit / Kobayashi Joint Venture (K/JV)	Jul 26'09	June 30'11	Jul 25'11	Jul 02'16
DB-320	Kamehameha Guideway (KHG)	Kiewit Infrastructure West Company (KWC)	Mar 19'10	June 30'11	Jul 12'11	Dec 15'15
DB-450	Airport Guideway and Stations	Shimick/Traylor/Granite, JV	Apr 07'15	TBD	TBD	NTP + 53 months
DBOM-920	Core Systems Contract	Ansaldo Honolulu JV	Aug 17'09	Nov 29'11	Jan 13'12	Mar 13'19
MI-930	Elevators and Escalators	Schindler Elevator Corporation	Dec 18'12	Jul 31'13	Aug 02'13	Jun 13'18
FD-140	West O'ahu Station Group Final Design and Support	URS Corporation	Jan 11'10	Jan 14'12	Jan 15'12	Jan 21'17
FD-340	Farrington Highway Station Group Final Design and Support -2	URS Corporation	Jan 01'13	Sep 27'13	Sep 30'13	Nov 14'16
FD-340	Kamehameha Highway Station Group Final Design (includes H2R2 Ramp) and Support	Anil Verma Associates, Inc.	Jan 20'11	Nov 16'12	Nov 26'12	Jan 14'17
FD-430	Airport Section Guideway and Utilities Final Design and Support	AECOM Technical Services, Inc.	Jan 26'11	Dec 22'11	Jan 05'12	Jan 30'17
FD-530	City Center Section Guideway and Utilities Final Design and Support	AECOM Technical Services, Inc.	Dec 16'11	Jul 30'12	Jul 31'12	Apr 30'18
FD-440	Airport Station Group Final Design and Support	AECOM Technical Services, Inc.	Mar 30'12	Nov 7'12	Nov 14'12	Jan 30'17
FD-550	Dillingham and Kaka'ako Station Groups "East Side Stations" Final Design and Support	Perkins+Will	Nov 14'12	Aug 15'13	Aug 19'13	Jul 30'18
MM-290	Construction Engineering & Inspection West Side Sections	PGHWong Engineering, Inc.	Jul 26'13	Jan 9'14	Jan 09'14	Jan 09'20
MM-595	Construction Engineering & Inspection East Side Sections	URS Corporation	Jul 26'13	Jan 02'14	Jan 09'14	Oct 09'15
MM-901	Program Management Support Consultant - 2 (PMSC-2)	InfraConsult LLC	Aug 03'11	Feb 28'12	Mar 06'12	Mar 07'17
MM-910	General Engineering Consultant II (GEC-2) (Final Design and Construction)	Parsons Brinckerhoff	Sep 03'09	Jun 30'11	Aug 02'11	Dec 31'14
MM-913	General Engineering Consultant III (GEC-3)	CH2M HILL	Jul 26'13	Dec 5'13	Dec 05'13	Apr 04'19
MM-935	Real Estate Consultant	Paragon Partners, Ltd.	Apr 01'11	Mar 14'12	Mar 14'12	Mar 13'17
MM-937	Real Estate Mapping & Surveying	R.M. Towill Corporation	Nov 15'13	May 22'14	May 23'14	May 21'17
MM-940	Kāko'o Consultant	Pacific Legacy, Inc.	May 20'11	Mar 29'12	Mar 30'12	Feb 14'17
MM-941	Section 106 Programmatic Agreement Project Manager Kāko'o II	Honua Consulting	Jun 26'15	Dec 08'15	Jan 04'16	Jan 03'18
MM-950	Owner-Controlled Insurance Program (OCIP) Consultant	Marsh USA, Inc.	Jan 31'12	May 10'12	Jun 05'12	May 09'17
MM-951	Owner-Controlled Insurance Program (OCIP) Brokerage Services	Aon Risk Services, Inc., of Hawaii	Jun 04'13	Apr 09'14	Apr 09'14	Mar 30'19
MM-960	Archaeological & Cultural Monitoring	Cultural Surveys Hawai'i	Sep 10'13	Jan 15'14	Jan 15'14	Sep 10'19
MM-962	CORE Systems Support	Lea+Elliott, Inc.	Sep 13'13	Feb 10'14	Feb 11'14	Sep 10'19
MM-964	Safety / Security Support	Lawson & Associates, Inc.	Oct 23'13	Apr 23'14	May 01'14	Dec 14'17
MM-975	LEED Commissioning Services for the Maintenance and Storage Facility (MSF)	Enovity, Inc.		Oct 6'10	Oct 07'10	Aug 31'17
