HART DEPT. COMM. NO. 216

IN REPLY REFER TO:
CMS-AP00-01912

HONOLULU AUTHORITY for RAPID TRANSPORTATION

Krishniah N. Murthy
INTERIM EXECUTIVE DIRECTOR AND CEO

BOARD OF DIRECTORS

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Mark N. Garrity
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Colbert M. Matsumoto
Glenn M. Nohara

December 16, 2016

The Honorable Ronald D. Kouchi
and Members of the State Senate
Hawaii State Capitol
415 South Beretania Street, Room 409
Honolulu, Hawaii 96813

Dear Senate President Kouchi and Senators:

Attached please find the Honolulu Authority for Rapid Transportation's (HART) 2016 Annual Report to the Governor of the State of Hawaii and the 2017 Legislature.

This report was prepared in response to a request of Governor David Ige and following the adoption of Honolulu City Council Resolution 15-79, CD1, which directs HART to annually report to the State Legislature no later than twenty days prior to the start of the Legislative Session on the construction, financial, revenue, and budgetary updates of the Honolulu Rail Transit Project.

This report is also available on our project website at:

http://hartdocs.honolulu.gov/docushare/dsweb/Get/Document-20212/20161217-annual-report.pdf

Mahalo for this opportunity to provide this annual report to our State and City leaders, as well as members of the general public.

Very truly yours,

Krishniah N. Murthy
Interim Executive Director and CEO

Attachment

cc: HART Board of Directors
Legislative Reference Bureau

HONOLULU RAIL TRANSIT PROJECT

HONOLULU AUTHORITY for RAPID TRANSPORTATION

2016 ANNUAL REPORT

REPORT TO THE GOVERNOR OF THE STATE OF HAWAI‘I AND THE 2017 LEGISLATURE

HONOLULU RAIL TRANSIT

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A – Interim Plan
B – Draft Update of the Financial Plan
C – Status of DPP Station Area TOD Planning

Download Appendices

Summary/Look Ahead

Summary

The purpose of this Annual Report is to provide the Governor, the Legislature and the public with an annual progress report on revenue, costs and progress of the Honolulu Rail Transit Project (the Project).

The Honolulu Authority for Rapid Transportation (HART) made significant progress in 2016. More than 10 miles of guideway has been built for the Project, and by the end of 2016, the entire guideway superstructure will be completed on the first half of the alignment. HART's Rail Operations Center (ROC) is now substantially complete and has been turned over to the Operations contractor. Located in Waipahu, the ROC is a 43-acre site that contains four main buildings where the fleet of 80 rail cars will be maintained and from which the rail system will be operated and monitored. HART's first 4-car passenger train arrived in Hawai'i and has been delivered to the ROC. Additional rail cars will be delivered throughout 2017.

HART also successfully awarded the following significant contracts: Airport Guideway and Stations Design-Build contract, Kamehameha Highway Stations Group Construction contract, and the Fare Collection System contract.

HART continued its multi-pronged approach to keep the public informed about rail construction and traffic impacts to communities and businesses along the alignment in 2016. Among other initiatives, HART held monthly Business and Community meetings to provide Project updates and traffic information, and tailored business briefings for various business groups along the alignment.

In February 2016, the City and County of Honolulu passed an ordinance to extend the General Excise and Use Tax (GET) surcharge to 2027, thereby increasing the forecasted Project funding to $6.8 billion.

In August 2016, the HART Board of Directors accepted the resignation of HART Executive Director/Chief Executive Officer (CEO), Daniel Grabauskas. In October, the Board of Directors announced its unanimous selection of K.N. Murthy as the Interim Executive Director and CEO. He will serve until a permanent CEO is selected.

In November, a majority of O'ahu voters approved Charter Amendment 4, which allows for the city's Department of Transportation Services (DTS) to handle future operations of the rail system, as well as the bus and paratransit systems. The Charter Amendment also establishes a rate commission, so rates for the different transit modes will be determined by a single entity. Finally, the Charter Amendment modifies the HART Board of Directors' role regarding governance and leadership of HART.

Currently, the Project cost projection is approximately $8.2 billion, before financing costs. The Revenue Service Date (RSD) is forecasted for December 2025.

In June, the Federal Transit Administration (FTA) requested HART to submit a Recovery Plan demonstrating that HART is taking every reasonable measure to mitigate cost overruns and minimize the delay to opening the Project for revenue operations. And as recent as December, FTA granted an extension for HART to complete and submit its Recovery Plan from the end of the year to April 30, 2017.

In September, HART provided the FTA an Interim Plan to describe the City's plan for moving forward and its commitment to a financial Recovery Plan that achieves the objectives of the Full Funding Grant Agreement (FFGA) to the maximum extent possible.

The Interim Plan included a proposed process for Plan A – The City's Preferred Financial Recovery Plan, and Plan B – Build to Budget. Plan A represents the City's financial Recovery Plan in support of building the minimum operable segment (MOS) between East Kapolei and Ala Moana Center. Plan B represents the build to budget option, describing the process the City will undertake to deliver a transit system with independent utility within the program's existing $6.8 billion funding projection. Please see Appendix A for the Interim Plan.

As part of the plan, HART submitted a draft Update of the Financial Plan on December 1, 2016. Please see Appendix B for the draft Update of the Financial Plan.

HART continues to prioritize and place a significant amount of resources in developing cost containment strategies in order to mitigate the rising cost of the Project. In 2016, HART implemented a variety of cost containment strategies that yielded positive results with regards to cost and schedule.

Look Ahead

In the coming year, while HART is continuing to manage the planning, design and construction of this very complex project, HART will be supporting the City and County of Honolulu, in presenting a request to the State of Hawai‘i Legislature and the Governor to obtain additional funding to complete the Project to Ala Moana Center.

The FTA, while continuing to monitor the Project through its monthly oversight meetings by its Project Management Oversight Contractor (PMOC), will be reviewing updated submissions of parts of the Recovery Plan to include the ridership, scope, cost estimate and schedule for both Plan A (complete project as identified in the FFGA) and Plan B (a truncated project that will be determined by the current available funding).

As part of HART's efforts to develop a Recovery Plan and the FTA Administrator's letter of June 6, 2016 (please see Exhibit A in the attached Interim Plan), HART will host a Peer Review in January of 2017 through the American Public Transportation Association (APTA), will re-baseline the Project budget and schedule, and continue to update its newly implemented Risk Management program.

Assuming additional non-Federal funding sufficient to complete the Project is identified, HART expects to submit its full Recovery Plan to the FTA in April 2017. With the acceptance of the plan by FTA, HART expects to be able to proceed with the procurement of the City Center Guideway and Stations (CCGS) contract which will enable the Project to be completed to Ala Moana Center.

Organization

Honolulu Authority for Rapid Transportation (HART)

Following the November 8, 2016 general election results, Charter Amendment No. 4 redefined the Honolulu Authority for Rapid Transportation's authority to develop the high-capacity fixed guideway rapid transit system of the City and County of Honolulu. HART's responsibility is to direct the development of the fixed guideway system; preparing and adopting an annual operating budget; applying for and receiving grants of property, money and services, and other assistance for capital or operating expenses; making administrative policies and rules to effectuate its functions and duties; and to promote and assist transit-oriented development (TOD) projects near fixed guideway system stations that promote transit ridership.

In August 2016, the HART Board of Directors accepted the resignation of HART Executive Director/CEO, Daniel Grabauskas. Subsequently, Michael Formby, a HART Board member and Director of Transportation Services for the City and County of Honolulu, was appointed as Acting Executive Director of HART. He served as Acting Executive Director until November, upon which Deputy Executive Director Brennon Morioka was appointed Acting Executive Director.

On December 5, K.N. Murthy began serving as the authority's Interim Executive Director and CEO (please see the project organization chart on page 7). He will serve until a permanent CEO is selected.

HART Board

HART is governed by a ten-member Board of Directors that directs the organization's policy. The administration of the authority is overseen by its Executive Director and CEO.

HART Board of Directors
Damien Kim, Chair
Terrence Lee, Vice-Chair
John Henry Felix
Terri Fujii
William Hong
Colbert Matsumoto
Glenn Nohara
Art Challacombe, Ex-Officio, Department of Planning and Permitting
Ford Fuchigami, Ex-Officio, Hawai'i Department of Transportation
Mark Garrity, Ex-Officio, Department of Transportation Services

K.N. Murthy, Interim Executive Director and Chief Executive Officer
Brennon Morioka, Deputy Executive Director


Damien Kim


Terrence Lee


John Henry Felix


Terri Fujii


William Hong


Colbert Matsumoto


Glenn Nohara


Art Challacombe


Ford Fuchigami


Mark Garrity

In April 2016, the members of the HART Board of Directors unanimously elected Colleen Hanabusa chair of the Board and Damien Kim as vice chair.

In November, the HART Board elected Damien Kim to succeed Colleen Hanabusa. Terrence Lee was elected to replace Damien Kim in the vice chair post.

In addition to a change in leadership, the following changes have occurred on the Board:

Donald Horner, Ivan Lui-Kwan, Michael Formby and Colleen Hanabusa left the HART Board of Directors, in 2016.

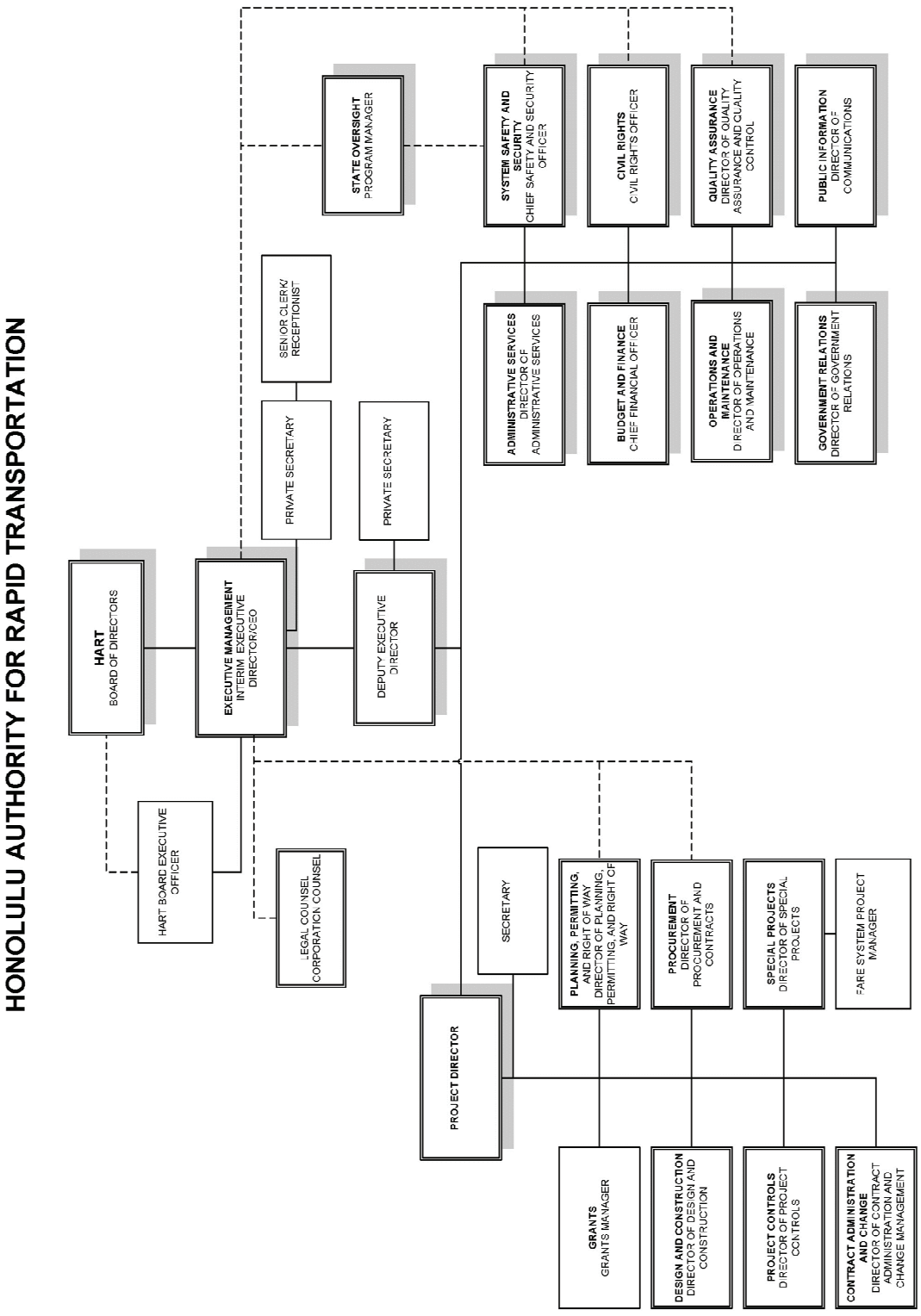
In April, Mayor Kirk Caldwell appointed Colbert Matsumoto to serve the remainder of Donald Horner's term.

The Honolulu City Council appointed John Henry Felix to replace Ivan Lui-Kwan on the HART Board in July.

In August, Michael Formby resigned from the HART Board upon accepting the Acting Executive Director position with HART.

In October, Mayor Kirk Caldwell appointed Glenn Nohara to serve the remainder of Colleen Hanabusa's term.

Through his role as Acting Director of Transportation Services, Mark Garrity is serving as a voting ex-officio member of the Board. Art Challacombe, Acting Director of Planning and Permitting, is serving as a non-voting ex-officio member of the HART Board.


HONOLULU AUTHORITY FOR RAPID TRANSPORTATION
HART
BOARD OF DIRECTORS
HART BOARD EXECUTIVE OFFICER
EXECUTIVE MANAGEMENT
INTERIM EXECUTIVE DIRECTOR/CEO
LEGAL COUNSEL
CORPORATION COUNSEL
SENIOR CLERK/ RECEPTIONIST
PRIVATE SECRETARY
PRIVATE SECRETARY
DEPUTY EXECUTIVE DIRECTOR
STATE OVERSIGHT
PROGRAM MANAGER
SYSTEM SAFETY AND SECURITY
CHIEF SAFETY AND SECURITY OFFICER
CIVIL RIGHTS
CIVIL RIGHTS OFFICER
QUALITY ASSURANCE
DIRECTOR OF QUALITY ASSURANCE AND QUALITY CONTROL
PUBLIC INFORMATION
DIRECTOR OF COMMUNICATIONS
ADMINISTRATIVE SERVICES
DIRECTOR OF ADMINISTRATIVE SERVICES
BUDGET AND FINANCE
CHIEF FINANCIAL OFFICER
OPERATIONS AND MAINTENANCE
DIRECTOR OF OPERATIONS AND MAINTENANCE
GOVERNMENT RELATIONS
DIRECTOR OF GOVERNMENT RELATIONS
SECRETARY
PROJECT DIRECTOR
PLANNING, PERMITTING, AND RIGHT OF WAY
DIRECTOR OF PLANNING, PERMITTING, AND RIGHT OF WAY
PROCUREMENT
DIRECTOR OF PROCUREMENT AND CONTRACTS
SPECIAL PROJECTS
DIRECTOR OF SPECIAL PROJECTS
FARE SYSTEM PROJECT MANAGER
GRANTS
GRANTS MANAGER
DESIGN AND CONSTRUCTION
DIRECTOR OF DESIGN AND CONSTRUCTION
PROJECT CONTROLS
DIRECTOR OF PROJECT CONTROLS
CONTRACT ADMINISTRATION AND CHANGE
DIRECTOR OF CONTRACT ADMINISTRATION AND CHANGE MANAGEMENT

Rail Update

Overall Progress:

- Significant construction progress was made in 2016. As of November, the following construction had been completed:
  - 100% of the 452 guideway support columns are in place on the western guideway section
  - 100% of the 495 drilled shaft foundations on the western guideway section are completed, as well as 7 shafts in the Airport section
  - 100% of the 5,238 western guideway segments have been cast
  - 432 of 437 (98.9%) of the western guideway spans are erected. By the end of the year, the entire guideway superstructure will be completed on the first half of the alignment.
  - 99.9% of the ROC is completed and all track is in place
  - The first four-car train set has been delivered and is at the ROC. Additional rail cars will be delivered throughout 2017.

- With this construction progress, the overall project status can be quantified approximately as follows:

Project Progress* Through October 28, 2016	
	Actual
Overall Project Progress	54.3%
Overall Construction Progress	47.9%
Overall Design Progress	90.8%
Overall Utilities Progress	51.2%

* Reported percentages complete are based on the Full Funding Grant Agreement (FFGA) budget and Revenue Service Date (RSD). HART will revise its progress curves when the project budget and RSD are re-baselined.

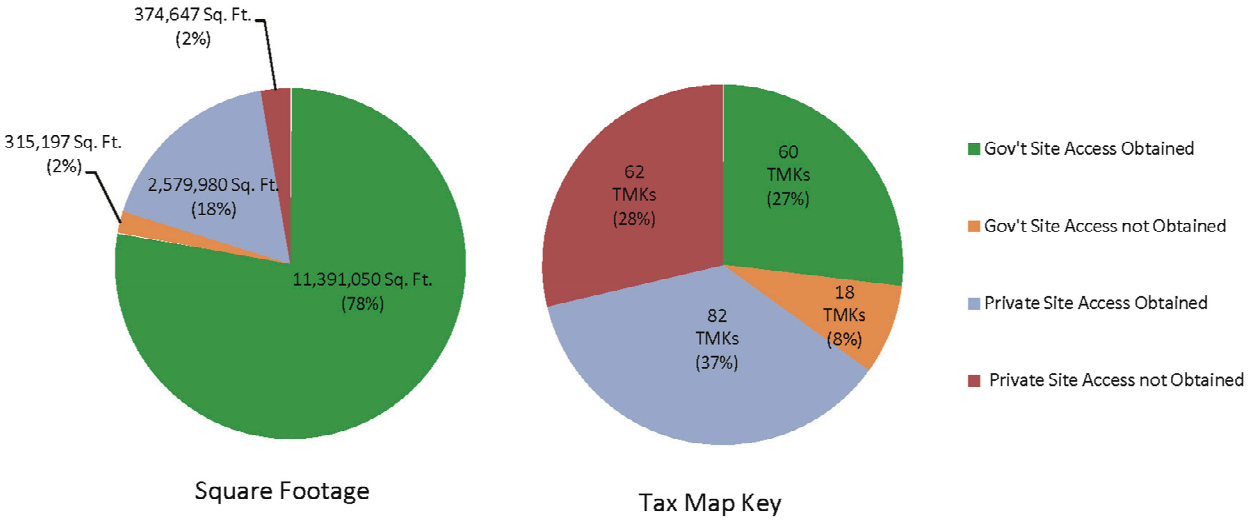
- Other developments in 2016 included:
  - Groundbreakings have been held at all of the westside stations and construction work has begun.
  - A solicitation for the Airport Guideway and Stations (AGS) DB contract was issued. Three potential proposers were qualified and proposals were received from them in April. In July, HART issued a notice of award to the winning bidder, Shimmick/Traylor/Granite, JV, in the amount of $874.8 million. The Notice to Proceed (NTP) was issued on December 1, 2016.
  - A solicitation for the City Center Guideway and Stations (CCGS) DB contract was issued. The solicitation is on hold pending additional funding and is part of the focus of the Recovery Plan.
  - The procurement of the Pearl Highlands Transit Center, Parking Garage, and Ramp Design-Build project will be issued when funding is available.

- The release for manufacturing the Elevators and Escalators equipment is being coordinated for a "just in time" delivery. Farrington Highway Station Group (FHSG) and West O'ahu Station Group (WOSG) elevators and escalators equipment has been released for manufacturing. The release of the equipment required for Kamehameha Highway Station Group (KHSG) will be dependent upon the acceptance of the construction schedule for the KHSG contract.
- To mitigate delays to the CCGS procurement, HART initiated underground utility mapping to verify existing utility locations in the City Center Section, and completed the preliminary design of Hawaiian Electric Company (HECO) high-voltage transmission lines. The results of both efforts will mitigate risk which will reduce costs and support the future CCGS contract.

Right-of-Way:

- Land Acquisitions: HART has obtained site access for construction for approximately 96% of the land area required for the Project. To date, the real estate expenses are running $7.1 million under budget. Out of 223 property acquisitions identified as needed for the Project, to date, HART has obtained site access for 142 parcels, and acquired 58 parcels for $88.5 million.

- Parcel Site Access Status by Land Area and Ownership Type (as of November 3, 2016):



- Relocations: Out of 112 identified relocations, HART has completed 101 relocations. 11 are in progress and are for businesses. Relocation assistance provisions for displaced businesses and residential occupants are outlined in the Uniform Act, Title I.

- As of November 3, 2016, the Right-of-Way budget is as follows:

	Baseline Budget	Expended	Remaining Budget Balance	Estimate to Completion	Forecast Variance
Acquisition	$ 201.70	$ 92.90	$ 108.80	$ 95.70	$ 13.10
Relocation	$ 20.50	$ 14.40	$ 6.10	$ 12.10	$ (6.00)
Total (Million)	$ 222.20	$ 107.30	$ 114.90	$ 107.80	$ 7.10

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

Utility Relocation:

- During 2016, work was underway along the length of the first 10 miles and in the section between Aloha Stadium and the Middle Street Transit Center past the Honolulu Airport. HART staff and HECO made substantial progress in working through issues associated with the need to either relocate or leave in place power lines in various sections of the rail alignment. For West O'ahu/Farrington Highway (WOFH) and Kamehameha Highway Guideway (KHG), HECO has successfully tested two new bucket trucks (not currently in their fleet) that can perform the 46kV work with less than their required working clearance. This will mitigate the need to relocate almost 90% of the 46kV poles/lines that do not meet their current required working clearances. For the 138kV lines at WOFH and KHG, HECO and HART traveled to Colorado to review the operational capabilities of the Phoenix and Skybird bucket trucks. HECO is evaluating their findings to better determine the extent of their powerlines that can be addressed through the use of this new equipment. A final report from HECO is expected shortly. 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. However, for AGS, a HECO-HART combined solution of increased Navy easements and redesigned (shortened) pole conductors may alleviate undergrounding the 9-pole 138kV system fronting Pearl Harbor. Combined with specialized equipment from the west side, to maintain and replace the 46kV system, undergrounding of HECO transmission lines may not be necessary.

Procurement:

- During 2016, the following contracts were awarded:
  - Kamehameha Highway Stations Group Construction Contract (awarded December 22, 2015; contract date January 27, 2016) awarded to Nan, Inc.
  - Independent Financial Auditor "II" Contract awarded to KMH, LLP
  - Fare Systems Design-Build-Operate-Maintain Contract awarded to INIT Innovations in Transportation, Inc.
  - On-Call Construction Contractor Contract "III" awarded to Royal Contracting
  - On Call Appraisers Contract awarded to ACM Consultants, Inc.
  - Complex Construction Claims Negotiation and Litigation Services Multi-Award Contract awarded to multiple contractors
  - Airport Section Guideway and Stations Design-Build Contract awarded to Shimmick/Traylor/Granite, JV
  - Real Estate Contractor Contract "II" awarded to Colliers International

- Complex Real Property Negotiations and Litigation Support Contract awarded to Starn O'Toole Marcus & Fisher, A Law Corporation
- Outside Counsel for Land Court Petition Services Contract awarded to Imanaka Asato, a Limited Liability Law Company
- Seven (7) Art-in-Transit contracts (Ho'opili Station, ROC/Operations & Service Building, UH West O'ahu Station, East Kapolei Station, Aloha Stadium Station, West Loch Station, and Pearlridge Station) awarded to multiple contractors

- Remaining contracts yet to be awarded include:

Remaining Contracts

Contract Code	Contract Name	Advertise Date	Bids Due/Part 1 Proposals/BAFO Due	RFP Part 2 Proposals/BAFO Due	Issue NTP	Projected Contract Substantial Completion Date
AP-00	Art-in-Transit	May 09 '13	-	*NA*	*TBD/Staggered*	*TBD*
DB-550	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	*NA*	*TBD*	*Dec 31 '22 + 3 Year Option*
MM-985	On Call Appraisers "II"	Nov 16 '16	*Dec 30 '16*	*NA*	*Feb 2017*	*NTP + 5 Years + 3 Year Option*
TBD	Owner Controlled Insurance Program (OCIP) Consultant "II"	*Dec 2016*	*Feb 2017*	*NA*	*Mar 2017*	*TBD*

- The following procurements are under evaluation:
  - UH West O'ahu Temporary Park and Ride and UH West O'ahu Campus Road "B" Design-Bid-Build Contract
  - Design Review Architect/Engineer (A&E) or A&E firm
  - Legal Counsel for Public Utilities Commission (PUC) Matters
  - Pearl Highlands Garage, Transit Center and Ramp H2R1
  - East Kapolei and UH West O'ahu Park and Ride (Design)
  - East Kapolei and UH West O'ahu Park and Ride (Construction)
  - Core Systems Back-up Generators/Batteries

Planning:

- HART commenced its Hawaiian Station Naming Program.
- HART continues to work with the FTA on environmental documentation for refinements to Project elements.
- HART continues to have regular meetings with the city DTS on bus-rail integration planning to conceptualize and finalize plans for seamless bus and rail connections at rail stations.
- HART transmitted the two non-substantive revised Makalapa Nominations to the Navy's Federal Preservation Officer; station construction cannot start until the nomination is submitted to the Keeper of the National Register of Historic Places and a second design workshop has been held.
- HART and the city's DTS worked with the State Department of Transportation and the O'ahu Metropolitan Planning Organization to secure $1 million in Federal grants for multimodal access projects, including a path connecting the Pearl Harbor Historic Trail to the Leeward Community College rail station.

- HART worked with the O‘ahu Metropolitan Planning Organization to incorporate updated land use and transportation data into the regional travel demand forecasting model.
- HART held the National Historic Preservation Act Section 106 Programmatic Agreement (PA) annual meeting with Signatory and Consulting Parties, as required by the PA. This resulted in key historic and cultural resource issues being addressed so that construction can progress.

Art-In-Transit (AIT) Program:

- The Transit Art Committee (TAC), composed of art and design professionals and HART staff, evaluated over 400 “Call for Artists” applications to select artists for the 21 stations, and the Operations and Servicing Building at the ROC. Ranking of Artists for individual stations and the ROC artwork is complete. Artist contracts have been awarded and notices to proceed have been issued for 6 stations and for the ROC. The remainder is in queue for negotiations. This will be followed by execution of the respective contracts with the artists and notices to proceed issued.

Transit-Oriented Development (TOD):

- HART participates in the State TOD Stakeholders Advisory Group, which brings state agencies together with the goal of identifying opportunities for TOD on state properties.
- HART continues to coordinate with the Hawai‘i Community Development Authority (HCDA) on the Kaka‘ako Community Development District TOD Overlay Environmental Impact Statement. HART also completed consultation with HCDA on the Civic Center and Kaka‘ako Stations.
- HART continues to coordinate with the City and County of Honolulu Department of Planning and Permitting (DPP), the Mayor’s Subcabinet, and other partner agencies and landowners regarding TOD plans for areas around the stations. The status of these plans is shown in Appendix C.
- HART participated in various community workshops led by the DPP TOD Group, including Chinatown Action Plan, Waipahu Action Plan, and Kapalama Canal Visioning Workshop.

Construction and Traffic Impact Mitigation:

- HART continued to take a multi-pronged approach in 2016 in keeping the public informed about construction and traffic impacts to communities and businesses along the alignment. HART had the following programs and activities underway:
  - Open for Business Initiatives: Our “Open for Business” initiatives include signage, materials, coordinating work schedules when possible to allow for busy times and deliveries, and making sure contractors keep access to businesses clear. The contractor also provides notices and detour maps for businesses to give to their customers, to email to contacts, and to place on their websites.
  - HART’s Business Alliance Program: More than 1,000 businesses are currently signed up for the program that provides regular updates on business outreach programs, including free workshops and other business development programs. The Alliance also provides feedback to help refine and enhance existing mitigation programs. One-on-one meetings and construction updates for businesses are also provided.

- Monthly Business and Community Meetings: In addition to the regular Business Alliance meetings, additional monthly business and community meetings are held to provide Project updates and traffic information to community members, elected officials and other stakeholders.
- Neighborhood Board Meetings: HART representatives attend dozens of Neighborhood Board meetings throughout the year, focusing on those boards in communities along the rail alignment. Every month, HART provides Project updates and answers questions posed by board members and members of the public who attend the meetings.
- Business Briefings: HART holds tailored briefings regularly for various business groups along the route, including businesses in the Dillingham and Kalihi areas. These targeted briefings are designed to answer questions specific to individual business and business groups' concerns.
- Shop & Dine on the Line: HART's Shop & Dine on the Line Program is a partnership with businesses to assist them during construction. About 100 businesses in the Waipahu, Pearl City, and Aiea areas are currently participating in the program. The program encourages people to visit businesses impacted by construction and mention the Shop & Dine on the Line Program to receive special discount offers as an incentive to generate additional customers during construction. The special offers are distributed in brochures, using social media, and can also be found at www.ShopAndDineOnTheLine.com and via our mobile site.
- Shop, Dine & Shuttle: This free trolley service is provided to customers and area residents so that they can patronize businesses along the rail corridor. HART's initial service started at Aloha Stadium, which encouraged swap meet goers to participate, and ran along Kamehameha Highway, stopping at various shopping centers and plazas. A similar program was also offered in the Waipahu community.
- HART in the Community Days: New for 2016, HART provided educational banners and posters at Pearlridge Center, and on three occasions staffed a vacant store space on a weekend to answer questions about the Project from the hundreds of shoppers who visited the HART space. The Community Outreach team also opened HART's first train cars for visits by the public.

Financial and Revenue Update

- In July 2015, the Governor signed legislation approving a five year GET surcharge extension. It was subsequently approved by the City Council, and it was signed into law by the Mayor in February 2016. As a result of this extension, the projected cumulative revenue for the Project increased to $6.8 billion from $5.3 billion originally planned in the FFGA.

- Since the passage of this ordinance however, HART's independent bottoms-up risk analysis forecast the Total Project Cost of the MOS to be approximately $8.2 billion. This is largely influenced by the adverse impact of high construction escalation in Honolulu experienced since 2014 and anticipated to continue, in addition to other factors highlighted in subsequent sections.

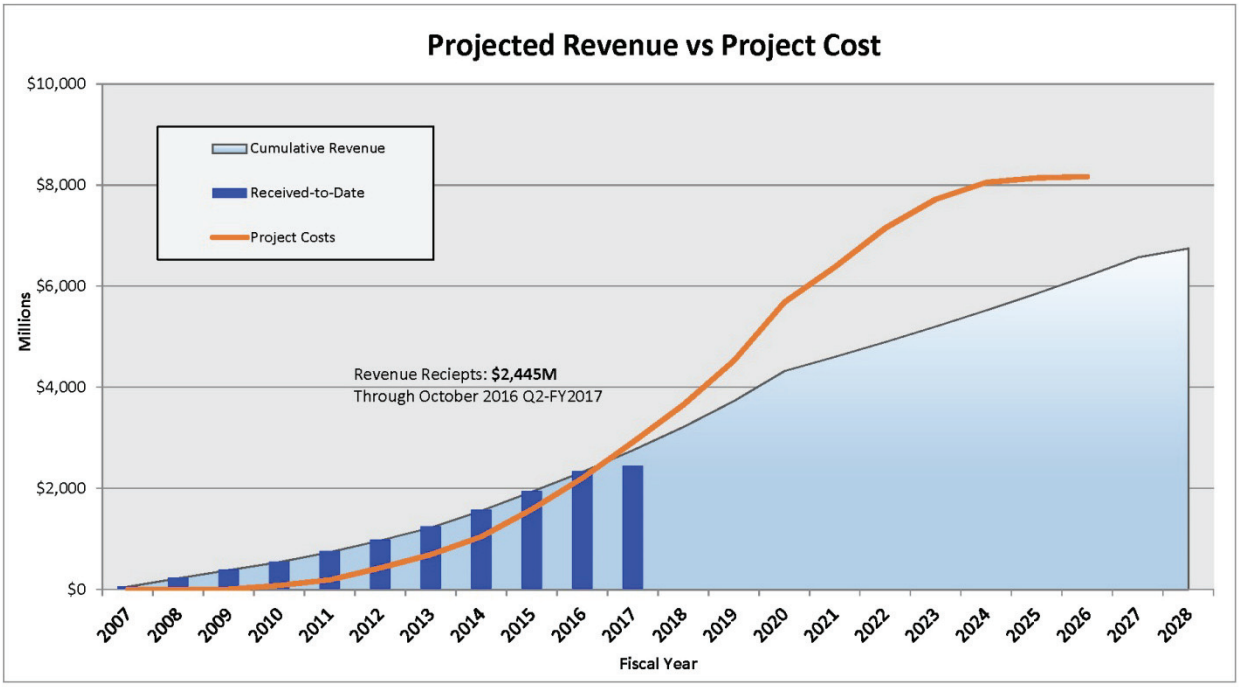
- Due to this projected revenue shortage, the FTA has required HART to submit a Recovery Plan that details how the Project will be built to satisfy their minimum requirements for a rail system of independent utility.

- On September 30, 2016, HART submitted an Interim Plan to the FTA that stated a final Recovery Plan could be provided to the FTA by June 30, 2017 for either Plan A – construct the rail system between East Kapolei and Ala Moana Center (the MOS); or Plan B – construct a rail system between East Kapolei and likely the Downtown Station for a cost within the current $6.8 billion budget.

- The draft Update of the Financial Plan submitted to FTA on December 1, 2016 assumes construction of Plan A based on currently available information and construction estimates. For the funding required to build the MOS, the GET surcharge sunset date would need to be extended beyond the 2027 sunset date for a duration and an amount sufficient to pay for the $8.2 billion Project cost, plus the additional financing costs that will be dependent on the financing strategy yet to be determined.

- HART currently estimates the five-year extension of the GET surcharge will total $1.5 billion through December 31, 2027, which is short of the current estimated Project Cost.

- The updated capital cost of the Project without finance charges is $8.2 billion in year-of-expenditure dollars. Financing costs, including interest and bond issuance charges, will be dependent on an extension of the GET surcharge as well as the terms upon which the extension is based. The duration and amount of bond financing will weigh significantly on the final total budget necessary for the project. The longer the project must borrow or finance the capital costs of construction should HART not receive the full amount of GET surcharge currently anticipated, finance costs will be greater than currently planned. As an example, should the GET surcharge be extended for an additional period of 10 years through December 2038 and HART continue to receive 90% of the surcharge collected, one financing strategy could result in finance charges of up to $1.3 billion which would bring the total project budget to $9.5 billion.



Planned Funding levels as per the December 2016 Draft Financial Plan
Data date for Revenue & Project Cost = October 28, 2016

- HART's current planned versus received funding (as of October 28, 2016):

Planned vs. Received Project Funding				
Funding Source	Pre-FFGA Project [1]	FFGA Project Period		Total Project
	2007 - 2009 Actuals Received	Planned [2] ($YOE M)	2009 - Present Actuals Received	2007 - Present Actuals Received
	[A]		[B]	[C] = A +B
Beginning Project Cash Balance [3]	0	298	298	n/a
Interest Income on Cash Balance	7	3	2	9
FTA Section 5309 New Starts Revenue [4]	0	1,550	622	622
FTA Section 5307 Formula Funds	0	0	0	0
ARRA Funds	0	4	4	4
Net General Excise Tax (GET) Surcharge revenues FY2010-FY2028	378	4,816	1,432	1,810
Total	385	6,671	2,358	2,445

[1] GET and Interest Income received during Pre-Preliminary Engineering (pre-PE) phase prior to entry into PE

[2] FFGA Financial Plan, Table A-1 *Capital Plan Cash Flows*.

[3] 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.

[4] New Starts Funds Obligated Through Federal Fiscal Year 2014 Totals $806.3 Million

- GET surcharge collections in calendar year 2016 are expected to total $244.5 million. The total collected to date is $1.8 billion, which is $48.4 million or 1.5% less than forecast in the original June 2012 Financial Plan.

- HART expects to receive $162 million in 2016 from the FTA, bringing total federal funding received for the Project to $634 million. Congressional appropriations for the Project are $1.1 billion, which is approximately two-thirds of the $1.6 billion committed to the Project in the FFGA. The FTA is withholding $500 million of the grant funds pending completion of the Recovery Plan and updated project financial plan.

- HART's fourth annual independent financial audit was conducted and submitted to the HART Board of Directors, Mayor and City Council for fiscal year 2015. The auditor's opinion was unmodified.

