Honolulu Rail Transit Project

Final
Financial Plan for Full Funding Grant Agreement

June 2012

Prepared by:
City and County of Honolulu

Table of Contents

ATTACHMENTS

List of Tables

List of Figures

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
CPI-U	Consumer Price Index All Urban Consumers
DBEDT	State of Hawai‘i Department of Business, Economic Development and Tourism
DBOM	Design-Build-Operate-Maintain
DTS	Department of Transportation Services, City and County of Honolulu
FD	Final Design
FFGA	Full Funding Grant Agreement
FGM	Fixed Guideway Modernization
FRR	Farebox Recovery Ratio
FTA	Federal Transit Administration, U.S. Department of Transportation
FY	Fiscal Year
GDP	Gross Domestic Product
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
MSF	Maintenance and Storage Facility and Yard
O&M	Operations and Maintenance
ORTP	(2030) O‘ahu Regional Transportation Plan
OTS	O‘ahu Transit Services, Inc.
PE	Preliminary Engineering
PTD	Public Transit Division, Department of Transportation Services
RVH	Revenue Vehicle Hour
SCC	Standard Cost Category
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 percent of O'ahu's residents and over 83 percent 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 Aloha Stadium is expected to start in fiscal year (FY) 2016, and service to Ala Moana Center is expected to start in FY2019.

Planning, construction, operations, and maintenance of the Project are 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. Fixed route bus (TheBus) and paratransit (TheHandi-Van) services continue to be provided through a management services contract with O'ahu Transit Services, Inc. and overseen by the Department of Transportation Services' Public Transit Division.

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 financial plan was prepared to support the City's submittal to the Federal Transit Administration (FTA) for Full Funding Grant Agreement (FFGA) approval for the Project. It is consistent with FTA's *Guidance for Transit Financial Plans* issued in June, 2000, and subsequent guidance at New Starts workshops, as well as the *Guidelines and Standards for Assessing Local Financial Commitment*, issued by FTA in June, 2007, and the *Reporting Instructions for the Section 5309 New Starts Criteria*, issued in August 2011.

The financial 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. The last section presents the results of three sensitivity analyses and potential mitigation strategies.

SUMMARY OF THE PROJECT FINANCIAL PLAN

Table ES-1 summarizes the capital and operating sources and uses of funds for the Project, as well as for the entire transit system over the FY2010 – FY2030 period. This table shows that the financial plan is expected to be balanced for both capital and operating needs. The $193 million projected ending cash balance is assumed to be transferred to ongoing rail capital and operating needs. The following sections outline the key inputs and results of the financial plan.

Table ES-1, Project and Systemwide Sources and Uses of Funds, FY2010 - FY2030, YOE $millions

SOURCES OF FUNDS	YOE $M
Project Capital Sources of Funds	
Project Beginning Cash Balance	298
Net GET Surcharge Revenues	3,291
FTA Section 5309 New Starts Revenues	1,550
FTA Section 5307 Formula and ARRA Funds Used for the Project 1/	214
Interest Income	3
Transfer from Project Cash Balance to Ongoing Rail Capital and O&M Cost	(193)
Subtotal Project Capital Sources of Funds	**$5,163**
Ongoing Capital Sources of Funds	
FTA Section 5309 Fixed Guideway Modernization	80
FTA Section 5309 Bus Discretionary	116
FTA Section 5307 Formula Funds Used for Ongoing Capital Cost	499
FTA Section 5307 and 5309 Grants Carryover from Prior Years	50
American Recovery and Reinvestment Act	26
FTA Section 5316 (JARC) and 5317 (New Freedom)	0
Transfers to the State's Vanpool Program	(3)
Transfer from Project Cash Balance to Ongoing Rail Capital Cost	54
City General Obligation Bond Proceeds	404
Subtotal Ongoing Capital Sources of Funds	**$1,225**
TOTAL CAPITAL SOURCES OF FUNDS	**$6,388**
Operating Sources of Funds	
Fare Revenues (TheBus and Rail)	2,098
Fare Revenues (TheHandi-Van)	60
Subtotal Fare Revenues	**$2,158**
FTA Section 5307 Formula Funds Used for Preventative Maintenance	247
FTA Section 5316 (JARC) and 5317 (New Freedom)	20
Transfer from Project Cash Balance to Rail O&M Cost	140
City Operating Subsidy	5,871
TOTAL OPERATING SOURCES OF FUNDS	**$8,436**

USES OF FUNDS	YOE $M
Project Capital Uses of Funds	
Project Capital Cost	4,949
Subtotal Project Capital Cost	**$4,949**
Finance Charges	
Interest Payment on GO Bonds Issued for the Project	191
Interest Payment on Tax-Exempt Commercial Paper	10
GO Bond Issuance Cost	13
Subtotal Finance Charges	**$215**
Subtotal Project Capital Uses of Funds	**$5,163**
Ongoing Capital Uses of Funds	
Additional Railcar Acquisitions	35
Project Capital Asset Replacement Program	150
TheBus Vehicle Acqusitions	667
Other Capital Cost	235
TheHandi-Van Vehicle Acquisitions	138
Subtotal Ongoing Capital Uses of Funds	**$1,225**
TOTAL CAPITAL USES OF FUNDS	**$6,388**
Operating Uses of Funds	
TheBus O&M Costs	5,459
Rail O&M Costs	1,613
TheHandi-Van O&M Costs	1,310
Other O&M Costs	55
TOTAL OPERATING USES OF FUNDS	**$8,436**

1/ Includes $4M from American Recovery & Reinvestment Act of 2009
Note: totals may not add due to rounding

PROJECT CAPITAL PLAN

Project Capital Cost Estimate: The capital cost of the Project without finance charges is $4,949 million in year-of-expenditure (YOE) dollars. The Baseline Project Cost for the FFGA is $5,122 million in YOE dollars, and includes finance charges through FY2020. This capital cost estimate reflects advanced preliminary engineering, cost estimation methodologies, and actual contract bid prices. The Project cost through FY2023 totals $5,163 million in YOE dollars and includes all finance charges associated with the Project construction. The capital cost is substantiated by the use of refined "bottom-up" cost estimation, extensive risk assessment, input from FTA's Project Management Oversight Contractor, and the fact that approximately 41 percent of the Project's cost (without contingency) is reflective of contracts that have already been awarded for several major project components. The Baseline Project Cost also includes a variety of allocated and unallocated contingencies in the cost estimate to allow for potential unexpected expenses, which is common practice in major construction projects. The total Project contingency is about 15 percent of YOE cost without contingencies.