PA-102	Historic Architecture Design Services	Fung Associates, Inc.	Mar 15'13	Aug 1'13	Aug 01'13	Oct 28'16
MM-915	HDOT Traffic Management Coordination Consultant	ICX Transportation Group, Inc.	Aug 15'11	Jun 5'12	Jun 12'12	Jun 11'17
MM-920	HDOT Design Coordination Consultant - West O'ahu/Farrington Highway	AECOM Technical Services, Inc.		Jun 7'11	Jun 08'11	Jun 07'18
MM-921	HDOT Design Coordination Consultant - Kamehameha Highway Guideway	AECOM Technical Services, Inc.		Jun 29'12	Jun 29'12	Jun 30'17
MM-922	HDOT Design Coordination Consultant - Airport and City Center Guideway	SSFM International, Inc.		Jun 8'12	Jun 12'12	Jun 13'17
MM-925	HDOT Labor Master Agreement WOFH	HDOT		Oct 27'10	Oct 27'10	Oct 27'19
MM-936	Real Estate Contractor Contract "II"	Colliers International HI, LLC	Mar 04'16	TBD	TBD	NTP + 48 months
MM-945	On-Call Construction Contractor	Royal Contracting Co. Ltd.	Jun 02'14	Aug 6'14	Aug 14'14	Jul 06'19
MM-946	On-Call Hazardous Materials (HazMat) Removal Contractor	CH2M HILL		Aug 23'12	Sep 07'12	Aug 22'19
MM-947	On-Call Construction Contractor II	Royal Contracting Co. Ltd.	Mar 17'15	May 21'15	May 21'15	May 21'20
MM-948	On-Call Construction Contract "III"	Royal Contracting Co. Ltd.	Feb 23'16	May 09'16	May 16'16	NTP + 84 months
MM-596	Construction Engineering and Inspection (CE&I) "II" Contract	Stantec Consulting Services	Mar 25'15	Sep 10'15	Sep 14'15	Dec 31'19
MM-970	Fare Collection System Technical Support Consultant	CH2M HILL	Mar 24'15	Oct 22'15	Oct 23'15	Dec 31'19
MM-980	Complex Construction Claims Negotiation and Litigation Services	Arcadis U.S., Inc.	Apr 27'16	Jun 29'16	TBD	NTP + 60 months + 3 year option
MM-980	Complex Construction Claims Negotiation and Litigation Services	Hill International Consulting, Inc.	Apr 27'16	Jun 29'16	TBD	NTP + 60 months + 3 year option
MM-980	Complex Construction Claims Negotiation and Litigation Services	Kobayashi Sugita & Goda, LLP	Apr 27'16	Jun 29'16	TBD	NTP + 60 months + 3 year option
MM-981	Complex Real Property Negotiations and Litigation Support Contract	Stern O'Toole Marcus & Fisher, A Law Corporation	Feb 23'16	TBD	TBD	NTP + 24 months + 2 year option
MM-982	On Call Appraisers	ACM Consultants, Inc.	Mar 18'16	Jun 23'16	Jun 23'16	NTP + 48 months
MM-983	Outside Counsel for Land Court Petition Services	Imanaka Asato	May 13'16	TBD	TBD	NTP + 36 months
MI-900	Fare Systems Contract	INIT Innovations in Transportation, Inc.	Aug 11'15	Apr 14'16	Apr 18'16	Apr 17'26
DBB-385	Ramp H2R2	Royal Contracting Co. Ltd.	Jan 30'15	May 18'15	May 18'15	May 31'16
DBB-505	Airport Section Utilities Construction	Nan, Inc.	Dec 17'13	Jun 30'14	Oct 6'14	Jul 13'16
DBB-525	Airport Section Guideway Seven (7) Pier Construction Contract	HDCC / CJA JV	Jul 09'14	Sep 18'14	Sep 18'14	Apr 22'15
DBB-271	Farrington Hwy Stations Group Construction	Hawaiian Dredging Construction Company, Inc.	Dec 19'14	Jun 22'15	Aug 17'15	NTP + 29 months
DBB-171	West O'ahu Stations Group Construction	Nan, Inc.	Apr 13'15	Jul 20'15	Oct 13'15	NTP + 29 months
DBB-371	Kamehameha Hwy Stations Group Construction	Nan, Inc.	Aug 18'15	Nov 17'15	TBD	NTP+ 32 months
	Independent Financial Auditor "II" Contract	KMH LLP	Oct 26'15	Mar 15'16	Mar 23'16	Mar 22'18