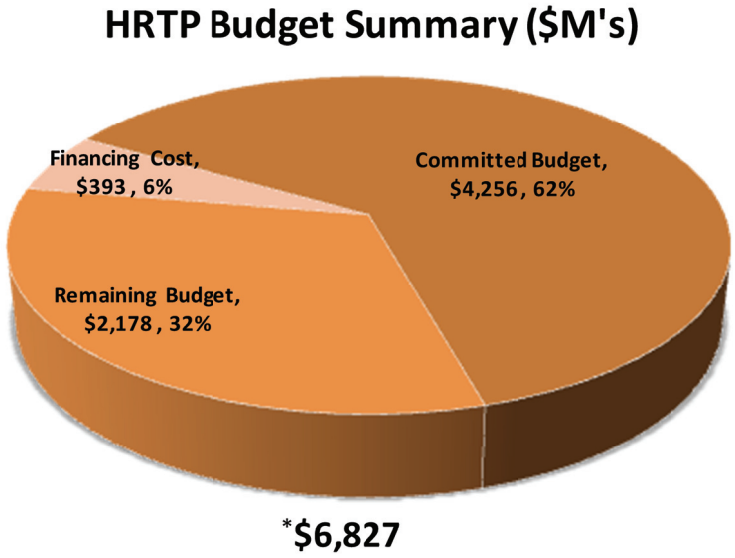
- HART continued to work on improving financial reporting to the HART Board, the City Council, the State Legislature, and to the community through the HART website. The Project Monthly Reports are distributed widely and routinely.

- HART has resolved up to $180 million of the outstanding Archaeological Inventory Survey and NTP delay claims, at a projected cost of $190 million as compared to the original claim amount of $290 million. In addition, HART has settled outstanding claims from the ROC contractor for $7 million compared to the original amount of $10 million.

Project Budget

Honolulu Rail Transit Project Summary

- As indicated earlier, the City and County of Honolulu passed an ordinance in 2016 to extend the GET surcharge to 2027, thereby increasing the forecasted Project funding to $6.8 billion. By the end of 2016, 62% of the Project budget will be committed to contracts, with a combined 38% remaining to be bid and provided for debt financing as seen in the figure below. The most significant construction package remaining to be awarded is the City Center Guideway and Stations Design-Build contract package which is scheduled to be awarded in 2018. This section will describe the Total Project Cost projection that indicates cost will exceed the revised Project budget, the factors influencing this cost projection, and cost containment measures HART has taken to mitigate the projected overruns.



** HRTP Budget updated to reflect projected revenue received with the adoption of Bill 23*

Total Project Cost

- As of December 2016, the Project cost projection is approximately $8.2 billion, before financing cost, which represents Plan A as described in the proposed Interim Plan prepared for the FTA. This projection represents the most current cost estimate for the Project; however, the Project budget is likely to be much higher depending on cost of debt financing which will be clearer after the State Legislature determines how much additional funding HART will receive, if any. The cost estimate increased approximately $1.8 billion from a year ago reflecting the adverse impact of high construction escalation in Honolulu experienced since 2014 and anticipated to continue. The current cost projection increases the budget for the City Center Guideway and Stations (CCGS) Design-Build package by 60% which is the most significant line item increase to the budget. Since arriving at earlier cost estimates of the CCGS package, we have been able to better quantify the risks involved with the substantial amount of utility relocation required for this package, which in turn results in more potential cost escalation among

other factors increasing the budget for this contract package. The current CCGS budget is $1.4 billion. Other influences to the overall Project cost includes costs budgeted for utility relocations for the identified clearance conflicts with low and high voltage power lines in the West O'ahu and Kamehameha segment of the alignment, the soft costs associated with the Revenue Service Date extending to December 2025, and the overall contingency level for the Project was increased to $1.4 billion or 20% of the Project cost.

Cost Containment

HART continues to prioritize and place a significant amount of resources in developing cost containment strategies in order to mitigate the rising cost of the Project. Every month, HART staff meets with the FTA and its PMOC consultant in breakout workshops to discuss cost, schedule, and risk under the context of identifying cost containment opportunities. In 2016, HART implemented a variety of cost containment strategies that yielded positive results with regards to cost and schedule. Below highlights a couple examples of implemented cost containment strategies that benefited the Project most significantly over the past year:

- AGS Design-Build – One of the actions HART took last year was to repackage the construction of guideway and stations in the Airport and City Center segments of the Project into two large Design-Build packages. We heard from the contracting community this would likely increase competition for those bids as opposed to several smaller construction packages. By doing so, HART was pleased to have three qualified contracting teams provide proposals for this package once proposals were due. In addition, after receiving the initial prices for this package, HART sought further information from the Priority-Listed Offerors (PLO) by entering in a Best and Final Offer (BAFO) phase during the procurement to identify how we could get an even more competitive price. Ultimately, the BAFO period resulted in the winning PLO lowering their initial offer over $30 million. It is our expectation we will see a similarly competitive procurement for the CCGS package which would likely result in competitive pricing.

- West Side Utility Conflicts – One of the most significant cost variables of the current $8.2 billion Project Cost estimate is the budgeted cost to underground high and low voltage utilities in the West O'ahu and Kamehameha segments of the alignment that were in violation of HECO's clearance restriction with the elevated guideway, a potential $200 million cost that was not previously contemplated in the budget. Thanks to the work done by a dedicated task force within HART and the relationship that we have been able to establish with HECO, we collaborated to identify an alternative solution to reduce the amount of conflicts within the western segments of the alignment. By providing HECO specialized vehicles that HECO has tested and approved, it is estimated we will save approximately $40-$50 million by having the ability to leave in place some of the conflicted power lines using this equipment as opposed to undergrounding those lines. In addition, we continue to look for other more cost effective solutions to the conflicted power lines with HECO and we have reason to be optimistic we can even further reduce the cost by resolving these conflict issues.

Schedule

Master Project Schedule (MPS)

- As of the 4th Quarter of 2016, the RSD is forecasted for December 2025, about four years beyond the December 2021 date projected in 2015. Please see the MPS Summary on the following page for more details. During the 2015 Legislative Session, it was projected the GET surcharge extension would provide sufficient funding to complete the Project at the time; however, cost estimates on the final two Design-Build contracts to construct the guideway and stations on the east revealed much higher than expected cost in addition to other factors resulting in a revised estimate-at-completion of $8.2 billion. Due to this shortfall in funding, the procurement of the CCGS Design-Build package, which is the critical path to full Revenue Service, is postponed until the funding is identified to procure the fully scoped contract package as described in Plan A. The CCGS package is currently expected to have NTP in August 2018.

- HART continues to work with both Design-Build guideway contractors on WOFH and KHG where work progress is behind approved schedules. Construction is in progress for the six western stations under the WOSG and FHSG contracts. Both are forecasted for substantial completion in 2018. Construction NTP was issued in October 2016 for the third western station contract, KHSG. The AGS Design-Build contract package has been awarded and the NTP was issued on December 1, 2016.

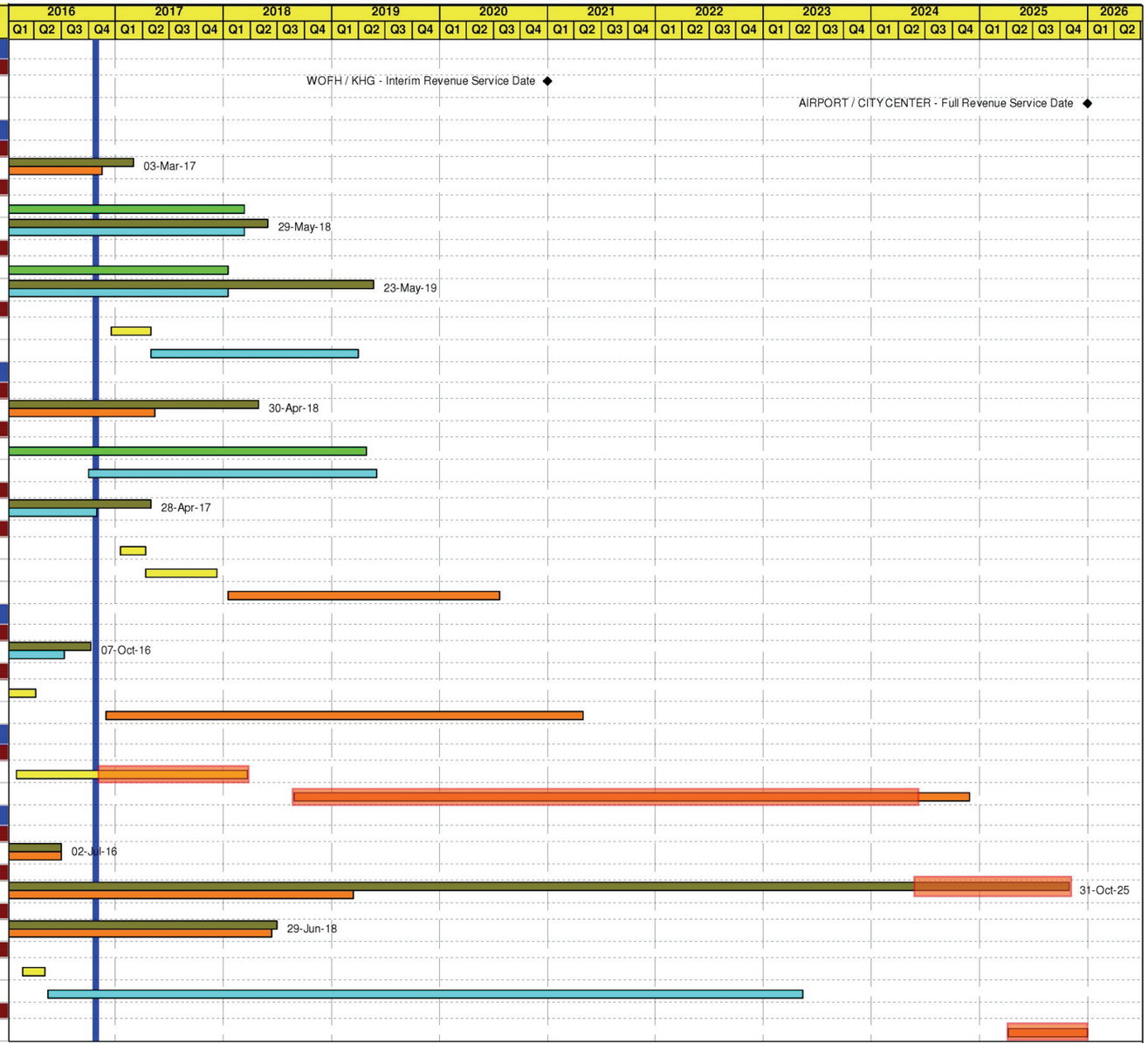
- Below highlights prior schedule delays and risk events that could potentially impact currently active and future contract packages:

  Past Schedule Delays:
  - Federal court case delays
  - Protests and NTP delays
  - Third party approval delays
  - Third party Right-of-Way acquisition
  - Contractor productivity issues
  - Traffic modifications

  Potential Schedule Risk Events:
  - Contracting protests
  - Revisions to contracting strategy to increase competition
  - Third party cooperation for utilities and permitting
  - Right-of-Way acquisitions
  - Contractor performance
  - Other concurrent public and private construction activities
  - Legal challenges
  - Traffic modifications to accommodate business/public concerns

  (While it is unlikely all potential schedule risk events may occur, historical trends indicate a few will.)

Activity Name	Contract Start	Contract Finish
KEY DATA		
MILESTONES		
WOFH / KHG - Interim Revenue Service Date		31-Dec-20*
AIRPORT / CITY CENTER - Full Revenue Service Date		31-Dec-25
WEST OAHU / FARRINGTON HIGHWAY (WOFH) - SECTION 1		
WOFH Guideway & Utilities		
DB-120 - WOFH Guideway - Design & Construction	01-Dec-09 A	16-Nov-16
West Oahu Station Group (WOSG)		
FD-140 - West Oahu Station Group - Including Design Services During Construction	15-Jun-12 A	12-Mar-18
DBB-171 - West Oahu Station Group - Construction	13-Oct-15 A	12-Mar-18
Farrington Hwy Station Group (FHSG)		
FD-240 - Farrington Highway Station Group - Including Design Services During Construction	30-Sep-13 A	16-Jan-18
DBB-271 - Farrington Highway Station Group - Construction	17-Aug-15 A	16-Jan-18
UH West Oahu Park n Ride & Ho`opili Station Finishes		
DBB-600 - East Kapolei and UH/West Oahu Park and Ride Lots - Bid & Award	15-Dec-16	30-Apr-17
DBB-600 - East Kapolei and UH/West Oahu Park and Ride Lots - Construction	01-May-17	01-Apr-19
KAMEHAMEHA HIGHWAY (KH) - SECTION 2		
Kamehameha Highway Guideway & Utilities		
DB-320 - KHG Guideway - Design & Construction	12-Jul-11 A	12-May-17
Kamehameha Highway Stations		
FD-340 - Kamehameha Highway Station Group - Including Design Services During Construction	26-Nov-12 A	30-Apr-19
DBB-371 - Kamehameha Highway Station Group - Construction	03-Oct-16 A	02-Jun-19
Ramp H2R2		
DBB-385 - Ramp H2R2 - Construction	18-May-15 A	28-Oct-16
Pearl Highlands Parking Structure & Ramps		
Pearl Highlands Transit Center and Ramp H2R1 - Design Build Procurement Part 1 (Tentative)	16-Jan-17*	11-Apr-17
Pearl Highlands Transit Center and Ramp H2R1 - Design Build Procurement Part 2 (Tentative)	12-Apr-17	08-Dec-17
Pearl Highlands Transit Center and Ramp H2R1 - Design and Construction (Tentative)	17-Jan-18	22-Jul-20
AIRPORT - SECTION 3		
Airport Utility Relocation		
DBB-505 - Airport Section Utilities - Construction	06-Oct-14 A	13-Jul-16 A
Airport Guideway & Stations (AGS)		
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-Dec-16	30-Apr-21
CITY CENTER (CC) - SECTION 4		
City Center Guideway & Stations (CCGS)		
DB-550 - City Center Guideway & Stations - Design Build Procurement Part 2	02-Feb-16 A	24-Mar-18
DB-550 - City Center Guideway & Stations - Construction	28-Aug-18	27-Nov-24
PROJECT WIDE - ALL SECTIONS		
Maintenance & Storage Facility (MSF)		
DB-200 - MSF - Design & Construction (Design-Build)	25-Jul-11 A	02-Jul-16 A
Core Systems		
DBOM-920 - Core Systems - Design & Construction	13-Jan-12 A	15-Mar-19
Elevators & Escalators		
MI-930 - Elevators and Escalators - Design, Manufacture, Install, & Test	02-Aug-13 A	13-Jun-18
On-Call Construction Contract "III"		
MM-948 - On-Call Construction Contract "III" - Bid & Award	23-Feb-16 A	09-May-16 A
MM-948 - On-Call Construction Contract "III" - Construction (Duration To Be Determined)	16-May-16 A	15-May-23
Final Testing and Commissioning		
Final Testing and Commissioning	07-Apr-25	31-Dec-25



HONOLULU AUTHORITY for RAPID TRANSPORTATION

Design Build
Contractor's Forecast
Construction
Design
Bid/Award
Milestone

Honolulu Rail Transit Project
As of: 28-Oct-16

Pg 1 of 1

MPS Summary
Design & Construction Contracts

Glossary of Acronyms

A&E	Architect/Engineer
AA	Alternatives Analysis
AGS	Airport Guideway and Stations
AIT	Art-in-Transit
BAFO	Best and Final Offer
BOD	Board of Directors
CCGS	City Center Guideway and Stations
CE&I	Construction Engineering and Inspection
CEO	Chief Executive Officer
DB	Design-Build contract project delivery method
DBB	Design-Bid-Build contract project delivery method
DPP	Dept. of Planning and Permitting, City & County of Honolulu
DTS	Department of Transportation Services
EAC	Estimate at Completion
EIS	Environmental Impact Statement
FFGA	Full Funding Grant Agreement
FHSG	Farrington Highway Station Group
FTA	Federal Transit Administration
GET	General Excise and Use Tax
HART	Honolulu Authority for Rapid Transportation
HCDA	Hawai‘i Community Development Authority
HECO	Hawaiian Electric Company
HRTP	Honolulu Rail Transit Project
KHG	Kamehameha Highway Guideway
KHSG	Kamehameha Highway Station Group
LPA	Locally Preferred Alternative
MOS	Minimum Operable Segment
MPS	Master Project Schedule
NTP	Notice to Proceed
OCIP	Owners Controlled Insurance Program
PA	Programmatic Agreement
PLO	Priority-Listed Offerors
PMOC	Project Management Oversight Contractor
PUC	Public Utilities Commission
RAMP	Real Estate Acquisition Management Plan
ROC	Rail Operations Center
RSD	Revenue Service Date
TAC	Transit Art Committee
TOD	Transit-Oriented Development
TVM	Ticket Vending Machine
WOFH	West O‘ahu/Farrington Highway
WOSG	West O‘ahu Station Group

Appendices

Appendix A
Interim Plan

Honolulu Authority for Rapid Transportation (HART)



Interim Plan

Prepared for: Federal Transit Administration (FTA)

Prepared by: HART

September 30, 2016

EXECUTIVE SUMMARY

Overview

Via letter dated June 6, 2016, in response to rising project costs and schedule delays, Federal Transit Administration (FTA) Region IX Regional Administrator Leslie T. Rogers requested the City and County of Honolulu (City) submit a Recovery Plan for the Honolulu Rail Transit Project (HRTP or Project) on or before August 7, 2016. (*Exhibit A*)

In response, on June 24, 2016, the City requested an extension of the Recovery Plan submittal date from August 2016 to mid-2017 so the City could secure additional financial resources and submit a financial Recovery Plan supporting construction of the Minimum Operable Segment (MOS) from East Kapolei to Ala Moana Center. (*Exhibit B*)

On July 21, 2016, FTA Acting Administrator Carolyn Flowers wrote the City and agreed to extend the Recovery Plan submittal date to the end of 2016, subject to an August 2016 meeting with the FTA and submission of an Interim Plan by the end of September 2016. (*Exhibit C*)

Per Administrator Flower's letter dated July 21, 2016, the City needed to either:

> reduce the scope of the Project, consistent with the financial resources currently available, or seek additional, non-Federal resources to complete the functional scope of work under our Full Funding Grant Agreement of December 2012, or undertake some combination of these.

In August 2016, City leadership met with FTA leadership in San Francisco, California, at which time the City strongly affirmed its commitment to construct the full MOS from East Kapolei to Ala Moana Center (Plan A) as opposed to the deferral of stations and other project components, stopping the guideway short of Ala Moana Center, impacting ridership and undertaking additional planning and environmental studies necessitated by having to build within current project funding levels (Plan B).

After much discussion, the FTA reserved its decision on the City's request for a mid-2017 Recovery Plan submittal date pending receipt and approval of the City's Interim Plan.

Honolulu Authority for Rapid Transportation (HART)

Goals

The City is requesting an extension of the December 2016 Recovery Plan submittal date to June 30, 2017 and offers this Interim Plan to describe the City's plan for moving forward and its commitment to a financial Recovery Plan that achieves the objectives of the Full Funding Grant Agreement (FFGA) that the City and the FTA entered into in December 2012 to the maximum extent possible. The City's Interim Plan also sets forth the process the City will follow in preparing a plan that includes primary and secondary mitigation, including station, transit center, parking garage and/or off-ramp deferrals and guideway shortening with associated studies of negative ridership impacts and other necessary planning studies, which could position the City to construct and deliver a system of independent utility[1] within the City's existing budget. This Interim Plan contains the following information:

- Project Description (Project History, Project Timeline)
- Current Status and On-going Activities
- Project Cost Estimate and Schedule, Financial Plan and Risk Management
- Coordination with Elected Officials and Business/Community Outreach Stakeholders
- Interim Plan (Proposed Process for Plan A - The City's Preferred financial Recovery Plan and Plan B - Build to Budget)
- Conclusion and Renewed Request for Extension of Recovery Plan Submittal Date

[1] 23 CFR 771.111(f) cited below:

(f) In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated in each EIS or finding of no significant impact (FONSI) shall:
(1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
(2) Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
(3) Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Honolulu Authority for Rapid Transportation (HART)

PROJECT DESCRIPTION

Project History

On December 19, 2012, the FTA and the City signed the FFGA for the HRTP. The FFGA scope consists of the design and construction of a 20 mile grade-separated fixed rail system with 21 stations and 80 rail cars beginning at East Kapolei and terminating at Ala Moana Center, the MOS.

The fully automated and driverless rail system will operate in an exclusive right-of-way and will be elevated except for a .6 mile at-grade section with a station near Leeward Community College (LCC). The system will be powered with third rail electrification and maintained and operated at the 44 acre Maintenance and Storage Facility (MSF) located adjacent to LCC.

The Baseline Cost Estimate for the FFGA was $5.12 billion, including $644 million in allocated and unallocated contingency and $173 million in financing costs. The Revenue Service Date in the FFGA was January 31, 2020.

Project Timeline

July 13, 2005	The Hawaii State Legislature passes H.B. No. 1309, HD2, SD2, CD1 which was later enacted into law as Act 247 (2005) by the Governor of the State of Hawaii. Act 247 (2005) authorizes the counties to levy a county surcharge on the general excise and use tax of up to one-half percent to fund public transportation systems. A county was required to levy such a county surcharge by December 31, 2005 which could not begin prior to January 1, 2007 and is to be repealed on December 31, 2022
August 22, 2005	The Honolulu City Council approves Bill 40 (2005), FD1, CD2, which was signed into law by Honolulu's Mayor and referred to as Ordinance 05-27. The ordinance establishes a one-half percent general excise and use tax surcharge to be levied beginning January 1, 2007 that would be repealed on December 31, 2022 for the purposes of funding the operating and capital costs of Honolulu's public

Honolulu Authority for Rapid Transportation (HART)

	transportation. Ordinance 05-27 was conditioned upon the approval of a locally preferred alternative following an Alternatives Analysis and Draft EIS, receipt of an operational, financial and development and route plan and a commitment of federal funds
February 27, 2007	The Honolulu City Council selects East Kapolei to Ala Moana Center via Salt Lake as the First Construction Project or MOS (Resolution 07-39) and later amends the route on January 28, 2009 to serve the Airport as part of the First Construction Project (Resolution 08-261)
November 11, 2009	City executes a contract for design-build services with Kiewit Pacific Company for the West Oahu/Farrington Highway Guideway (WOFH)
June 30, 2011	City executes a contract for design-build services with Kiewit Infrastructure West Company for the Kamehameha Highway Guideway (KHG)
	City executes a contract for design-build services with Kiewit /Kobayashi Joint Venture for the MSF
July 1, 2011	Honolulu Authority for Rapid Transportation (HART) forms pursuant to an amendment to City Charter in the 2010 general election establishing HART as a semi-autonomous agency of the City
November 28, 2011	HART executes a contract for design-build-operate-maintain services for Core Systems and Operations, including 80 rail cars, with Ansaldo Honolulu JV for the MOS
December 29, 2011	FTA provides Final Design Approval
February 6, 2012	FTA approves a Limited Construction Letter of No Prejudice (LONP) in the amount of $184.7M
August 24, 2012	Hawaii Supreme Court requires an Archaeological Inventory Survey (AIS) be completed for the entire 20-mile route before construction can resume

Honolulu Authority for Rapid Transportation (HART)

November 2, 2012	Judge A. Wallace Tashima, federal court, requires further studies to supplement the original Environmental Impact Study (EIS)
December 19, 2012	City and the FTA sign the FFGA
February 2013	Rail opponents file an appeal to the federal court ruling
September 16, 2013	HART restarts construction after 13 month delay
February 18, 2014	Ninth Circuit Court of Appeals panel rules in favor of FTA, USDOT and City, allowing the project to move forward
July 2014	The Project Management Oversight Consultant (PMOC) Risk Refresh Report indicates HART's estimate falls short of the predicted FTA model outcome by approximately $265 million
August 2014	Bids for construction of nine Westside rail stations are opened and exceed estimates by more than $100 million
September 2014	HART cancels the Westside rail station solicitation and repackages into three contracts of three stations each
December 2014	HART projects a $910 million budget shortfall for the project due to lower than expected GET surcharge revenues and increasing delays and utility relocation costs
January - May 2015	HART and City leaders testify in support of extending the 0.5% GET surcharge to fund rail construction
June 22, 2015	HART executes a contract for construction services with Hawaiian Dredging Construction Company, Inc. for the Farrington Highway Station Group cconstruction contract
July 14, 2015	Act 240, HB134 HD1 SD2 CD1 – Purpose: Reauthorizes the counties' authority to establish a county GET surcharge to be effective until 12/31/2027. Limits use of surcharge revenue to capital costs (*Exhibit D*)

Honolulu Authority for Rapid Transportation (HART)

July 20, 2015	HART executes a contract for construction services with Nan, Inc. for the West Oahu Station Group construction contract
January 27, 2016	Council approves Bill 23 (2015), CD2, FD1, Relating to the Transportation Surcharge. Bill 23 amended Ordinance 05-27 (that established a one-half percent general excise and use tax (GET) surcharge to be used to fund the operating and capital costs of the locally preferred alternative for the City's mass transit project) and effectuated the extension of the GET surcharge for Honolulu permitted under Section 3 of Act 240 beyond December 31, 2022 to December 31, 2027
	HART executes a contract for construction services with Nan, Inc. for the Kamehameha Highway Stations Group Construction contract
February 1, 2016	Mayor signs Bill 23 (2015), CD2, FD1, into law (now referred to as Ordinance 16-1) Relating to the Transportation Surcharge. Ordinance 16-1 extends the GET surcharge for five (5) years beyond December 31, 2022 to December 31, 2027 (*Exhibit E*)
June 2016	The PMOC Risk Refresh Report estimates the total cost to complete the HRTP will range between $7.73 billion and $8.01 billion dollars and be delayed until December 2024
	HART initiates a new capital Risk Management System to assist the project management team in decision making, cost containment and risk mitigation
June 6, 2016	FTA Region IX Regional Administrator Leslie T. Rogers writes and requires HART and the City submit a Recovery Plan on or before August 7, 2016 for completion of the Project which demonstrates HART is working to contain costs and minimize the delay in opening for revenue operations (*Exhibit A*)

Honolulu Authority for Rapid Transportation (HART)

June 24, 2016	Honolulu Mayor Kirk Caldwell writes FTA seeking an extension for submittal of the Recovery Plan submittal date to mid calendar year (CY) 2017 (*Exhibit B*)
July 21, 2016	FTA Acting Administrator Carolyn Flowers responds to the request seeking an extension and insists the City provide the FTA with such a plan no later than the end of CY 2016. Administrator Flowers also requests HART meet with the FTA at the end of August 2016 and provide an Interim Plan on how the Project will move forward by the end of September 2016 (*Exhibit C*)
August 18, 2016	CEO and Executive Director Grabauskas submits his resignation and HART Board member Formby is appointed Acting Executive Director of HART HART Board forms Permitted Interaction Group (PIG) to select an interim Executive Director
August 29-30, 2016	The City and HART leadership, including Mayor Caldwell, Council Chair Martin, Council Transportation Chair Manahan, Board Chair Hanabusa, Board Vice-Chair Damien Kim, Acting Executive Director Formby, Deputy Director Morioka and Project Director Sam Camaggio meet with FTA Acting Administrator Carolyn Flowers, Region IX Administrator Leslie T. Rogers and FTA leadership in San Francisco to discuss Honolulu's Recovery Plan for the Project and the need for additional time to obtain a commitment for the revenue to construct the MOS
September 2016	HART Board Chair Hanabusa and Acting Executive Director Formby meet with City Council members and Hawaii State Legislative leadership regarding the Project's need for additional revenue to complete construction of the MOS Council leadership initiates meetings with members of the Hawaii State Legislature regarding the completion of the rail Project to Ala Moana Center

September 8, 2016 HART submits request for Peer Review, to be completed by the end of CY 2016, to the American Public Transportation Association (APTA)

September 13, 2016 HART Acting Executive Director Formby, Deputy Director Morioka and Project Director Carnaggio meet with FTA leadership in Los Angeles to discuss HART's activities since the San Francisco meeting and HART's Interim Plan due by the end of September 2016

September 20, 2016 HART formalizes changes to the HART monthly Progress Report with Report Highlights to the HART Board and continues work on FY18 budget, cost projections, cash flows and schedules

HART commences intensive effort to update the HRTP Financial Plan for the FFGA, last prepared June 2012, with an update due no later than December 1, 2016

HART undertakes organizational review and change, as necessary, to support greater functionality and program management oversight

September 25, 2016 HART holds Honolulu Train #1 Community Train Day at the MSF in Pearl City with Council members, Legislators and over 3,500 community members in attendance

CURRENT STATUS AND ON-GOING ACTIVITIES

Major contracts underway and status:	Completion*
WOFH Guideway	93%
KHG Alignment	76%
Maintenance Service Facility	99%
Core Systems Contract	36%
Vehicles (4 of 80 delivered)	5%

West Oahu Station Group	6%
Farrington Highway Station Group	1%
Kamehameha Hwy Station Group	0%
Elevator/Escalator Contracts	12%

* Based on the weighted value progress

Recent Award: On July 19, 2016, the Airport Guideway and Stations design-build contract, providing both guideway and stations from the Pearl Harbor Station (Makalapa) to the Middle Street Station was awarded. The contract was executed on September 20, 2016 and Notice to Proceed (NTP) is expected to be issued in the fourth quarter of 2016 or later if requested by the contractor.

Future Awards: Two major contracts have yet to be awarded:

1) The Pearl Highlands Transit Center (parking garage, transit center and H-2 off-ramp) with a current budget line item of $315 million; and

2) The City Center Guideway and Station design-build contract with a current budget line item of $1.61 billion.

WORK IN PROGRESS: PROJECT COST ESTIMATE AND SCHEDULE, FINANCIAL PLAN AND RISK MANAGEMENT

Project Cost Estimate and Schedule

HART is intently focused on updating its post-FFGA Contract Packaging Plan (project cost estimate and project schedule) using both independent cost estimates and a bottoms-up risk assessment of every project in the program. HART wants to ensure all program risks are quantified and realistic estimates are assigned from which HART project managers can manage risks, contain costs, value engineer and administer the contracts in a fiscally responsible manner.

As of 9/30/2016:	Estimated Project Cost:	~$6.8B
	Contingency:	~$1.4B
	Financing Cost:	~$ .4B
	Total:	~$8.6B
	Projected Revenue Service Date:	Dec 2025

Financial Plan

To date, HART has not published an update to the 2012 FFGA Financial Plan. HART is currently working with all stakeholders (capital program staff, operations and maintenance (O&M) staff, intermodal partners such as the Department of Transportation Services (DTS), Oahu Transit Services (OTS), Budget and Fiscal Services (BFS) and third-party stakeholders, including land owners and utility companies) to compile the necessary data to produce an updated Financial Plan for the HRTP by no later than December 1, 2016.

The task is necessarily complicated by the inability to completely update FFGA Financial Plan assumptions made in the 2012 FFGA Financial Plan when decisions regarding certain aspects of the future O&M of the intermodal system are, as of yet, undecided. Examples include fare-box policies and the details of intermodal operations, including but not limited to the specifics of an interim opening of the intermodal system.[2]

Nonetheless, HART is committed to produce an updated Financial Plan based upon the best available data and information by no later than December 1, 2016.

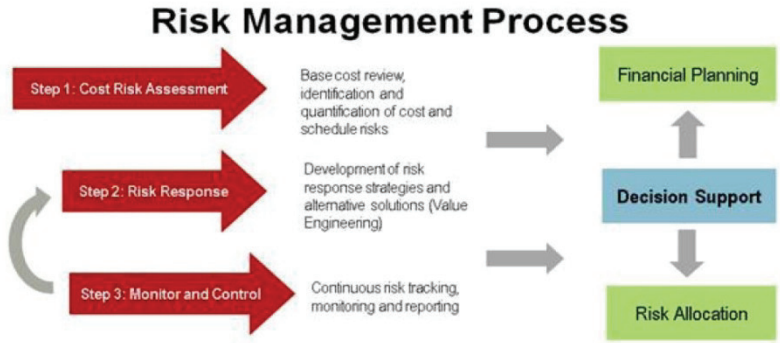
Risk Management

In 2016, HART adopted a new Risk Management System that focuses on mitigation strategies to assist the project teams in project delivery. The risk management program has recently performed a bottoms-up risk assessment of every project in the HRTP program in support of budget and schedule refinement and development. This process evaluated the base cost and

[2] Responsibility for intermodal O&M is currently the subject of Proposed Charter Amendment Question No. 4: "Should a unified multi-modal transportation system be created by: . . . Placing operations and maintenance responsibilities for bus, paratransit and rail solely in the Department of Transportation Services…?" See www.honoluluchartercommission.org.

schedule of each of the approximately 38 individual projects in the program and then applied a network risk model that was created to define and determine how a discrete risk on one project affects or has the potential to affect other projects in the program. By monetizing the potential risks and impacts, including impacts to schedule, the risk management program assists the project management teams in decision making, costs containment and risk mitigation.

HART is confident its new Risk Management System will empower its program managers and project director to think and act proactively, thereby anticipating risks, costs associated with risks and potential schedule impacts in advance. Armed with such knowledge, decision makers will be poised to mitigate risks and avoid costly change orders, claims and contract amendments.





COORDINATION WITH ELECTED OFFICIALS AND BUSINESS/COMMUNITY OUTREACH WITH STAKEHOLDERS

Coordination with Elected Officials

Honolulu's Mayor, City Council leadership, the HART Board of Directors and HART's management team have briefed leadership and members of the state legislature to initiate discussions regarding various options to generate additional non-federal funding for the Project. While legislators were open to meet and discuss, they clearly indicated the need for more information regarding HART's Project Cost Estimate, Schedule, Financial Plan and Budget, drawdown of federal funds, GET and cash flow. HART has committed to work with all legislators (state and city) to provide them the information and data they need to make informed decisions.

To date, the following meetings have occurred between HART and elected officials to share HRTP information and provide a status update:

August 22, 2016	Mayor Kirk Caldwell
August 22, 2016	Council Chair Ernest Y. Martin
August 22, 2016	Council member Brandon Elefante
August 23, 2016	Council member and Budget Chair Ann Kobayashi and Council member Carol Fukunaga
August 23, 2016	Council member Kymberly Pine
August 24, 2016	Council member Ron Menor
August 24, 2016	Council member and Transportation Chair Joey Manahan
August 31, 2016	Council Vice-Chair Ikaika Anderson
August 31, 2016	State House Speaker Joseph Souki
September 1, 2016	Council member Trevor Ozawa
September 2, 2016	State Senate President Ronald Kouchi
September 2016	State Legislators (House and Senate)

Business/Community Outreach with Stakeholders

Since traveling to San Francisco to meet with the FTA in August 2016, the HART Acting Executive Director, the HART Board Chair, the HART Deputy Executive Director, the HART Project Director and the HART Director of Government Relations have met with and made or scheduled presentations to different business and community stakeholders, including but not limited to Move Oahu Forward, the Hawaii Business Roundtable, the American Society of Civil Engineers, the American Council of Engineering Companies and its local Hawaii chapter, neighborhood boards and community associations, as well as labor organizations, including but not limited to the Laborers-Employees Cooperation and Education Trust, and other project stakeholders. The purpose of the meetings was to convey the City's commitment to construction of the MOS and the strength of the City's partnership with the FTA. The feedback from the meetings has been positive and encouraging, as there is overwhelming support for the City to pursue the funding options necessary to construct the MOS to Ala Moana Center.

INTERIM PLAN (PROPOSED PROCESS)

During the August 30, 2016 meeting with the FTA, City and HART leadership spoke with one voice in strong support of submitting a financial Recovery Plan by June 30, 2017, a plan that honors the City's commitment to Oahu communities, residents and transit riders by building a functional rail system between East Kapolei and Ala Moana Center (the MOS).

The two plans that follow describe the City's process to deliver a Recovery Plan consistent with the City's priority and FTA guidelines and objectives:

1) "Plan A" represents the City's financial Recovery Plan in support of building the MOS between East Kapolei and Ala Moana Center.

As recently as Wednesday, September 28, 2016, Council Chair Ernest Y. Martin and Council Transportation Chair Joey Manahan noted:

> We support HART's recovery plan to complete the rail line to Ala Moana Shopping Center, as agreed to in the Full Funding Grant Agreement (FFGA). This project will serve as the backbone of an island-wide multimodal transportation network that will create economic opportunities and more housing choices while providing a much needed alternative to residents battling some of the worst traffic congestion in the country. The Honolulu City Council is committed towards continuing work with HART, the administration, the private sector and our partners in the state and federal government to secure additional funding for the project.

On Thursday, September 29, 2016, during HART's project update meeting with Mayor Kirk Caldwell, the Mayor reaffirmed his unwavering commitment to rail and to building the entire 20-mile, 21-station route, from Kapolei to Middle Street to Downtown and to Ala Moana. Mayor Caldwell emphasized that he was "equally committed to securing the funding sources needed to complete the project in its entirety."