Local Funding: The dedicated local funding source for the implementation of the Project is an established one-half percent (0.5 percent) county surcharge on the State of Hawai'i's General Excise and Use Tax (GET). The GET Surcharge commenced on January 1, 2007 and, under current enabling legislation, will be levied through December 31, 2022. This source of revenue is to be used exclusively for the capital and/or O&M expenditures of the Project. The plan reflects actual receipts through FY2012, and then assumes that GET Surcharge revenues will grow at a rate of 5.04 percent in line with the long-term historical growth experienced by statewide GET revenues. Total revenues from the GET Surcharge are expected to total approximately $3.7 billion between FY2007 and FY2023. Based on collections

through March 31, 2012, the City has already received approximately 23 percent of the expected total, amounting to $860 million.

Federal Funding: The City is requesting a total of $1.55 billion in FTA New Starts funding, which is assumed to be expended through FY2017, with annual amounts of up to $250 million per year. The City has already received $120 million in appropriations between FY2008 and FY2011 from the New Starts program. This amount of New Starts funding is on par with several other projects that have received FFGAs in recent years, including the East Side Access and Second Avenue Subway projects in New York City, and the Dulles Corridor Metrorail Project in Northern Virginia. The assumed annual amount of New Starts funding is also not unprecedented since both the East Side Access and Second Avenue Subway projects received over $200 million in New Starts funds in Federal FY2010. Total New Starts funding requested for the Project amounts to 30.3 percent of the Project cost.

FTA Section 5307 Urbanized Area Formula funds will also fund portions of the Project between FY2014 and FY2019. In total, the Project is expected to utilize approximately $210 million in Section 5307 funds during the construction period, representing approximately 4 percent of the Project cost. .Going forward, the City and HART plan to review the Project's funding requirements each year and apply Section 5307 funds that are currently identified in this plan for use on Project construction to other City transit needs if doing so will not affect the integrity of the Project financial plan.

Project Financing: The debt financing plan for the Project has been developed with the goals of preserving the City's financial condition, minimizing finance charges, and providing for repayment solely from Project revenues by FY2023. In the years in which capital expenditures are greater than the funding available on a pay as you go basis, a mix of General Obligation (GO) bonds (backed by Project revenues) and short-term borrowing in the form of Tax-Exempt Commercial Paper (TECP), would be used to meet Project funding needs. The use of these debt instruments is also necessary for the Project to be completed in FY2019 as currently scheduled.

The City expects to utilize $100 million of its existing $450 million total TECP capacity on a 270-day revolving basis between FY2014 and FY2018. After FY2018, when the $100 million in TECP capacity is no longer needed to finance Project construction, the City would still have access to the entire $450 million in authorized TECP capacity.

SYSTEMWIDE CAPITAL PLAN

Ongoing Capital Needs: The capital plan includes ongoing 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. The City's planned bus fleet replacement schedule is expected to result in an average bus age of 7.5 years by FY2020, which corresponds to the first full year of operations of the Project. This is lower than TheBus' current average fleet age of 10.1 years.

Funding Sources: FTA Section 5307 Urbanized Area Formula program, FTA Section 5309 Fixed Guideway Modernization (FGM) program, and FTA Section 5309 Bus and Bus-Related Equipment and Facilities program will continue to provide assistance for ongoing capital expenditures for the existing transit system – with funding levels from the first two programs expected to increase after the Project is implemented. Starting in FY2020, Section 5307 funds will be available for systemwide capital needs as well as for preventive maintenance for TheBus.

SYSTEMWIDE OPERATING PLAN

O&M Costs: The O&M cost estimates for the Project reflect current economic conditions, as well as the terms of the Core Systems Contract. Rail O&M costs that are not covered under the Core Systems Contract (and thus provided directly by HART) include the projected costs of administrative and management personnel for the HART organization. TheBus O&M costs were developed using existing bus

operations as the baseline and anticipated service levels through FY2030. Finally, TheHandi-Van O&M costs were calculated by applying the FY2011 cost per rider to the projected ridership.

Operating Revenues: Several sources of funds will be used to support transit operations, including fare revenues and Federal funds for preventive maintenance activities, and transfers from the City's General and Highway funds. Consistent with current policy, the City will continue to increase fares periodically for transit operations to ensure that the farebox recovery ratio remains between 27 percent and 33 percent and keeps pace with inflation. The City will utilize Section 5307 Formula funds to pay for preventive maintenance activities for TheBus, with the exception of fiscal years 2014 through 2019, and will continue to receive funds from FTA Section 5316 (Job Access and Reverse Commute) and Section 5317 (New Freedom) programs to fund operations for projects serving low-income communities. Transit operations will be subsidized with local funds through transfers from the City's General and Highway funds.

RISKS AND UNCERTAINTIES

The financial plan discusses several potential risks to the cost and revenue assumptions, and presents strategies for mitigating these risks in the unlikely event that they would be needed. Three stress tests were analyzed using scenarios that are consistent with FTA's procedures for reviewing financial plans for an FFGA: a 10 percent increase in Project capital cost incurred after the FFGA; a lower growth rate for net GET Surcharge revenues; and an increase in the City's operating subsidy requirement.

The City has developed a risk and contingency management plan and is committed to enacting cost containment measures as a primary tool to maintain the Project's capital cost within the Baseline budget. If needed, the City also has various strategies to mitigate these downside risks using mechanisms that are currently in place, including additional debt capacity available to the City through the issuance of GO debt backed by excess Project revenues. As a last source of mitigation, the City could also utilize its existing TECP program for short-term financing needs. Other potential mitigating strategies that could be utilized by the City include value capture mechanisms, advertising and parking revenues, and extending the GET Surcharge revenues (although this would require legislative amendment).

KEY FINDINGS AND RESULTS

The City has the financial capacity to implement, operate, and maintain the Project, while maintaining the rest of its public transportation system in a state of good repair. The following summarizes key findings from the financial plan:

- **With 70 percent of capital funding provided from non-New Starts sources, the City's financial commitment to the Project merits approval for a Full Funding Grant Agreement with FTA.** The City is requesting only 30 percent Federal participation from the FTA New Starts program. Moreover, all of the local capital funding for the Project is fully committed through GET Surcharge revenues which can be used exclusively for Project ongoing capital or O&M expenditures.

- **The City has enough financial capacity to fund the Project capital cost and cover unexpected cost overruns or revenue shortfalls.** Based on the assumptions presented in this financial plan, the City is expected to have excess funding capacity. While the City has many options on how to utilize this excess capacity, the financial plan assumes that up to $139 million will be deposited in a Project reserve fund out of the first issuance of GO bonds in FY2014. These reserve funds would be maintained throughout the construction period and released in FY2023 to repay a portion of that year's debt service obligations. This structure is one of many options available to the City on how to use the excess funding capacity and does not constitute a legal requirement under current law. As such, the reserve funds could also be available to cover Project capital cost increases or revenue shortfalls during the construction period if needed.