## Appendix F. DBE Participation

HART has established a Disadvantaged Business Enterprise (DBE) program in accordance with the regulations of the U.S. Department of Transportation (USDOT), Title 49, Code of Federal Regulations, Part 26 (49 CFR Part 26). To be certified as a DBE, a firm must be small business owned and controlled by socially and economically disadvantaged individuals.

FTA funds totaling approximately \$1.764 billion in year of expenditure dollars (\$1.550 billion New Starts funds plus \$0.214 billion Section 5307/ARRA funds) will be expended for Project related goods and services. A project goal of 13% or approximately \$229 million dollars has been established for awards to DBEs through Federal Fiscal Year 2018.

It is the policy of HART to ensure that DBEs as defined in 49 CFR Part 26 have an equal opportunity to receive and participate in USDOT-assisted contracts.

DBE Participation (9/24/07 to 8/31/16)						
DBE Firm	NAICS	Race	Sex	Contract Number	Participation to Date	Total DBE Participation
David's Fencing	238990	APA	M	CT-HRT-10H0137 DB-120	\$ 15,492	
				CT-DTS-1100195 DB-320	\$ 140,654	
				CT-HRT-1500297 MM-947	\$ 221	
				CT-HRT-1000449 DB-200	\$ 80,842	\$ 237,209
Glad's Landscaping	561730	APA	M	CT-HRT-10H0137 DB-120	\$ 331,197	\$ 331,197
Don's Makiki	484110	APA	M	CT-HRT-10H0137 DB-120	\$ 588,941	
				CT-HRT-10H0449 DB-200	\$ 81,581	
				CT-DTS-1100195 DB-320	\$ 60,714	\$ 731,236
Pacific Preferred Contractors Corp.	237310	APA	M	CT-HRT-10H0137 DB-120	\$ 212,114	
				CT-HRT-1500297 MM-947	\$ 3,840	\$ 215,954
PAC Electric	238210	APA	F	CT-HRT-10H0137 DB-120	\$ 7,254,511	\$ 7,254,511
PMJ Builders	238310	APA	M	CT-HRT-10H0137 DB-120	\$ 43,866	
				CT-DTS-1100195 DB-320	\$ 107,100	\$ 150,966
Standard Sheetmetal & Mechanical	236220	APA	M	CT-HRT-10H0449 DB-200	\$ 6,105	\$ 6,105
LP&D Hawaii	541320	APA	M	SC-DTS-1100013 FD-240	\$ 219,911	\$ 219,911
Ace Land Surveying	541370	NA	M	SC-DTS-1100013 FD-240	\$ 38,700	\$ 38,700
Integrated Security Tech.	561621	O	F	CT-HRT-1200106 DBOM-920	\$ 105,180	\$ 105,180
LKG-CMC	541618	O	F	SC-HRT-11H0131 MM-905	\$ 2,600,462	
				SC-DTS-0700001 ****MM-910	\$ 2,783,277	
				SC-HRT-1400051 MM-595	\$ 271,047	
				SC-HRT-1600008 MM-595	\$ 118,824	
				SC-HRT-1400049 MM-962	\$ 410,355	\$ 6,183,965