With the strong support of the Mayor and the Honolulu City Council, HART will continue to work aggressively to contain program costs, pace program expenditures, improve program management and mitigate program risks while working collaboratively with state and city leaders to secure the additional program funding necessary to submit a financial Recovery Plan to the FTA that assures the completion of the MOS.

2) "Plan B" represents the build to budget option, describing the process the City will undertake to deliver a transit system with independent utility within the program's existing budget. As the full buildout of the rail system from East Kapolei to Middle Street does not qualify as a system of independent utility within FTA guidelines, Plan B will necessarily require the City defer stations, defer other project components and stop the guideway short of Ala Moana Center to reach a logical termini within the existing budget, all of which will negatively impact ridership and require additional planning and environmental studies. As such, a Plan B option is strongly disfavored by the City.

Although not described herein, as noted by Administrator Flower's in her letter dated July 16, 2016, there is an option to combine Plan A and Plan B with an outcome based

on the receipt of additional revenue combined with mitigation considerations which will result in some negative impact to the current HRTP project design and functionality.

Plan A - The City's Preferred Financial Recovery Plan

Under Plan A, the City is taking steps to secure a commitment of additional financial resources during the 2017 state and city legislative processes. Between October 2016 and January 2017, the City and HART leadership will continue to meet with legislators, community and business groups and residents to reinforce the City's commitment to a multimodal transit system between East Kapolei and Ala Moana Center.

The City Center Guideway and Stations (CCGS) segment is the last major component of the MOS that is not currently under contract due to budgetary constraints. HART is actively working on finalizing CCGS documents and specifications for the design-build contract including, but not limited to, the finalization of plans and designs for the relocation of utilities running through the CCGS corridor.

Based on the City's strong support for Plan A, assuming HART is able to secure additional financial resources, HART projects an award of the CCGS contract in mid to late 2018. In the meantime, HART is continuing with right-of-way (ROW) acquisitions, sensitive to Council's and the HART Board of Directors' concerns that HART work proactively with business owners to avoid prematurely displacing or interrupting businesses in advance of actual construction. HART shares these concerns and has agreed to proceed accordingly.

HART is still refining the total cost and schedule for the program, which includes the presently unfunded CCGS. The refinement process incorporates HART's new risk management assessment on all contracts and projects, including the CCGS base cost and schedule. HART has also called upon the services of its On-Call Contractor to facilitate areas needing special attention including, but not limited to, verification of existing utility as-built drawings and relocation of specific utility lines.

As the outcome of the state and city legislative processes will not be known until mid-2017, HART will continue to pace expenditures on existing contracts and work to contain costs. HART will also forego the Pearl Highlands Transit Center (parking

garage, transit center and H-2 off-ramp) procurement until additional funding resources are secured to complete the MOS. Consequently, to effectively evaluate the feasibility of this Plan A option, an extension to deliver the final Recovery Plan until June 30, 2017 remains an operative request from the City as this is clearly the preferred option to meet the objectives of the FFGA.

Plan B - Build to Budget

If no additional federal and non-federal funds are made available, HART must develop a strategy to complete a project of independent utility within its current estimated revenue of $6.8 billion. Building a system, as planned and designed, from East Kapolei to Middle Street has already been determined as one lacking independent utility, meaning Middle Street is not a logical termini within FTA guidelines for the purpose of amending the FFGA and retaining the FFGA federal share of $1.55 billion. As a result, absent a financial Recovery Plan, HART must de-scope the existing program and proceed with Plan B.

HART has already completed Rough Order of Magnitude (ROM) cost estimates for various Plan B options which were presented to the HART Board of Directors on June 8, 2016 for discussion purposes only.[3] The HART presentation at that time included estimated daily boardings at 21 stations along the 20 mile guideway in 2030, totaling an expected 119,582 daily boardings. The ridership estimates provided to the Board also differentiated between those riders who were expected to arrive at a station by car and park, be dropped off, arrive by transit (bus/paratransit) or walk/bike to the rail station. The cost and ridership estimates, along with general pros and cons for program de-scoping options provided to the Board on June 8, 2016, demonstrate that HART has an understanding of the Plan B task. Further, HART acknowledges that the Plan B process will need to be refined and studied at a much more discerning and in-depth level. (*Exhibit F*)

For example, HART is presently undertaking a detailed cost estimate and schedule analysis of one Plan B option, an alignment that would end at the Downtown Station,

[3] Cost estimates to complete the project to various stations between Middle Street and Ala Moana Center have been revised since the June 8, 2016 presentation to the HART Board.

arguably a logical termini of a system with independent utility. Initial ROM cost estimates indicate that constructing the guideway to the Downtown Station necessarily means the deferral of the Pearl Highlands Transit Center (parking garage, transit center and H-2 off-ramp), along with the deferral of the Kalihi, Kapalma, Iwilei and Chinatown stations. In addition, a Plan B to Downtown necessarily defers Civic Center, Kakaako and Ala Moana Center stations. While the City would plan to add these project components and stations back when funds are available in the future (a date uncertain), the current impact to the system is calculable and would be quantified and described in detail (loss of ridership and fare-box, disengagement of communities and transit riders, negative impact to Transit Oriented Development (TOD) opportunities including affordable housing opportunities, disruption to communities associated with construction on multiple versus single occasions, increased future construction costs for deferred project components and stations, need for additional bus/paratransit service in affected communities at a higher per-mile cost, etc.).

HART plans on commencing its cost and schedule analysis during October 2016, including a ridership study that will provide the necessary input for the feasibility of project de-scoping options, with completion anticipated in April 2017. Based on the results of these studies, HART will develop the scope of work to retain a consultant to assess the National Environmental Policy Act (NEPA) and Chapter 343, Hawaii Environmental Policy Act (HEPA) impacts of project de-scoping options with mitigations considerations. The scope of work should be completed by the first quarter of 2018, to be followed by the NEPA and HEPA planning/environmental studies and alternative analyses, a period of twenty-four (24) to thirty-six (36) months. All dates are approximate.

Recognizing the FTA's concern that pursuing a Plan A option might negatively impact successful implementation of Plan B, HART is monitoring its cash flow rate and is taking immediate steps to pace future expenditures to the fullest extent possible. HART is also focusing on cost containment in anticipation of June 30, 2017 Recovery Plan submittal date. For example, the Pearl Highlands Transit Center procurement is on hold pending a determination of a Plan A versus Plan B Recovery Plan.

As noted in the July 2016 PMOC report, HART has recently implemented cost containment and cost reduction measures as follows:

1. Significant revision of HART's contract packaging strategy;
2. Development of a detailed cost reduction matrix that focuses on the remaining construction contracts (Value Engineering);
3. Review of interface milestones to help relieve schedule compression where possible;
4. Review of various options related to financing of the project;
5. Identification of items that could be considered O&M costs;
6. Development of a HART Decision Milestone Matrix.

Previous initiatives to contain and reduce costs include: Changes to the General Conditions including, but not limited to, simplifying subcontractor specialty license requirements and giving contractors more control over Maintenance of Traffic (MOT); Changes to Procurement (changing from design-bid-build to design-build procurements and re-packaging from one large design-build to two design-build procurements); Changes to Design Criteria, such as maximizing the use of precast and fabrication off-site for speed of construction and reduced MOT and relaxation of concrete mix specifications; and Changes to the Station Scopes, such as simplifying the design of parking lot canopies at Aloha Stadium and eliminating the Ewa entry and bridge at the UH West Oahu Station.

In summary, under a Plan B process, HART will accomplish the following:

- Develop cost and schedule analyses for Plan B project options under build to budget scenarios. The cost and schedule analyses will be comprehensive and include the anticipated increased costs for future project component and station construction that will be deferred in the Plan B scenarios (April 2017);
- Conduct a comprehensive ridership analysis to determine the negative impacts to ridership due to the deferral of project components and stations, including direct and indirect (disparate) impacts, along with the anticipated loss of fare-box revenue and the increased costs associated with additional bus service to compensate for those communities not having access to rail (April 2017);

- Determine which project components and stations need to be deferred to deliver a system with independent utility within the program budget and quantify and describe the negative impacts to communities, businesses, TOD opportunities and residents associated with said deferrals and de-scoping (June 2017);
- Develop a sequencing schedule for the Plan B scenarios which disrupt communities, businesses and residents through multiple construction project necessitated by the later construction of deferred project components and stations (June 2017);
- Draft NEPA/HEPA Scopes of Work (April 2017 – October 2017);
- Conduct the NEPA/HEPA studies necessitated by the de-scoped program (October 2017 – March 2020).

CONCLUSION

HART is confident it can submit a financial Recovery Plan (Plan A) or a build to budget Recovery Plan (Plan B), or a combination thereof, by June 30, 2017 while preserving the City's strongly preferred option of constructing the MOS from East Kapolei to Ala Moana Center.

We invite any questions you may have regarding this Interim Plan and look forward to the FTA's earliest reply regarding the City's request for a June 30, 2017 Recovery Plan submittal date.

EXHIBIT A

Rec'd 6/7 GE

HART

U.S. Department
of Transportation
Federal Transit Administration

'16 JUN -9 A9 :51

REGION IX
Arizona, California,
Hawaii, Nevada, Guam
American Samoa,
Northern Mariana Islands

90 7th Street
Suite 15-300
San Francisco, CA 94103-6701
415-734-9490
415-734-9489 (fax)

JUN 6 2016

The Honorable Kirk Caldwell
Mayor
City and County of Honolulu
530 South King Street, Suite 300
Honolulu, Hawaii 96813

Mr. Daniel A. Grabauskas
Executive Director and Chief Executive Officer
Honolulu Authority for Rapid Transportation
1009 Alakea Street, Suite 1700
Honolulu, Hawaii 96813

Re: Recovery Plan for Completion
of the Honolulu Rail Project

Dear Mayor Caldwell and Mr. Grabauskas:

As you are aware, the recent Risk Report for the Honolulu Rail Transit Project ("Project") indicates the total cost to complete the Project will range between $7.73 billion and $8.01 billion, with an estimated completion date of December 2024. These costs and the schedule extend far beyond the costs and schedule set forth in the December 2012 Full Funding Grant Agreement (FFGA) between the Federal Transit Administration (FTA) and grant recipient, the City and County of Honolulu. In accordance with the terms and conditions of the FFGA, I write today to require the City and County of Honolulu and the Honolulu Authority for Rapid Transportation (HART) to submit a *Recovery Plan* for completion of the Project which demonstrates HART is taking every reasonable measure to mitigate the cost overruns and minimize the delay in opening the Project to revenue operations. The FTA Acting Administrator Carolyn Flowers and I will expect your *Recovery Plan* on or before August 7, 2016.

We appreciate the many challenges HART has faced in the design and construction of the Project, among them, the unfavorable market conditions, unanticipated costs for utility relocation, and delays attributable to litigation. Still, HART can do more to contain costs and mitigate the slippage in schedule. Most importantly, HART must re-baseline the Project budget and schedule to reflect current conditions, identify a permanent risk manager, update the Project Management Plan, and streamline its organizational structure with clear roles and responsibilities. Moreover, we urge HART to engage a peer review with industry experts to recalibrate a critical path for Project completion that is entirely consistent with your expected financial resources.

EXHIBIT A

As FTA seeks to protect the public's very substantial investment under the FFGA, and HART seeks to deliver a rail transit system of enormous and lasting benefits to the island of Oahu, we call on you to redouble your efforts to complete the Project as quickly and efficiently as possible. The

Acting Administrator will contact you in the near future to gauge your progress on the *Recovery Plan.* In the interim please do not hesitate to contact me should you have any questions.

Sincerely,

Leslie T. Rogers
Regional Administrator

EXHIBIT B

HART

OFFICE OF THE MAYOR
CITY AND COUNTY OF HONOLULU
530 SOUTH KING STREET, ROOM 300 • HONOLULU, HAWAII 96813
PHONE: (808) 768-4141 • FAX: (808) 768-4242 • INTERNET: www.honolulu.gov

2016 JUN 29 P4:04

KIRK CALDWELL
MAYOR

ROY K. AMEMIYA, JR.
MANAGING DIRECTOR

GEORGETTE T. DEEMER
DEPUTY MANAGING DIRECTOR

June 24, 2016

The Honorable Carolyn Flowers
Acting Administrator
Federal Transit Administration (FTA)
U.S. Department of Transportation
1200 New Jersey Avenue, S.E.
Washington, District of Columbia 20590

The Honorable Leslie Rogers
Regional Administrator
Federal Transit Administration (FTA), Region IX
U.S. Department of Transportation
90 7th Street, Suite 15-300
San Francisco, California 94103-6701

Dear Administrator Flowers and Regional Administrator Rogers:

This letter responds to Administrator Roger's letter of June 6, 2016 requesting the City and County of Honolulu (City) and the Honolulu Authority for Rapid Transportation (HART) submit a *Recovery Plan* for completion of the Honolulu Rail Transit Project (Project) to the FTA by August 7, 2016.

We appreciate the FTA acknowledging the many challenges HART has faced in the course of implementing the Project and we share the FTA's objective to contain future construction costs and mitigate the slippage in schedule the Project has experienced to date. We want to assure the FTA, as our federal partner, that we intend to submit a *Recovery Plan* that accurately reflects the City's preferred path forward in constructing the Project. We also want to emphasize that while the *Recovery Plan* is important to the City and FTA for recalibrating this Project, it in no way reduces the City's commitment to 20 miles and 21 stations under the minimum operable segment (MOS).

Request for Extension of Time to Provide a *Recovery Plan*

While we acknowledge the FTA's desire to receive a *Recovery Plan* by August 7, 2016, the size of the potential funding gap in the Project is such that additional time is needed to carefully assess all options. As such, the City proposes June 1, 2017 for the submission of its *Recovery Plan*.

EXHIBIT B

The Honorable Carolyn Flowers
The Honorable Leslie Rogers
June 24, 2016
Page Two

A June 1, 2017 date will provide the City the time it needs to more fully develop and cost Project options based not only on the resources available today, but resources the City intends to aggressively pursue between now and the first half of CY2017. It is the City's unwavering commitment to rail that drives our request for more time to submit a *Recovery Plan* that is thorough, achievable and, frankly, honors our commitment.

Assurance of Project Progress – Work Plan

To assure you our request to submit the City's *Recovery Plan* by mid-2017 in no way adversely affects our continued progress on the Project, please find the City's Project Work Plan through mid-2017 attached hereto.

In closing, thank you Administrator Flowers and Regional Administrator Rogers for your continued willingness to work with the City on a plan to complete the Honolulu Rail Transit Project and provide safe, effective and affordable mass transportation services to our communities on Oahu.

Sincerely,

Kirk Caldwell
Mayor

Attachment

cc. Ms. Colleen Hanabusa, Chairwoman, HART Board of Directors
HART Board of Directors
Mr. Dan Grabauskas, Executive Director
Honorable Ernest Y. Martin, Chair and Presiding Officer and Members
Honorable David Ige, Governor
Honorable Brian Schatz, U.S. Senator
Honorable Mazie Hirono, U.S. Senator
Honorable Tulsi Gabbard, U.S. Representative
Honorable Mark Takai, U.S. Representative
Honorable Ron Kouchi, State Senate President
Honorable Joseph Souki, State House Speaker

EXHIBIT B

The Honorable Carolyn Flowers
The Honorable Leslie Rogers
June 24, 2016

WORK PLAN

- Complete construction of West Side Stations and Guideway (East Kapolei to Aloha Stadium) to have interim service beginning in 2021.
- Continue land acquisition activities necessary for Dillingham Boulevard to enable an advanced utility relocation and road widening project. On-going
- Continue potholing and other pre-construction activities in support of design completion and reduce any further construction risks. On-going
- Continue with completion of design for utility relocation work on the City Center Guideway and Stations alignment including underground of 138 KV. On-going
- Continue outreach to community and businesses along City Center Guideway & Stations alignment route. On-going
- Award Airport Guideway and Stations contract. Q3 2016.
- Complete installation and testing of signaling equipment in the Yard and Yard Control Bungalow. Q4 2016
- Complete Testing and Commissioning of Traction Power Substations at Yard TPSS and Waipahu TPSS. Q4 2016
- Complete Static testing of Train 1. Q4 2016
- Begin Train Signaling and Communications cable installation on Guideway. Q4 2016
- Complete power cabling installation on Train test track between Waipahu Station and West Loch Station. Q1 2017
- Receive second train at Rail Operations Center. Q1 2017
- Begin Train testing in Yard on Yard Test Track. Q1 2017
- Begin Train testing on Guideway. Q2 2017
- Potentially issue an advance utility relocation and roadway widening contract for the Dillingham Blvd segment. Q2 2017

EXHIBIT C

U.S. Department of Transportation
Federal Transit Administration

Administrator

1200 New Jersey Avenue, SE
Washington, DC 20590

JUL 21 2016

The Honorable Kirk Caldwell
Mayor of Honolulu
530 South King Street, Suite 300
Honolulu, HI 96813

Dear Mayor Caldwell:

Thank you for your June 24 letter seeking an extension of time for submittal of a Recovery Plan for the Honolulu Rail Transit Project (Project). The Federal Transit Administration (FTA) is amenable to an extension, but must insist that the City and County and the Honolulu Authority for Rapid Transportation (HART) provide FTA with such a plan no later than the end of this calendar year. Also, no later than the end of this August, HART and FTA must meet to discuss the immediate milestones and deliverables for an interim plan on how the Project will move forward, and I will expect that plan by the end of September 2016.

Please recognize, FTA is obliged to protect the public's very substantial investment in the Project, thus we need to know the City and County's intentions for resolving your planning, engineering, and financial issues as quickly as practicable.

For the future of the Project the City and County must make a fundamental choice to either reduce the scope of the Project, consistent with the financial resources currently available, or seek additional, non-Federal resources sufficient to complete the functional scope of work under our Full Funding Grant Agreement of December 2012, or undertake some combination of these. Your Recovery Plan must then be based on your decision whether to reduce the Project scope or seek additional, non-Federal resources, or both. Logically, your first step will be to identify a range of viable options for cost containment, new investments in the Project, perhaps an interim terminus or deferral of certain stations, and an analysis of the costs and estimated ridership associated with each such option. As local deliberations continue, FTA cautions the City and County to refrain from any procurements or other actions that would foreclose viable options for maximizing Project benefits or prejudice FTA's decision on a Recovery Plan.

My staff and I have several thoughts that should be discussed with HART during the month of August. Mr. Leslie Rogers, FTA Region IX Administrator, will call you to make arrangements for that purpose.

Sincerely yours,

Carolyn Flowers
Acting Administrator

cc: Mr. Dan Grabauskas
Mr. Leslie Rogers

EXHIBIT D

GOV. MSG. NO. 1349

EXECUTIVE CHAMBERS
HONOLULU

DAVID Y. IGE
GOVERNOR

July 14, 2015

The Honorable Ronald D. Kouchi,
President
and Members of the Senate
Twenty-Eighth State Legislature
State Capitol, Room 409
Honolulu, Hawai'i 96813

The Honorable Joseph M. Souki,
Speaker and Members of the
House of Representatives
Twenty-Eighth State Legislature
State Capitol, Room 431
Honolulu, Hawai'i 96813

Dear President Kouchi, Speaker Souki, and Members of the Legislature:

This is to inform you that on July 14, 2015, the following bill was signed into law:

HB134 HD1 SD2 CD1 RELATING TO TAXATION
ACT 240 (15)

Sincerely,

David Y. Ige

DAVID Y. IGE
Governor, State of Hawai'i

Approved by the Governor
on JUL 14 2015

EXHIBIT D
ORIGINAL

ACT 240

HOUSE OF REPRESENTATIVES
TWENTY-EIGHTH LEGISLATURE, 2015
STATE OF HAWAII

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

A BILL FOR AN ACT

RELATING TO TAXATION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. The purpose of this Act is to address the county surcharge on state general excise and use taxes.

More specifically, this Act:

(1) Authorizes the extension of the surcharge by any county that has adopted an ordinance to establish the surcharge prior to the effective date of this Act;

(2) Authorizes other counties to adopt ordinances establishing the surcharge;

(3) For counties with a population greater than five hundred thousand:

(A) Limits the use of surcharge revenues to "capital costs"; and

(B) Expands the definition of "capital costs"; and

(4) Amends the definition of "public lands" to include the air rights over any portion of state land upon which a county mass transit project is developed after July 11, 2005.

EXHIBIT D

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

SECTION 2. This Act shall not affect the validity or effect of any surcharge on state tax adopted pursuant to Act 247, Session Laws of Hawaii 2005, prior to the effective date of this Act.

SECTION 3. Section 46-16.8, Hawaii Revised Statutes, is amended to read as follows:

"**[~~[~~§46-16.8**[~~]~~]** County surcharge on state tax.** (a) Each county may establish a surcharge on state tax at the rates enumerated in sections 237-8.6 and 238-2.6. A county electing to establish this surcharge shall do so by ordinance; provided that:

(1) No ordinance shall be adopted until the county has conducted a public hearing on the proposed ordinance;

(2) The ordinance shall be adopted prior to December 31, 2005; and

(3) No county surcharge on state tax that may be authorized under this [~~section~~] subsection shall be levied prior to January 1, 2007[~~.~~], or after December 31, 2022, unless extended pursuant to subsection (b).

Notice of the public hearing required under paragraph (1) shall be published in a newspaper of general circulation within the

EXHIBIT D

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

county at least twice within a period of thirty days immediately preceding the date of the hearing.

[~~(b)~~] A county electing to exercise the authority granted under this [~~section~~] subsection shall notify the director of taxation within ten days after the county has adopted a surcharge on state tax ordinance and, beginning no earlier than January 1, 2007, the director of taxation shall levy, assess, collect, and otherwise administer the county surcharge on state tax.

(b) Each county that has established a surcharge on state tax prior to the effective date of this Act under authority of subsection (a) may extend the surcharge from January 1, 2023, until December 31, 2027, at the same rates. A county electing to extend this surcharge shall do so by ordinance; provided that:

(1) No ordinance shall be adopted until the county has conducted a public hearing on the proposed ordinance; and

(2) The ordinance shall be adopted prior to July 1, 2016, but no earlier than July 1, 2015.

EXHIBIT D

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

A county electing to exercise the authority granted under this subsection shall notify the director of taxation within ten days after the county has adopted an ordinance extending the surcharge on state tax. Beginning on January 1, 2023, the director of taxation shall levy, assess, collect, and otherwise administer the extended surcharge on state tax.

(c) Each county that has not established a surcharge on state tax prior to the effective date of this Act may establish the surcharge at the rates enumerated in sections 237-8.6 and 238-2.6. A county electing to establish this surcharge shall do so by ordinance; provided that:

(1) No ordinance shall be adopted until the county has conducted a public hearing on the proposed ordinance;

(2) The ordinance shall be adopted prior to July 1, 2016, but no earlier than July 1, 2015; and

(3) No county surcharge on state tax that may be authorized under this subsection shall be levied prior to January 1, 2018, or after December 31, 2027.

A county electing to exercise the authority granted under this subsection shall notify the director of taxation within ten days after the county has adopted a surcharge on state tax

EXHIBIT D

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

ordinance. Beginning on January 1, 2018, the director of taxation shall levy, assess, collect, and otherwise administer the county surcharge on state tax.

(d) Notice of the public hearing required under subsection (b) or (c) before adoption of an ordinance establishing or extending the surcharge on state tax shall be published in a newspaper of general circulation within the county at least twice within a period of thirty days immediately preceding the date of the hearing.

[~~(c)~~] (e) Each county with a population greater than five hundred thousand that adopts or extends a county surcharge on state tax ordinance pursuant to subsection (a) or (b) shall use the surcharges received from the State for:

(1) [~~Operating or capital~~] Capital costs of a locally preferred alternative for a mass transit project; and

(2) Expenses in complying with the Americans with Disabilities Act of 1990 with respect to paragraph (1).

The county surcharge on state tax shall not be used to build or repair public roads or highways, bicycle paths, or support

EXHIBIT D

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

public transportation systems already in existence prior to July 12, 2005.

[~~(d)~~] (f) Each county with a population equal to or less than five hundred thousand that adopts a county surcharge on state tax ordinance pursuant to [~~subsection (a)~~] this section shall use the surcharges received from the State for:

(1) Operating or capital costs of public transportation within each county for public transportation systems, including public roadways or highways, public buses, trains, ferries, pedestrian paths or sidewalks, or bicycle paths; and

(2) Expenses in complying with the Americans with Disabilities Act of 1990 with respect to paragraph (1).

[~~(e)~~] (g) As used in this section, "capital costs" means nonrecurring costs required to construct a transit facility or system, including debt service, costs of land acquisition and development, acquiring of rights-of-way, planning, design, and construction, and including equipping and furnishing the facility or system. For a county with a population greater than five hundred thousand, capital costs also include non-recurring



EXHIBIT D

personal services and other overhead costs that are not intended to continue after completion of construction of the minimum operable segment of the locally preferred alternative for a mass transit project."

SECTION 4. Section 171-2, Hawaii Revised Statutes, is amended to read as follows:

"**§171-2 Definition of public lands.** "Public lands" means all lands or interest therein in the State classed as government or crown lands previous to August 15, 1895, or acquired or reserved by the government upon or subsequent to that date by purchase, exchange, escheat, or the exercise of the right of eminent domain, or in any other manner; including lands accreted after May 20, 2003, and not otherwise awarded, submerged lands, and lands beneath tidal waters that are suitable for reclamation, together with reclaimed lands that have been given the status of public lands under this chapter, except:

(1) Lands designated in section 203 of the Hawaiian Homes Commission Act, 1920, as amended;

(2) Lands set aside pursuant to law for the use of the United States;

(3) Lands being used for roads and streets;

EXHIBIT D

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

(4) Lands to which the United States relinquished the absolute fee and ownership under section 91 of the Hawaiian Organic Act prior to the admission of Hawaii as a state of the United States unless subsequently placed under the control of the board of land and natural resources and given the status of public lands in accordance with the state constitution, the Hawaiian Homes Commission Act, 1920, as amended, or other laws;

(5) Lands to which the University of Hawaii holds title;

(6) Lands to which the Hawaii housing finance and development corporation in its corporate capacity holds title;

(7) Lands to which the Hawaii community development authority in its corporate capacity holds title;

(8) Lands to which the department of agriculture holds title by way of foreclosure, voluntary surrender, or otherwise, to recover moneys loaned or to recover debts otherwise owed the department under chapter 167;

(9) Lands that are set aside by the governor to the Aloha Tower development corporation; lands leased to the

EXHIBIT D

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

Aloha Tower development corporation by any department or agency of the State; or lands to which the Aloha Tower development corporation holds title in its corporate capacity;

(10) Lands that are set aside by the governor to the agribusiness development corporation; lands leased to the agribusiness development corporation by any department or agency of the State; or lands to which the agribusiness development corporation in its corporate capacity holds title; and

(11) Lands to which the high technology development corporation in its corporate capacity holds title[~~.~~]; provided that, except as otherwise limited under federal law and except for state land used as an airport as defined in section 262-1, public lands shall include the air rights over any portion of state land upon which a county mass transit project is developed after July 11, 2005."

SECTION 5. Section 237-8.6, Hawaii Revised Statutes, is amended by amending subsection (b) to read as follows:

"(b) Each county surcharge on state tax that may be adopted or extended pursuant to section [~~46-16.8(a)~~] 46-16.8

EXHIBIT D

shall be levied beginning in the taxable year after the adoption of the relevant county ordinance; provided that no surcharge on state tax may be levied [~~prior~~]:

(1) Prior to:

(A) January 1, 2007[~~.~~], if the county surcharge on state tax was established by an ordinance adopted prior to December 31, 2005; or

(B) January 1, 2018, if the county surcharge on state tax was established by the adoption of an ordinance after June 30, 2015, but prior to July 1, 2016; and

(2) After December 31, 2027."

SECTION 6. Section 238-2.6, Hawaii Revised Statutes, is amended by amending subsection (b) to read as follows:

"(b) Each county surcharge on state tax that may be adopted or extended shall be levied beginning in the taxable year after the adoption of the relevant county ordinance; provided that no surcharge on state tax may be levied [~~prior~~]:

(1) Prior to:

EXHIBIT D

(A) January 1, 2007[~], if the county surcharge on state tax was established by an ordinance adopted prior to December 31, 2005; or

(B) January 1, 2018, if the county surcharge on state tax was established by the adoption of an ordinance after June 30, 2015, but prior to July 1, 2016; and

(2) After December 31, 2027."

SECTION 7. Act 247, Session Laws of Hawaii 2005, is amended by amending section 9 to read as follows:

"SECTION 9. This Act shall take effect upon its approval; provided that:

(1) If none of the counties of the State adopt an ordinance to levy a county surcharge on state tax by December 31, 2005, this Act shall be repealed and section 437D-8.4, Hawaii Revised Statutes, shall be reenacted in the form in which it read on the day prior to the effective date of this Act;

(2) If any county does not adopt an ordinance to levy a county surcharge on state tax by December 31, 2005, it shall be prohibited from adopting such an ordinance

EXHIBIT D

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

pursuant to this Act, unless otherwise authorized by the legislature through a separate legislative act; and

(3) If an ordinance to levy a county surcharge on state tax is adopted by December 31, 2005:

(A) The ordinance shall be repealed on December 31, 2022; provided that the repeal of the ordinance shall not affect the validity or effect of an ordinance to extend a surcharge on state tax adopted pursuant to Act , Session Laws of Hawaii 2015;

(B) This Act shall be repealed on December 31, [~~2022,~~] 2027; and

(C) Section 437D-8.4, Hawaii Revised Statutes, shall be reenacted in the form in which it read on the day prior to the effective date of this Act[~~.~~]; provided that the amendments made to section 437D-8.4, Hawaii Revised Statutes, by Act 226, Session Laws of Hawaii 2008, as amended by Act 11, Session Laws of Hawaii 2009, and Act 110,

EXHIBIT D

H.B. NO. 134 H.D. 1 S.D. 2 C.D. 1

Session Laws of Hawaii 2014, shall not be repealed."

SECTION 8. Statutory material to be repealed is bracketed and stricken. New statutory material is underscored.

SECTION 9. This Act shall take effect on July 1, 2015.

APPROVED this 14 day of JUL , 2015

GOVERNOR OF ~~THE~~ STATE OF HAWAII

EXHIBIT E

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 16-1

BILL 23 (2015), CD2, FD1

A BILL FOR AN ORDINANCE

RELATING TO THE TRANSPORTATION SURCHARGE.

BE IT ORDAINED by the People of the City and County of Honolulu:

SECTION 1. Council Findings and Purpose. The purpose of this ordinance is to amend the ordinances pertaining to the county surcharge on general excise and use taxes.

Pursuant to Section 2 of Act 247, Session Laws of Hawaii, Regular Session of 2005, codified as HRS Section 46-16.8, Ordinance 05-27 established a one-half percent general excise and use tax surcharge to be used to fund the operating and capital costs of the locally preferred alternative for the City's mass transit project and related improvements to comply with the Americans with Disabilities Act (ADA), which was to take effect on January 1, 2007 and be repealed on December 31, 2022.

Among other things, Section 3 of Act 240, Session Laws of Hawaii, Regular Session of 2015, amended HRS Section 46-16.8 to provide for a five year extension of the general excise and use tax surcharge beyond December 31, 2022 to December 31, 2027, for any county that had established a tax surcharge prior to the Act's effective date and that enacts an ordinance to implement the extension; provided that the ordinance is enacted after holding a public hearing that satisfies certain notice requirements and is enacted after July 1, 2015, but prior to July 1, 2016. For the City, which prior to December 31, 2005 had enacted an ordinance to levy the general excise and use tax surcharge for the period between January 1, 2007 and December 31, 2022, Section 7 of Act 240 requires that that ordinance be repealed on December 31, 2022.

This Ordinance is intended to: (1) amend Ordinance 05-27, and (2) effectuate the extension of the general excise and use tax surcharge for Honolulu permitted under Section 3 of Act 240, while complying with the mandate that Ordinance 05-27 be repealed on December 31, 2022.

SECTION 2. Chapter 6, Article 60, Revised Ordinances of Honolulu 1990, is amended to read as follows:

"Article 60. Transportation Surcharge—Use of Funds

Sec. 6-60.1 Establishment of surcharge—Conditions.

Pursuant to Section 2 of Act 247, Session Laws of Hawaii, Regular Session of 2005, codified as Section 46-16.8 of the Hawaii Revised Statutes, there is hereby established a one-half percent general excise and use tax surcharge to be used for

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purposes of funding the operating and capital costs of public transportation within the City and County of Honolulu as specified herein. The excise and use tax surcharge [shall] will be levied beginning January 1, 2007. [Prior to the tax surcharge monies being expended as the local match for federal funds, the following shall occur:

(1) The council has approved by ordinance a locally preferred alternative following an Alternatives Analysis; and

(2) The council has received from the director of transportation services an operational, financial, development and route plan for the locally preferred alternative; and

(3) There is a commitment of federal funds, whether for planning, land acquisition or construction, to further the locally preferred alternative.]

Sec. 6-60.2 Use of funds.

(a) [All] As required by HRS Section 248-2.6(d), moneys received from the state derived from the imposition of the surcharge established under this article [shall] will be [deposited into the] a general fund [and] realization. Beginning July 1, 2015, moneys received from the surcharge may be expended for the following purposes authorized by state law:

(1) [Operating or capital] Capital costs of a locally preferred alternative for a mass transit project; and

(2) Expenses in complying with the Americans with Disabilities Act of 1990 with respect to [paragraph] subdivision (1).

(b) No surcharge moneys may be expended on portions of the locally preferred alternative for mass transit project beyond the minimum operable segment established under resolution 08-261, and a maximum amount of $4.815 billion of surcharge moneys levied from January 1, 2007 to December 31, 2022 may be expended on the minimum operable segment and associated debt financing costs.

(c) Notwithstanding the restrictions detailed in subsection (b) above, any surcharge moneys collected in excess of the $4.815 billion may be expended in the following order of priority:

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(1) Contingency and other reserves as recommended by the Federal Transit Administration and as detailed in the Updated Final Financial Plan for the Full Funding Grant Agreement;

(2) ADA accessibility improvements to the minimum operable segment of the locally preferred alternative for the mass transit project;

(3) Planning and design costs for route expansion; and

(4) Infrastructure improvements to rail station areas to support affordable housing, as permitted by State and Federal law,

provided that these additional surcharge expenditures may be expended only after the Honolulu Authority for Rapid Transportation provides for council review an update on the expenditures to date on the mass transit project and the anticipated use and amount of the additional surcharge expenditures above the $4.815 billion limit.

(d) No surcharge moneys may be expended for any purpose if the expenditure of such moneys will result in the project ending cash balance falling below the amount set forth in the Updated Final Financial Plan for the Full Funding Grant Agreement.

(e) The Honolulu Authority for Rapid Transportation shall submit to the council no later than January 1, 2017, any and all costs associated with: 1) contingency and other reserves as recommended by the Federal Transit Administration and as detailed in the Updated Final Financial Plan for the Full Funding Grant Agreement; 2) ADA accessibility improvements to the minimum operable segment of the locally preferred alternative for the mass transit project; 3) planning and design costs for route expansion; and 4) infrastructure improvements to rail station areas to support affordable housing, as permitted by State and Federal law.

(f) No moneys received from the surcharge [shall] may be used to build or repair public roads or highways or bicycle paths, or to support public transportation systems already in existence prior to July 12, 2005.

(g) Prior to and as a prerequisite for any transfer of moneys received from the surcharge, the Honolulu Authority for Rapid Transportation shall submit to the council a quarterly updated cash balance summary that contains all revenues and expenditures, including both capital expenditures and operating and maintenance expenditures.

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(h) At the close of each quarter, the Honolulu Authority for Rapid Transportation shall submit to the council:

(1) A capital improvement program status report in substantially the same form as that submitted by the director of budget and fiscal services for the city's executive capital improvement program.

(2) A statement of cash balances for each revenue source and each category of project cost showing the cash balance at the start of the accounting period and the cash balance at the end of the period.

(i) Within 30 days following the end of each fiscal year, the Honolulu Authority for Rapid Transportation shall submit to the council a report detailing all amounts invoiced by and paid to general contractors for the fiscal year just ended. The report must be organized by general contractor, separately reflect amounts billed by the general contractor for work done by its subcontractors, and include the following information:

(1) The names of general contractors and their respective subcontractors;

(2) The type of services provided by each general contractor and subcontractor;

(3) A detailed description and justification for the work done by each general contractor and subcontractor; and

(4) The amount invoiced by and paid to each general contractor, and the amount invoiced by each subcontractor to the general contractor for the described work.