The proposed debt structure also results in a Project cash balance that accrues to a total of $193 million by the end of FY2023. This balance will be first applied to the Project's ongoing capital needs, and then to its O&M needs, thus reducing the amount of City funds needed for ongoing capital needs and O&M costs.

- **The City will receive additional Federal funds for capital and capital O&M needs as a result of the Project.** The City is expected to receive approximately $103 million in additional Section 5307 Urbanized Area Formula funds and $27 million in additional Section 5309 FGM funds between FY2020 and FY2030 due to the implementation of the Project, based on the formula that FTA uses to apportion these funds. This $130 million in additional funds can be used to support systemwide needs.

- **Rail provides the most cost-effective option for handling future transit demand.** In part due to labor costs accounting for a smaller percentage of the Project's cost structure than TheBus, the Project will handle larger volumes of passengers at higher levels of productivity. In FY2030, the Project will move each passenger at a cost of $0.43 per mile, whereas TheBus will move each passenger at a cost of $0.80 per mile. Similarly, in FY2030 the rail system will recoup approximately 34 percent of its O&M costs from fare revenues, while TheBus will recoup approximately 26 percent. This illustrates the fact that, once fully implemented, the Project is expected to carry a larger load relative to its O&M cost than TheBus. The expected passenger fares for bus and rail will be consistent with current City policy.

- **The costs to operate the City's transit system are still expected to be attributable mostly to TheBus operations, as the Project is expected to account for only about 23 percent of total O&M costs between FY2017 and FY2030.** Historically, the City has been a strong supporter of transit, with 11 percent of City funds that are available for public transportation currently used to support the operations of TheBus and TheHandi-Van services. Including rail, the share of these funds used to support transit is expected to average 16 percent through FY2030.

- **The City has a feasible, cost-effective, and prudent financial plan for implementing the Project.** The City will continue to monitor Project activities and market conditions for potential financial risks to ensure that there is no impact to the City's General or Highway funds.

Chapter 1: INTRODUCTION

This report provides an updated 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. This version of the financial plan is a revision to the plan submitted in September 2011 for approval to advance the Project to the Final Design (FD) phase (see Attachment G for key changes to financial plan since the request to enter FD). It supports the City and County of Honolulu's (City's) submittal to the Federal Transit Administration (FTA) for Full Funding Grant Agreement (FFGA) approval. This financial plan meets FTA's requirements for a Project seeking an FFGA.

Unless otherwise noted, all amounts in this financial plan are presented on a City fiscal year (FY) basis, from July 1 to June 30. For example, FY2013 refers to the City's fiscal year starting on July 1, 2012 and ending on June 30, 2013. All dollar amounts shown, unless otherwise noted, are in millions of year-of-expenditure (YOE) dollars.

This financial plan consists of three main components that are presented in the following chapters. 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 that the City has the 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 capacity of the City to operate and maintain the 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 some of the assumptions made in the financial plan. The final section also includes an analysis of mitigating strategies to address these risks, as well as sensitivity analyses to evaluate funding and financing options to overcome potential shortfalls.

DESCRIPTION OF THE PROJECT SPONSOR AND FUNDING PARTNERS

PROJECT SPONSOR – CITY AND COUNTY OF HONOLULU

The City is the Project sponsor and FTA grantee. 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 the Honolulu Authority for Rapid Transportation (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 Department of Transportation Services' (DTS) Public Transit Division (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, construction, operation, maintenance, and expansion of the City's fixed guideway mass transit system.

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. During FY2012 HART continues to use 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. This support from the City has enabled HART to begin functioning relatively quickly and assume its responsibilities for undertaking the Project without any negative impact on its implementation. During FY2013 and beyond, HART will evaluate the extent to which it should develop its own business systems.

HART has completed a number of steps during its first year of operations in order to develop the organizational capability and capacity to fulfill its mission. Tasks that have been accomplished thus far in FY2012 include the following:

- Adopted Board of Directors rules, operating procedures and practices including a committee structure and meeting schedule.
- Adopted Board of Directors policies guiding agency business activities (e.g., financial policy and procurement policy).
- Developed administrative procedures and practices that are specific to a transit agency in areas such as procurement and contract administration; safety and security; employee relations; and management reporting.
- Developed a management reporting system on key performance metrics.
- Created an organizational structure that will enable fulfillment of the agency's Mission and Vision.
- Hired an Executive Director and a Chief Financial Officer.

Department of Transportation Services – Public Transit Division

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. TheBus currently has 97 fixed routes and 4 deviation routes and provides approximately 74 million unlinked passenger trips each year. In 1997, OTS was assigned operating responsibility for the City's paratransit services, referred to as the "TheHandi-Van." With more than 13,000 eligible customers, TheHandi-Van currently provides over 940,000 unlinked passenger trips per year.

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 percent) county surcharge on the State of Hawai‘i’s General Excise and Use Tax (GET). In 2005, the Hawai‘i State Legislature authorized the counties to adopt a maximum 0.5 percent GET Surcharge for public transportation projects. Following this authorization, the City enacted Ordinance No. 05-027 establishing the 0.5 percent GET Surcharge. The GET Surcharge commenced on January 1, 2007, and will be levied through December 31, 2022. The last installment of the Surcharge is to be received by HART in January 2023.

Business activities that take place on O‘ahu that are subject to the 4 percent GET 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.

This source of revenue is to be exclusively used for the operating and/or capital expenditures of a fixed guideway system. The Hawai‘i Department of Taxation is responsible for collecting the GET Surcharge and remitting to the City the net amount after retaining 10 percent of the gross proceeds. The financial plan projects that revenues from the GET Surcharge will be approximately $3.7 billion (FY2007–FY2023). Based on collections through March 31, 2012, the City has already received approximately 23 percent of the expected total or $860 million.

Federal Transit Administration

Federal funding assistance from FTA is assumed in the financial plan for Project capital expenditures. The City is requesting a total of $1.55 billion in FTA New Starts funding to implement the Project. The City has already received $120 million in appropriations between FY2008 and FY2011 from the New Starts program. FTA Urbanized Area Formula funds and non-New Starts discretionary capital investment funds will also fund portions of the Project, as well as continue to provide assistance for preventive maintenance and ongoing capital expenditures for the entire transit system. In FY2010, the City was awarded $29 million in funds from the American Reinvestment and Recovery Act (ARRA), $4 million of which were applied to Preliminary Engineering (PE) costs for the Project, with the remainder being used in FY2010 and FY2011 for other capital needs.

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 percent 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 would 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 the 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 and Pearl Highlands, and includes construction of the Maintenance 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 the Ala Moana Center.