DBE Participation (9/24/07 to 8/31/16)						
DBE Firm	NAICS	Race	Sex	Contract Number	Participation to Date	Total DBE Participation
Lawson & Associates	541690	O	F	SC-HRT-11H0131 MM-905	\$ 740,962	
				SC-DTS-0700001 ****MM-910	\$ 150,141	
				SC-HRT-1400061 MM-964	\$ 1,516,327	\$ 2,407,430
Gary K. Omori	541618	APA	M	SC-HRT-11H0131 MM-905	\$ 388,609	
				SC-DTS-0700001 ****MM-910	\$ 392,920	\$ 781,529
Pat Lee & Assoc.	541618	APA	M	SC-HRT-11H0131 MM-905	\$ 402,791	
				SC-DTS-0700001 ****MM-910	\$ 374,110	\$ 776,901
212 Harakawa	541430	APA	F	SC-HRT-11H0131 MM-905	\$ 358,141	
				SC-DTS-0700001 ****MM-910	\$ 354,758	\$ 712,899
JAD & Associates	541330	APA	M	SC-DTS-0700001 ****MM-910	\$ 508,355	\$ 508,355
Pacific Architects	541310	APA	M	SC-DTS-0700001 ****MM-910	\$ 39,273	\$ 39,273
Nagame Okawa*	541310	APA	M	SC-DTS-0700001 MM-910	\$ 67,014	\$ 67,014
Consulting Structural Hawaii	541330	APA	M	SC-DTS-0700001 ****MM-910	\$ 298,557	\$ 298,557
Bright Light Marketing Group	541613	APA	F	SC-HRT-1200038 FD-430	\$ 162,813	
				SC-HRT-1200149 FD-530	\$ 191,227	
				SC-HRT-1300022 FD-440	\$ 134,912	\$ 488,952
Ki Concepts	541320	APA	M	SC-HRT-1200077 MM-922/923	\$ 26,550	\$ 26,550
Miyabara Associates	541320	APA	M	SC-HRT-1300022 FD-440	\$ 99,850	\$ 99,850
Anil Verma Associates, Inc. **	541350	HA	M	SC-HRT-1200111 FD-340	\$ 3,890,116	\$ 3,890,116
AMR Estimating Services ***	541330	HA	M	SC-HRT-11H0131 MM-905	\$ 135,281	
				SC-HRT-1400027 MM-913	\$ 1,209,793	\$ 1,345,074
The Nakoia Companies	541620	NA	M	CT-HRT-1200106 DBOM-920	\$ 3,843	\$ 3,843
Hawaiya Technologies	238210	APA	F	CT-HRT-10H0449 DB-200	\$ 27,514	
				CT-HRT-1200106 DBOM-920	\$ 20,142	\$ 47,656
Element Environmental	541620	APA	M	SC-HRT-1400050 MM-290	\$ 1,890,713	\$ 1,890,713
PSC Consultants	541330	APA	M	SC-HRT-1400050 MM-290	\$ 1,297,415	
				SC-HRT-1400051 MM-595	\$ 10,197	\$ 1,307,612