(j) For purposes of this article, "capital costs" means the same as defined in HRS Section 46-16.8, as it may be amended, for a county with a population greater than 500,000.

Sec. 6-60.3 Repeal of surcharge.

Pursuant to Section 9 of Act 247, Session Laws of Hawaii, Regular Session of 2005, Section 6-60.1 [shall] will be repealed on December 31, 2022."

SECTION 3. Chapter 6, Article 60, Revised Ordinances of Honolulu 1990, is repealed.

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["**Article 60. Transportation Surcharge—Use of Funds**

Sec. 6-60.1 Establishment of surcharge—Conditions.

Pursuant to Section 2 of Act 247, Session Laws of Hawaii, Regular Session of 2005, codified as Section 46-16.8 of the Hawaii Revised Statutes, there is hereby established a one-half percent general excise and use tax surcharge to be used for purposes of funding the operating and capital costs of public transportation within the City and County of Honolulu as specified herein. The excise and use tax surcharge will be levied beginning January 1, 2007.

Sec. 6-60.2 Use of funds.

(a) As required by HRS Section 248-2.6(d), moneys received from the state derived from the imposition of the surcharge established under this article will be a general fund realization. Beginning July 1, 2015, moneys received from the surcharge may be expended for the following purposes authorized by state law:

(1) Capital costs of a locally preferred alternative for a mass transit project; and

(2) Expenses in complying with the Americans with Disabilities Act of 1990 with respect to subdivision (1).

(b) No surcharge moneys may be expended on portions of the locally preferred alternative for mass transit project beyond the minimum operable segment established under resolution 08-261, and a maximum amount of $4.815 billion of surcharge moneys levied from January 1, 2007 to December 31, 2022 may be expended on the minimum operable segment and associated debt financing costs.

(c) Notwithstanding the restrictions detailed in subsection (b) above, any surcharge moneys collected in excess of the $4.815 billion may be expended in the following order of priority:

(1) Contingency and other reserves as recommended by the Federal Transit Administration and as detailed in the Updated Final Financial Plan for the Full Funding Grant Agreement;

(2) ADA accessibility improvements to the minimum operable segment of the locally preferred alternative for the mass transit project;

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(3) Planning and design costs for route expansion; and

(4) Infrastructure improvements to rail station areas to support affordable housing, as permitted by State and Federal law,

provided that these additional surcharge expenditures may be expended only after the Honolulu Authority for Rapid Transportation provides for council review an update on the expenditures to date on the mass transit project and the anticipated use and amount of the additional surcharge expenditures above the $4.815 billion limit.

(d) No surcharge moneys may be expended for any purpose if the expenditure of such moneys will result in the project ending cash balance falling below the amount set forth in the Updated Final Financial Plan for the Full Funding Grant Agreement.

(e) The Honolulu Authority for Rapid Transportation shall submit to the council for no later than January 1, 2017, any and all costs associated with: 1) contingency and other reserves as recommended by the Federal Transit Administration and as detailed in the Updated Final Financial Plan for the Full Funding Grant Agreement; 2) ADA accessibility improvements to the minimum operable segment of the locally preferred alternative for the mass transit project; 3) planning and design costs for route expansion; and 4) infrastructure improvements to rail station areas to support affordable housing, as permitted by State and Federal law.

(f) No moneys received from the surcharge may be used to build or repair public roads or highways or bicycle paths, or to support public transportation systems already in existence prior to July 12, 2005.

(g) Prior to and as a prerequisite for any transfer of moneys received from the surcharge, the Honolulu Authority for Rapid Transportation shall submit to the council a quarterly updated cash balance summary that contains all revenues and expenditures, including both capital expenditures and operating and maintenance expenditures.

(h) At the close of each quarter, the Honolulu Authority for Rapid Transportation shall submit to the council:

(1) A capital improvement program status report in substantially the same form as that submitted by the director of budget and fiscal services for the city's executive capital improvement program.

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(2) A statement of cash balances for each revenue source and each category of project cost showing the cash balance at the start of the accounting period and the cash balance at the end of the period.

(i) Within 30 days following the end of each fiscal year, the Honolulu Authority for Rapid Transportation shall submit to the council a report detailing all amounts invoiced by and paid to general contractors for the fiscal year just ended. The report must be organized by general contractor, separately reflect amounts billed by the general contractor for work done by its subcontractors, and include the following information:

(1) The names of general contractors and their respective subcontractors;

(2) The type of services provided by each general contractor and subcontractor;

(3) A detailed description and justification for the work done by each general contractor and subcontractor; and

(4) The amount invoiced by and paid to each general contractor, and the amount invoiced by each subcontractor to the general contractor for the described work.

(j) For purposes of this article, "capital costs" means the same as defined in HRS Section 46-16.8, as it may be amended, for a county with a population greater than 500,000.

Sec. 6-60.3 Repeal of surcharge.

Pursuant to Section 9 of Act 247, Session Laws of Hawaii, Regular Session of 2005, Section 6-60.1 will be repealed on December 31, 2022."]

SECTION 4. Chapter 6, Revised Ordinances of Honolulu 1990 ("Revolving Special Funds, Housing Mortgage Loans and Fees"), is amended by adding a new Article 60, to read as follows:

"Article 60. Transportation Surcharge—Use of Funds

Sec. 6-60.1 Establishment of surcharge—Conditions.

Pursuant to Section 2 of Act 247, Session Laws of Hawaii, Regular Session of 2005, codified as Section 46-16.8 of the Hawaii Revised Statutes, there is hereby

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established a one-half percent general excise and use tax surcharge to be used for purposes of funding the operating and capital costs of public transportation within the City and County of Honolulu as specified herein. The excise and use tax surcharge will be levied beginning January 1, 2007.

Sec. 6-60.2 Use of funds.

(a) As required by HRS Section 248-2.6(d), moneys received from the state derived from the imposition of the surcharge established under this article will be a general fund realization. Beginning July 1, 2015, moneys received from the surcharge may be expended for the following purposes authorized by state law:

(1) Capital costs of a locally preferred alternative for a mass transit project; and

(2) Expenses in complying with the Americans with Disabilities Act of 1990 with respect to subdivision (1).

(b) No surcharge moneys may be expended on portions of the locally preferred alternative for mass transit project beyond the minimum operable segment established under resolution 08-261, and a maximum amount of $4.815 billion of surcharge moneys levied from January 1, 2007 to December 31, 2027 may be expended on the minimum operable segment and associated debt financing costs.

(c) Notwithstanding the restrictions detailed in subsection (b) above, any surcharge moneys collected in excess of the $4.815 billion may be expended in the following order of priority:

(1) Contingency and other reserves as recommended by the Federal Transit Administration and as detailed in the Updated Final Financial Plan for the Full Funding Grant Agreement;

(2) ADA accessibility improvements to the minimum operable segment of the locally preferred alternative for the mass transit project;

(3) Planning and design costs for route expansion; and

(4) Infrastructure improvements to rail station areas to support affordable housing, as permitted by State and Federal law,

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provided that these additional surcharge expenditures may be expended only after the Honolulu Authority for Rapid Transportation provides for council review an update on the expenditures to date on the mass transit project and the anticipated use and amount of the additional surcharge expenditures above the $4.815 billion limit.

(d) No surcharge moneys may be expended for any purpose if the expenditure of such moneys will result in the project ending cash balance falling below the amount set forth in the Updated Final Financial Plan for the Full Funding Grant Agreement.

(e) The Honolulu Authority for Rapid Transportation shall submit to the council for no later than January 1, 2017, any and all costs associated with: 1) contingency and other reserves as recommended by the Federal Transit Administration and as detailed in the Updated Final Financial Plan for the Full Funding Grant Agreement; 2) ADA accessibility improvements to the minimum operable segment of the locally preferred alternative for the mass transit project; 3) planning and design costs for route expansion; and 4) infrastructure improvements to rail station areas to support affordable housing, as permitted by State and Federal law.

(f) No moneys received from the surcharge may be used to build or repair public roads or highways or bicycle paths, or to support public transportation systems already in existence prior to July 12, 2005.

(g) Prior to and as a prerequisite for any transfer of moneys received from the surcharge, the Honolulu Authority for Rapid Transportation shall submit to the council a quarterly updated cash balance summary that contains all revenues and expenditures, including both capital expenditures and operating and maintenance expenditures.

(h) At the close of each quarter, the Honolulu Authority for Rapid Transportation shall submit to the council:

(1) A capital improvement program status report in substantially the same form as that submitted by the director of budget and fiscal services for the city's executive capital improvement program.

(2) A statement of cash balances for each revenue source and each category of project cost showing the cash balance at the start of the accounting period and the cash balance at the end of the period.

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CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 16-1

BILL 23 (2015), CD2, FD1

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(i) Within 30 days following the end of each fiscal year, the Honolulu Authority for Rapid Transportation shall submit to the council a report detailing all amounts invoiced by and paid to general contractors for the fiscal year just ended. The report must be organized by general contractor, separately reflect amounts billed by the general contractor for work done by its subcontractors, and include the following information:

(1) The names of general contractors and their respective subcontractors;

(2) The type of services provided by each general contractor and subcontractor;

(3) A detailed description and justification for the work done by each general contractor and subcontractor; and

(4) The amount invoiced by and paid to each general contractor, and the amount invoiced by each subcontractor to the general contractor for the described work.

(j) For purposes of this article, "capital costs" means nonrecurring costs required to construct a transit facility or system, including debt service, costs of land acquisition and development, acquiring of rights-of-way, planning, design, and construction, including equipping and furnishing the facility or system. "Capital costs" also include nonrecurring personal services and other overhead costs that are not intended to continue after completion of construction of the minimum operable segment of the locally preferred alternative for a mass transit project.

Sec. 6-60.3 Repeal of surcharge.

Pursuant to Section 7 of Act 240, Session Laws of Hawaii, Regular Session of 2015, Section 6-60.1 will be repealed on December 31, 2027."

SECTION 5. Ordinance material to be repealed is bracketed. New material is underscored. When revising, compiling, or printing this ordinance for inclusion in the Revised Ordinances of Honolulu, the reviser of ordinances need not include the brackets, the bracketed material or the underscoring.

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CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 16–1

BILL 23 (2015), CD2, FD1

A BILL FOR AN ORDINANCE

SECTION 6. The repeal in SECTION 3 of this Ordinance takes effect on December 31, 2022. The enactment in SECTION 4 of this Ordinance takes effect on January 1, 2023. The other Sections of this Ordinance take effect upon approval.

INTRODUCED BY:

Ernest Martin

DATE OF INTRODUCTION:

March 12, 2015
Honolulu, Hawaii

Councilmembers

APPROVED AS TO FORM AND LEGALITY:

Deputy Corporation Counsel

APPROVED this 1 day of February, 2016.

KIRK CALDWELL, Mayor
City and County of Honolulu

OCS2016-0079/1/20/2016 3:47 PM 11

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EXHIBIT E

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII
CERTIFICATE

ORDINANCE 16–1 **BILL 23 (2015), CD2, FD1**

Introduced: 03/12/15 By: ERNEST MARTIN Committee: BUDGET

Title: A BILL FOR AN ORDINANCE RELATING TO THE TRANSPORTATION SURCHARGE.

Voting Legend: * = Aye w/Reservations

04/01/15	SPECIAL COUNCIL	BILL PASSED FIRST READING AND REFERRED TO COMMITTEE ON LEGISLATIVE MATTERS. 7 AYES: ANDERSON, ELEFANTE, FUKUNAGA*, MANAHAN, MARTIN, MENOR, OZAWA. 1 NO: KOBAYASHI. 1 ABSENT: PINE.
		CC-299 MARTIN – RE-REFERRAL OF BILL 23 (2015) FROM COMMITTEE ON LEGISLATIVE MATTERS TO COMMITTEE ON BUDGET.
10/21/15	BUDGET	NO ACTION TAKEN.
11/18/15	BUDGET	CR-434 – BILL REPORTED OUT OF COMMITTEE FOR PASSAGE ON SECOND READING AND SCHEDULING OF A PUBLIC HEARING AS AMENDED IN CD1 FORM.
11/28/15	PUBLISH	PUBLIC HEARING NOTICE PUBLISHED IN THE HONOLULU STAR ADVERTISER.
12/05/15	PUBLISH	PUBLIC HEARING NOTICE PUBLISHED IN THE HONOLULU STAR ADVERTISER (2ND NOTICE).
12/09/15	COUNCIL/PUBLIC HEARING	NOTE: PROPOSED CD1, FD1 (BE) POSTED ON THE AGENDA WAS NOT CONSIDERED. BILL FAILED TO BE AMENDED TO CD1, FD1 (KP). 4 AYES: ANDERSON, ELEFANTE, MENOR, PINE. 5 NOES: FUKUNAGA, KOBAYASHI, MANAHAN, MARTIN, OZAWA. CR-434 ADOPTED. BILL PASSED SECOND READING AS AMENDED, PUBLIC HEARING CLOSED AND REFERRED TO COMMITTEE ON BUDGET. 7 AYES: ELEFANTE*, FUKUNAGA, MANAHAN, MARTIN, MENOR*, OZAWA, PINE*. 2 NOES: ANDERSON, KOBAYASHI.
12/16/15	PUBLISH	SECOND READING NOTICE PUBLISHED IN THE HONOLULU STAR-ADVERTISER.
01/13/16	BUDGET	CR-10(16) – BILL REPORTED OUT OF COMMITTEE FOR PASSAGE ON THIRD READING AS AMENDED IN CD2 FORM.

16–1

EXHIBIT E

16-1

01/27/16	COUNCIL	NOTE: PROPOSED CD2, FD1 (KP) POSTED ON THE AGENDA WAS NOT CONSIDERED. BILL AMENDED TO CD2, FD1 (EM). 9 AYES: ANDERSON, ELEFANTE, FUKUNAGA, KOBAYASHI, MANAHAN, MARTIN, MENOR, OZAWA, PINE. CR-10(16) ADOPTED AND BILL 23 (2015), CD2, FD1 PASSED THIRD READING. 7 AYES: ELEFANTE, FUKUNAGA, MANAHAN, MARTIN, MENOR, OZAWA, PINE. 2 NOES: ANDERSON, KOBAYASHI.

I hereby certify that the above is a true record of action by the Council of the City and County of Honolulu on this BILL.

GLEN I. TAKAHASHI, CITY CLERK

ERNEST Y. MARTIN, CHAIR AND PRESIDING OFFICER

16-1



Honolulu Rail Transit Project Update

Options to HART's Current FFGA Scope

June 8, 2016

EXHIBIT F

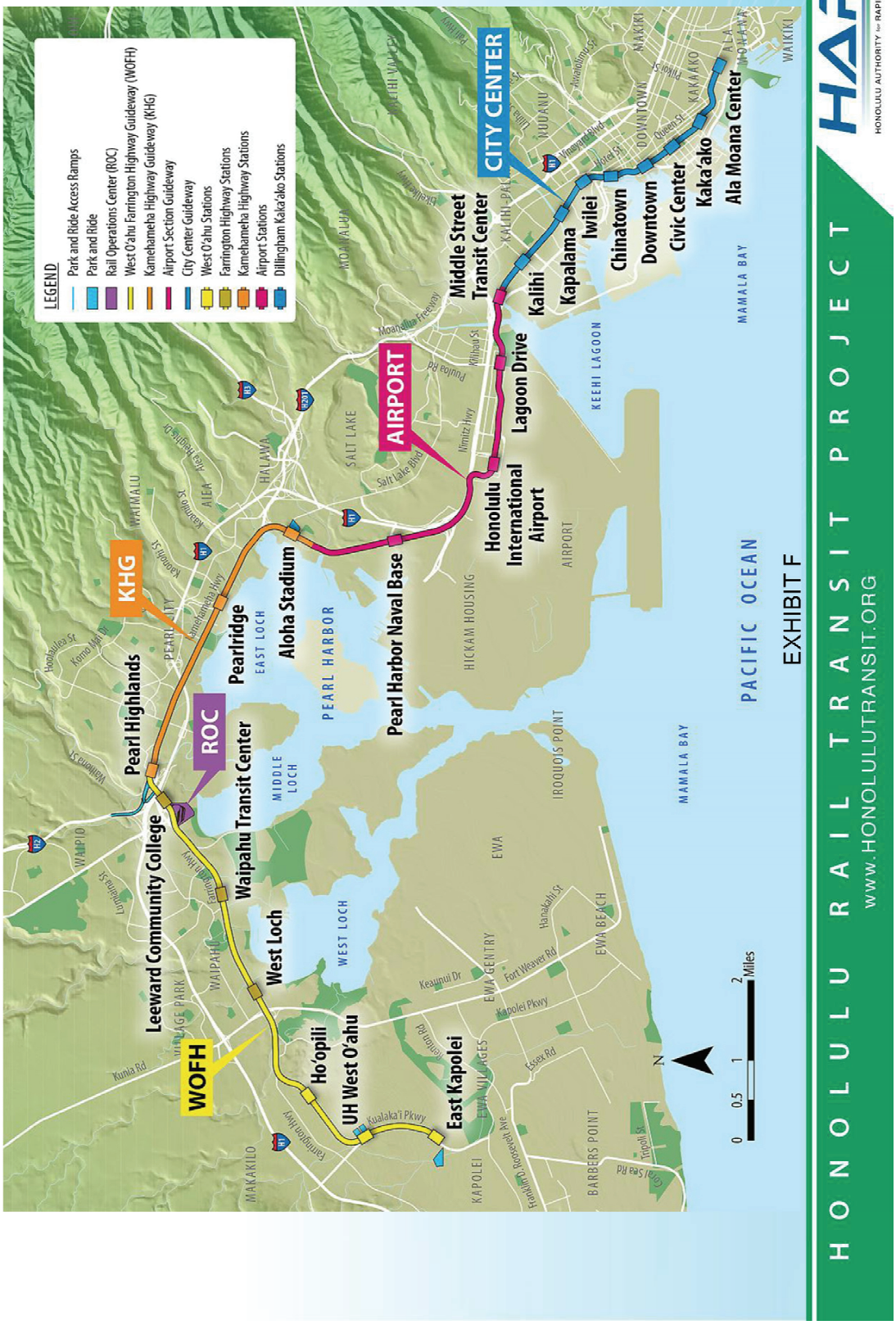
HONOLULU RAIL TRANSIT PROJECT

www.HONOLULUTRANSIT.ORG

HART

HONOLULU AUTHORITY for RAPID TRANSPORTATION

Current Alignment
20 Miles – 21 Stations



Original FFGA Requirements

- On December 19, 2012, HART signed a Full Funding Grant Agreement for a total Project cost of $5,121,693,163 with a Federal contribution of $1,550,000,000. The Revenue Service Date (RSD) was to be January 31, 2020.
- The Project description stated "The Honolulu Rail Transit Project (the Project) consists of design and construction of a 20-mile, grade separated fixed rail system from East Kapolei to the Ala Moana Center in Honolulu Hawai'i. From East Kapolei, the Project proceeds to the University of Hawai'i at West Oahu, then east to Pearl Harbor, the Honolulu International Airport and ends at Kona Street adjacent to Ala Moana Center. The Project will operate in an exclusive right-of-way and will be grade separated except for a 0.6 mile, at grade section near the Leeward Community College. The Project includes 21 stations, 80 rail vehicles and a Maintenance and Storage Facility".
- In FTA's Risk and Contingency Review in September, 2012 for the FFGA, the PMOC stated that HART's cost estimate of $5.122 billion, including $644 million in total contingency, was acceptable.

EXHIBIT F

History of Review by FTA

- Since then, HART has worked closely with the FTA in the management of the Project.
- During this time, Monthly Reviews were performed by the FTA's Project Management Oversight Contractor (PMOC) and Quarterly Reviews performed by the FTA's Regional Office.
- On August 14, 2014, FTA issued another Risk Refresh letter in which they recommended that HART increase their cost estimate to $5.386 billion by adding $265 million ($139.5 million in adjustments and $125.5 million in additional contingency).
- Both the FTA and the PMOC, as well as HART, were surprised at the increased costs to the Project in late 2014 due primarily to the extraordinary construction cost increases in Honolulu over the past five years.
- On May 10, 2016, FTA forwarded a copy of their recent 2016 Risk Refresh entitled FINAL DRAFT for comment. In this review, the FTA states the cost to be $7.731 billion (p50) including an increase of $856 million in contingency, an increase of $2.609 billion over the original FFGA cost estimate. The FTA also gave a cost of $8.016 billion (p65) by including $1.141 billion in contingency.

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HART's Current Cost & Schedule Estimate

- To construct the Project as programmed in the FFGA,
  - ➢ Projected Cost Estimate **$7,967,000,000**
  - ➢ Projected Schedule (same as FTA's estimate)
    - ✓ Construction Completion **April, 2024**
    - ✓ Revenue Service Date (RSD) **December, 2024**

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HART's Current Capital Revenue Estimate

- Projected Revenue Resources total **$6.827 billion**:
  - GET Revenue totals $4.977 billion
    - ✓ Growth rate lowered from 5.04% in original financial plan (June 2012) to 4.3%
    - ✓ Council on Revenues current Statewide GET projection reflects a 4.8% compounded annual growth rate from FY 2014 to FY2022
    - ✓ Range from $4.903 billion at 4% to $5.167 billion at 5.04%
  - Federal Grant provides $1.551 billion
  - Beginning Balance of $0.3 billion
    - ✓ Consists of GET revenues and interest income prior to the grant period (January 2007 to October 2009) net of City expenses

**Growth rate applied to 4 quarterly receipts through 1/31/2016*

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Estimated Daily Boardings 2030

WEST SIDE	Daily Boardings	EAST SIDE	Daily Boardings
East Kapolei	7,266	Pearl Harbor	5,552
UH West O'ahu	6,939	Airport	6,490
Ho'opili	1,995	Lagoon Drive	3,215
West Loch	5,526	Middle Street	2,895
Waipahu Center	3,167	Kalihi	3,701
Leeward CC	3,356	Kapalama	2,395
Pearl Highlands	11,750	Iwilei	4,028
Pearlridge	5,982	Chinatown	1,499
Aloha Stadium	4,334	Downtown	10,748
		Civic Center	3,933
		Kaka'ako	3,199
		Ala Moana	21,612
		EAST/WEST TOTAL	**119,582**

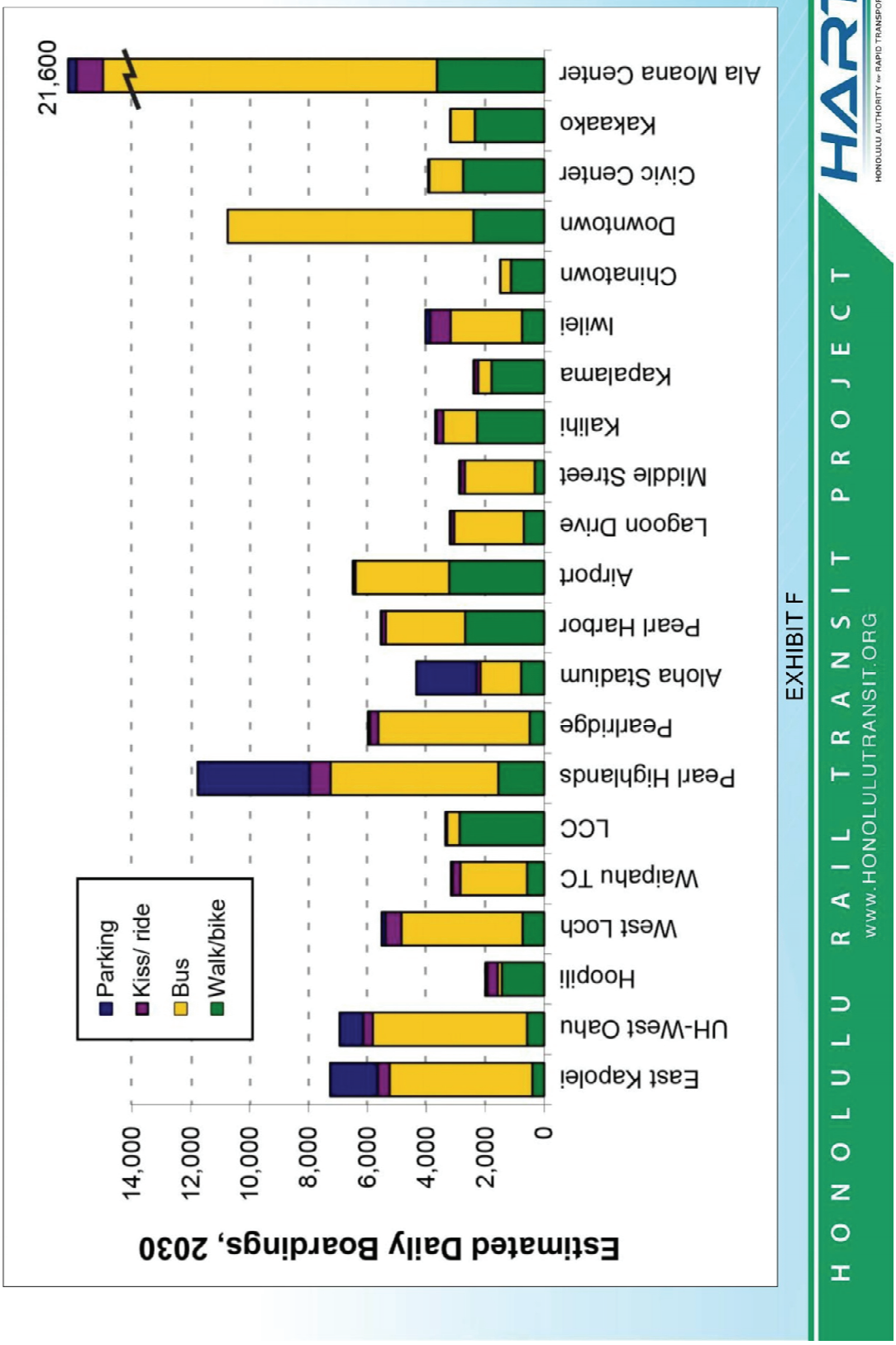
4-car train update

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Estimated Daily Boardings 2030



Projected Cost vs. Projected Revenue

- Given the projected Project cost of **$7.967 billion** and the projected revenue of **$6.827 billion**, the Project as defined by the FFGA has a potential deficit of **$1.140 billion**

- Without additional revenue, HART, after consultation with the FTA, needs to consider options for construction within the current projected revenues

- **Build to Budget vs. Budget to Build**

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Options

#1 Build to Middle Street as planned plus "guideway only" to Ala Moana

#2 Build to Middle Street as planned and continue with bus service

#2a Build to Middle Street as planned and continue with at-grade rail system

#3 Construct as far as funding allows (a la carte evaluation)

#4 Public-Private Partnership (P3) Solicitations for all stations

#5 Change alignment to Nimitz

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Option #1
Build to Middle Street as planned; Build 'guideway only' to Ala Moana (no stations, except Ala Moana)

Description of Changes

- Build 'guideway only' from Middle Street to Ala Moana
- Do not build any stations beyond Middle Street, except for the terminus station at Ala Moana

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Middle Street Transit Center Site



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Option #1

Build to Middle Street as programmed;
Build "guideway only" to Ala Moana

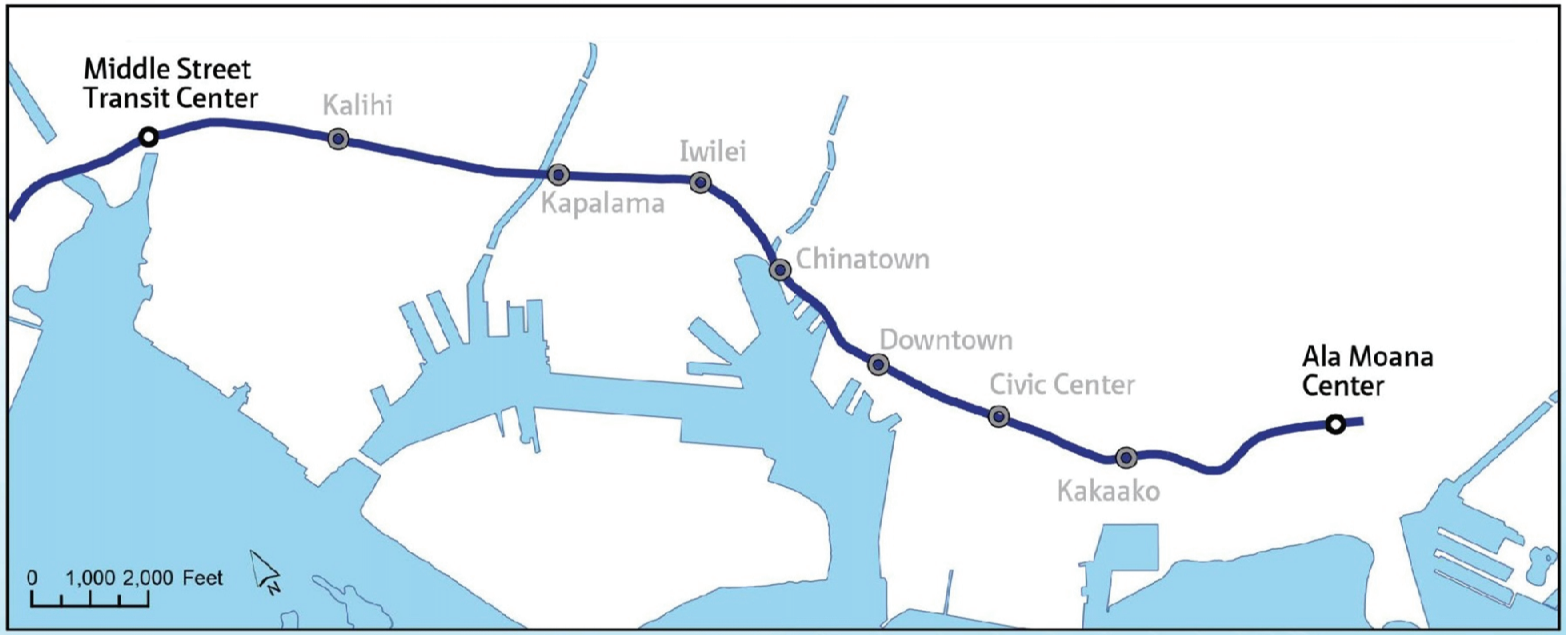


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Option #1
Build to Middle Street as programmed; Build 'guideway only' to Ala Moana

Pros

1) Saves initial cost of building seven stations
2) Construction impact will be temporarily lessened by deferral of stations
3) Will reduce number of railcars, but will not recoup full cost
4) Preserves guideway corridor

Cons

1) Deferral of stations will significantly impact ridership
2) Increased final costs to build remainder of stations later
3) Increased costs to buy remainder of railcars later
4) No significant savings of time
5) No rail service to Kalihi, Downtown or Kaka'ako
6) Significant changes to existing contracts
7) **Insufficient funds ($7.59+B)**

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Option #2
Build to Middle Street as planned & continue with bus

Description of Changes

- Terminates elevated rail system after station
- Install crossover after station
- Initialize integration w/ bus transit center
- Move TPSS and other core system changes
- Construct Kiss and Ride facilities

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Option #2

Build to Middle Street as planned & continue with bus

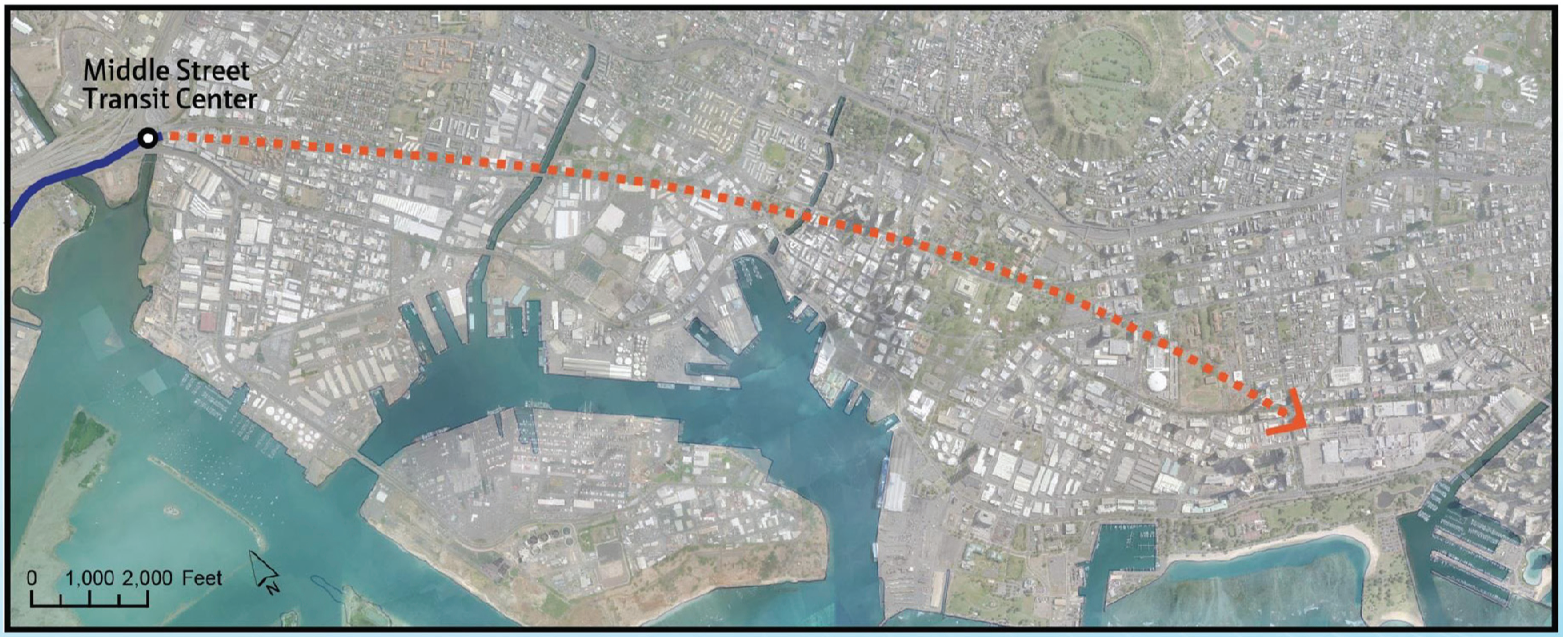


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Option #2
Build to Middle Street as planned & continue with bus

Pros

1) Saves initial cost of building eight stations
2) Construction impact will be temporarily lessened by deferral of stations
3) Will reduce number of railcars, but will not recoup full cost

Cons

1) Change of travel modes discourages ridership
2) Requires more bus integration and increased bus service and cost
3) Increased costs of right-of-way acquisition later
4) Additional costs due to infrastructure changes and core system changes
5) Increased costs to build remainder of stations and guideway and buy railcars later

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Option #2a
Build to Middle Street as planned & continue with at-grade rail system

Description of Changes

- Terminates elevated rail system after station
- Install crossover after station
- Possible need for Supplemental EIS for change in technology
- Initialize integration with bus and new light rail system
- Acquire land, design and construct new light rail operations and maintenance facility
- Design and construct alignment for light rail including overhead electrical catenary system
- Move TPSS and other core system changes

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Option #2a

Build to Middle Street as planned & continue with at-grade rail system

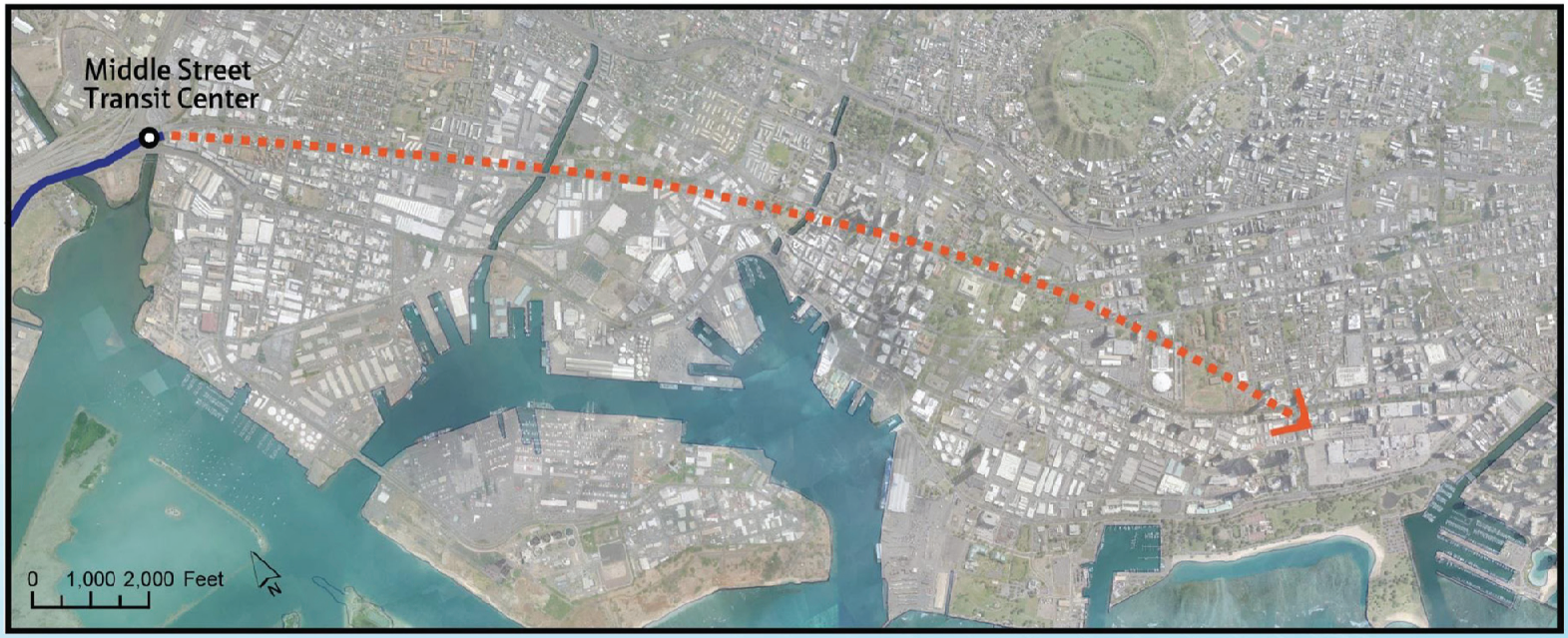


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Option #2a
Build to Middle Street as planned & continue with at-grade rail system