Engineering and design for the Project continues and limited construction work began in April 2012 following receipt of a Letter of No Prejudice (LONP) from FTA. In May 2012 HART also received authorization which covered the pre-cast yard for the guideway segments. Construction of the rest of the Project will be completed following an FFGA. Commencement of revenue service from East Kapolei to Aloha Stadium is proposed to start in FY2016, with the entire Project operating in FY2019. Full project closeout and completion is expected to take place in FY2020.

Cost estimates for the Project presented in this financial plan reflect a steel-wheel-on-steel rail automated technology, operating primarily on elevated guideway using high floor vehicles and a barrier-free fare collection system.

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 in late 2007 and received FTA approval to proceed into 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 an LONP for limited 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 Table 1-1. 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 16, 2009
FTA Issues Record of Decision	January 18, 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	October 2012
Open East Kapolei to Aloha Stadium	June 2016
Open East Kapolei to Ala Moana Center	March 2019

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

PROCUREMENT AND PROJECT DELIVERY

The Project will be implemented using various contract types. The MSF and the guideway from the East Kapolei to Aloha Stadium will be constructed under multiple design-build agreements, where contractors will share in the risks of the Project, resulting in expected cost savings to the City. The guideway from Aloha Stadium to Ala Moana Center will be designed and constructed using the design-bid-build method. Elevators and escalators will be 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 operations and maintenance (O&M) component could be extended to 10 years beyond the completion of the full Project opening in FY2019. Consistent with the project development milestones, the following summarizes the O&M periods for the Core Systems Contract:

- Intermediate O&M Period– East Kapolei to Aloha Stadium – June 2016 to March 2019
- Full O&M Period – East Kapolei to Ala Moana Center – March 2019 to March 2024
- Optional O&M Period – East Kapolei to Ala Moana Center –March 2024 to March 2029

The cost estimates presented in this report were developed based on contract bid prices for the Core Systems Contract and construction contracts for the first phase of the Project. Additional information about the procurement and delivery strategy is provided in Chapter 2.

REGIONAL ECONOMIC CONDITIONS

Unlike a sales tax which is typically levied on retail activities only, the 0.5 percent GET Surcharge is levied on retail, services, contracting, theater, amusement parks, interest, commissions, hotels, all other rentals, and other uses.

The local economy has generally followed the trends of the nation as a whole in the recent months. Overall, the State of Hawai‘i Department of Business Economic Development and Tourism (DBEDT) estimates that the economic recovery began in 2010, as real gross State product increased 1.4 percent in 2010 and 1.2 percent in 2011. Further, DBEDT forecasts growth between 1.8 and 2.2 percent from 2012 to 2015.

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 percent of the State’s economy, and tourism-related employment accounts for more than 152,000 jobs. The decline in tourism activity and spending in 2009 affected Hawai‘i. However, DBEDT has reported that visitor expenditures increased by 10.6 percent in 2010 and 15.4 percent in 2011, and are forecasted to increase by 6.4 percent in 2012. This recovery is expected to continue in the long-term and would lead to increases in GET Surcharge revenues.

Employment in Honolulu is heavily influenced by the construction and contracting sector, and military and military-related jobs. With the recent downturn in the housing market, residential and non-residential construction has slowed; however, the private residential and non-residential construction is expected to resume after housing prices stabilize through 2012. Furthermore, the infrastructure spending provisions of the Federal economic stimulus bill have started to take effect and will continue through 2012, increasing demand for construction-related labor, which could potentially increase tax receipts.

Another important area of Honolulu’s economy is the stability of military employment. Even though it has declined by more than 20 percent in the last 10 to 15 years, military employment has maintained a consistent presence with about 59,000 U.S. Department of Defense military and civilian personnel each year. Federal defense spending makes up approximately 10 percent of the total O‘ahu economy due to military and supporting civilian employment. The stability of this employment contributes to the overall economy, although Federal defense spending is not likely to contribute to growth in the coming years as much as expansion in private industry.

Together, all of these trends show that while Honolulu’s economy was recently in a downturn along with the rest of the country, signs of recovery began in 2010. According to DBEDT’s second quarter 2012 economic outlook, Hawai‘i’s economy is expected to continue positive growth for the rest of 2012 and into 2013. Given the dependence of the Project’s financial plan on GET Surcharge revenues, the local economic environment in Hawai‘i is very important. Additional details regarding projections of GET Surcharge revenues can be found later in this report.

SUMMARY OF THE FINANCIAL PLAN

Table 1-2 summarizes the capital cost of the Project with and without finance charges. The total capital cost including finance charges through FY2020 will be the amount included in an FFGA as the "Baseline Project Cost", as is consistent with FTA guidelines for New Starts projects. The total capital cost with finance charges through FY2023 includes all finance charges associated with the Project construction.

Table 1-2, Project Capital Cost Summary, FY2010–FY2030, YOE $millions

	YOE $M
Project Capital Cost Excluding Unallocated Contingency and Finance Charges	$4,847
Unallocated Contingency	$102
Project Capital Cost Excluding Finance Charges	**$4,949**
Finance Charges through FY2020	$173
Baseline Project Capital Cost for FFGA	**$5,122**
Finance Charges from FY2021 to FY2023	$42
Total Project Capital Uses of Funds	**$5,163**

Note: Totals may not add due to rounding

Table 1-3 summarizes the capital and operating sources and uses of funds for the Project, as well as for the entire transit system. Sources and uses are based on the baseline assumptions as defined in the subsequent chapters of this report. The City is expected to balance sources and uses in aggregate over the FY2010 – FY2030 period.

Table 1-3, Project and Systemwide Sources and Uses of Funds, FY2010–FY2030, YOE $millions

SOURCES OF FUNDS	YOE $M
Project Capital Sources of Funds	
Project Beginning Cash Balance	298
Net GET Surcharge Revenues	3,291
FTA Section 5309 New Starts Revenues	1,550
FTA Section 5307 Formula and ARRA Funds Used for the Project 1/	214
Interest Income	3
Transfer from Project Cash Balance to Ongoing Rail Capital and O&M Cost	(193)
Subtotal Project Capital Sources of Funds	**$5,163**
Ongoing Capital Sources of Funds	
FTA Section 5309 Fixed Guideway Modernization	80
FTA Section 5309 Bus Discretionary	116
FTA Section 5307 Formula Funds Used for Ongoing Capital Cost	499
FTA Section 5307 and 5309 Grants Carryover from Prior Years	50
American Recovery and Reinvestment Act	26
FTA Section 5316 (JARC) and 5317 (New Freedom)	0
Transfers to the State's Vanpool Program	(3)
Transfer from Project Cash Balance to Ongoing Rail Capital Cost	54
City General Obligation Bond Proceeds	404
Subtotal Ongoing Capital Sources of Funds	**$1,225**
TOTAL CAPITAL SOURCES OF FUNDS	**$6,388**
Operating Sources of Funds	
Fare Revenues (TheBus and Rail)	2,098
Fare Revenues (TheHandi-Van)	60
Subtotal Fare Revenues	**$2,158**
FTA Section 5307 Formula Funds Used for Preventative Maintenance	247
FTA Section 5316 (JARC) and 5317 (New Freedom)	20
Transfer from Project Cash Balance to Rail O&M Cost	140
City Operating Subsidy	5,871
TOTAL OPERATING SOURCES OF FUNDS	**$8,436**