DBE Participation (9/24/07 to 8/31/16)						
DBE Firm	NAICS	Race	Sex	Contract Number	Participation to Date	Total DBE Participation
Bow Construction Management	541330	APA	M	SC-HRT-1400050 MM-290	\$ 127,539	\$ 127,539
FIC, LLC	541611	APA	M	SC-HRT-1400051 MM-595	\$ 1,299,481	
				SC-HRT-1600008 MM-595	\$ 346,027	\$ 1,645,508
The Solis Group	541620	O	F	SC-HRT-1400027 MM-913	\$ 1,841,030	\$ 1,841,030
Island Hauling	484110	APA	M	CT-HRT-1000449 DB-200	\$ 355,656	\$ 355,656
ADS System Safety Consulting *****	541620	BA	M	SC-HRT-1400061 MM-964	\$ 2,078,985	\$ 2,078,985
Minatoishi Architects	541310	APA	F	SC-HRT-1400027 MM-913	\$ 335,266	\$ 335,266
Dovetail Consulting	541330	BA	F	MOU-11-SO-1 MM-930	\$ 892,834	\$ 892,834
Amazon Construction Co.	238990	APA	F	CT-HRT-1500056 MM-945	\$ 446,558	
				CT-HRT-1500309 DBB-385	\$ 151,633	
				CT-HRT-1500297 MM-947	\$ 857,986	\$ 1,456,177
Aloha Steel	238120	APA	M	CT-HRT-1500056 MM-945	\$ 176	
				CT-HRT-1400323 DBB-505	\$ 36,094	
				CT-HRT-1500297 MM-947	\$ 152	\$ 36,422
Carol Kwan Consulting	561730	O	F	CT-HRT-1500056 MM-945	\$ 13,291	
				CT-HRT-1500297 MM-947	\$ 2,117	\$ 15,408
Geotech	423390	NA	M	CT-HRT-1500309 DBB-385	\$ 7,399	\$ 7,399
Lenax Construction	541611	O	F	SC-HRT-1600008 MM-595	\$ 1,143,635	\$ 1,143,635
<b>Total</b>						<b>\$ 40,103,117</b>

\* Nagame Okawa's countable participation is limited to the period from 1/2/09 to 2/16/10. The company graduated from the DBE program on 2/16/10.  
 \*\* Anil Verma Associates, Inc. is a prime contractor and was certified as a DBE effective 6/26/13.  
 \*\*\* AMR Estimating Services, Inc. was certified as a DBE effective 10/25/13.  
 \*\*\*\* DBE participation from 9/24/07 to 9/17/13.  
 \*\*\*\*\* ADS System Safety Consulting was certified as a DBE effective 8/7/14.