Pros

1) Provide a street running light rail system at grade
2) Size and cost of rail stations are minimized

Cons

1) Change of travel modes discourages ridership
2) Likely need for Supplemental EIS
3) Requires further bus and rail integration
4) Additional costs due to new rail system including land, design and train driver labor costs
5) New rail car costs and new rail maintenance and operations facility
6) Light rail intermixed with vehicles within the street network

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Option #3

Construct Project as far as funding allows (a la carte evaluation)

1. Cost to terminate guideway after each station

2. Additional changes may need to be considered:
   - Install crossover after station
   - Move TPSS and other core system changes
   - Initialize integration with bus
   - Make necessary site changes to be a terminus

3. Itemized costs that could be saved by deferring a specific station

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Option #3

Construct Project as far as funding allows

Cost to Complete Project to Each Station	
Middle Street	$6.22B
Kalihi	$6.57B
Kapalama	$6.89B
Iwilei	$7.15B
Chinatown	$7.27B
Downtown	$7.46B
Civic Center	$7.63B
Kaka'ako	$7.82B
Ala Moana	$7.97B

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Option #3

Construct Project as far as funding allows

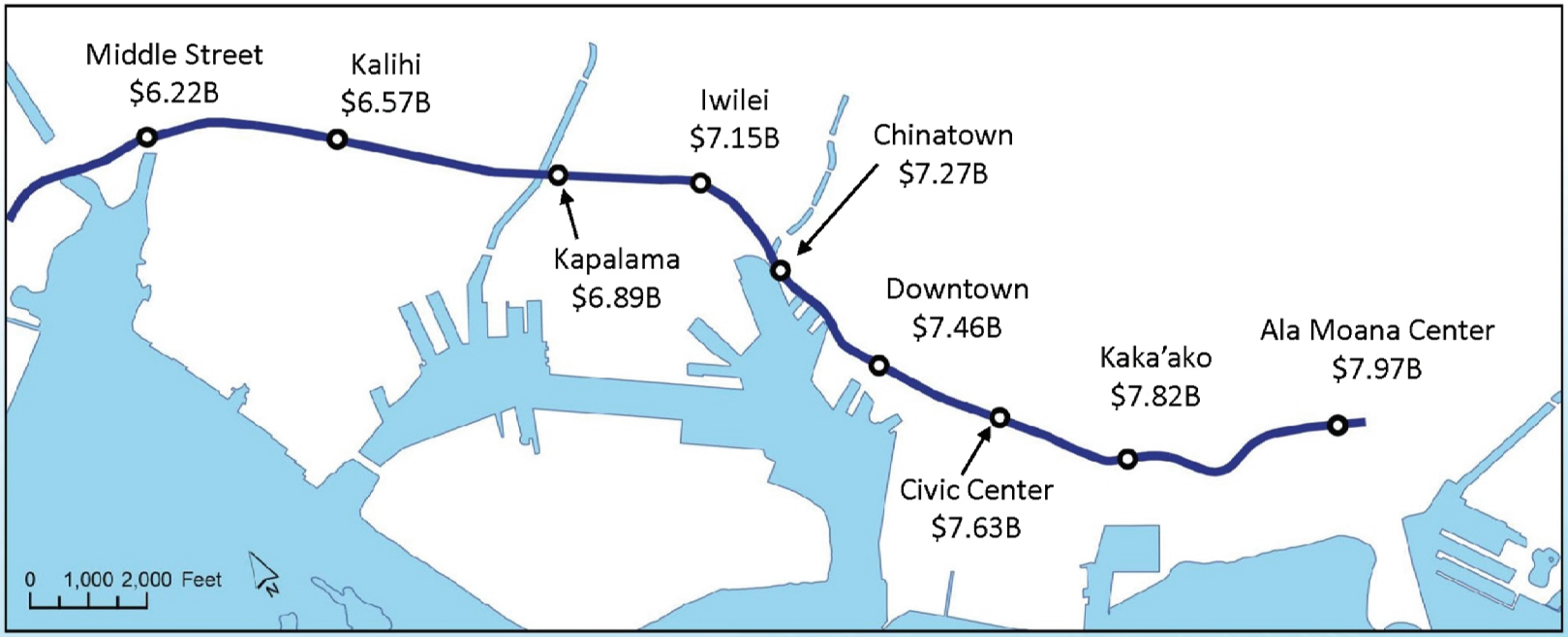


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Option #3

Construct Project as far as funding allows

Actual or Estimated Cost of Each Station

East Kapolei	$	17.7M	Airport	$	32.5M
UH West O'ahu	$	22.2M	Lagoon Drive	$	22.3M
Ho'opili	$	14.1M	Middle Street	$	45.9M
West Loch	$	41.0M	Kalihi	$	30.2M
Waipahu	$	35.2M	Kapalama	$	33.0M
Leeward CC	$	12.0M	Iwilei	$	31.8M
Pearl Highlands TC	$	280.0M	Chinatown	$	41.1M
Pearl Highlands	$	47.1M	Downtown	$	60.1M
Pearlridge	$	36.4M	Civic Center	$	37.4M
Aloha Stadium	$	30.5M	Kaka'ako	$	27.9M
Pearl Harbor	$	26.0M	Ala Moana	$	45.6M

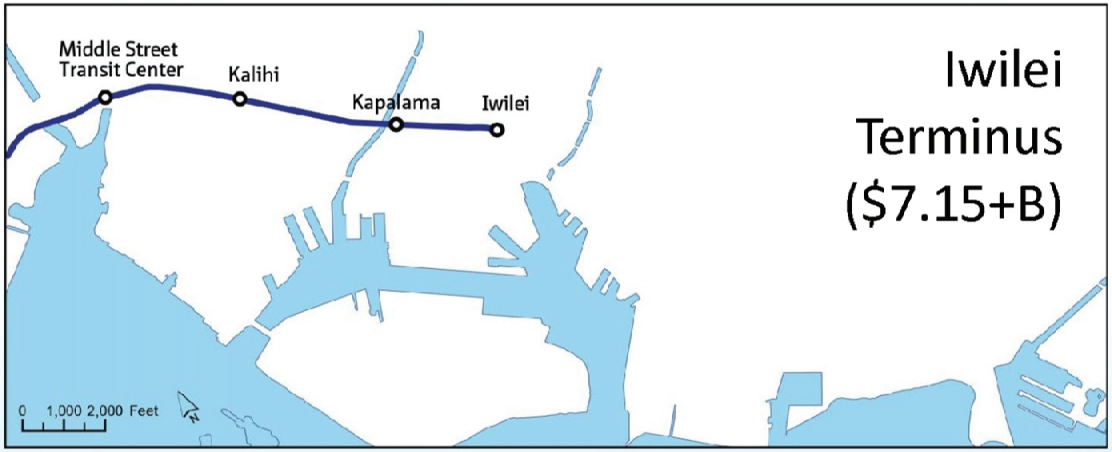
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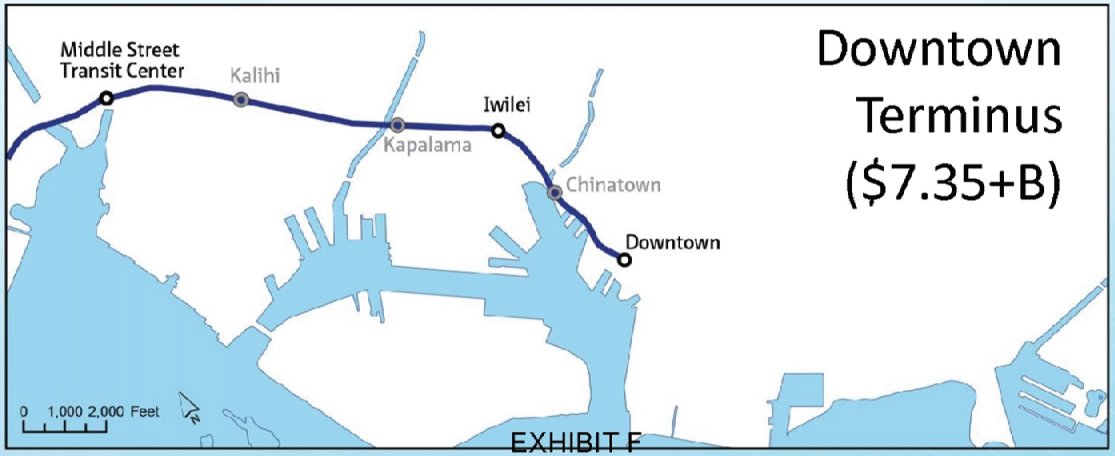
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Option #3

(a la carte examples)



Iwilei Terminus ($7.15+B)



Downtown Terminus ($7.35+B)

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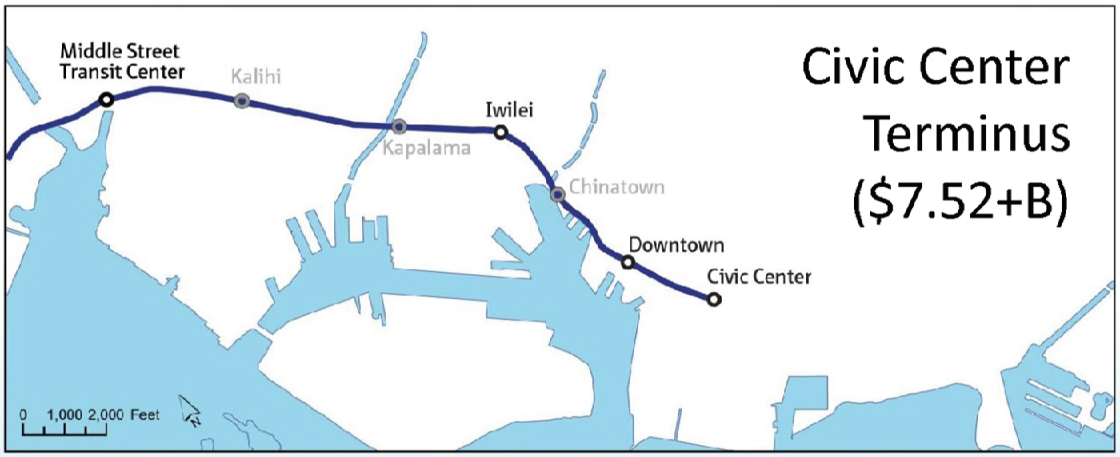
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Option #3

(a la carte examples)



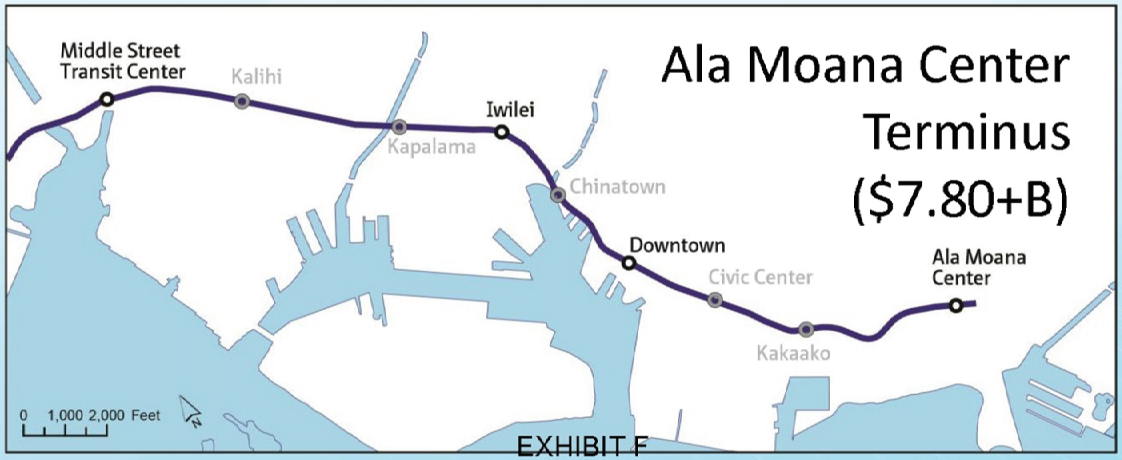


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Option #3

Construct Project as far as funding allows

Pros

1) Maximizes flexibility in use of current funding
2) Saves initial cost of not building guideway and/or some stations
3) Construction impact will be temporarily lessened by deferral of stations and guideway
4) Will reduce number of railcars, but will not recoup full cost

Cons

1) Change of travel modes discourages ridership
2) Requires more bus integration
3) Additional costs due to infrastructure changes and core system changes
4) Increased costs to build remainder of guideway and/or stations later and buy railcars later

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Option #4
Issue Public-Private Partnerships (P3) Solicitations for All Stations

- In an effort to reduce initial HART capital investments and get more buy-in by developers, issue P3 solicitations for all 21 stations.

- Decision would require change orders to existing contracts deleting nine stations; work has already begun on some of the contracts.

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Option #4

Issue P3 Solicitations for All Stations



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Option #4

Issue P3 Solicitations for All Stations

Pros

1) P3 Solicitations might result in lower costs for some stations

Cons

1) Requires stopping construction of nine west side stations, causing defaults for convenience by HART and high penalties
2) Impacts timing for new solicitations
3) Uncertainties on timing of availability of operational stations
4) Over $900M in private capital would be needed to construct 21 stations

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Option #5
Change Alignment to Nimitz Highway

- Instead of guideway alignment proceeding down Dillingham, alignment proceeds from Middle Street Station down Nimitz Highway to Downtown Station.

- Significant environmental and ridership studies would need to be performed before design work could begin.

- Station selections would need to be evaluated .

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Option #5

Change Alignment to Nimitz Highway



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Option #5

Change Alignment to Nimitz Highway

Pros

1) Costs could potentially be less because of fewer stations
2) Continues access to downtown area without same utility issues along Dillingham

Cons

1) Potential seven to ten year delay due to FTA review and approval including EIS
2) Possible ridership impacts
3) New station location and right-of-way acquisition
4) Introduces new unknown utility and superfund challenges
5) HDOT jurisdiction

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Next Steps

- HART will take the feedback from today's presentation and update the presentation to be shared with the Mayor's Office and City Council. HART will refine the cost for the overall program as well as the analysis for any options the Board chooses.

- A Working Group will be formed to develop a plan for completing the Project in a manner that is in the best interest and benefit of the public.

- Advise current CCGS Priority-Listed Offerors of current status and potential timeline for remaining procurement.

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Mahalo!

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Appendix B
Draft Update of the Financial Plan



DRAFT Update of the Financial Plan for Full Funding Grant Agreement

Updated: December 1, 2016

Prepared by:
Honolulu Authority for Rapid Transportation

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List of Acronyms

ARRA	American Recovery and Reinvestment Act of 2009
BLS	U.S. Bureau of Labor Statistics
CAGR	Compounded Annual Growth Rate
CARP	Capital Asset Replacement Program
CBO	Congressional Budget Office
CCGS	City Center Guideway and Stations
CE&I	Construction Engineering & Inspection
CIP	Capital Improvement Program
City	City and County of Honolulu
CPI-U	Consumer Price Index All Urban Consumers
CPP	Contract Packaging Plan
DBEDT	State of Hawai'i Department of Business, Economic Development and Tourism
DBOM	Design-Build-Operate-Maintain
DPP	Department of Planning and Permitting
DTS	Department of Transportation Services, City and County of Honolulu
EAC	Estimate at Completion
EIS	Environmental Impact Statement
FD	Final Design
FFGA	Full Funding Grant Agreement
FFY	Federal Fiscal Year
FGM	Fixed Guideway Modernization
FRR	Farebox Recovery Ratio
FTA	Federal Transit Administration, U.S. Department of Transportation
FY	Fiscal Year
GDP	Gross Domestic Product
GEC	General Engineering Consultant
GET	General Excise and Use Tax
GO	General Obligation
H-1	Interstate H-1, which runs through the Project corridor
H-2	Interstate H-2, which feeds into Interstate H-1
H-3	Interstate H-3, which feeds into Interstate H-1
HART	Honolulu Authority for Rapid Transportation, City and County of Honolulu
HOV	High Occupancy Vehicle
JARC	Job Access and Reverse Commute
LONP	Letter of No Prejudice
M	Millions
MOS	Minimum Operable Segment
MOU	Memorandum of Understanding
MSF	Maintenance and Storage Facility and Yard
NEPA	National Environmental Policy Act

O&M	Operations and Maintenance
ORTP	(2030) O'ahu Regional Transportation Plan
OTS	O'ahu Transit Services, Inc.
PE	Preliminary Engineering
PHTG	Pearl Highlands Transit Center and Parking Garage
PIG	Permitted Interaction Group
PTD	Public Transit Division, Department of Transportation Services
PV	Peak Vehicle
RSD	Revenue Service Date
RVH	Revenue Vehicle Hour
RVM	Revenue Vehicle Mile
SCC	Standard Cost Category
TDFM	Travel Demand Forecasting Model
TECP	Tax Exempt Commercial Paper
TIP	Transportation Improvement Program
YOE	Year-of-Expenditure

EXECUTIVE SUMMARY

INTRODUCTION

The Honolulu Rail Transit Project (the Project) is a 20.1-mile proposed rail transit system in Honolulu extending from East Kapolei in the west to Ala Moana Center in the east via the Honolulu International Airport. The Project is intended to provide a high-capacity, high-speed transit service in the highly congested east-west corridor; and to improve mobility, transit reliability, and service equity for over 68% of O'ahu's residents and over 83% of its workforce who live and work in the areas within and connecting to this corridor, and for its many visitors. Revenue service from East Kapolei to Ala Moana Center is expected to start in December 2025.

Planning, design, construction, operations, and maintenance of the Project are currently the responsibility of the Honolulu Authority for Rapid Transportation (HART), which functions as a semi-autonomous unit of the City and County of Honolulu's (City) government. However, due to the recent passage of Charter Amendment Number 4 in the 2016 Elections, the voters of the City authorized the consolidation of the operations and maintenance functions and responsibilities for all modes of public transit. Therefore, rail transit operations and maintenance will be combined with that of fixed route bus (TheBus) and paratransit (TheHandi-Van) services under management by the Department of Transportation Services' (DTS) Public Transit Division (PTD).

The Project will be fully integrated with TheBus operations, which will be reconfigured to add feeder bus service to provide increased frequency and more transfer opportunities between bus and rail. The new rail and enhanced TheBus service will provide additional travel options, increase service frequencies, expand the hours of operation, minimize wait times, reduce total travel times, improve service reliability, and enhance comfort and convenience for passengers, resulting in over 20 million hours of user benefits annually.

This updated Financial Plan is being submitted to fulfill HART's commitment made in the September 30, 2016 Interim Plan, as part of the request for extension of the submittal of a full Recovery Plan. The plan provides a summary of the capital costs and funding sources associated with both the Project and the City's ongoing capital needs for its existing public transportation system. It then describes the City's plan to fund the operations and maintenance (O&M) costs associated with the Project, TheBus, and TheHandi-Van services.

SUMMARY OF THE PROJECT FINANCIAL PLAN

The current draft capital plan is based on the following key assumptions:

- Projected total Project cost of $8.2 billion, based on current construction cost estimates.
- General Excise and Use Tax (GET) surcharge revenue estimated using a 4.3% assumed annual growth rate, as directed previously by the HART Board of Directors, beginning the quarter ended June 2017 through December 31, 2027 so as not to presume any extension of the GET surcharge at this point in time.
- Federal Transit Administration (FTA) grant reimbursement drawdowns of eligible project costs totaling $1.6 billion by July 2020 based on current project plan and schedule or Revenue Service Date (RSD) of fiscal year (FY) 2026.

Project Capital Cost Estimate: The updated capital cost of the Project without finance charges is $8.2 billion in year-of-expenditure (YOE) dollars. Financing costs, including interest and bond issuance charges, will be dependent on an extension of the GET surcharge as well as the terms upon which the

extension is based. The duration and amount of bond financing will weigh significantly on the final total budget necessary for the project.

The capital cost estimate provided in this updated Financial Plan draft reflects advanced final engineering, cost estimation methodologies, and actual contract bid prices for all but two of the major construction contracts. The revised cost estimate includes approximately 20% of contingency funds for existing and new contracts to cover risks.

Local Funding: The dedicated local funding source for the implementation of the Project is an established one-half percent (0.5%) county surcharge on the State of Hawai'i's GET surcharge. The GET surcharge commenced on January 1, 2007. On July 14, 2015, the Governor signed legislation that allows the City to extend the GET surcharge from December 31, 2022 to December 31, 2027. Following the passage of legislation by the City Council, the Mayor signed into law Ordinance 16-1 on February 1, 2016 to extend the GET City surcharge. Based on the most recent cost estimates and revenue projections, the GET surcharge would need to be further extended beyond the current 2027 sunset date.

The GET surcharge revenue is to be used exclusively for the Project. The plan reflects actual receipts through FY2017, and assumes that GET surcharge revenues will grow at a combined annual rate of 4.3%, as previously directed by a Permitted Interaction Group (PIG) of the HART Board of Directors. Total revenues incorporated in the updated Financial Plan from the GET surcharge are expected to total approximately $4.8 billion between FY2010 and FY2028. Based on collections through the quarter ending September 2016, HART has received $1.4 billion from the start date of the Financial Plan in October 2009.

Federal Funding: The Full Funding Grant Agreement (FFGA) was signed on December 19, 2012. Under this agreement the City was awarded a total of $1.6 billion in FTA New Starts funding, with annual amounts of up to $250 million per year. Through October 2016, HART has drawndown $622 million. FTA Section 5307 Urbanized Area Formula funds ($210 million) have been removed from the Financial Plan and will be utilized for current City transportation needs.

Project Financing: Given the higher total estimated project cost, additional funding is needed to complete the project. Should additional funding materialize, the updated Financial Plan submitted as part of the final project Recovery Plan will continue to use a mortgage-type amortization schedule with level debt service repayment for each General Obligation (GO) bond issuance

SYSTEMWIDE CAPITAL PLAN

Ongoing Capital Needs: HART, with the approval of the FTA, has reconfigured the vehicles from two-car trains to four-car trains. For purposes of this update, it is assumed that the replacement cost and schedule remains unchanged. The ongoing capital plan includes costs to replace, rehabilitate, and maintain capital assets in a state of good repair as well as necessary expansion of the existing system to accommodate forecasted FY2030 demand levels. The City is committed to maintaining the existing transit system in a state of good repair.

Funding Sources: FTA Section 5307 Urbanized Area Formula program, and other federal grants will continue to provide assistance for ongoing capital expenditures for the existing transit system. Section 5307 funds will be available for systemwide capital needs as well as for preventive maintenance for TheBus.

SYSTEMWIDE OPERATING PLAN

As with the original Financial Plan, the updated Financial Plan reflects the current transit policies applied to the future integrated transit system. The current City policy of setting fare rates to recover between 27-33% of operating costs, as well as the current fare rate categories, remains constant in the updated Financial Plan. By holding these factors constant, this updated Operating Plan projection will serve as a base comparison for changes to fare policies, fare differentials, and service levels.

O&M Costs: Updated rail costs in current year dollars are as projected in the original Financial Plan. However, projected estimates in certain cost categories vary considerably from the original projections. When converting the current year rail costs to YOE cost figures using the escalation factors in the original Financial Plan, rail costs forecast slightly under the original Financial Plan. The rail operating costs project between $8 million to $15 million per year higher when using more conservative escalation factors, as provided in Table 3-4.

Bus costs have been as anticipated in the original Financial Plan. The historical annual increase in bus costs per revenue service hour in the original Operating Plan was 3.9%. The actual cost per revenue hour over the last 10 years is 3.1%, reflecting the recent lower fuel prices. The updated Financial Plan estimates bus costs per revenue service hours to increase at approximately the same level as the original Financial Plan's historical cost. Handi-Van has experienced the cost increases as projected in the original Operating Plan.

Table ES-1, Operating Costs in First Full Year, YOE $ millions

		Original FY 2020	Original Inflated to FY 2026	Updated FY 2026 Original Factors	Updated FY 2026 Moderate	Updated FY 2026 High
Bus Cost	YOE million $'s	$263	$326	$309	$309	$309
Handi-Van Cost	YOE million $'s	$59	$83	$85	$85	$85
Rail Cost	YOE million $'s	$113	$129	$127	$137	$144
Other	YOE million $'s	$2	$4	$4	$4	$4
Combined Total	YOE million $'s	$437	$542	$525	$535	$542
Fare Revenue	YOE million $'s	$110	$143	$126	$126	$126
Subsidy	YOE million $'s	$307	$370	$389	$398	$406

Operating Revenues: Approximately 258,000 daily linked trips were estimated in the first full year of the bus and rail combined system in 2020. The forecast grew to 280,000 linked trips per day in 2030 for the bus and rail combined system. The updated forecast estimates approximately 279,000 linked trips in the first full year and 313,000 in the tenth year.

With respect to actual boarding to date, actual boarding and original Financial Plan forecast began to diverge in FY2013. There are a number of factors that may have contributed to this situation, but service hour reductions and the decreasing price of fuel beginning in May 2014 are likely contributors. The updated ridership forecast commences at the current ridership results from FY2016.

Fare rate increases are comparable to Consumer Price Index All Urban Consumers (CPI-U) increases utilizing the original Financial Plan factors. Similar to the cost scenarios, this report also details the impact of lower ridership figures and its impact on fare rates and subsidy levels.

Table ES-1 above reflects a variance in the fare revenue between the original FY2026 ($143 million) total and the updated fare revenue in FY2026 ($126 million). This variance is attributable to the revenue service date starting in December 2025, midway through the fiscal year as opposed to a full year fare revenue in the original Financial Plan.

Subsidy: The original Financial Plan projected the transit system subsidy to grow to $307 million in the first full year of combined operations (FY2020) and $370 million in the seventh year of operations (FY2026). Fare Commission recommendations, other revenue sources (such as concessions, advertising, and potential leasing space for fiber cable), and further cost benefit analysis will lower subsidy levels. However, several sources of funds will be needed to support transit system operations, including fare revenues and continued Federal funds for preventive maintenance activities, increased City revenues related to transit-oriented development, and continued transfers from the City's General and Highway funds.

Chapter 1 INTRODUCTION

This report provides an updated draft Financial Plan for implementing and operating the approximately 20-mile rail transit project in Honolulu from East Kapolei to Ala Moana Center via the Honolulu International Airport (the Project), as well as operating and maintaining the existing public transportation system in a state of good repair.

The original Financial Plan submitted in June 2012 was prepared to support the City's submittal to the FTA for FFGA approval for the Project. As with the original Financial Plan, this updated Financial Plan provides an analysis of the capital costs and funding sources associated with both the Project and the City's ongoing capital needs for its existing public transportation system.

It then describes the City's plan to fund the O&M costs associated with the Project, TheBus, and TheHandi-Van services. The rail portion of the O&M costs is detailed in this report. The update of the integration of the entire transportation system has been reviewed and updated relative to the modifications in the capital plan (i.e. scheduling, four-car trains, fare gates, etc.) and pending policy decisions relative to bus and handi-van design and service.

On September 30, 2016, HART submitted an Interim Plan to the FTA that requested an extension to provide a complete Recovery Plan to the FTA by June 30, 2017 for either Plan A-construct the rail system between East Kapolei to Ala Moana Center (the MOS, Minimum Operable Segment); or Plan B-construct a rail system between East Kapolei to Middle Street or the Downtown Station for a total project funding of $6.8 billion.

Also stated in the Interim Plan is that HART would provide an updated Financial Plan based on the best available data and information on the first of December 2016 to construct the rail system between East Kapolei to Ala Moana Center (the MOS)—Plan A, including updated analysis and projections of the future operating and maintenance costs and revenues.

Unless otherwise noted, all amounts in this Financial Plan are presented on a fiscal year basis, from July 1 to June 30. For example, FY2013 refers to the fiscal year starting on July 1, 2012 and ending on June 30, 2013. All dollar amounts shown, unless otherwise noted, are in millions of YOE dollars.

This Financial Plan consists of three main components. The first component is the capital plan, which outlines capital costs and presents revenues available for the Project as well as for the rest of the public transportation system. The purpose of the capital plan is to demonstrate the City's financial capacity to implement the Project, while keeping its public transportation system in a state of good repair by replacing vehicles that have met their useful service life and addressing other ongoing capital needs.

The second component is the operating plan, which demonstrates the requirements to operate and maintain an integrated transit system including the Project. The final component presents an analysis of risks and uncertainties, which is critical in assessing the potential risks inherent to certain assumptions made in the Financial Plan.

DESCRIPTION OF THE PROJECT SPONSOR AND FUNDING PARTNERS

PROJECT SPONSOR – CITY AND COUNTY OF HONOLULU

HART is the project sponsor for the Project and the City is the direct recipient of FTA grant funds. The City is a body politic and corporate, as provided in Section 1-101 of the Revised Charter of the City and County of Honolulu 1973, as amended. The City's governmental structure consists of the Legislative

Branch, the Executive Branch, and three other governmental units: The Board of Water Supply, the Department of the Prosecuting Attorney, and HART.

The legislative power of the City is vested in and exercised by an elected nine-member City Council whose terms are staggered and limited to no more than two consecutive four-year terms. The executive power of the City is vested in and exercised by an elected Mayor, whose term is limited to no more than two consecutive full four-year terms.

The City is authorized under Chapter 51 of the Hawai'i Revised Statutes to "acquire, condemn, purchase, lease, construct, extend, own, maintain, and operate mass transit systems, including, without being limited to, motor buses, street railroads, fixed rail facilities such as monorails or subways, whether surface, subsurface, or elevated, taxis, and other forms of transportation for hire for passengers and their personal baggage." This authority may be carried out either directly, jointly, or under contract with private parties. The City is the designated recipient of FTA Urbanized Area Formula Funds apportioned to the Honolulu and Kailua-Kāne'ohe urbanized areas. Transit services are currently provided through a management services contract with O'ahu Transit Services, Inc. (OTS) and overseen by the City's DTS PTD.

Honolulu Authority for Rapid Transportation

On November 2, 2010, O'ahu voters approved an amendment to the Charter of the City and County of Honolulu to create a semi-autonomous public transit authority responsible for the planning, design, construction, operation, maintenance, and expansion of the City's fixed guideway mass transit system. This authority is named HART.

HART began operating on July 1, 2011 and assumed the duties and responsibilities of the DTS Rapid Transit Division for the Project. Accordingly, FY2012 is the first year of business activities for HART. The agency consists of a Board of Directors, Executive Director, and professional staff.

HART functions as a semi-autonomous unit of the City's government. HART utilizes various City business systems and administrative practices in the conduct of the new authority's business activities (e.g., City Department of Budget and Fiscal Services accounting and payroll systems). In addition, HART continues to receive services provided by other City departments. Memoranda of Understanding with the City departments set forth the scope and terms of the services to be provided.

On November 8, 2016, voters approved an amendment to the City Charter (Amendment 4) to transfer the responsibility for operations and maintenance and fare setting of the rail system to the City's DTS effective July 1, 2017. The Charter amendment implementation will likely result in HART becoming primarily a rail system construction delivery agency, and the updating of this Financial Plan will become a joint effort between HART and the City in the future. This change should not have a significant impact to the FFGA or the Financial Plan update as the grant agreement is between the FTA and the City.

Department of Transportation Services – Public Transit Division

Based on the passage of Charter Amendment 4 in the recent 2016 elections, the responsibility for O&M of the rail system will be transferred to DTS, effective July 1, 2017. The DTS PTD will continue to be responsible for managing the City's fixed route bus and paratransit services operated under contract by OTS. The City's fixed route bus system is referred to as "TheBus," and is currently the 23rd most utilized transit system in the U.S. Annual transit passenger miles per-capita in Honolulu are higher than in all other major U.S. cities, with the exception of New York City; and is the highest in all major cities without a fixed guideway transit system. TheBus serves the entire island of O'ahu, including the estimated 950,000 residents and 100,000 visitors on the island on an average day.

FUNDING PARTNERS

The financial analysis applies and assumes capital funding projections from two major funding partners: the City and FTA. The financial analysis applies several sources of operating funds, mainly consisting of passenger revenues, Federal formula grants for preventive maintenance activities, and subsidies from the City's General and Highway funds. Capital and operating funding sources are further described both below and in subsequent chapters of this report.

City and County of Honolulu

The dedicated local funding source for the implementation of the Project is an established one-half percent (0.5%) county surcharge on the State of Hawai'i's GET. In 2005, the Hawai'i State Legislature authorized the counties to adopt a maximum 0.5% GET surcharge for public transportation projects. Following this authorization, the City enacted Ordinance No. 05-027 establishing the 0.5% GET surcharge. The GET surcharge commenced on January 1, 2007. In 2015, the Governor signed legislation that allowed the City to extend the GET surcharge from December 31, 2022 to December 31, 2027, which was subsequently approved by the City Council. Business activities that take place on O'ahu that are subject to the 4% GET surcharge rate (including retailing of goods and services, contracting, renting real property or tangible personal property, and interest income) are also subject to the GET surcharge. The Hawai'i Department of Taxation is responsible for collecting the GET surcharge and remitting to the City the net amount after retaining 10% of the gross proceeds.

The Financial Plan projects that revenues from the GET surcharge will be approximately $4.8 billion (FY2010–FY2028). Based on collections through October 2016, the City has already received approximately $1.4 billion.

Federal Transit Administration

New Starts funding is assumed to provide a total of $1.6 million to the Project, with annual amounts of up to $250 million per year through Federal Fiscal Year (FFY) 2017. The availability of future New Starts funding will depend on future actions by Congress to authorize and make annual appropriations for the program, as well as the nationwide competitive landscape for funding major transit capital investments.

DESCRIPTION OF THE PROJECT

The Project's east-west corridor stretches across southern O'ahu. The corridor is, at most, 4 miles wide because much of it is bounded by the Ko'olau and Waianae Mountain Ranges in the north and the Pacific Ocean in the south. Between Pearl City and Aiea, the corridor's width is less than 1 mile.

Between Kapolei and the University of Hawai'i at Mānoa, the corridor is highly congested with more than 60% of O'ahu's population residing in that area. The City and County of Honolulu General Plan (Honolulu General Plan, DPP 1997a) directs future population growth to the 'Ewa and Primary Urban Center Development Plan areas and the Central O'ahu Sustainable Communities Plan area. The largest increases in population and employment growth are expected to occur in the 'Ewa, Waipahu, Downtown and Kaka'ako Districts, which are all located in the corridor.

According to the 2000 census, Honolulu ranks as the fifth densest city among U.S. cities with a population greater than 500,000. Among those, Honolulu is the only one without a fixed guideway transit system.

Increasing traffic congestion has impacted the accessibility of the corridor, reduced mobility for people and goods, degraded transit performance, and increased travel costs. The longer travel times reduce the attractiveness of new developments emerging in 'Ewa-Kapolei. Average weekday peak-period speeds on Interstate Route H-1 (H-1 Freeway), which runs through the corridor with the H-2 and H-3 Freeways feeding into it, are currently less than 20 miles per hour in many places and will degrade further by

FY2030. Travelers on O'ahu's roadways experienced 71,800 vehicle hours of delay, a measure of how much time is lost daily by travelers in traffic, on a typical weekday in FY2007. This is expected to increase to 104,700 hours by FY2030, assuming all planned improvements in the O'ahu Regional Transportation Plan (ORTP) are implemented (excluding a fixed guideway system). With the implementation of the Project, the vehicle hours of delay are projected to be reduced to 85,800 vehicle hours.