USES OF FUNDS	YOE $M
Project Capital Uses of Funds	
Project Capital Cost	4,949
Subtotal Project Capital Cost	**$4,949**
Finance Charges	
Interest Payment on GO Bonds Issued for the Project	191
Interest Payment on Tax-Exempt Commercial Paper	10
GO Bond Issuance Cost	13
Subtotal Finance Charges	**$215**
Subtotal Project Capital Uses of Funds	**$5,163**
Ongoing Capital Uses of Funds	
Additional Railcar Acquisitions	35
Project Capital Asset Replacement Program	150
TheBus Vehicle Acqusitions	667
Other Capital Cost	235
TheHandi-Van Vehicle Acquisitions	138
Subtotal Ongoing Capital Uses of Funds	**$1,225**
TOTAL CAPITAL USES OF FUNDS	**$6,388**
Operating Uses of Funds	
TheBus O&M Costs	5,459
Rail O&M Costs	1,613
TheHandi-Van O&M Costs	1,310
Other O&M Costs	55
TOTAL OPERATING USES OF FUNDS	**$8,436**

1/ Includes $4M from American Recovery & Reinvestment Act of 2009

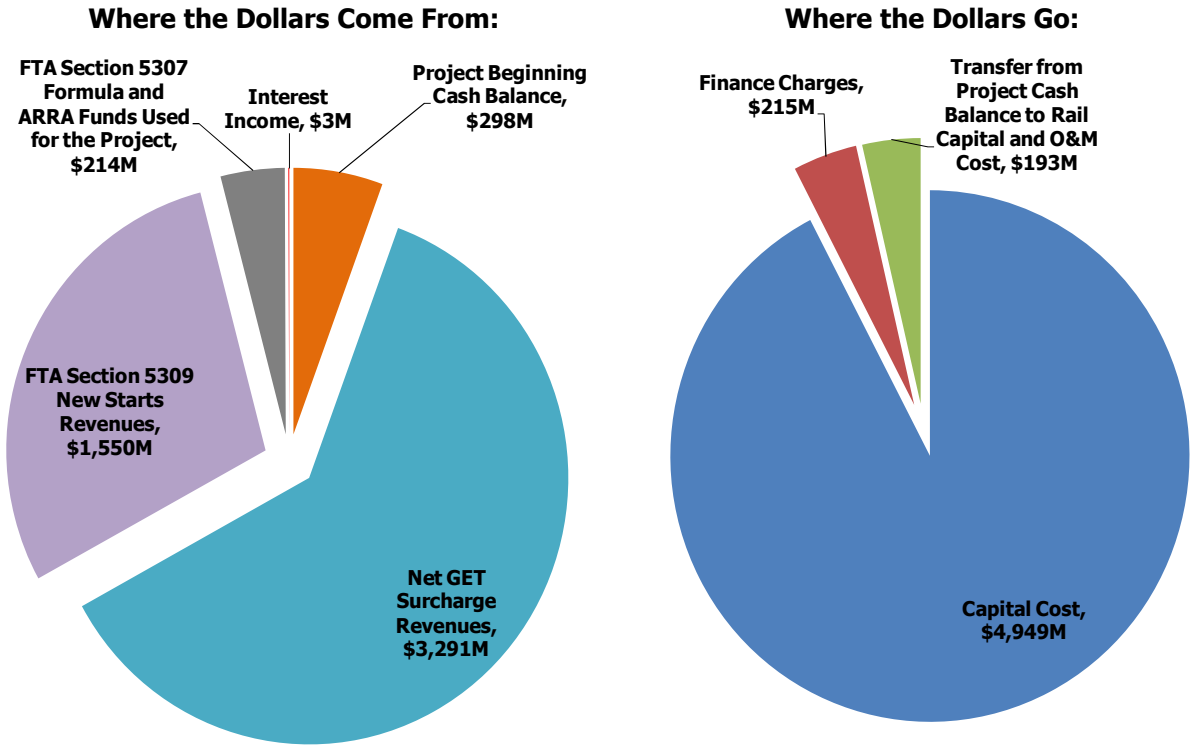
Note: totals may not add due to rounding

GET= General Excise and Use Tax // O&M=Operating and Maintenance // GO= General Obligation // JARC=Job Access and Reverse Commute

Chapter 2: CAPITAL PLAN

This chapter describes the capital costs and funding sources associated with both the Project and the City's existing public transportation system. The purpose of the chapter is to demonstrate that there is an adequate level of funding for the capital costs associated with both the Project and the systemwide needs through FY2030. Figure 2-1 shows the Project sources and uses of funds in YOE dollars.

Figure 2-1, Project Sources and Uses of Funds, YOE $millions



Note: Totals may not add due to rounding
ARRA = American Recovery and Reinvestment Act // GET = General Excise and Use Tax

PROJECT CAPITAL COSTS

Table 2-1 presents the Project's annual capital costs excluding finance charges. The total capital cost for the Project is $4,396 million in 2012 dollars and $4,949 million in YOE dollars. 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 costs incurred for planning, environmental analysis, and conceptual engineering incurred prior to entry into PE on October 16, 2009.

Table 2-1, Project Annual Capital Costs, Excluding Finance Charges, FY2010 – FY2020

City Fiscal Year	Base Year 2012 $M	YOE $M
2010*	$79	$79
2011*	124	124
2012	365	366
2013	704	734
2014	778	858
2015	773	887
2016	626	733
2017	538	659
2018	356	443
2019	45	55
2020	9	12
Total	**$4,396**	**$4,949**

Note: Totals may not add due to rounding
* Actuals

CAPITAL COST ESTIMATING METHODOLOGY

The PE design level 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, and station design contracts that have been executed or are in the award process. The cost estimates for the remaining project elements are based on PE and were estimated using a "bottom-up" approach. A summary of the major Project contracts is shown in Table 2-2.