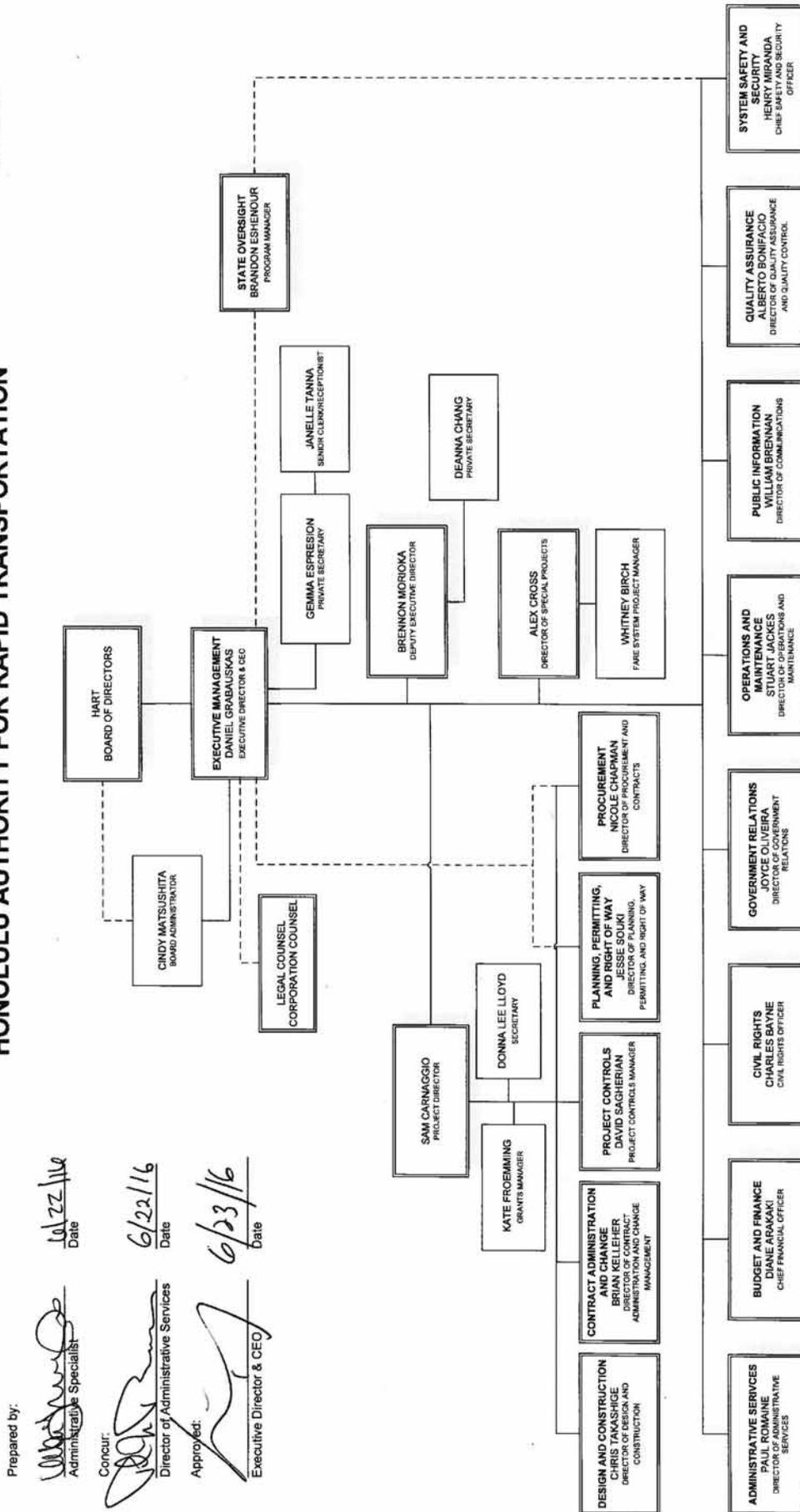
**Race Categories**

<b>APA</b>	Persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands, (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia or Hong Kong
<b>BA</b>	Persons having origins in any of the black racial groups of Africa
<b>HA</b>	Persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin regardless of race
<b>NA</b>	Persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians
<b>SAA</b>	Persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka
<b>O</b>	Any other group whose members are designated as socially and economically disadvantaged by the SBA