OBJECTIVES OF THE PROJECT SPONSOR

The City's goal for the Project is to provide high-capacity, high-speed transit service in the congested east-west transportation corridor mentioned above, as specified in the ORTP. The Project is intended to provide faster, more reliable transportation in the corridor and to provide basic mobility in areas with diverse populations.

The following objectives were used to select the Project:

- Improve corridor mobility
- Encourage patterns of smart growth and support City land use policies for growth
- Improve transit service reliability
- Provide equitable transportation solutions for all people in the corridor

Implementation of the Project, in conjunction with other improvements in the ORTP, will moderate the growth of anticipated traffic congestion in the corridor, provide an alternative to private automobile use, and improve transit linkages to and within the corridor. The Project also supports the goals of the City's General Plan and the ORTP by serving areas designated for urban growth.

PROJECT DETAIL

The Project, on which this Financial Plan is based, is a 20.1-mile rail transit system extending from East Kapolei in the west to Ala Moana Center in the east and is shown on Figure 1-1. The alignment is elevated, with the exception of 0.6 miles that will be constructed at-grade. The alignment will include 21 stations.

The Project is planned to be delivered in four design and construction sections. The first section is the portion between East Kapolei to Pearl Highlands, and includes construction of the Maintenance and Storage Facility and Yard (MSF). The second section will be constructed from Pearl Highlands to Aloha Stadium. The third section will be constructed from Aloha Stadium to Middle Street, and the final section will continue to Ala Moana Center.

Planning and design continue on the east half, for Design-Build projects that include both the guideways and stations, while construction on the guideway is in full progress on the west half with station construction now underway. System testing and an interim opening is in the planning stage for 2020 using the west side, while the RSD is projected for 2025 for the entire system, after the east side is completed.

Figure 1-1, Project Location Map



INTEGRATION WITH THE EXISTING BUS SYSTEM

The Project will be fully integrated with TheBus operations, which will be reconfigured to add feeder bus service to provide increased frequency and more transfer opportunities between bus and rail.

The Financial Plan assumes fares will be the same for TheBus and the Project, with free transfers and passes allowed on both modes. Fare vending machines will be available at all rail stations, and standard fareboxes will continue to be used on all buses. More information regarding the fare structure and fare revenues can be found in Chapter 3.

PROJECT TIMING

The City initiated technical and engineering work in support of the National Environmental Policy Act (NEPA) in late 2007 and received FTA approval to proceed into Preliminary Engineering (PE) on October 16, 2009. On January 18, 2011, FTA issued a Record of Decision for the Project and provided pre-award authority for right-of-way acquisition, utility relocation, and acquisition of rail vehicles. In May 2011, FTA issued a Letter of No Prejudice (LONP) for limited Final Design (FD) activities, and in February 2012 FTA issued a second LONP for limited Project construction. In May 2012, FTA provided additional authorization which covered the pre-cast yard for the guideway segments. A summary of the major Project development milestones is provided in the following table. The Project schedule is subject to change as procurement and phasing decisions are finalized.

Table 1-1, Summary of Major Project Development Milestones

Milestone	Date
FTA Approves Entry into Preliminary Engineering	October 2009
FTA Issues Record of Decision	January 2011
City Submits LONP Request for Limited Final Design Activities	April 2011
FTA Approves Limited Final Design LONP	May 2011
City Requests Entry into Final Design	October 2011
FTA Provides Final Design Approval	December 2011
City Submits LONP Request for Limited Construction Activities	December 2011
FTA Approves Limited Construction LONP	February 2012
City Requests FFGA	June 2012
City and FTA Execute FFGA	December 2012
Interim Opening Date	December 2020
Revenue Service Date	December 2025

LONP = Letter of No Prejudice / FFGA = Full Funding Grant Agreement

PROCUREMENT AND PROJECT DELIVERY

The Project will be implemented using various contract types. The completed MSF and the guideway from East Kapolei to Aloha Stadium are in construction under multiple Design-Build agreements, where contractors share in the risks of the Project. The 9 stations, under construction from East Kapolei to Aloha Stadium, were procured as low bid Design-Bid-Build contracts. The guideway and stations from Aloha Stadium to Ala Moana Center were originally planned to be designed and constructed using the Design-Bid-Build method, however HART repackaged those contract packages into two large Design-Build packages. This was one of the strategies implemented to mitigate rising costs due to the extraordinary escalation being experienced in Honolulu. Elevators and escalators are being provided on a Manufacture, Install and Maintain basis.

The Core Systems Contract (systems and vehicles) was awarded in 2011 as a Design-Build-Operate-Maintain (DBOM) agreement, with the expectation that the O&M component could be extended to 10 years beyond the completion of the full Project opening in FY2026.

The cost estimates presented in this report were developed based on the most current estimate at completion values for active contracts and bottoms up estimates for future contract packages. Additional information about the procurement and delivery strategy is provided in Chapter 2.

REGIONAL ECONOMIC CONDITIONS

Tourism plays an important role in Hawai'i's economy, and historical data shows there has been a strong correlation between GET collections and the number of visitors. The State of Hawai'i Tourism Authority estimates that tourism spending accounts for 18.5% of the State's economy, and tourism-related employment accounts for more than 152,000 jobs.

The State of Hawai'i's Department of Business, Economic Development & Tourism provides quarterly estimates of the Hawai'i economy. Their 4th Quarter 2016 Outlook for the Economy states: "Visitor arrivals are expected to increase 2.3 percent in 2016, 0.4 of a percentage point above the previous forecast. The forecast for visitor days in 2016 increased 0.3 of a percentage point to 1.9 percent. The forecast for visitor expenditure growth in 2016 was revised upward to 3.9 percent, from 3.2 percent growth projected in the previous forecast. For 2017, the growth rate of visitor arrivals, visitor days, and visitor expenditures are now expected to be 1.8 percent, 2.0 percent, and 4.0 percent, respectively."

Chapter 2 CAPITAL PLAN

PROJECT CAPITAL COSTS

The total capital cost for the Project is $8.2 billion in YOE dollars. See Attachment B for the most recent Contract Packaging Plan (CPP) summary. These costs are inclusive of construction, professional services (such as engineering, design, and construction management), and contingency, but exclude finance charges that are detailed later in this chapter. Consistent with FTA guidelines for New Starts projects, the capital cost estimate does not include expenses for planning, environmental analysis, and conceptual engineering incurred prior to entry into preliminary engineering on October 16, 2009.

There are two remaining major capital contracts: the City Center Guideway and Stations (CCGS) Design-Build package and the Pearl Highlands Transit Center and Parking Garage (PHTG) Design-Build package. Both contract packages will likely begin in FY2019 with the condition additional funding is identified to complete the MOS. Construction market conditions in Honolulu have continued to be volatile and is one of the primary causes of the $8.2 billion project cost estimate.

CONTINGENCIES

This updated EAC includes $1.4 billion in contingency to address cost overruns for active contracts that are expected to exceed the original allocated contingencies. Design-Build contracts on the West segment of the Project in particular were burdened with Project delays that exhausted a substantial amount of allocated contingency, leaving an insufficient amount to cover risk exposures and unawarded contracts under the Original Budget. Further contingency is being applied to upcoming major projects to support contract related changes during construction.

COST ESCALATION

Market factors beyond HART's control are contributing significantly to higher expected prices than originally estimated on upcoming construction packages. A leading nationally published construction advisory report from Rider Levett Bucknall indicates that as of the 3rd quarter 2016, local construction costs are currently higher than almost anywhere in the nation. Firms providing the Independent Cost Estimates for upcoming packages are accounting for these extraordinary market conditions by utilizing local labor availability, local supplier backlog, and escalation to the midpoint of construction in their estimates to provide us with a bid day price HART can expect. In addition, the Rider Levett Bucknall report shows Honolulu approaching the peak inflationary period, with an expected flattening of the inflation rate. This will allow for current estimates to more accurately reflect and predict future costs.

CAPITAL COST ESTIMATING METHODOLOGY

The capital cost estimate is organized in the FTA Standard Cost Category (SCC) format, which includes the following components: guideway and track elements, stations, support facilities, sitework and special conditions, systems, right-of-way, vehicles, and professional services (including HART costs).

The Project incorporates multiple project delivery approaches, including Design-Bid-Build, Design-Build, and DBOM contracts. The capital cost estimate takes into account the cost of Design-Build, DBOM, FD, and Design-Bid-Build contracts that have already been executed or are in the process of being awarded. The cost estimates for the remaining project elements are based on Independent Cost Estimates from the Construction Engineering & Inspection (CE&I) consultant and\or General Engineering Consultant (GEC) staff using a "bottom-up" approach; and some smaller elements are cost estimates that have been risk adjusted to account for current market conditions and a revised Revenue Service Date of December 2025. Cost estimates for active contracts are derived from the aggregate of the original award value, executed changes, and all potential changes identified through the change management process.

There have been significant revisions to the Contract Packaging Plan (CPP) since the original FFGA, which include but are not limited to, the repackaging of the stations and guideway elements on the final 10 miles of the alignment into two Design-Build contracts (Airport Guideway and Stations & City Center Guideway and Stations). Due to multiple delays incurred from legal injunctions, protests on several contract awards, and other factors, the Project schedule has slipped into an unfavorable local construction bidding environment. Revisions to the delivery method and the repackaging of contracts from the CPP are strategies aimed at containing cost overruns and optimizing the schedule due to the market conditions in Honolulu.

Finance Cost: The updated capital cost of the Project without finance charges is $8.2 billion in YOE dollars. Financing costs, including interest and bond issuance charges, will be dependent on an extension of the GET surcharge as well as the terms upon which the extension is based. The duration and amount of bond financing will weigh significantly on the final total budget necessary for the project. The longer the project must borrow or finance the capital costs of construction should HART not receive the full amount of GET surcharge currently anticipated, finance costs will be greater than currently planned. As an example, should the GET surcharge be extended for an additional period of 10 years through December 2038 and HART continue to receive 90% of the surcharge collected, one financing strategy could result in finance charges of up to $1.3 billion which would bring the total project budget to $9.5 billion.

CAPITAL FUNDING FOR THE PROJECT

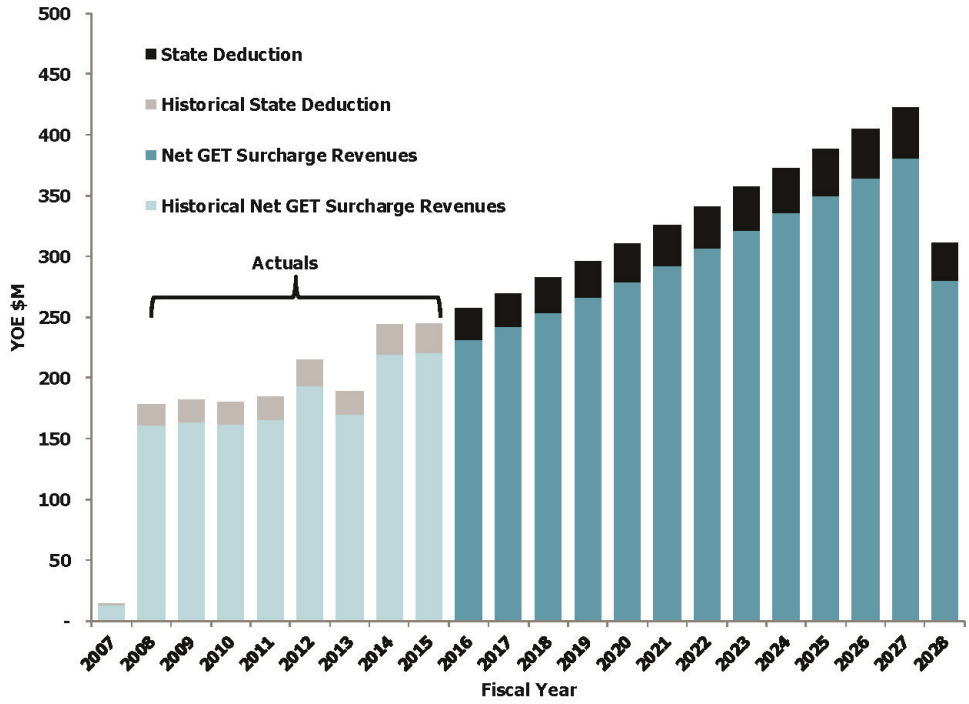
The Project is expected to be entirely funded by revenues from the dedicated GET surcharge and Federal funds.

LOCAL GET SURCHARGE

The local funding source for the Project is a dedicated one-half (0.5) percent county surcharge on the State of Hawai'i's GET surcharge. In 2005, the Hawai'i State Legislature authorized counties to adopt a surcharge on the GET surcharge of 0.5% for public transportation projects. On July 14, 2015, the Governor signed legislation that allows the City to extend the GET surcharge from December 31, 2022 to December 31, 2027. Following the passage of legislation by the City Council, the Mayor signed into law Ordinance 16-1 on February 1, 2016 to extend the GET surcharge.

Figure 2-1 presents the actual net GET surcharge collections to date and expected net GET surcharge revenues expected to be received by the City. The GET surcharge revenue from inception to 2027 is projected to be $5.2 billion. Of that, $1.8 billion has been received through October 2016. It is important to note that given the changes in the global and U.S. economies, this projection will be reviewed and refined periodically over time, as more actual tax collection data are received and as the local, national, and global economic outlooks change.

Figure 2-1, Annual Net GET Surcharge Revenues, FY2007 - FY2028, YOE $millions



Timing of GET Surcharge Collections: The Financial Plan presents the annual GET surcharge amounts on a cash basis. This method accounts for the fact that HART does not receive its share of GET surcharge revenues until the month after the end of each quarter. For example, revenue for April 1 through June 30, 2016 was remitted to HART in July 2016 by the state government. This delay should be noted when comparing GET surcharge revenue as reported by the State to data presented in the Financial Plan. Additionally, the State of Hawai'i Department of Taxation experiences delays in processing GET surcharge returns, which can make quarterly year-over-year comparisons of historical GET surcharge collections less meaningful.

The Financial Plan submitted to the FTA in 2012 used the actual revenue remitted to HART by the State Department of Taxation for the 12-month period immediately preceding the release of the June 2012 Financial Plan. Subsequent to the submittal of the original Financial Plan, the State Department of Taxation informed HART that it had made an error and had remitted to HART $9 million more than they should have. Since the error was included in the base projection period, its effect is compounded over the term of the Financial Plan. HART now has reduced the original GET surcharge revenue by $100 million to offset the impact of the remittance error. The budget, when adjusted for the remittance error, is approximately equal to actual receipts, and receipts through October 2016 is $1.4 billion.

GET surcharge Forecast Methodology: The original Financial Plan assumes that GET surcharge revenues will grow in line with the long-term historical growth experienced by statewide GET surcharge revenues. The long-term compounded annual growth rate (CAGR) in statewide GET surcharge revenues (FY1981 to FY2010) of 5% was used to forecast GET surcharge revenues for FY2013 to FY2023.

The growth rates assumed are subject to numerous risks and uncertainties, including the magnitude and timing of the economic recovery, future inflationary pressures, the strength of the U.S. dollar (especially relative to the East Asian currencies) and U.S. monetary policy. Due to these uncertainties, the combined growth rate in the updated Financial Plan lowers the annual revenue growth rate from 5% to 4.3%.

The table below details the impact of the recession on the growth in GET surcharge excise revenues. The chart illustrates that when the full impact of the "Great Recession," the worst economic downturn since 1929, the compounded annual growth rate is 4.1%. However, the growth rate rebounds even after only removing 1 year of the "Great Recession" at 5.6% over the last 6 years.

Table 2-1, Compound Annual GET Surcharge Growth Rate

Fiscal Years	# of Years	Description	Growth Rate
FY2008-15	7	Full Impact of "Great Recession"	4.1%
FY2009-15	6	FY 2009 Impact Great Recession"	5.6%

FEDERAL FUNDING SOURCES

FTA Section 5309 New Starts (49 U.S.C. Section 5309)

As shown in the following table, New Starts funding is assumed to provide a total of $1.6 billion to the Project though FY2017, with annual amounts of up to $250 million per year. The table presents the fiscal year in which the federal appropriations are assumed to be made, and when the funds will be used. The difference in timing reflects the assumed timing of federal appropriations, the cumulative amount of eligible expenditures in the fiscal year, and the fact that New Starts funds are expended on a reimbursable basis using the New Starts share for the Project. The availability of future New Starts funding will depend on future actions by Congress to authorize and make annual appropriations for the program, as well as the national competitive landscape for funding major transit capital investments.

Table 2-2, Status of Section 5309 New Starts Revenues, through October 31, 2016, YOE $millions

Federal Fiscal Year	New Starts Appropriations	Actual Drawdown to Date
FFY 2008	$15	$15
FFY 2009	$20	$20
FFY 2010	$30	$30
FFY 2011	$55	$55
FFY 2012	$200	$200
FFY 2013	$236	$236
FFY 2014	$250	$66
FFY 2015	$250	$0
FFY 2016	$250	$0
FFY 2017	$244	$0
Total	$1,550	$622

FFY 2016 through 10/31/2016 unaudited

American Recovery and Reinvestment Act of 2009 Funding

The Project includes a minimal level of funding provided through stimulus monies received by the City. Specifically, the Project received $4 million in ARRA funding in FY2010 which was used to support preliminary engineering activities.

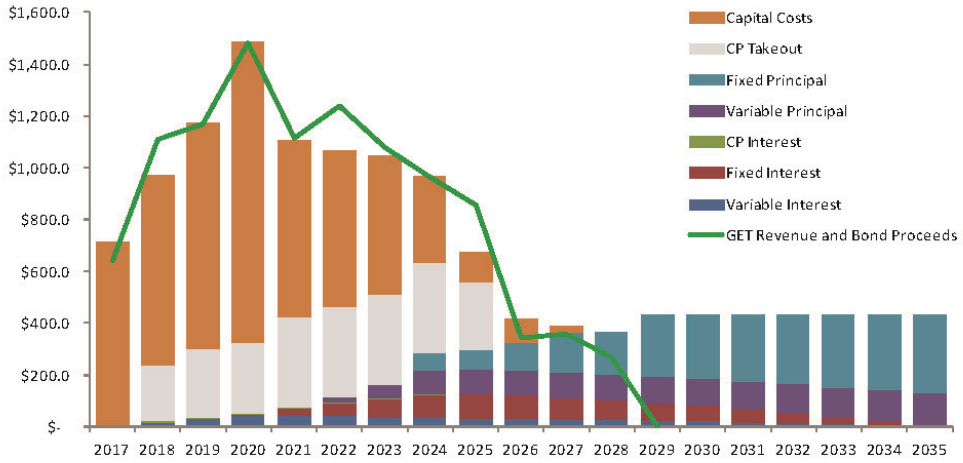
FTA Section 5307 Formula Funds (49 USC Section 5307)

The updated Financial Plan removes the 5307 formula funds which can now be utilized by the City for existing transportation needs. The 5307 formula funds are being replaced by the extension of the GET surcharge to December 31, 2027.

FINANCING OF THE PROJECT

The following figure shows the Project capital sources and uses of funds, including debt service. In the years in which capital expenditures are greater than the funding available on a pay as you go basis, debt financing is needed. GET surcharge revenue will continue to be generated after construction is completed, which provides the funding source for debt financing. However, this will require the GET surcharge to be extended beyond the existing 2027 sunset.

Figure 2-2, Project Capital Sources and Uses of Funds, FY2017 – FY2035, YOE $millions



The following chart shows the tabular date through FY2027. As shown below, there are sufficient revenues through the current sunset date:

($ in millions)	Fiscal Years												
	Feb-16	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Beginning Cash Balance	$298	$192	$95	$25	$25	$25	$25	$25	$25	$25	$25	$209	$141
Project Funding Sources:													
G.E.T.	$1,259	$61	$236	$246	$257	$268	$279	$291	$304	$317	$330	$344	$359
Federal Grant	$515	$54	$192	$212	$254	$323	$0	$0	$0	$0	$0	$0	$0
All Other	$6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Revenue	$1,780	$115	$428	$458	$511	$591	$279	$291	$304	$317	$330	$344	$359
Total Project Sources	$1,780	$115	$428	$458	$511	$591	$279	$291	$304	$317	$330	$344	$359
Project Uses:													
Total Project Costs	$1,885	$213	$706	$875	$870	$1,158	$691	$773	$571	$333	$116	$89	$26
Debt Service	$0	$0	$7	$20	$34	$51	$74	$94	$112	$125	$128	$120	$112
Total Project Uses	$1,885	$213	$713	$896	$904	$1,209	$765	$868	$682	$458	$243	$209	$137
Net Current Change	($105)	($98)	($285)	($438)	($394)	($618)	($486)	($577)	($379)	($141)	$87	$136	$222
Debt Proceeds	**$0**	**$0**	**$215**	**$653**	**$660**	**$892**	**$836**	**$946**	**$777**	**$649**	**$526**	**$0**	**$0**
Less Debt Repayment	$0	$0	$0	($215)	($267)	($274)	($350)	($370)	($398)	($508)	($429)	($204)	($251)
Ending Cash Balance	**$192**	**$95**	**$25**	**$25**	**$25**	**$25**	**$25**	**$25**	**$25**	**$25**	**$209**	**$141**	**$111**

However, after the current sunset date, there are insufficient funds to pay debt service on the bonds. Table A-1 illustrates this.

Debt Capacity

The City's ability to issue debt is defined by legal limits included in the State's Constitution. Furthermore, the City has implemented policy guidelines that define appropriate levels of debt in relation to its funding base.

Legal Debt Limit: The State of Hawai'i Constitution (Act VII, Section 12 and 13) requires any one county to have a total outstanding funded debt equal to no more than 15% of that county's total assessed value of real property for tax purposes. This test represents the primary legal restriction on the amount of debt that the City could issue. Based on current estimates there is significant debt capacity under the limit. As of December 31, 2014, the City had $188.6 billion in net assessed value of real property, which represents $26.1 billion in total legal debt capacity. Of the total capacity, $22.5 billion was available for future use.

City Affordability Guidelines: The City has established affordability guidelines, as last amended by Resolution No. 06-222 in June 2010. These policies include the following:

- Debt service for GO bonds, including self-supported bonds and enterprise and special revenue funds, should not exceed 20% of the City's total operating budget.
- Debt service on direct debt, excluding self-supported bonds, should not exceed 20% of the General Fund revenues.
- Other guidelines include a limitation on the City's variable debt rate and debt refunding policy.

Assuming the City's affordability guidelines are applicable in future years, the limitations on future GO debt can be calculated based on growth assumptions in assessed property values, General Fund revenues, and the City's operating budget. The resolution that adopted the affordability guidelines includes language stating that the guidelines "may be suspended for emergency purposes or because of unusual circumstances." The unusual circumstances relate to the Project having "self supported" short term GO debt, not included in the City operating budget, that is paid for by GET surcharge revenues rather than the City's General Fund revenues.

SYSTEMWIDE AND ONGOING CAPITAL COST

The capital plan includes ongoing costs to replace, rehabilitate and maintain capital assets in a state of good repair throughout the forecast period. It also includes necessary expansion of the existing transit system in order to accommodate forecasted FY2030 ridership demand levels.

Project Capital Asset Replacement Program: A Capital Asset Replacement Program (CARP) consisting of periodic overhaul, rehabilitation, refurbishment or replacement of major components, equipment, and facilities will be carried out for the Project elements included in the Core Systems Contract. The Core Systems Contract sets out a maximum level of CARP spending in FY2011 dollars for each year of the contract and includes a formula based on indices of labor costs and producer prices to escalate the maximum cost budget to YOE dollars. The Financial Plan conservatively assumes that this maximum amount of CARP spending would be required in each year. Eleven years of historical data from the U.S. Bureau of Labor Statistics were used to escalate CARP costs for the Financial Plan.

Total FY2019 to FY2030 CARP spending in the original Financial Plan was anticipated to be $150 million in YOE dollars. Shifting the replacement schedule to the updated revenue service date at the original Financial Plan escalation composite rate would add approximately $2-$3 million per year. The weighted average inflation rate used in the original Financial Plan was 2.6%. The updated projection uses the CPI-U inflation rate which ranges between 2.6% to 2.8%.

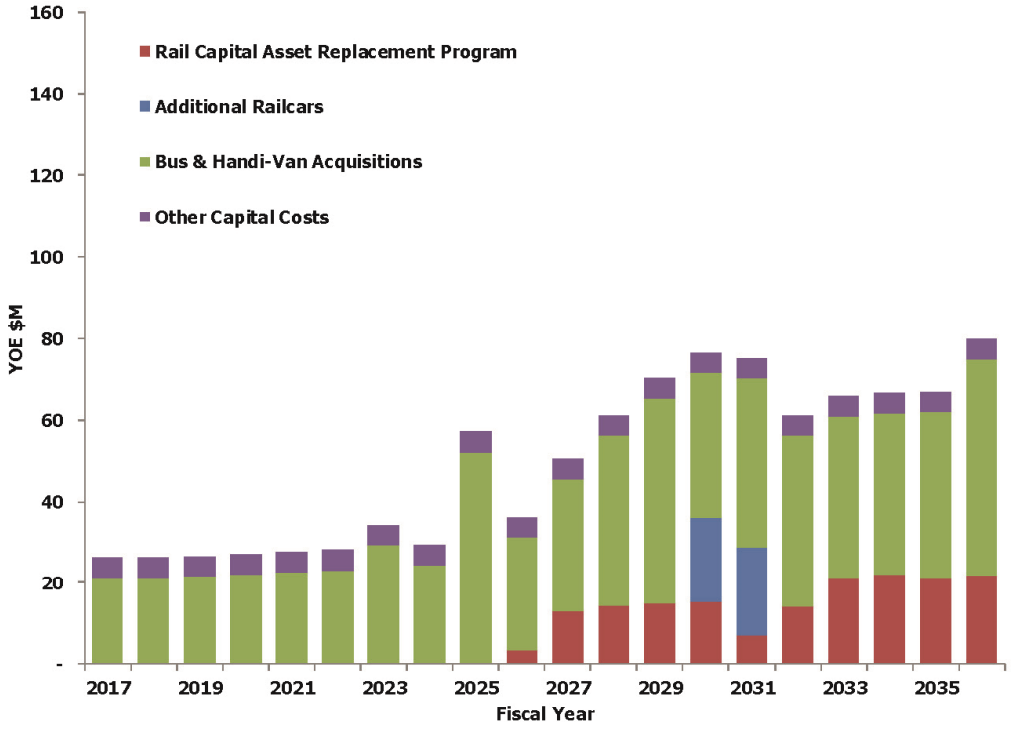
Additional Railcar Acquisitions: In the original Financial Plan, the purchase of ten additional railcars was expected to be needed to accommodate forecasted ridership in FY2025. The original Financial Plan

assumed that this delivery will be made over two years, with five railcars in FY2024 and the remaining five in FY2025. The total capital cost of the ten added cars was estimated at $35 million in YOE dollars. The updated Financial Plan similarly expects additional railcars to be needed in the sixth full year of operations. The equivalent YOE cost of additional rail cars to purchase in FY2030 and FY2031 would total approximately $43 million.

TheBus and TheHandi-Van Vehicle Acquisitions: Most changes in the transit network will result from adjustments to existing bus routes in order to complement the Project. Some bus routes will be re-structured and shortened to become feeder routes while others will be shortened where the Project provides improved service.

Other Capital Cost: The Financial Plan uses cost estimates assuming that $5 million will be spent annually on TheBus and TheHandi-Van facilities, including transit security projects and small transit centers. The following figure presents the annual ongoing systemwide capital expenditure broken down by the components outlined above. Bus acquisition constitutes by far the single biggest ongoing capital expense. The following section will describe the sources of funds assumed in this Financial Plan to pay for these needs.

Figure 2-3, Ongoing Capital Expenditures, FY2017 – FY2036, YOE $millions



SYSTEMWIDE CAPITAL FUNDING SOURCES

While the assumed New Starts funding and GET surcharge revenues will be adequate to fund the Project capital costs, other sources of funds will continue to be relied upon to fund ongoing capital costs for the existing TheBus and TheHandi-Van systems.

FEDERAL FUNDS

The three main sources of Federal funds for system-wide capital costs are as follows:

- FTA Urbanized Area Formula Program (49 U.S.C. Section 5307)
- FTA Capital Investment Grants (49 U.S.C. Section 5309) – Fixed Guideway Modernization (FGM) Program
- FTA Capital Investment Grants – Bus and Bus-Related Equipment and Facilities Program

Under Federal law, Section 5307 funds may be used for preventive maintenance, which is part of a transit system's operating budget. As a general rule for the Financial Plan, Section 5307 funds are first applied to ongoing capital needs, with any surplus being transferred to preventive maintenance.

LOCAL CAPITAL ASSISTANCE FOR THE SYSTEMWIDE AND ONGOING PROJECT CAPITAL NEEDS

The City is required to match all FTA funding programs with at least 20% in local funds. This Financial Plan, therefore, assumes that at least 20% of each year's ongoing capital needs are matched at that level. With the Federal revenues described above, the City is periodically required to contribute more funds to ensure that projected capital needs are met. Historically, the City has consistently done so through the issuance of GO bonds, and this Financial Plan assumes that it will continue to do so.

Chapter 3 OPERATING PLAN

INTRODUCTION

This report updates the Operating Plan portion of the original City's Final Financial Plan for FFGA, June 2012. This updated Financial Plan is based on the 20.1 mile route with full revenue service starting December 2025. Interim service may begin in December 2020 to Aloha Stadium.

The Project will be fully integrated with TheBus operations, which will be reconfigured to add feeder bus service to provide increased frequency and more transfer opportunities between bus and rail. The new rail and modified bus service will provide additional travel options, increase service frequencies, expand the hours of operation, minimize wait times, reduce total travel times, improve service reliability, and enhance comfort and convenience for passengers.

As with the original Operating Plan, the updated Operating Plan reflects the current transit policies applied to the future integrated transit system. The current City policy of setting fare rates to recover between 27-33% of operating costs, as well as the current fare rate categories, remains constant in the updated Operating Plan. By holding these factors constant, this updated Operating Plan projection will serve as a base comparison for changes to fare policies, fare differentials, and service levels.

UPDATE SUMMARY

Original Financial Plan: The following table summarizes the financial elements in the original Financial Plan that was released in June 2012. The table compares FY2011 actual with the first full year of operations in FY2020 in inflated YOE dollars.

Table 3-1, Original Financial Plan Figures, June 2012

		FY 2011 Actual	Original FY 2020	Change	% Change
Bus Cost	YOE million $'s	$173	$263	$90	52%
Handi-Van Cost	YOE million $'s	$34	$59	$25	73%
Rail Cost	YOE million $'s	$0	$113	$113	-
Combined Total	YOE million $'s	$207	$435	$228	110%
Bus Service Hours	millions	1.38	1.58	0.20	14%
Fare Revenue	YOE million $'s	$54	$110	$56	104%
Average Fare	YOE $'s	$0.93	$1.30	$0.37	40%
Subsidy	YOE million $'s	$133	$307	$174	131%

Updated Operating Costs: Projecting rail operating costs is a two-step process. The first step is to update the operating plan in today's current dollars incorporating all known changes (e.g. four car trains, fare gates, and power consumption estimates). After capturing current real changes, the second step is to convert current year cost figures into YOE dollars by selecting an inflationary factor.

Updated rail costs in current year dollars are as projected in the original Financial Plan (June 2012). However, projection estimates in certain cost categories vary considerably from the original projections.

These current year cost estimates are then converted to YOE dollars. The original Financial Plan applied various escalation factors to each cost category (e.g. core systems, power costs, station maintenance). This update provides a range of cost escalation scenarios and details their impacts.

Bus costs have been as anticipated in the original Financial Plan. The historical annual increase in bus costs per revenue service hour in the original Operating Plan was 3.9%. The actual cost per revenue hour over the last 10 years is 3.1% reflecting the recent lower fuel prices. The updated Financial Plan estimates bus costs per revenue service hours to increase at approximately the same level as the original Financial Plan's historical cost. Handi-Van has experienced the cost increases as projected in the original Operating Plan.

Updated Ridership: Ridership is projected using a travel demand model with inputs from customer survey data. A more robust regional planning model is currently being utilized to forecast ridership in conjunction with a fare modeling study. Approximately 258,000 daily linked trips were estimated in the first full year of a bus and rail combined system in 2020. The forecast grew to 280,000 linked trips per day in 2030 for the bus and rail combined system. The updated forecast estimates approximately 279,000 linked trips in the first full year and 313,000 in the tenth year.

With respect to actual boarding to date, actual boarding and the original Financial Plan forecast began to diverge in FY2013. There are a number of factors that may have contributed to this situation, but service hour reductions and the decreasing price of fuel beginning in May 2014 are likely contributors. The updated ridership forecast commences at the current ridership results from FY2016.

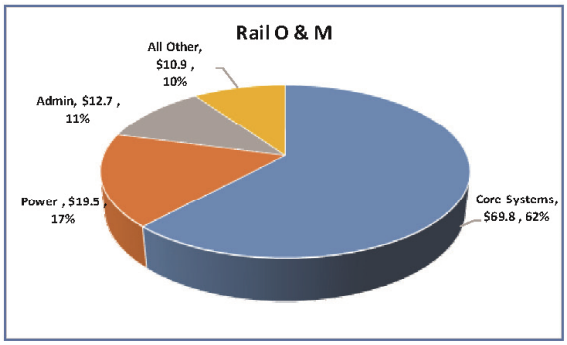
Fare rate increases are comparable to CPI-U increases utilizing the original Financial Plan factors. Similar to the cost scenarios, this report also details the impact of lower ridership figures and its impact on fare rates and subsidy levels.

OPERATING COST UPDATE

RAIL O&M COSTS

The assumptions incorporated in the original Financial Plan were mostly conceptual as final designs were not developed by the plan's release in June 2012. This update of rail O&M costs is based on information obtained and project developments between June 2012 and November 2016. These updated figures will be continually reviewed as designs are finalized, operation and maintenance contracts are secured, and organizational structure develops. The following figure reflects the operating costs in the original Operating Plan. Core Systems Contract and power represent nearly 80% of all operating costs.

Figure 3-1, Original Financial Plan Rail Costs in FY2020, YOE $'s millions



Projecting rail operating costs is a two-step process. The first step is to update the operating plan in today's current dollars including all known contract awards, final designs, system changes such as fare

gates and four car trains, process changes, and energy consumption projections. After capturing current real changes, the second step is to convert current year cost figures into future YOE dollars.

The following table compares the updated cost estimates to the original Financing cost estimate for FY2016. In other words, if the rail systems were opened today what would the cost be using the contractual cost of the Ansaldo contract, current electrical rates, power consumption estimates, etc. The table reveals that total rail costs in current dollars are approximately as projected in the original Financial Plan. However, deviations exist within the various cost categories. These deviations are explained in the following sections.