Table 2-2, List of Major Project Contracts

Major Contract Breakdown	Contracting Method	Source of Estimate
West O‘ahu - Farrington Highway Guideway Design-Build Contract	Sealed Proposals (Best Value)	Used price of executed contract
Maintenance Storage Facility and Yard Design-Build Contract	Sealed Proposals (Best Value)	Used price of executed contract
Kamehameha Highway Guideway Design-Build Contract	Sealed Proposals (Best Value)	Used price of executed contract
Airport Utilities	Design-Bid-Build	PE design level cost estimate
City Center Utilities	Design-Bid-Build	PE design level cost estimate
Airport and City Center Guideways	Design-Bid-Build	PE design level cost estimate
Core Systems DBOM Contract (including vehicles)	Sealed Proposals (Best Value)	Used price of executed contract
Stations, parking garage, intermodal contracts	Design-Bid-Build	PE design level cost estimate
Elevators/Escalators design, manufacture, install, test, & maintain	Sealed Proposals	PE design level cost estimate
Professional Services	Qualifications or sealed proposals	PE design level cost estimate

DBOM = Design-Build-Operate-Maintain // PE = Preliminary Engineering

Included in the awarded costs are the contract values of three design-build contracts (the West O‘ahu-Farrington Highway Guideway, the Kamehameha Highway Guideway, and the MSF), and the Core Systems (including vehicles) DBOM contract.

Prices were de-escalated from YOE dollars to first quarter 2012 dollars and entered into the estimate. These contract values were then input as multiple lump-sum line item values over appropriate SCC categories and escalated from first quarter 2012 dollars. As a final step, the base estimates for the remaining contracts were also escalated from first quarter 2012 dollars by adjusting for inflation on a commodity basis.

Labor rate tables have been developed using the 2010 Hawai'i prevailing wage determination rates for various labor crafts which were then escalated to 2012 dollars. Material costs used are in 2012 dollars. Equipment costs are based on vendor quotations and industry standard publications. The estimate has been developed according to a work breakdown structure based on the FTA's SCC format for New Starts projects.

The total costs in 2012 and YOE dollars, by FTA SCC, are detailed in Table 2-3. Note that this table excludes finance charges and also excludes costs incurred prior to entry into PE. The largest cost item is for Guideway Construction and Track Work, which accounts for approximately 26 percent of total capital expenditures. Professional Services and Sitework and Special Conditions both account for more than 20 percent. All other cost items have a share of total capital cost of 10 percent or less.

Table 2-3, Project Capital Costs by SCC, Excluding Finance Charges, FY2010 – FY2020

FTA Standard Cost Category	Base Year 2012 $M	YOE $M	Share of Total YOE Capital Cost
10 Guideway Construction/Track Work	$1,092	$1,275	26%
20 Stations	421	506	10%
30 Yard, Shops and Support Facilities	91	99	2%
40 Sitework and Special Conditions	1,001	1,104	22%
50 Systems	210	247	5%
60 Right-of-Way	203	222	4%
70 Vehicles	178	209	4%
80 Professional Services	1,110	1,184	24%
90 Unallocated Contingency	89	102	2%
Total Project Cost (Excluding Finance Charges)	**$4,396**	**$4,949**	**100%**

Note: Totals may not add due to rounding

CONTINGENCIES

The cost estimates include a variety of contingencies to allow for potential additional expenses related to each cost category. The total contingency included in the Project cost estimate is approximately 15 percent of the total YOE cost without contingencies, or approximately $644 million in YOE dollars. Of the total $644 million in YOE dollars contingency amount, $542 million is allocated contingency and $102 million is unallocated contingency.

Allocated contingency is contingency that has been spread among the various cost categories to reflect relative levels of risk. It was determined that the nature of the construction process for constructing an elevated guideway with pre-cast construction techniques lowers the level of uncertainty for the Project cost. The allocation of contingency across cost categories also reflects where contracts have been awarded and have thus shifted risk from the City to the contractor. Unallocated contingency corresponds to contingency that has not been spread among the various cost categories. The financial plan assumes that the $102 million (in YOE dollars) will be fully expended.

COST ESCALATION

The escalation rates used for the capital cost estimate have not changed since the September 2011 financial plan, and are documented in *Honolulu High-Capacity Transit Corridor Project Cost Escalation Forecast, FY2011-2019 (2010)*. The forecasting methodology identifies key cost drivers and makes assumptions as to how these drivers affect costs over the forecast horizon. Some of these key drivers

include: international and national market dynamics, local market dynamics, supply chain/transportation factors, and one-time events that temporally change the market structure.

Based on these categorizations, an escalation model was developed to calculate an escalation rate reflecting major underlying factor inputs. Projected rates of growth for each of the major cost inputs are weighted based on each of the input's estimated contribution to overall Project costs. The weighted sum of all the growth rates yields the component-weighted average escalation rate. In addition to the economic drivers that are inherent in each component, forecasts for transportation costs of each component and variations in contractor margins (which are a result of the level of contractor availability and competition) are factored into the analysis.

The individual weights are derived from a detailed local market analysis and an extensive research database that analyzes data from the past five years. The database includes research on highway and transit projects in New York, New Jersey, Florida, Hawai'i, Louisiana, Ohio, and Washington.

PROJECT CAPITAL COST AND SCHEDULE

Table 2-4 provides a breakdown of total capital expenditures by year excluding finance charges. Capital expenditures are expected to peak in FY2015 with a total cost during that year of $887 million.

Table 2-4, Annual Capital Expenditures by SCC, Excluding Finance Charges, FY2010 – FY2020, YOE $millions

City Fiscal Year	2010*	2011*	2012	2013	2014	2015	2016	2017	2018	2019	2020	TOTAL
Guideway Construction/Track Work	-	-	$7	$175	$245	$292	$210	$217	$129	-	-	**$1,275**
Stations	-	-	-	5	70	92	99	138	93	7	3	**$506**
Yard, Shops, and Support Facilities	-	-	4	38	40	17	-	-	-	-	-	**$99**
Sitework and Special Conditions	35	31	157	183	187	185	105	109	86	17	8	**$1,104**
Systems	-	-	1	39	41	38	39	45	43	3	-	**$247**
Right-of-Way	3	10	23	38	40	42	43	23	-	-	-	**$222**
Vehicles	-	-	-	31	33	34	36	37	35	3	-	**$209**
Professional Services	41	83	174	225	202	170	128	78	57	26	1	**$1,184**
Unallocated Contingency	-	-	-	-	-	18	72	12	-	-	-	**$102**
Total Project Cost	**$79**	**$124**	**$366**	**$734**	**$858**	**$887**	**$733**	**$659**	**$443**	**$55**	**$12**	**$4,949**

Note: Totals may not add due to rounding
* Actuals

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. It is assumed that the costs in the last year of the Optional O&M Period will continue through the end of the forecast period. Total FY2019 to FY2030 CARP spending is anticipated to be $150 million in YOE dollars.