Appendix G. Project Organization Chart

June 27, 2016

HONOLULU AUTHORITY FOR RAPID TRANSPORTATION



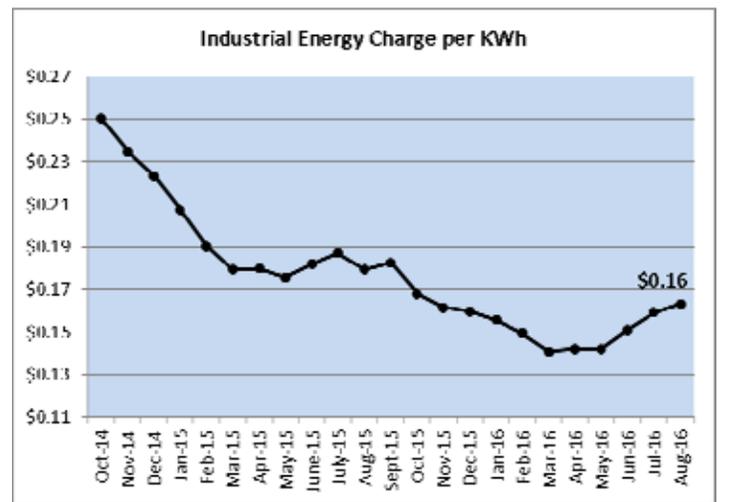
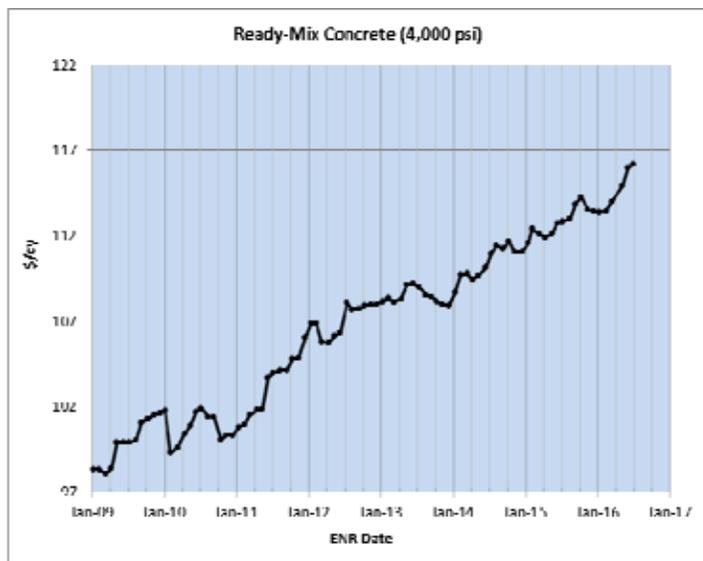
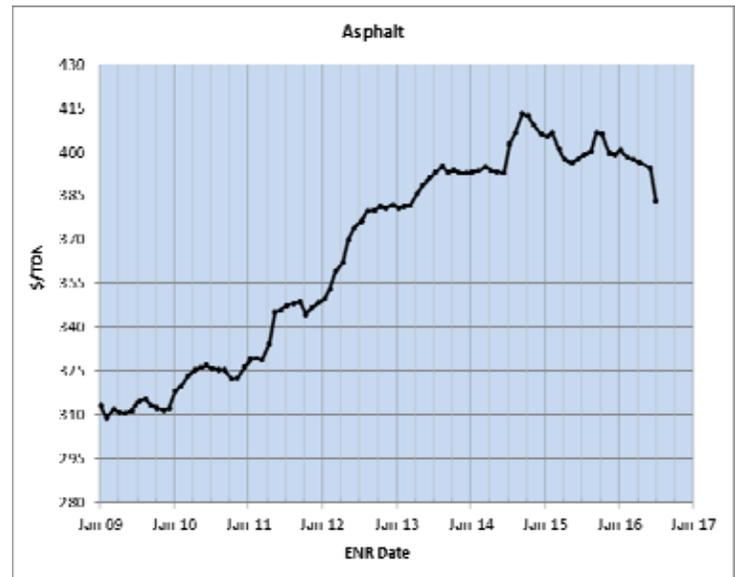
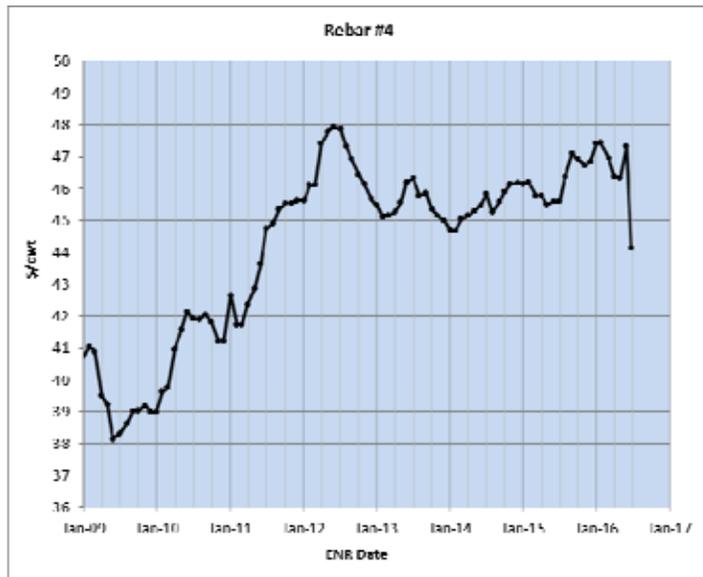
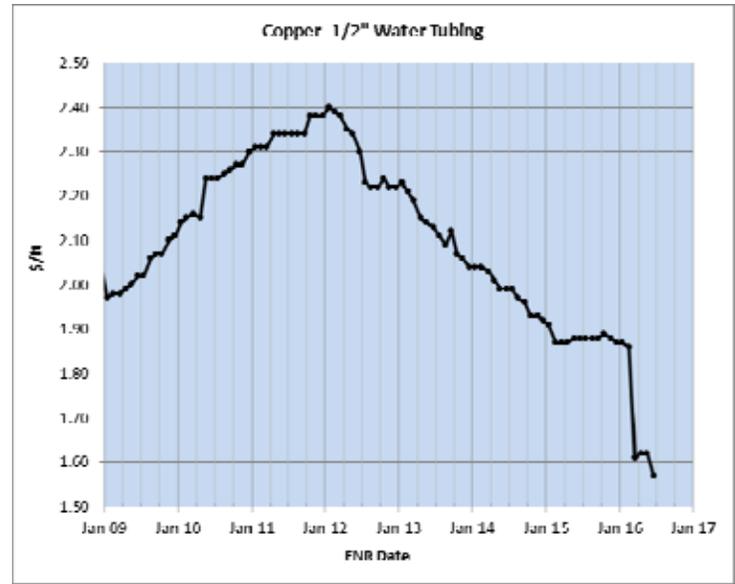
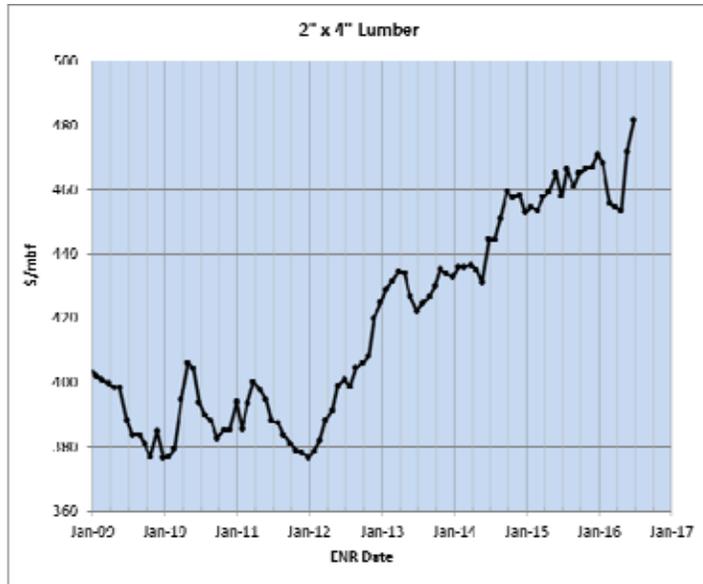
Prepared by:  Administrative Specialist Date: 6/22/16