Table 3-2, Update of Rail O&M Costs, 2016 $'s millions

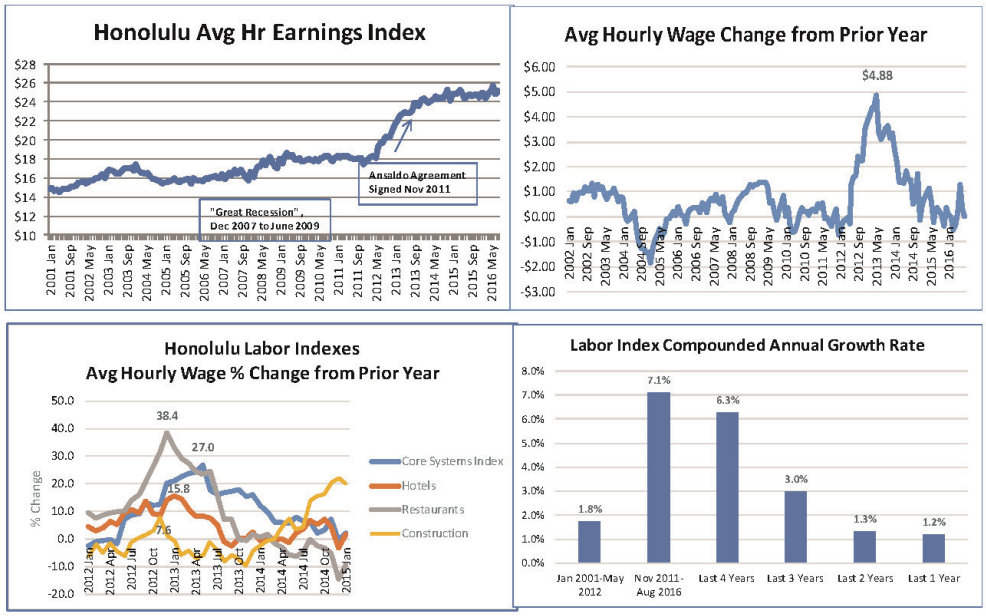
	FFGA First Full Year of Operations, June 2012:					Updated FY 2017:	
	In Constant $'s mil.	FFGA Inflation Factor	Inflated to Cost in FY 2017	Inflated to Cost in FY 2020	Inflated to Cost in FY 2026	Updated Amount in Current $'s	Change from FFGA FY 2017
Core Systems Labor	$ 25.5	1.2%	$ 27.1	$ 27.9	$ 29.9	$ 36.1	$ 9.1
Core Systems Materials	$ 20.2	3.6%	$ 24.1	$ 27.3	$ 34.0	$ 20.5	$ (3.6)
Core Systems Admin	$ 13.1	1.2%	$ 13.9	$ 14.5	$ 15.6	$ 13.9	$ -
Subtotal Core Systems	$ 58.8		$ 65.1	$ 69.8	$ 79.5	$ 70.6	$ 5.5
HART Admin	$ 10.4	2.5%	$ 11.8	$ 12.7	$ 14.7	$ 7.0	$ (4.8)
Power Costs	$ 18.3	0.8%	$ 19.1	$ 19.5	$ 21.8	$ 16.5	$ (2.5)
Guideway Maintenance	$ 1.9	2.5%	$ 2.2	$ 2.4	$ 2.7	$ 2.65	$ 0.4
Security Patrols	$ 0.7	2.5%	$ 0.8	$ 0.8	$ 1.0	$ 2.00	$ 1.2
Fare Enforcement	$ 1.8	2.5%	$ 2.0	$ 2.2	$ 2.6	$ -	$ (2.0)
Fare Collection	$ 2.4	2.5%	$ 2.8	$ 3.0	$ 3.4	$ 3.33	$ 0.6
Station Maint.	$ 2.1	2.5%	$ 2.3	$ 2.5	$ 2.9	$ 2.83	$ 0.5
Water	$ 0.01	2.5%	$ 0.01	$ 0.01	$ 0.02	$ 0.03	$ 0.0
Subtotal HART	$ 37.7		$ 41.0	$ 43.1	$ 49.2	$ 34.3	$ (6.6)
Total Projected O&M	**$ 96.5**		**$ 106.0**	**$ 112.8**	**$ 128.7**	**$ 104.9**	**$ (1.1)**

Core Systems Contract: The Core Systems Contract was signed with Ansaldo to operate and maintain the rail system. The O&M costs for the Project were developed using prices from the Core Systems Contract awarded in 2011. The Core Systems Contract has formulas to convert the bid award's 2011 dollars to YOE dollars. The formulas are based on indices published by the U.S. Bureau of Labor Statistics (BLS) for labor costs and material costs. The contract's labor index is based on the Honolulu Average Hourly Earnings of Production Employees in the Trade, Transportation, and Utilities Sector. The materials index is a composite of two national Producer Price indexes for Line-Haul and Rapid Transit Cars.

For the original Financial Plan, 11 years of historical data from the BLS were used to escalate the O&M costs that are included in the Core Systems Contract. The greatest deviation from the original Financial Plan is the Core Systems labor escalation factor. The Core Systems Contract was signed in November 2011. The following figure shows the labor index spiked in early calendar year 2012, reflecting the pent up pressure after the "Great Recession." Average hourly wages grew $4.88 per hour (27%) from the previous year in May 2013. Similar spikes in the average hourly rate increase were experienced in other major sectors of the Honolulu economy such as the restaurant, hotel, and construction sectors. Contractually the labor compounded annual growth rate (CAGR) peaked at an annualized rate of 17% in early 2013. The CAGR for this labor index from the execution of the contract in November 2011 through

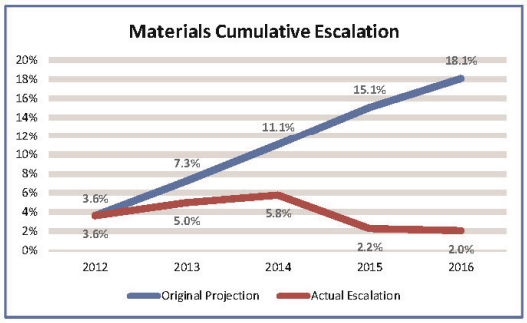
August 2016 has since dropped to approximately 7%. This labor index has averaged only 1.3% growth per year over the last two years. Despite the falling growth rate, if the rail systems started now, the escalation would add approximately $9 million to operating costs.

Figure 3-2, Honolulu Labor Index, August 2016



Unlike the labor index, the materials composite index is much lower than the original Operating Plan projections. The materials index was expected to grow at 3.6% annually. The following figure highlights the actual change in the materials composite index is well below the original projection through August 2016. This actual index change represents a $3.6 million savings from the original plan.

Figure 3-3, Core Systems Materials Index Update



City Cost Responsibilities: The remainder of the rail O&M services will be the City DTS responsibility, based on the passage of Charter Amendment 4 in the recent 2016 elections. These costs include: power costs, guideway structure inspections and maintenance, security patrols, fare revenue collection and

equipment servicing, fare inspection and enforcement, station maintenance (including escalators and elevators), and costs associated with the staffing of administrative and management personnel, including overhead, for the organization.

HART & City Admin: The original Financial Plan assumed that the HART organization would include 86 full-time equivalent positions in the first full year of operations. The cost estimates in the original plan assumed a stand-alone organization with a full complement of staffing; including support position such as human resources, accounting, and information technology. There was no consolidation of services with the City or the bus operator. With the recent Charter organizational changes, the plan will be updated based on new organizational structures and resource needs developed over the next year.

Power Costs: The largest operating cost besides the Core Systems Contract is electrical power. The original Operating Plan based its power consumption and demand projection from estimates in the Core Systems Contractor's proposal. The power price projection was based on then current industrial rates and escalated rates gradually over the projection period. These original estimates have been reviewed and updated relative to current track alignment and four car train operations.

The following table incorporates the current power consumption and demand figures with the current industrial electrical rates to calculate the current dollar impact for power costs. The table reflects the impact of the updated power consumption total that increases power costs by $1.8 million. This power consumption increase is offset by a decrease in electrical rates of $3.1 million, resulting in a total decrease in power costs to $16.5 million in current dollars. The $1.8 million savings grows to $2.5 million when the original plan is escalated to current year dollars.

Table 3-3, Power Consumption and Rate Variances

	Original Plan	Update 2016	Change	% Change
Power Rate Comparison:				
Usage per kwh	$0.22	$0.157	$ (0.06)	-29%
Traction Demand per kw	$18.86	$24.34	$ 5.48	29%
Station Demand per kw	$11.11	$24.34	$ 13.23	119%
Volume Comparison:				
Energy Consumption kwh	69,470,784	77,137,606	7,666,822	11%
Demand kw	10,920	11,355	435	4%
Cost Update:				
Annual Power Cost	$18,303,028	$16,545,748	($1,757,281)	-10%
Cost Variance:				
Change in Rates		($3,112,227)		
Change In Volume		$1,777,130		
Mix Variance		($422,184)		
Total Variance		($1,757,281)		

Fare Collection and Enforcement: Ticket vending machines were originally envisioned for the rail system with fare enforcement officers verifying payment. A new automated integrated fare collection system that can be used throughout the entire transportation system is currently being implemented. In addition, the Project now includes fare gates thereby eliminating on board fare enforcement. The integrated fare collection system and other associated costs increases rail's share of collection costs to $3.3 million in current dollars, a net increase of $0.6 million.

Guideway and Station Maintenance: The Core Systems Contractor is responsible for all maintenance associated with operating the rail system, including all track and equipment on the guideway. DTS will be responsible to inspect and maintain the guideway structure, station structures, and station elevators

and escalators. The estimate includes resources to cover mandated guideway inspection, graffiti removal, elevator/escalator repair, and includes reserves to accumulate for major station and guideway repair. The updated figures increase both guideway and station maintenance by approximately $0.5 million each for a combined total of approximately $4 million per year.

Security: The rail system will have over 1,650 security cameras, emergency and information call points, sophisticated security software, as well as security staffing. The original security plan included an eight position staff as well as fare enforcement officers. The increase of $1.2 million in the cost of security reflects the need to increase staffing to offset the reductions in prior plan's fare enforcement officers.

Cost Adjustments Related to Inflationary Growth Rates

Once the operating costs are determined in current dollars, these cost estimates must be converted to future YOE dollars. The following table provides escalated costs under a variety of inflation assumptions. The chart demonstrates that the future first year operating costs could vary from approximately $127 to $144 million depending on escalation assumptions.

Table 3-4, Rail Costs under Various Inflation Assumptions

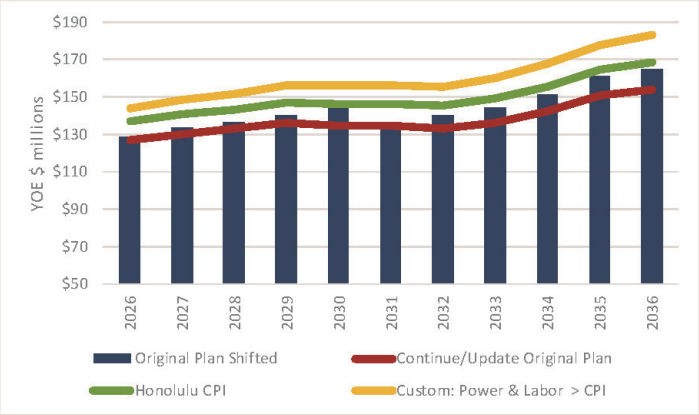
	Inflation Factor Scenarios:					
Cost Category	Continue FFGA Escalation Factor to FY 2026	Change From FFGA FY 2026	Honolulu CPI to FY 2026	Change From FFGA FY 2026	Custom Inflation	Change From FFGA FY 2026
Core Systems Labor	$ 40.5	$ 10.5	$ 46.7	$ 16.7	$ 51.5	$ 21.5
Core Sys. Materials	$ 30.0	$ (4.0)	$ 27.2	$ (6.8)	$ 27.4	$ (6.6)
Core Systems Admin	$ 14.9	$ (0.7)	$ 18.8	$ 3.2	$ 19.1	$ 3.5
Subtotal	$ 85.3	$ 5.8	$ 92.6	$ 13.1	$ 98.0	$ 18.5
HART Admin	$ 8.7	$ (6.0)	$ 8.8	$ (5.9)	$ 8.8	$ (5.9)
Power Costs	$ 19.1	$ (2.7)	$ 21.5	$ (0.4)	$ 23.6	$ 1.8
Guideway Maint.	$ 3.3	$ 0.6	$ 3.3	$ 0.6	$ 3.3	$ 0.6
Security Patrols	$ 2.6	$ 1.6	$ 2.5	$ 1.6	$ 2.5	$ 1.6
Fare Enforcement	$ -	$ (2.6)	$ -	$ (2.6)	$ -	$ (2.6)
Fare Collection	$ 4.3	$ 0.8	$ 4.2	$ 0.8	$ 4.2	$ 0.8
Station Maint.	$ 3.5	$ 0.6	$ 3.6	$ 0.6	$ 3.6	$ 0.6
Water	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Subtotal HART	$ 41.5	$ (7.6)	$ 43.9	$ (5.2)	$ 46.1	$ (3.0)
Total Projected O&M	**$ 126.9**	**$ (1.8)**	**$ 136.6**	**$ 7.9**	**$ 144.1**	**$ 15.5**

Continuing Original Plan Methodology

This projection scenario applies the original operating plan inflation factors to current dollar cost estimates. Under this scenario, the labor index for Core Systems would continue to fall back to historical trend lines and power costs inflation would remain low. Core Systems material inflation would reverse its current low to date escalation and grow at its original Financial Plan annual rate of 3.6%.

In this scenario, total rail O&M cost would total approximately $127 million in the first full year of operations. This scenario would result in a cost savings of $1.8 million per year over the original Financial Plan cost projection inflated to the December 2025 starting date.

Figure 3-4, Comparison of Cost Escalation Scenarios, FY2026 – FY2036, YOE $ millions



Moderate Range Scenario

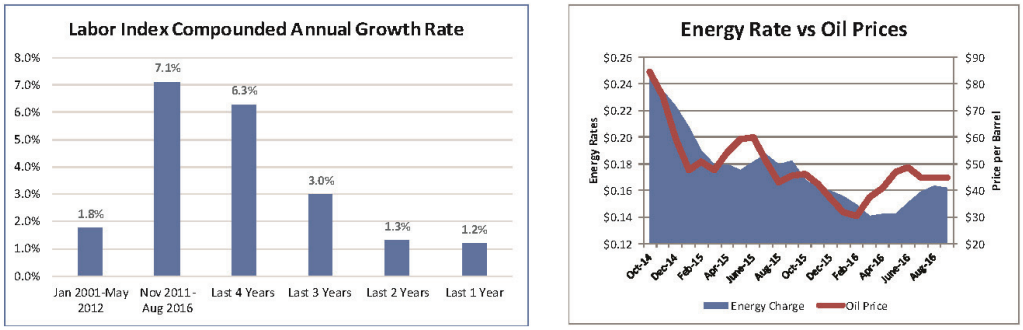
Although, the Honolulu Labor Index growth rate has decreased from its post-recession spike and electric rates to date have actually decreased from 2012, this scenario increases current dollar projections by the Honolulu CPI-U providing another cost perspective. This scenario uses the State Department of Business, Economic Development and Tourism's (DBEDT) most recent Honolulu CPI-U forecast (November 15, 2016) through 2019, then steps up CPI-U from 2.6% to 2.8% annually.

In this scenario, total rail O&M cost would total $136.6 million in the first full year of operations. This scenario would result in a cost increase of $7.9 million (6%) per year over the original Financial Plan cost projection inflated to the December 2025 starting date.

High Cost Range Scenario

The Core Systems labor and power costs represent approximately 50% of the current update for rail costs. To date, these costs have exhibited the most volatility. A more conservative forecasting approach would be to assume higher escalation factors than under the original Financial Plan methodology. Increasing these two cost categories approximately 1.4 times CPI-U results in total rail cost increasing to $144 million (11%) in the first full year of operations.

Figure 3-5, Core Systems Labor Index and Industrial Power Correlation

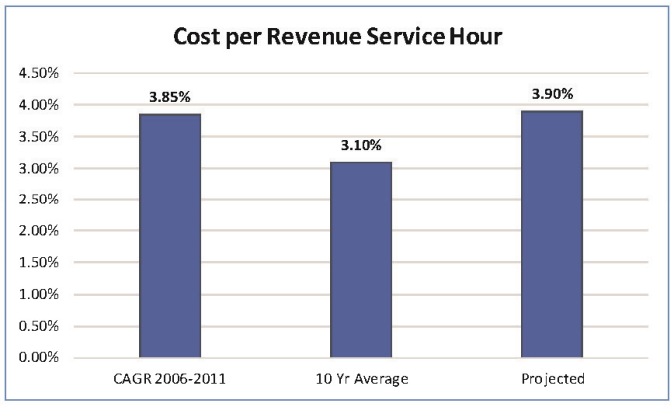


THEBUS O&M COSTS

In the original Financial Plan, TheBus O&M costs were developed using existing bus operations as the baseline as well as anticipated service levels through FY2030. TheBus O&M costing methodology uses a resource build-up approach that fully allocates O&M costs based on level of service variables. Each unit cost is broken down by object class which allows for applying different inflation rates to each object class. The overall composite cost based on revenue service hours was a 3.2% annual cost increase.

The following figure compares the inflationary growth factors cited in the original Financial Plan from 2006-2011 (3.9%), the updated 10 year average (3.1%), and the average used in the updated projection (3.9%). The updated projection uses a more conservative estimate given that the most recent years have realized savings from a sharp decrease in fuel costs. The total cost per revenue service hour for bus operations is currently approximately $130.

Figure 3-6, Growth Rates of Bus Costs per Revenue Service Hour

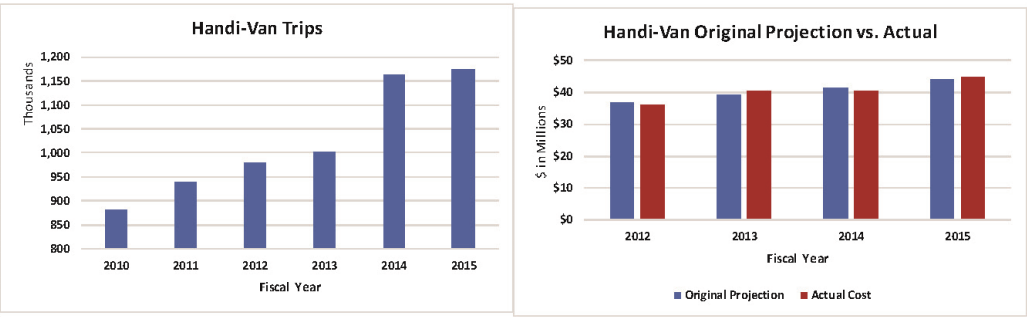


THEHANDI-VAN O&M COSTS

TheHandi-Van is a paratransit service operating in tandem with TheBus and has been in operation since 1999. In FY2011, TheHandi-Van serviced more than 940,000 trips with an associated total O&M cost of approximately $34 million. The projected O&M costs for TheHandi-Van are based on the FY2011 cost per rider, equal to $36.32, applied to the projected ridership, and adjusted for inflation.

The original Operating Plan assumed that TheHandi-Van ridership would increase at an average annual rate of 1.8% from FY2011 to FY2030. The overall Handi-Van total cost was projected to increase between 5% to 6% per year given the increase in ridership and inflation. Fiscal Year 2015 actual results and the original Financial Plan estimate were $44.8 million and $44.1 million respectively. The updated Financial Plan continues the assumptions in the original Financial Plan for the Handi-Van.

Figure 3-7, Handi-Van Annual Trips and Operating Costs



OTHER O&M COSTS

The Financial Plan also includes operating costs associated with other transit service programs. The projection increases over time from approximately $1 million in FY2017, up to $8 million per year in FY2036.

OPERATING REVENUES

PASSENGER FARES

Fare Policy: A City resolution stipulates that the farebox recovery ratio (FRR) for TheBus be maintained between 27% and 33%, which demonstrates a commitment of the City to keep operating costs and revenues growing at a comparable rate on average. The Charter Amendment 4 recently approved during the November 2016 General Election created a Fare Commission tasked with the responsibility of establishing fares for TheBus, Handi-Van, and the rail, including transfer policies. However, because this Fare Commission has yet to be established and the timing for any future decisions have yet to be determined, this Financial Plan assumes that the current fare structure for TheBus will be maintained for both TheBus and the Project, with free transfers assumed between both modes.

The below table details the history of City fare increases. The City last raised fares in July 2010.

Table 3-5, TheBus Fare Structure and History

Effective Date	One-way Cash Fare		Monthly Pass	
	Adult	Youth	Adult	Youth
March 1, 1971	0.25	0.15	N/A	N/A
March 2, 1971	0.25	0.10	N/A	N/A
June 9, 1972	0.25, 0.50	0.10, 0.25	N/A	N/A
March 15, 1974	0.25	0.10	N/A	N/A
November 1, 1979	0.50	0.25	15.00	7.50
June 18, 1984	0.60	0.25	15.00	7.50
October 1, 1993	0.85	0.25	20.00	7.50
July 1, 1995	1.00	0.50	25.00	12.50
July 1, 2001	1.50	0.75	27.00	13.50
July 1, 2003	1.75	0.75	30.00	13.50
October 1, 2003	2.00	1.00	40.00	20.00
July 1, 2009	2.25	1.00	50.00	25.00
July 1, 2010	2.50	1.25	60.00	30.00

N/A = Not Applicable

Ridership Forecasting: Ridership relies on outputs from travel demand models. The original Operating Plan was based on a travel demand model used in the development of the Environmental Impact Study. The update of the Operating Plan uses the OahuMPO regional travel demand forecasting model (TDFM). This regional TDFM uses land use and population data to estimate transit system usage at different horizon years.

The TDFM estimates future islandwide vehicular traffic flows and transit ridership based on land use, employment, population characteristics, and an underlying transportation network. The OahuMPO uses the TDFM during long-range planning efforts to assess and compare the performance of different transportation projects relative to a baseline scenario.

The TDFM is a tour-based micro-simulation model system that uses the TransCAD 6.0 software package. The model uses a synthetic population and land use forecasts to simulate and track the travel patterns of each individual or household in future years. The tour-based model simulates individual daily travel patterns as a series of linked trips or tours which begin or end at home or work. Trips are simulated as one of seven different tour purposes, such as work, school, or non-mandatory trips. The tour-based framework allows consistency across trip mode choice decisions. Someone who takes a bus to work, for example, would not be able to use a car for a trip during lunch because he or she would not have a car available to make the trip. The simulation results are then aggregated and assigned to a transportation network (highway or transit service). Simulation results are also supplemented by forecasts of tourists, airport passengers, and commercial vehicle traffic.

Major inputs into the OahuMPO TDFM include long-range socioeconomic forecasts prepared by the Department of Planning and Permitting in 2015 for the Oahu Regional Transportation Plan. Long-range population, housing, and employment forecasts for 2040 were linearly interpolated to develop intermediate forecasts for 2020 and 2030. A monte carlo simulation was used to fit a synthetic population to these targets. Overall, the land use inputs included about 3.4% fewer residents in 2030 than previous projections, or a total of 1.1 million people.

Other model inputs include data from the 2010 U.S. Census, as well as travel behavior surveys of 4,000 households and 950 visitors conducted in 2012. An onboard survey of 26,300 bus riders in 2012-2013 was also incorporated into the model. These surveys were used to calibrate the travel mode choice components of the model---e.g. how the model predicts that the synthetic travelers will chose to ride transit or drive an automobile.

Another major input into the TDFM is the underlying roadway and transit projects that are assumed to be in place at the time of the forecast year. This fare modeling study includes the committed short-range highway and transit projects included in the 2040 Oahu Regional Transportation Plans that was adopted in April 2016. Proposed mid- and long-range highway projects through 2029 and 2040, respectively, are not included in the fare model study due to their implementation horizons.

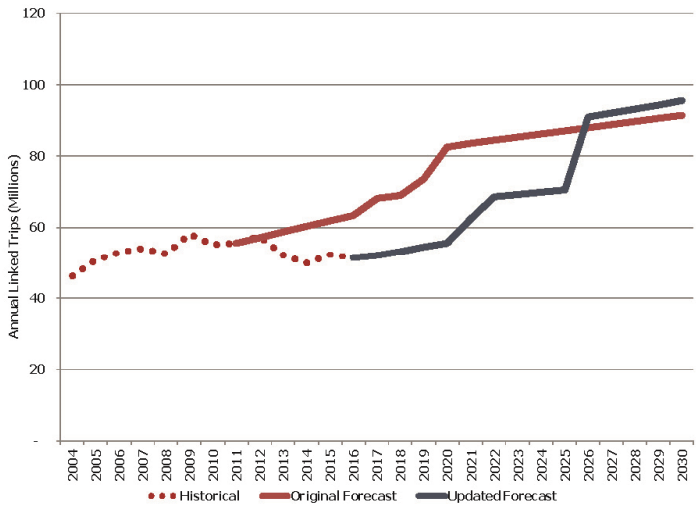
The TDFM also includes a underlying bus route network in order to simulate how travelers will use the transit system. Although the City and County Department of Transportation Services is developing the bus service plans that will be implemented when the rail system opens, this fare study uses two scenarios for analytical purposes:

The full-opening forecast assumes the comprehensive long-term restructuring of the bus network that was described in the Honolulu Rail Transit Project Final Environmental Impact Statement (EIS). This conceptual long-term bus network includes the addition of new high-frequency community circulators, truncation of regional and peak-period express routes, and a modest expansion in the bus fleet. Overall, the 2030 bus network included a roughly 20% increase in bus service hours over 2011 levels and an increase in the peak bus fleet of 474 vehicles (about a 10% increase).

In FY2011, TheBus reported boardings corresponded to about 55.5 million linked trips (taking transfers into account). The original Operating Plan estimated ridership from the original travel demand model. Approximately 258,000 daily linked trips were estimated in the first full year of a bus and rail combined system in 2020. The forecast grew to 280,000 linked trips per day in 2030 for the bus and rail combined system. Figure 3-8 displays the original Financial Plan with the updated forecasted linked trips. The updated forecast estimates approximately 279,000 linked trips in the first full year and 313,000 in the tenth year.

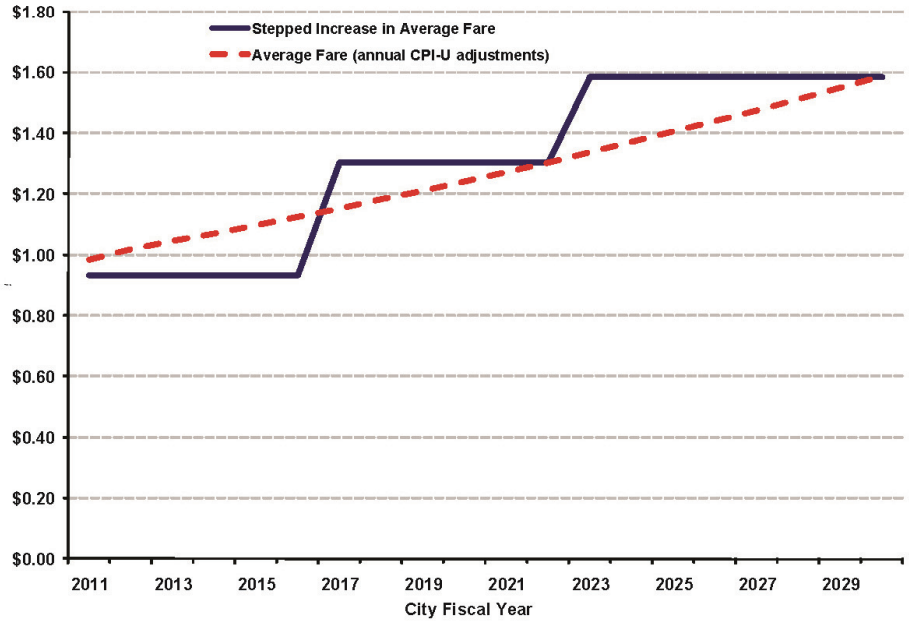
The figure also shows a gap has developed between 2012 and 2016. Beginning in 2013, the observed boarding and forecast began to diverge. There are a number of factors that may have contributed to this situation, but service hour reductions and the decreasing price of fuel beginning in May 2014 are likely contributors. The updated ridership forecast commences at the current ridership results from FY2016.

Figure 3-8, Historical and Forecasted Linked Trips for TheBus and the Project, FY2004 – FY2030, millions of Trips



Fares: The following figure illustrates the assumed future fare increases from the original Financial Plan. This figure compares the step up fare changes that are used as the basis for the fare revenue forecast, as compared to an annual increasing average fare. The original Financial Plan growth in average fare is assumed as a "step function" with increases of approximately $0.37 in FY2017 and $0.28 in FY2023.

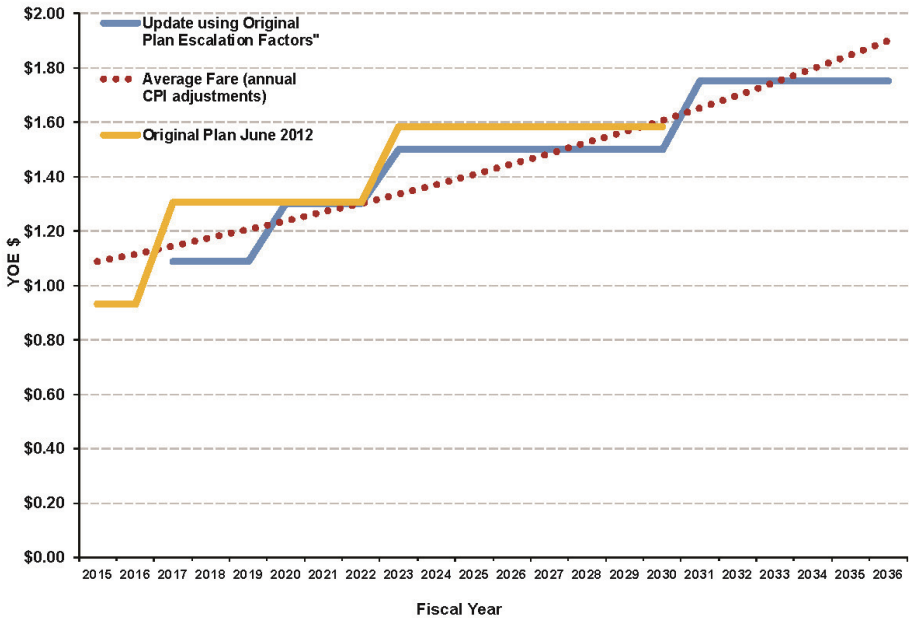
Figure 3-9, Original Financial Plan Fare Increases, FY2011 – FY2030, YOE $



CPI -U= Consumer Price Index All Urban Consumers

Continuing the Original Plan Revenue and Cost Assumptions: The following figure updates the original fare projection consistent with current City policies and fare products. The figure illustrates the impact of the shift in date of the full revenue service date. This figure assumes the updated rates based on cost escalation factors in the original Financial Plan as well as revenue factors developed in the final environmental impact study. Under this scenario, rates increase $0.20 to $1.30 in FY2020; to $1.50 in FY2023; and $1.75 in FY2031.

Figure 3-10, Average Fare Comparisons Original vs Updated Plan, YOE $



FEDERAL FUNDS

The City currently receives Federal funds through FTA's Section 5307 Urbanized Area Formula Program. As mentioned in the systemwide capital plan chapter of this Financial Plan, the majority of Section 5307 funds are applied first to ongoing capital needs with any surplus being used for preventive maintenance.

Beyond the Project construction period, the Financial Plan assumes that Section 5307 funds will be distributed first to fund the Project Capital Asset Replacement Program and ongoing systemwide capital expenditures; any remaining balance will then be used to fund preventive maintenance. The updated Financial Plan also includes a projected $1 million to $2 million annually for other federal grant programs.

SYSTEMWIDE OPERATING PLAN

Original Financial Plan Methodology

As previously discussed, this projection scenario applies the original Financial Plan escalation factors to convert current dollar cost estimates to YOE dollars and utilizes the same fare revenue factors. In this scenario, total rail O&M cost would total approximately $127 million in the first full year of operations. This scenario would result in a cost savings of $1.8 million per year over the original Financial Plan cost projection inflated to the December 2025 starting date. Average fare rates would increase with CPI-U. The original Financial Plan had average fares rising from $0.93 per trip to $1.58 in the ten year period ending in FY2030. In the updated Financial Plan, average fares would rise $0.17 to $1.75 over the ten year period ending FY2036.

Table A-2, *Operating Plan, Continue Original Plan Methodology*, provides the revenue, cost, and subsidy level through FY2036.

Moderate Range Scenario

Under this scenario, rail inflationary costs grow with projected increases in CPI-U. This scenario would increase total rail O&M costs by approximately $8 million (6%) in the first full year of operations over the original Financial Plan's FY2026 projection. The original Financial Plan had average fares rising from $0.93 per trip to $1.58 in the ten year period ending in FY2030. In this scenario, average fares would rise $0.24 to $1.82 over the ten year period ending FY2036.

Table A-3, *Operating Plan, Moderate Range Scenario*, provides the revenue, cost, and subsidy level through FY2036.

High Cost Range Scenario

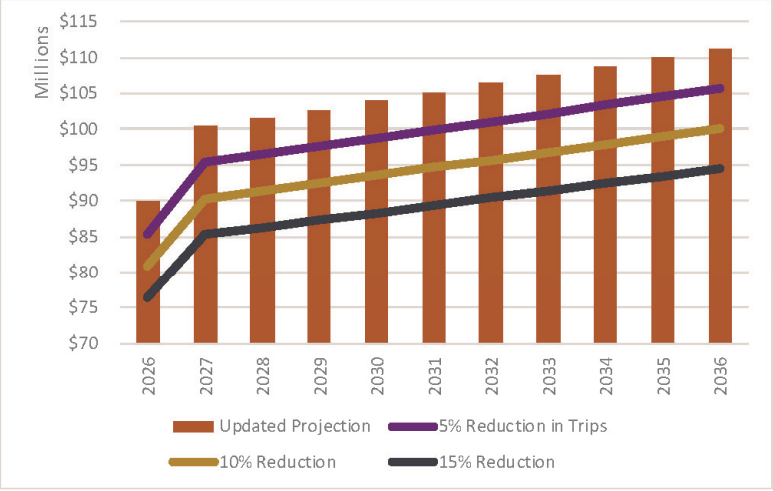
Under this scenario, rail inflationary costs grow from 3.6% to 3.8% annually for the most volatile cost categories to date: Core System labor and power costs. Growth in these cost categories would increase total rail O&M costs by approximately $15 million (11%) in the first full year of operations. The original Financial Plan had average fares rising from $0.93 per trip to $1.58 in the ten year period ending in FY2030. In this scenario, average fares would rise $0.27 to $1.85 over the ten year period ending FY2036.

Table A-4, *Operating Plan, High Cost Range Scenario*, provides the revenue, cost, and subsidy level through FY2036.

Slower Revenue Growth Scenario

Currently, there is not an automated system to capture ridership statistics. The bus and rail system will be equipped with an integrated automated fare collection system that will provide further insight into customer travel habits. Currently, surveys are preformed periodically to determine customer travel habits. Given the reliance on survey data, potential changing customer travel habits, and other economic factors, this update models the impact of a more conservative revenue model. The figure below highlights the impact of a 5%, 10%, and 15% reduction in ridership.

Figure 3-11, Ridership Sensitivity, YOE $ millions



The lower fare revenue in FY2026 reflects the full 20 mile rail system starting in December 2025, midway through the fiscal year.

HART has contracted with CH2M Hill in 2016 to undertake more detailed fare structure implementation options, including estimated ridership and fare revenue impacts. The core objective of this study is to evaluate alternative fare structure/fare policy options, including estimation of ridership and fare revenue impacts. This fare model will be used to estimate the ridership and fare revenue impacts of alternative fare structures, including changes to fare products, fare rates and transfer policies.

Table A-5, *Operating Plan, Ridership Sensitivity, at Current Average Fare Rate*, provides the revenue, cost, and subsidy level through FY2036.

CITY CONTRIBUTION

The City's contribution to transit O&M expenses is funded using local revenues from the General and Highway Funds. The General Fund comprises most of its revenues from the following taxes:

- Real Property Tax – tax on real property based on assessed value; rates vary with property class.
- State Transient Accommodations Tax – 7.3% tax on a dwelling that is occupied for less than 180 consecutive days. The City has historically received a portion of these revenues.
- Public Service Company Tax – the City receives 1.9% of all public service companies' gross income.

The Highway Fund comprises most of its revenues from the following taxes:

- Fuel Tax – a 16.5 cent per gallon tax on all fuel sold or used within the City's jurisdiction.
- Vehicle Weight Tax – a tax on the net weight of all passenger and non-commercial vehicles (5 cents per pound), and motor vehicles and non-passenger-carrying vehicles (5.5 cents per pound).
- Public Utility Franchise Tax – a 2.5% tax on all electric power and gas companies' gross sales receipts.

During the period from FY1994 to FY2011, revenues from these sources totaled $14 billion, of which approximately $1.5 billion (11%) went to transit. The percentage in FY2015 totaled approximately 13%. The original Financial Plan percentage in the first full year of operations totaled approximately 19%. The updated Financial Plan, assuming no change in fare policies, fare products, and service levels, would increase to approximately 21% in the first operating year.

The Financial Plan forecasts the growth in these City Funds at an aggregate level and the resulting share that will be needed for transit operations. This forecast applies the aforementioned CPI-U inflation forecast in Honolulu as well as a real rate of growth equal to 1.3%, which is equal to the real growth experienced between FY1996 and FY2011.

Increases in other transit revenue sources, such as advertising, concession contracts, and development opportunities, could reduce the amounts required to be transferred from the City's General and Highway Funds.

Although the actual funding of the operating costs will involve further in depth review and extensive public discussion, additional offsets such as fare differentials, fare equity, cost effective routing, potential Transit-Oriented Development related increases to tax revenues, and other revenues could provide additional resources for the Project.

Chapter 4 Risks and Uncertainties

CAPITAL PLAN

Capital Cost Risks

Risks and uncertainties related to the Project capital cost estimate are mostly related to inflationary and schedule risks as further described below. Market risks are reduced for awarded contracts that make up 62% of the Project capital cost estimate in YOE dollars (without contingency). To date, over 75% of the guideway construction is under contract including the most recently awarded Airport Guideway and Stations Design-Build package. Further, 13 of the 21 planned stations are also under contract. The two most significant contract packages outstanding are the City Center Guideway and Stations Design-Build package, which would include the remaining 4.2 miles of guideway and 8 stations, and the Pearl Highlands Transit Center and Parking Garage.