Additional Railcar Acquisitions: The purchase of ten additional railcars is expected to be needed to accommodate forecasted ridership in FY2025. The financial plan assumes 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 is estimated at $35 million in YOE dollars.

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. The bus capital costs reflect a gradual phase-out of the articulated hybrid bus fleet based on a City policy dated November 24, 2010. For more details on the bus acquisition schedule, refer to TheBus Fleet Management Plan (March 2012). TheBus acquisitions will result in an average bus age of 7.5 years by FY2020, the first full year of operations of the Project. This is lower than TheBus' current average fleet age of 10.1 years.

Other Capital Cost: Various facilities to accommodate ongoing operations are expected to be built and/or expanded simultaneously with aspects of the Project. The capital plan reflects expenditures for bus facilities programmed in the approved FY2011 - FY2014 Transportation Improvement Program (TIP) with some modifications to some project schedules based on input from the City's DTS. The TIP includes projects such as the design and construction of the Middle Street intermodal center, a maintenance facility for TheBus and TheHandi-Van operations in West O‘ahu, and transit security projects. It should be noted that DTS is currently reviewing the scope of the maintenance facility project to determine whether a smaller facility with an emphasis on fueling, washing, and vehicle storage would be more appropriate based on the future needs of TheBus and TheHandi-Van. A smaller facility would result in less capital cost than assumed in this financial plan.

The financial plan uses cost estimates from the TIP through FY2017, and then assumes that $5 million will be spent annually on TheBus and TheHandi-Van facilities, including transit security projects and small transit centers. Figure 2-2 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 2-2, Ongoing Capital Expenditures, FY2010 – FY2030, YOE $millions

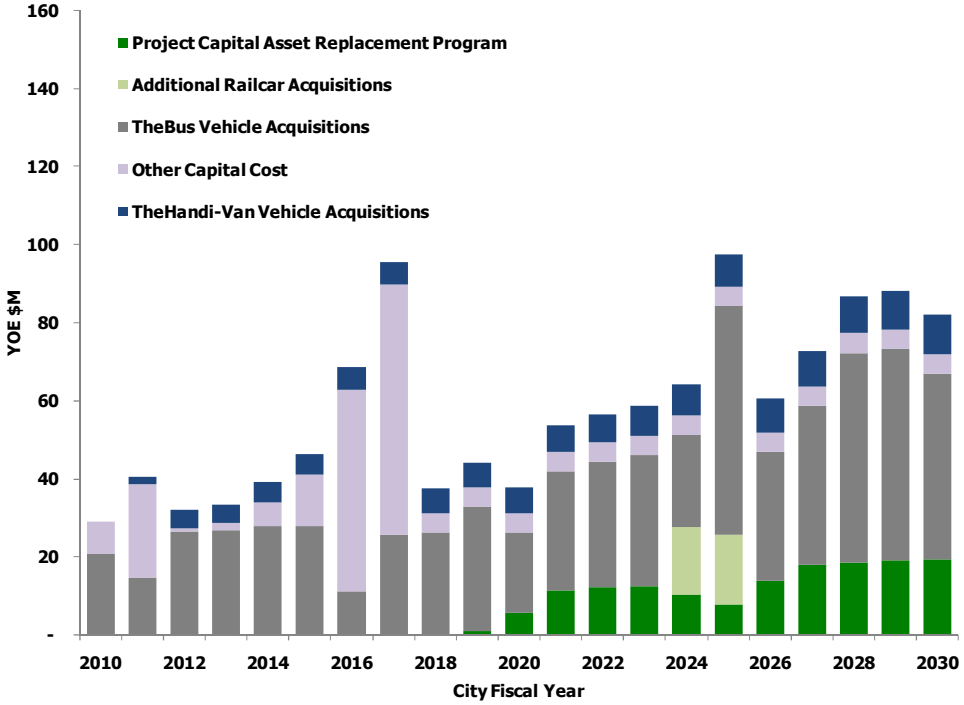
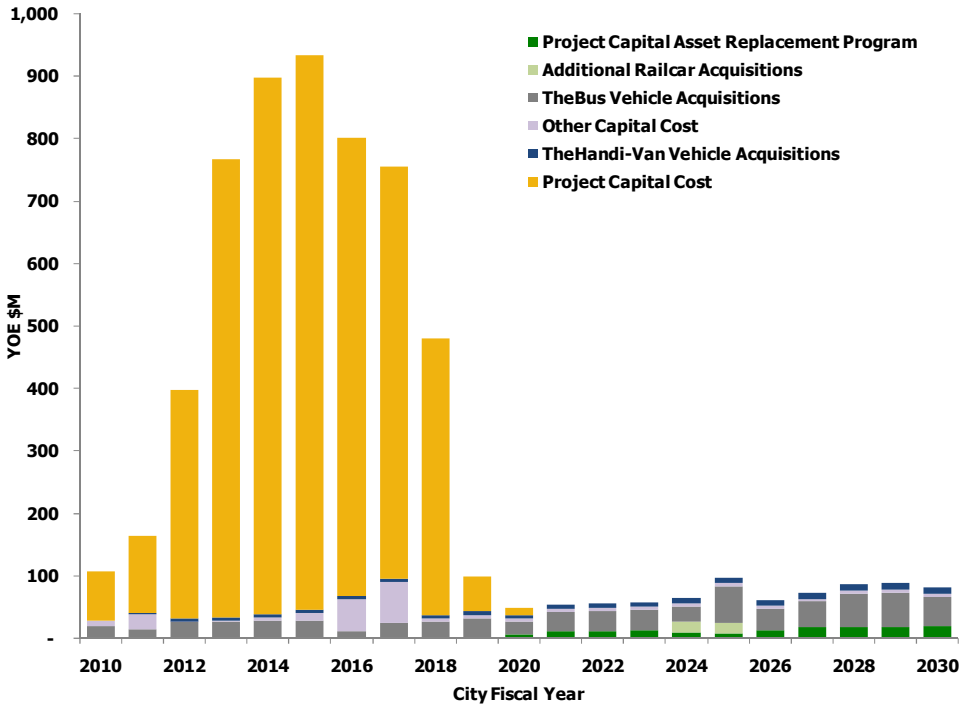


Figure 2-3 combines total capital costs for construction of the Project as well as additional ongoing capital expenditures necessary to keep the existing transit system in a state of good repair.