Concur:  Director of Administrative Services Date: 6/22/16

Approved:  Executive Director & CEO Date: 6/23/16

### Appendix H. Indices on Key Commodities

The following charts represent the cost trends on some of the key materials used in the program.



Source: HECO: Effective Rate Summary for P Rate

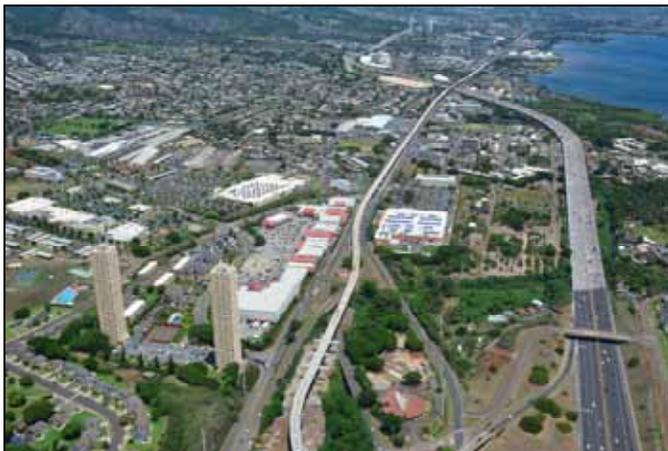
### Appendix I. Project Photos



Guideway construction in West O'ahu.



Equipment storage site.



Construction on Kamehameha Highway.



Balanced cantilever operations near the H-1 Freeway.



Construction along Kamehameha Highway.



Future Aloha Stadium Station.



Operations and Servicing Building (OSB).



Wheel Truing Building and OSB.



Maintenance of Way Building.



Casting Yard.