Market Conditions

As described in Chapter 2, construction cost estimates have been escalated to account for rising costs on the island of O'ahu. Inflation varies amongst cost components (labor, equipment, materials) based on their dependence to either a global or regional (local) economy. Commodities shipped to O'ahu tend to be more sensitive to global economic pressures; while labor shortages result in per diem expenses for workforce brought in from the mainland U.S. Therefore, cost projections on future contract packages consider these factors individually.

The majority of labor contracts were renegotiated in FY2013 and will be renegotiated again in FY2018, at which point labor prices could increase or decrease based on the availability of labor and the level of construction activity. Furthermore, the escalation rates for labor might be somewhat different if a labor agreement is signed for the Project, since it would lock in labor contracts throughout the construction period.

The total contingency included in the Project cost estimate is approximately 20% of the total project cost. The level of contingency reflects some cushion for potential cost escalation, within a reasonable level of probability.

Project Schedule

As part of the Project's ongoing risk management program and FTA's risk assessment process, the City has identified several Project activities that pose potential risks to the critical path of the Project. As with many projects of similar scope and size, the most significant schedule risks involve the timing of design and construction NTP; permitting delays; delays in acquisition of right-of-way; and late delivery or acceptance of design submittals. Of note, the largest remaining contract is the City Center Guideway and Stations contract which also includes the most complex utility relocations and the undergrounding of two major 138 kV circuits within a very narrow right of way. Constructability and resulting impacts on traffic and local businesses pose challenges to anticipated schedules.

The Project's master schedule is updated in close coordination with FTA, and reflects input on a monthly basis. The probability of risks associated with potential schedule delays has been included in the Project's risk register, and therefore is also reflected in the amount of contingency included in the Project budget.

Interest Rates and Municipal Market Uncertainties

As in any capital project requiring the issuance of debt, the Project is subject to uncertainty associated with fluctuations in interest rates. Variations in interest rates could affect the interest earned on cash balances and the interest paid on outstanding debt, as well as the size of the debt requirements to

finance the Project. Variations in interest rates could also influence the level of working capital and the ability to both operate existing service and undertake new initiatives.

Fluctuations in interest rates are influenced by a number of factors, including the credit rating of the bond issuer (the City) and other external factors that are not directly under the control of the City, such as market risks.

The Financial Plan assumes that the City will utilize GO bonds and short-term interim financing. These tools are currently available to the City and have been structured in the Financial Plan to conform to provisions of the Hawai'i Constitution. The interest rates assumed for each type of debt instrument are similar to the interest rates that are available for comparable maturities in today's market and have been adjusted upward by 50 basis points for bonds issued between FY2016 and FY2019 to account for potential higher future interest rates.

Credit Rating

This Financial Plan assumes that Project-related debt will not impact the credit rating of the City because the forecasted Project revenues are sufficient to fund all Project-related debt service. The cost of borrowing could increase if the City's credit rating were negatively impacted.

CAPITAL REVENUE RISKS

GET Surcharge Revenue

The primary source of non-Federal funding for the Project is the net GET surcharge revenues. The amount of total GET surcharge revenues depends on a variety of underlying economic factors outside of the City's control that may result in a higher or lower collection rate than the one currently used in this Financial Plan. Nonetheless, several mitigating factors are important to consider for the outlook in GET surcharge revenues:

- Inflation plays an important role in forecasting GET surcharge revenues, as this source of funds is highly dependent on local prices. Higher general inflation in the post-construction years could increase GET surcharge revenues without affecting Project capital costs.
- Unlike most sales taxes, the GET surcharge has the benefit of being levied on a broad range of business activities including both goods and services. This diversification is usually seen positively by economists and the investment community and is usually associated with greater stability.

FTA Funding: Section 5307 Formula; Section 5309 New Starts, FGM, and Bus Capital

The Project assumes Federal funding participation through the Section 5307 Urbanized Area program; and Section 5309 New Starts, FGM, and Bus Capital programs. Federal legislation that authorizes these programs (Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users) was scheduled to expire at the end of September 2009, but was extended until June 30, 2012. While these programs have been in place for many years, through several authorization cycles, there is always a possibility that Congress will change direction in the next authorization cycle. Congress could increase or decrease the amount of funds available, impose new rules on project eligibility, and/or revise the criteria used to evaluate potential projects.

Congress could also extend the funding period for the Project by stretching out the annual appropriations. Any delay or significant decrease in the annual New Starts appropriation amounts could necessitate additional borrowing or schedule delays, potentially increasing the Project's overall cost due to increased financing costs.

In the event of delays in FFGA funds, the City could consider issuing debt that would be secured with FFGA revenues, referred to as grant anticipation notes. These notes would allow the City to leverage future FFGA revenues before they are appropriated, and any appropriation risk would be factored into the

interest rate. This could help minimize the potential impacts of any delays in FFGA appropriations on the Financial Plan.

OPERATING PLAN

OPERATING COST RISKS

Core Systems Contract

As described in Chapter 3, about 80% of the Project's O&M cost will be covered by the Core Systems DBOM contract, including pass-through utility costs. The O&M agreement includes pricing for labor, materials, management and administration necessary to support the O&M of the Project. As such, the risks and uncertainties around unit prices and service plan are strongly mitigated by the presence of this contract for up to ten years.

Cost Escalation: Labor, Health Care and Energy Prices

Escalation rates were applied to each Project O&M cost category from the Core Systems Contract and each object class for TheBus and TheHandi-Van O&M costs. This level of disaggregation allowed for consideration of differences in the growth outlook for various cost items, such as labor, health care or fuel prices, which may expected to increase faster than general inflation. Inflationary risks and uncertainties do remain, however, as the global and local supply/demand balance evolves. This is the case, for example, with energy costs in Honolulu, which are highly driven by oil prices and therefore, subject to its volatility.

Other Transportation Costs: TheBus and Handi-Van

The risks and uncertainties outlined above could lead to a higher level of O&M subsidy required to operate and maintain the City's public transportation system i.e. TheBus and the Handi-Van. In the base scenarios, TheBus and Handi-Van are projected to grow at higher than general inflation. The updated Financial Plan projects TheBus operating subsidy (as measured by TheBus O&M cost minus TheBus fare revenues) per Revenue Vehicle Hour (RVH) to grow at a higher rate (3.8%) than the original plan (3.2%).

TheHandi-Van service levels are driven directly by ridership growth. The annual growth rate in TheHandi-Van ridership continues to be driven by the projected growth in population above 65 years old assuming 70% of the growth. The Handi-Van's costs are projected to grow between 5% to 6% per year.

OPERATING REVENUE RISKS

Fare Revenues-Ridership

Fare revenues are based on current demand forecasts for ridership and a continuation of current fare levels in real terms, which could both change due to a number of short-term and long-term factors such as:

- The state of the economy
- The local job market
- Population growth
- Traffic congestion on roads and main highways
- Fuel prices
- Land use and development plans

While the existing travel demand forecast has made some assumptions with regard to each of these variables, there are uncertainties surrounding the timing and extent of each.

The operating revenues included in the Financial Plan assume periodic fare increases that would maintain a Farebox Recovery Ratio (FRR) for TheBus and rail between 27% and 33%, in accordance with the City's current policy. However, the FRR would not be met if fares are not increased as shown in the Financial Plan.

The fare revenue forecast has not taken into account any temporary ridership decreases that could result from the fare increases based on previous experience demonstrating the relative inelasticity of the City's transit demand with respect to fares. Furthermore, the fare increases have been sized to increase the average fare at approximately the same rate as general price inflation, but on a less frequent basis. Accordingly, the fare increases should have a minimal effect on ridership. However, any reduction in ridership as a result of the fare increases could lead to a lower FRR.

POTENTIAL MITIGATION STRATEGIES FOR THE CAPITAL AND OPERATING PLANS

The City has various other funding opportunities that are available to add financial capacity if needed. These consist of potential future revenue-generating strategies and are not included in this Financial Plan as part of the Project cash flows.

Extension of GET Surcharge Revenues

An extension of the GET surcharge beyond 2027 is needed to complete the project to Ala Moana (MOS). The City and HART are preparing to request an extension of the surcharge during the next Legislative Session beginning in January 2017.

Value Capture

The Project will improve access to and spur development at several of the station areas within the City. There are many ways that the City can benefit from this expected development through 'value capture' mechanisms. These options would generate additional Project funding, which could be used to offset any increase in capital costs or decrease in available GET surcharge revenues, or to reduce the City's contribution to O&M costs for the Project. The City is currently evaluating the potential of "value capture" as well as other public-private partnerships to generate revenue opportunities for both capital and O&M to supplement the Project funding.

Advertising and Other Non-fare Operating Revenues

Expanding the advertising program could generate significantly more than the approximately $100,000 received by the City for bus advertisements. With the introduction of rail service, not only will there be an ability to advertise within each railcar, but the stations will also present potential advertising locations for local businesses. Based on 2011 National Transit Database data, Honolulu receives approximately $0.001 per boarding in advertising revenues, while similar larger-sized systems receive advertising revenues that are 10 to 100 times greater, after adjusting for ridership. Other miscellaneous operating revenue opportunities include the lease of right-of-way for telecommunications or the naming of stations. These funds could offset the City's contribution to O&M costs.

Parking Revenues

Demand for park-and-ride stations is strong in Honolulu, and charging even a nominal amount for daily parking could generate a significant amount of revenue. Collected parking funds could be used for capital and/or operating expenses, as parking surcharges could be used to offset the construction costs of the parking garages, or revenues could be used to offset operating costs of the garages including garage attendants and security personnel.

Improvement in Service Efficiencies in TheBus, TheHandi-Van, and Rail Operations

The addition of the Project to the existing transit network will likely result in some overlap of service between bus and rail. While some bus service and route modifications are planned as the Project is implemented, there is a possibility to further reduce redundancies in the bus service as rail ridership grows. This would have an impact on ongoing bus fleet replacement cycles, which can lead to reductions in both capital and O&M costs.

Productivity on TheHandi-Van system, as measured by the number of unlinked trips per RVH, decreased every year between FY2006 and FY2010 at a CAGR of -1.9%. However, the paratransit system experienced its first productivity gain in six years in FY2011, with riders per RVH increasing by 3.3%. The Base Case Financial Plan does not include any productivity gains beyond the one already captured in the FY2011 estimates. However, should the trend in productivity gains continue, growth in TheHandi-Van O&M cost could be further contained to mitigate a greater increase in ridership.

Attachment A: Summary Cash Flows

Table A-1, Capital Plan and Ongoing Capital Cash Flows

			FISCAL YEAR																		
	Total	Inception thru Feb-2016	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Beginning Cash Balance	$298	$298	$192	$95	$25	$25	$25	$25	$25	$25	$25	$25	$209	$141	$111	$13	($415)	($844)	($1,273)	($1,701)	($2,130)	($2,559)
Project Funding Sources:																						
G.E.T.	$4,816	$1,259	$61	$236	$246	$257	$268	$279	$291	$304	$317	$330	$344	$359	$266	$0	$0	$0	$0	$0	$0	$0
Federal Grant	$1,550	$515	$54	$192	$212	$254	$323	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
All Other	$6	$6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Revenue	$6,372	$1,780	$115	$428	$458	$511	$591	$279	$291	$304	$317	$330	$344	$359	$266	$0	$0	$0	$0	$0	$0	$0
Total Project Sources	$6,372	$1,780	$115	$428	$458	$511	$591	$279	$291	$304	$317	$330	$344	$359	$266	$0	$0	$0	$0	$0	$0	$0
Project Uses:																						
Total Project Costs	$8,165	$1,885	$213	$706	$875	$870	$1,158	$691	$773	$571	$333	$116	$89	$26	$0	$0	$0	$0	$0	$0	$0	($140)
Debt Service	$1,337	$0	$0	$7	$20	$34	$51	$74	$94	$112	$125	$128	$120	$112	$103	$92	$79	$66	$52	$38	$23	$8
Total Project Uses	$9,502	$1,885	$213	$713	$896	$904	$1,209	$765	$868	$682	$458	$243	$209	$137	$103	$92	$79	$66	$52	$38	$23	($132)
Net Current Change	($3,130)	($105)	($98)	($285)	($438)	($394)	($618)	($486)	($577)	($379)	($141)	$87	$136	$222	$163	($92)	($79)	($66)	($52)	($38)	($23)	$132
Debt Proceeds	$6,155	$0	$0	$215	$653	$660	$892	$836	$946	$777	$649	$526	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Less Debt Repayment	($6,170)	$0	$0	$0	($215)	($267)	($274)	($350)	($370)	($398)	($508)	($429)	($204)	($251)	($261)	($337)	($350)	($363)	($377)	($391)	($406)	($421)
Ending Cash Balance	**($2,847)**	**$192**	**$95**	**$25**	**$25**	**$25**	**$25**	**$25**	**$25**	**$25**	**$25**	**$209**	**$141**	**$111**	**$13**	**($415)**	**($844)**	**($1,273)**	**($1,701)**	**($2,130)**	**($2,559)**	**($2,847)**

City Fiscal Year	Units	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Funding Sources for Ongoing System-wide Capital Cost																					
Federal Assistance for Ongoing Capital Cost																					
Total Federal Assistance	YOE $M	16	16	17	17	18	18	23	20	42	22	26	33	40	28	33	34	32	32	32	42
Ongoing City Capital Funding																					
Transfer from Project	YOE $M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Proceeds	YOE $M	10	10	10	10	10	10	11	10	15	14	25	28	30	48	42	28	34	35	34	38
Total Ongoing City Capital Funding	YOE $M	10	10	10	10	10	10	11	10	15	14	25	28	30	48	42	28	34	35	34	38
Total Funding Sources	YOE $M	26	26	27	27	28	28	34	29	57	36	51	61	70	77	75	61	66	67	67	80
Ongoing Capital Costs																					
Additional Railcar Acquisitions	YOE $M	-	-	-	-	-	-	-	-	-	-	-	-	-	21	22	-	-	-	-	-
Rail Capital Asset Replacement Program	YOE $M	-	-	-	-	-	-	-	-	-	3	13	15	15	15	7	14	21	22	21	22
Bus & Handi-Van Acquisitions	YOE $M	21	21	22	22	23	23	29	24	52	28	32	42	50	35	41	42	39	40	41	53
Other Capital Cost	YOE $M	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Total Ongoing Capital Cost	YOE $M	26	26	27	27	28	28	34	29	57	36	51	61	70	77	75	61	66	67	67	80

Table A-2, Operating Plan, Continue Original Plan Methodology

City Fiscal Year	Units	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Operating Revenues																					
Fare Revenues (Bus)	YOE $M	55	58	59	72	80	86	100	101	102	84	93	94	95	96	112	113	114	115	116	117
Fare Revenues (Rail)	YOE $M	-	-	-	-	3	3	4	4	4	40	45	46	47	47	56	57	58	59	60	61
Fare Revenues (Handi-Van)	YOE $M	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Total Fare Revenues	**YOE $M**	**57**	**60**	**62**	**74**	**85**	**91**	**106**	**107**	**108**	**126**	**141**	**143**	**144**	**146**	**172**	**174**	**176**	**178**	**180**	**182**
Federal Operating Assistance																					
Total Federal Operating Assistance	**YOE $M**	**23**	**10**	**10**	**11**	**10**	**10**	**6**	**10**	**-**	**9**	**6**	**-**	**-**	**5**	**1**	**1**	**4**	**5**	**5**	**-**
Local Operating Assistance																					
Transfer from Project	YOE $M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
City Operating Subsidy	YOE $M	176	197	207	207	248	287	307	330	366	389	420	448	472	486	488	508	532	562	597	632
Total Local Operating Assistance	**YOE $M**	**176**	**197**	**207**	**207**	**248**	**287**	**307**	**330**	**366**	**389**	**420**	**448**	**472**	**486**	**488**	**508**	**532**	**562**	**597**	**632**
Total Operating Revenues	**YOE $M**	**256**	**268**	**279**	**292**	**343**	**389**	**419**	**447**	**475**	**524**	**567**	**591**	**616**	**638**	**661**	**683**	**712**	**745**	**781**	**814**
Operations and Maintenance (O&M) Costs																					
TheBus O&M Costs	YOE $M	204	212	220	229	238	247	257	268	291	309	342	358	374	391	409	428	448	469	490	513
Rail O&M Costs	YOE $M	-	-	-	-	39	71	87	100	101	127	130	133	136	134	135	133	136	142	151	154
TheHandi-Van O&M Costs	YOE $M	52	55	58	61	65	68	72	76	80	85	89	94	99	104	109	114	120	126	132	138
Other O&M Costs	YOE $M	1	1	1	2	2	2	3	3	3	3	5	6	7	8	8	8	8	8	8	8
Total O&M Costs	**YOE $M**	**256**	**268**	**279**	**292**	**343**	**389**	**419**	**447**	**475**	**524**	**567**	**591**	**616**	**638**	**661**	**683**	**712**	**745**	**781**	**814**
Farebox Recovery Ratio (Bus and Rail)		27%	27%	27%	32%	30%	28%	30%	28%	27%	28%	29%	28%	28%	27%	31%	30%	30%	29%	28%	27%

Table A-3, Operating Plan, Moderate Range Scenario, Honolulu CPI-U

City Fiscal Year	Units	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Operating Revenues																					
Fare Revenues (Bus & Rail)	YOE $M	55	58	59	72	83	89	104	105	106	124	138	140	141	143	154	156	173	175	177	186
Fare Revenues (Handi-Van)	YOE $M	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Total Fare Revenues	YOE $M	57	60	62	74	85	91	106	107	108	126	141	143	144	146	157	159	176	178	180	189
Federal Operating Assistance																					
Total Federal Assistance	YOE $M	23	10	10	11	10	10	6	10	-	9	6	-	-	5	1	1	4	5	5	-
Local Operating Assistance																					
Transfer from Project	YOE $M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
City Operating Subsidy	YOE $M	176	197	207	207	248	287	307	330	366	398	431	458	483	498	514	535	545	575	611	640
Total Local Assistance	YOE $M	176	197	207	207	248	287	307	330	366	398	431	458	483	498	514	535	545	575	611	640
Total Operating Revenues	YOE $M	256	268	279	292	343	389	419	447	475	534	577	601	627	650	673	696	725	758	795	829
Operations and Maintenance (O&M) Costs																					
TheBus O&M Costs	YOE $M	204	212	220	229	238	247	257	268	291	309	342	358	374	391	409	428	448	469	490	513
Rail O&M Costs	YOE $M	-	-	-	-	39	71	87	100	101	137	141	143	147	146	146	145	149	156	165	169
TheHandi-Van O&M Costs	YOE $M	52	55	58	61	65	68	72	76	80	85	89	94	99	104	109	114	120	126	132	138
Other O&M Costs	YOE $M	1	1	1	2	2	2	3	3	3	3	5	6	7	8	8	8	8	8	8	8
Total O&M Costs	YOE $M	256	268	279	292	343	389	419	447	475	534	577	601	627	650	673	696	725	758	795	829
Farebox Recovery (Bus and Rail)		27%	27%	27%	32%	30%	28%	30%	28%	27%	28%	29%	28%	27%	27%	28%	27%	29%	28%	27%	27%

Table A-4, Operating Plan, High Cost Range Scenario

City Fiscal Year	Units	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Operating Revenues																					
Fare Revenues (Bus & Rail)	YOE $M	55	58	59	72	83	89	104	105	106	124	138	140	156	157	159	161	183	185	187	189
Fare Revenues (Handi-Van)	YOE $M	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Total Fare Revenues	YOE $M	57	60	62	74	85	91	106	107	108	126	141	143	158	160	162	164	186	188	190	192
Federal Operating Assistance																					
Total Federal Assistance	YOE $M	23	10	10	11	10	10	6	10	-	9	6	-	-	5	1	1	4	5	5	-
Local Operating Assistance																					
Transfer from Project	YOE $M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
City Operating Subsidy	YOE $M	176	197	207	207	248	287	307	330	366	406	439	467	478	494	519	541	546	577	614	651
Total Local Assistance	YOE $M	176	197	207	207	248	287	307	330	366	406	439	467	478	494	519	541	546	577	614	651
Total Operating Revenues	YOE $M	256	268	279	292	343	389	419	447	475	541	585	609	636	659	683	706	736	770	809	843
Operations and Maintenance (O&M) Costs																					
TheBus O&M Costs	YOE $M	204	212	220	229	238	247	257	268	291	309	342	358	374	391	409	428	448	469	490	513
Rail O&M Costs	YOE $M	-	-	-	-	39	71	87	100	101	144	149	151	156	156	156	156	160	168	178	183
TheHandi-Van O&M Costs	YOE $M	52	55	58	61	65	68	72	76	80	85	89	94	99	104	109	114	120	126	132	138
Other O&M Costs	YOE $M	1	1	1	2	2	2	3	3	3	3	5	6	7	8	8	8	8	8	8	8
Total O&M Costs	YOE $M	256	268	279	292	343	389	419	447	475	541	585	609	636	659	683	706	736	770	809	843
Farebox Recovery (Bus and Rail)		27%	27%	27%	32%	30%	28%	30%	28%	27%	27%	28%	27%	29%	29%	28%	28%	30%	29%	28%	27%

Table A-5, Operating Plan, Ridership Sensitivity, At Current Average Fare Rate

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Constant $'s											
No Reduction	$89,855,800	$100,325,001	$101,534,448	$102,743,895	$103,953,342	$105,162,789	$106,372,236	$107,581,683	$108,791,130	$110,000,577	$111,210,024
Total Revenue @ 95%	$85,363,010	$95,308,751	$96,457,725	$97,606,700	$98,755,675	$99,904,649	$101,053,624	$102,202,599	$103,351,574	$104,500,548	$105,649,523
Change from 100%	($4,492,790)	($5,016,250)	($5,076,722)	($5,137,195)	($5,197,667)	($5,258,139)	($5,318,612)	($5,379,084)	($5,439,557)	($5,500,029)	($5,560,501)
Total Revenue @ 90%	$80,870,220	$90,292,501	$91,381,003	$92,469,505	$93,558,008	$94,646,510	$95,735,012	$96,823,515	$97,912,017	$99,000,519	$100,089,022
Change from 100%	($8,985,580)	($10,032,500)	($10,153,445)	($10,274,389)	($10,395,334)	($10,516,279)	($10,637,224)	($10,758,168)	($10,879,113)	($11,000,058)	($11,121,002)
Total Revenue @ 85%	$76,377,430	$85,276,251	$86,304,281	$87,332,311	$88,360,341	$89,388,371	$90,416,401	$91,444,431	$92,472,461	$93,500,491	$94,528,521
Change from 100%	($13,478,370)	($15,048,750)	($15,230,167)	($15,411,584)	($15,593,001)	($15,774,418)	($15,955,835)	($16,137,252)	($16,318,670)	($16,500,087)	($16,681,504)

Attachment B: Contract Packaging Plan Summary

MASTER BUDGET - Refreshed with Current Contract Packaging Plan Changes (post-FFGA)

CPP Confidential Deliberative Draft

12/1/2016

HRTP CPP Summary by Contract

Line Item	Contract ID	Contract Type	Issue NTP	Completion Date	Contract Duration	CPP for FFGA, Jun 2012 CPP Line Item Budget, Original	Estimate-at-Completion by Contract November 2016 Current CV/Est (YOE)
		Design-Build, DBOM, DFIM & Construction Contracts				[A]	[B]
1	DB120	West Oahu/Farrington Hwy Guideway (WOFH) DB	12/1/2009	3/3/2017	2,650	$542,135,144	$650,355,787
2	DB200	Maintenance & Storage Facility (MSF) DB	7/25/2011	7/2/2016	1,805	$222,954,905	$274,858,568
3	DB320	Kamehameha Hwy Guideway (KHG) DB	7/12/2011	5/31/2017	2,151	$371,929,117	$390,835,185
4	DB275	Pearl Highlands Garage, Bus Terminal (PHTG), + H2 Ramp DB	7/19/2018	4/24/2022	1,376	$173,507,338	$258,000,000
5	DB450	Airport Section Guideway and Station Group (AGSG) DB	12/1/2016	4/30/2021	1,612	$429,829,580	$875,000,000
6	DB550	City Center Section Guideway and Station Group (CCGS) DB	8/28/2018	11/27/2024	2,284	$449,082,526	$1,384,000,000
7	DBOM920	Core Systems Contract (CSC) Design-Build-Operate-Maintain*	1/13/2012	10/31/2025	5,041	$579,648,485	$600,820,687
8	DBB171	West Oahu Station Group (WOSG) Construction	10/13/2015	3/12/2018	882	$48,745,033	$56,088,470
9	DBB271	Farrington Highway Station Group (FHSG) Construction	8/17/2015	1/16/2018	884	$45,003,952	$79,799,174
10	DBB371	Kamehameha Highway Station Group (KHSG) Construction	10/3/2016	5/31/2019	971	$68,615,238	$115,805,845
11	DBB385	H2/R2 Ramp Construction	5/18/2015	5/31/2017	745	$0	$5,246,168
12	DBB505	Airport Section Utility Relocation Contract	10/6/2014	9/24/2016	720	$24,627,701	$27,285,754
13	DBB510	City Center Section Utilities Construction	NA	NA	NA	$63,025,090	Combined with CCGS
15	DBB525	Airport Section Guideway 7-pier Construction	9/18/2014	4/22/2015	217	$0	$4,027,843
16	DBB600	Park-and-Ride Lots Construction	5/1/2017	4/1/2019	701	$13,059,190	$21,000,000
17	MI930	Project-wide Elevator / Escalator Design-Furnish-Install-Operate*	8/2/2013	12/31/2024	4,170	$54,721,186	$51,999,035
18	MI900	Project-wide Fare Collection Design-Furnish-Install	4/18/2016	12/31/2024	3,180	$0	$15,464,198
19	MI940	Emergency Backup Generators Design-Furnish-Install	TBD	TBD	TBD	$0	$13,043,478
20	MI950	VAR Equipment Design-Furnish-Install	TBD	TBD	TBD	$0	$26,000,000
						$3,086,884,485	**$4,849,630,191**
		Professional Services Contracts - Design	Issue NTP	Completion Date	Contract Duration		
21	FD140	West Oahu Station Group (WOSG) Final Design	6/15/2012	6/21/2017	1,833	$7,882,312	$10,200,643
22	FD240	Farrington Highway Station Group (FHSG) Final Design 1	1/14/2011	10/14/2013	1,005	$8,137,060	$8,408,045
23	FD240-2	Farrington Highway Station Group (FHSG) Final Design 2	9/30/2013	11/14/2016	1,142	$0	$5,886,886
24	FD340	Kamehameha Highway Station Group (KHSG) Final Design	11/26/2012	6/14/2017	1,662	$8,702,592	$9,960,228
25	FD430	Airport Guideway & Airport Utility Relo Final Design	1/5/2012	6/30/2017	2,004	$39,307,052	$43,134,472
26	FD440	Airport Station Group (ASG) Final Design	11/14/2012	7/1/2015	960	$10,177,365	$11,573,852
27	FD530	City Center GW & CC Utility Relo Final Design	7/31/2012	4/30/2018	2,100	$48,266,165	$47,097,562
28	FD550	Dillingham / Kaka'ako (Eastside) SG Final Design	8/1/2013	7/30/2018	1,825	$21,479,676	$19,631,717
29	FD600	Park-and-Ride Lots Final Design	4/3/2017	3/2/2019	699	$2,465,890	$795,890
						$146,418,112	**$155,689,295**
		Professional Services Contracts - Management Support	Issue NTP	Completion Date	Contract Duration		
30	MM290	Westside CE&I Services	1/9/2014	4/30/2023	3,399	$32,123,832	$78,047,012
31	MM595	Eastside CE& I Services	1/9/2014	1/6/2016	728	$64,064,484	$12,706,100
32	MM596	Eastside CE& I Services II	9/14/2015	6/30/2026	3,943	$0	$136,190,533
33	MM900	Program Management Support Consultant 1	4/20/2007	2/28/2012	1,776	$20,000,000	$20,700,000
34	MM901	Program Management Support Consultant 2	3/8/2012	12/31/2026	5,412	$31,304,349	$167,698,154
35	MM905	General Engineering Consultant, EIS/PE (GEC-1)	10/25/2009	2/28/2012	857	$76,910,382	$74,157,822
36	MM910	General Engineering Consultant, FD & Constr (GEC-2)	8/2/2011	12/31/2014	1,248	$310,828,630	$150,000,000
37	MM913	General Engineering Consultant, Construction (GEC-3)	12/5/2013	6/30/2026	4,591	$0	$104,913,834
38	MM962	Core Systems Contract Oversight Consultant	2/11/2014	12/31/2026	4,707	$0	$90,457,694
39	MM964	Safety & Security Certification Consultant	5/1/2014	12/14/2018	1,689	$0	$5,027,660
40	MM915	HDOT Traffic Management Consultant	6/12/2012	6/11/2017	1,826	$1,057,391	$5,000,000
41	MM920	HDOT Coordination Consultant (WOFH)	6/8/2011	6/7/2018	2,557	$10,521,165	$9,500,000
42	MM921	HDOT Coordination Consultant (KHG)	6/29/2012	6/30/2017	1,828	$8,695,653	$8,600,000
43	MM922	HDOT Coordination Consultant (Airport)	6/12/2012	12/31/2024	4,586	$6,471,305	$6,400,000
44	MM923	HDOT Coordination Consultant (City Center)	6/12/2012	6/15/2018	2,195	$4,314,782	Combined with HDOT Airport
45	MM925	HDOT Highway Group MOA	TBD	TBD	TBD	$1,352,915	$1,815,633
46	MM930	State Safety Oversight Agency (SOA) Consultant	TBD	TBD	TBD	$1,272,174	$1,855,542
46	MM935	Real Estate Consultant	3/14/2012	3/13/2017	1,826	$3,200,000	$8,077,665
47	MM936	Real Estate Consultant II	TBD	TBD	TBD	$0	$6,480,508
48	MM937	ROW Engineering Support Services (including Mapping & Surveying)	5/23/2014	12/30/2017	1,318	$0	$2,998,000
49	MM940	Kako'o Consultant	3/30/2012	2/14/2017	1,783	$500,000	$550,000
50	MM941	Kako'o Consultant II	12/8/2015	12/7/2017	731	$0	$200,000
51	MM960	Archaeological & Cultural Monitoring Services	1/15/2014	5/30/2018	1,597	$0	$1,658,474
52	MM945	On-Call Construction Contractor	8/14/2014	7/6/2019	1,788	$869,565	$2,000,000
53	MM946	On-Call Hazardous Materials (HazMat) Removal Contractor	9/7/2012	8/22/2019	2,541	$2,608,695	$3,075,000
54	MM947	On-Call Construction Contractor II	5/21/2015	5/21/2020	1,828	$0	$6,000,000
55	MM948	On-Call Construction Contractor III	5/16/2016	5/15/2023	TBD	$0	$19,500,000
56	MM950	Owner Controlled Insurance Program (OCIP) Consultant	6/5/2012	5/9/2017	1,800	$2,000,000	$1,250,000
57	MM951	OCIP Broker + Insurance	4/8/2014	12/1/2025	4,256	$8,333,334	$53,662,092
58	MM970	Fare Collection Consultant	10/23/2015	12/31/2023	2,992	$0	$1,178,300
59	MM980	Outside Legal Counsel	6/29/2016	6/28/2021	TBD	$0	$910,000
60	MM981	Complex Real Property Nego & Lit. Services	9/9/2016	9/8/2018	TBD	$0	$603,141
61	MM982	On-Call Appraiser	6/23/2016	6/22/2020	TBD	$0	$3,011,936
62	MM983	Land Court Petition Services	10/17/2016	10/16/2019	TBD	$0	$775,916
63	PA101	Programmatic Agreement (PA) - Humanities (Allowance)	1/18/2012	1/18/2022	3,654	$610,000	$110,000
64	PA102	Programmatic Agreement (PA) - Historic (Allowance)	1/18/2012	1/18/2022	3,654	$2,000,000	$400,000
65	PA103	Programmatic Agreement (PA) - HPC Park Improvements (Allowance)	1/18/2012	1/18/2022	3,654	$750,000	$112,500
66	MM975	LEED Commissioning for MSF	10/7/2010	5/31/2017	2,429	$243,007	$288,540
67	MM990	DPP Design Review Contractor	TBD	TBD	TBD	$0	$6,000,000
						$590,031,653	**$991,912,055**
		Project Allowances					
68	UTIL	New Utilities or Relocation by Private Utility Owners				$132,689,208	$132,689,208
69	WSUC	West Side Utilities Clearance Issues				$0	$200,000,000
70	ROW	Real Estate / Right of Way Acquisition	1/1/2011	1/30/2022	4,047	$194,197,947	$193,727,124
71	ART	Project-wide Art				$5,000,000	$5,000,000
						$331,887,155	**$531,416,332**
		City and County Participating Departments					
72	HART200	Honolulu Authority for Rapid Transit (HART) - Labor				$74,522,729	$153,074,220
73	HART201	Honolulu Authority for Rapid Transit (HART) - Expenses & ODCs				$48,473,636	$74,335,140
74	CCH100	City and County of Honolulu				$15,348,444	$14,937,848
75	CCH101	Department of Budget and Fiscal Services (BFS)	7/1/2011	6/30/2026	5,478	$1,107,272	$1,107,273
76	CCH102	Department of Design and Construction, Land Division (DDC-LD)	7/1/2011	6/30/2026	5,478	$1,463,636	$1,463,636
77	CCH103	Department of Planning and Permitting (DPP)	7/1/2011	6/30/2012	365	$0	Consolidated in HART Labor & ODC Budget
78	CCH104	Department of Transportation Services (DTS)	7/1/2011	6/30/2016	1,826	$0	
79	CCH105	Department of Human Resources (DHR)	7/1/2011	6/30/2016	1,826	$0	
80	CCH106	Department of Information Technology (DIT)				$0	
81	CCH107	Corporation Counsel (COR)				$8,009,092	$9,610,910
82	CCH108	Board of Water Supply (BWS)	7/1/2011	6/30/2012	365	$928,182	$928,325
						$149,852,991	**$255,457,352**
		Subtotal $s for Master Budget Line Items , without unallocated contingency				**$4,305,074,406**	**$5,785,105,225**
	CONT1	CONTINGENCY				$643,560,514	$1,379,948,967
		Project Total $s for Master Budget, excluding Financing Costs				$4,948,634,920	$8,165,054,193
						*Finance Cost	$215,058,243	$464,897,438
						Total	$5,163,693,163	$8,629,951,631

1. The updated capital cost of the Project without finance cost is $8.2 billion in Year of Expenditure dollars.
2. The identified finance cost estimate of $465 million is based on bond financing terms and assumptions used in previous Project cost estimates.
3. Finance Costs, including interest and bond issuance charges will be dependent on an extension of the General Excise and Use Tax (GET) Surcharge as well as the terms upon which the extension is based.
4. The duration and amount of bond financing may weigh significantly on the final total budget necessary for the Project.

Appendix C
Status of DPP Station Area TOD Planning

Station Name	Neighborhood TOD Plan	Adopted	Draft Final	Public Review	Planning
East Kapolei	**East Kapolei** http://www.honolulu.gov/tod/neighborhood-tod-plans/dpp-tod-east-kapolei.html			**X**	
UH West O‘ahu					
Ho‘opili					
West Loch	**Waipahu** http://www.honolulu.gov/tod/neighborhood-tod-plans/dpp-tod-waipahu.html	**X** (April 2014)			
Waipahu Transit Center					
Leeward Community College	**Aiea Pearl City** http://www.honolulu.gov/tod/neighborhood-tod-plans/dpp-tod-aiea-pearlcity.html	**X** (September 2014)			
Pearl Highland Station					
Pearlridge Station					
Aloha Stadium	**Halawa Makai** http://www.honolulu.gov/tod/neighborhood-tod-plans/dpp-tod-halawa-makai.html				**X**
Pearl Harbor Naval Base Station	**Airport** http://www.honolulu.gov/tod/neighborhood-tod-plans/dpp-tod-airport.html				**X**
Honolulu International Airport					
Lagoon Drive					
Middle Street Transit Center	**Kalihi** http://www.honolulu.gov/tod/neighborhood-tod-plans/dpp-tod-kalihi.html		**X**		
Kalihi					
Kapalama					
Iwilei	**Downtown** http://www.honolulu.gov/tod/neighborhood-tod-plans/dpp-tod-downtown.html			**X**	
Chinatown					
Downtown					
Ala Moana Center	**Ala Moana Center** http://www.honolulu.gov/tod/neighborhood-tod-plans/dpp-tod-alamoana.html			**X**	