Figure 2-3, Total Systemwide Capital Expenditures, FY2010 – FY2030, YOE $millions



CAPITAL FUNDING FOR THE PROJECT

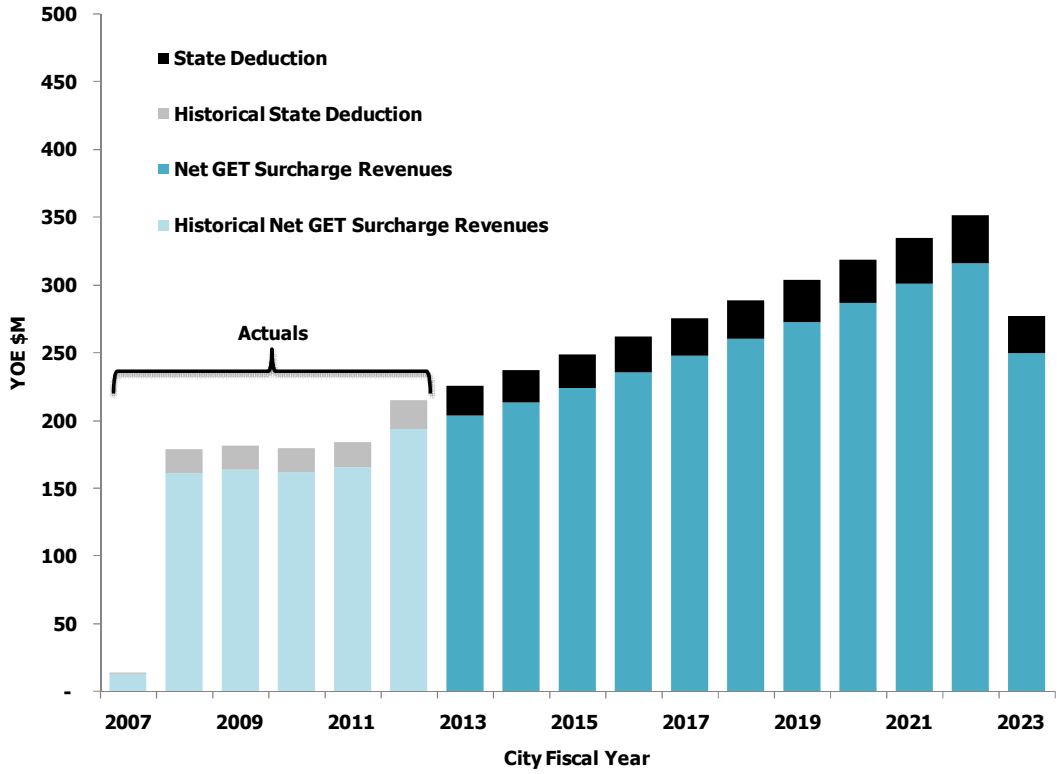
The Project is expected to be entirely funded by revenues from the dedicated GET Surcharge and Federal funds. As discussed in the section below, 100 percent of non-New Starts funding for the Project is committed.

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. In 2005, the Hawai'i State Legislature authorized counties to adopt a surcharge on the GET of 0.5-percent for public transportation projects. Following this authorization, the City and County of Honolulu enacted Ordinance No. 05-027 establishing a 0.5-percent GET county surcharge. This revenue is to be used exclusively for capital and/or operating expenditures of the Project. The GET Surcharge will be levied through December 31, 2022 (FY2023). The last installment of the GET Surcharge is to be received by HART in January 2023.

The net GET Surcharge revenues are projected to total $3,291 million from Q2 of FY2010 to FY2023. The total amount from inception of the GET Surcharge on January 1, 2007 through FY2023 is expected to equal $3,670 million. As of March 31, 2012, the City has already received approximately 23 percent of the estimated total amount or $860 million. Figure 2-4 presents the actual net GET Surcharge collections to date and expected net GET Surcharge revenues expected to be received by the City. Additional information about historic GET collections is included in Attachment C.

Figure 2-4, Annual Net GET Surcharge Revenues, FY2007 - FY2023, YOE $millions



GET = General Excise and Use Tax

The following provides a summary of the net GET Surcharge revenues expected to be received by the City between FY2013 and FY2023. It is important to note that given the current uncertainties in the

global and U.S. economies, this projection will be reviewed and refined over time, as more actual tax collection data are received and as the local, national, and global economic outlooks change.

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 the City 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 of 2010 was paid to the City in July 2010. This delay should be noted when comparing GET Surcharge revenue as reported by the State to data presented in the financial plan. Additionally, State of Hawai'i Department of Taxation sometimes experiences delays in processing GET Surcharge returns, which can make quarterly year-over-year comparisons of historical GET Surcharge collections less meaningful.

Actual Receipts to Date: The City received $13 million in GET Surcharge revenues in FY2007. The first full fiscal year of GET Surcharge revenues was FY2008, with a total of $161 million in receipts. Despite the economic recession, FY2009 receipts were slightly higher than FY2008, totaling $164 million. This increase can be explained by the 23 percent growth in the first quarter of receipts counting towards FY2009 from the same quarter in FY2008, which offsets the negative growth of the subsequent three quarters. In FY2010, continued unfavorable economic conditions caused revenue to fall slightly to $162 million. Revenue then increased to $166 million in FY2011 and $194 million in FY2012.

GET Surcharge Forecast Methodology: The financial plan assumes that GET Surcharge revenues will grow in line with the long-term historical growth experienced by statewide GET revenues. The long-term compounded annual growth rate (CAGR) in statewide GET revenues (FY1981 to FY2010) of 5.04 percent has been used to forecast GET Surcharge revenues for FY2013 to FY2023. Historical annual statewide GET revenues for FY1981 to FY2011 are presented in Attachment C.

In FY2023, with receipt of the surcharge ending in the third quarter of FY2023, net GET Surcharge cash revenues are expected to total three quarters worth of tax collection, thus accounting for the lower total cash revenues in that fiscal year compared to FY2022.

As mentioned earlier, 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. Chapter 4 presents a sensitivity analysis that examines the potential risk associated with decreased GET Surcharge growth rates.

FEDERAL FUNDING SOURCES

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

As shown in Table 2-5, New Starts funding is assumed to provide a total of $1,550 million to the Project though FY2017, with annual amounts of up to $250 million per year. The table presents the City 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 City fiscal year, and the fact that New Starts funds are expended on a reimbursable basis using the New Starts share for the Project.

The amount of New Starts funding being requested for the Project is on par with several other projects that have received FFGAs in recent years, including the East Side Access project in New York City ($2.6 billion, or 36 percent New Starts share), Second Avenue Subway project in New York City ($1.3 billion, or 27 percent New Starts share), and the Dulles Corridor Metrorail Project in Northern Virginia ($900 million, or 28 percent New Starts share). The annual amount of New Starts funding assumed in the financial plan is also not unprecedented, as both the East Side Access and Second Avenue Subway projects received over $200 million in New Starts funds in Federal FY2010.

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.

Table 2-5, Timing of Use of Section 5309 New Starts Revenues, YOE $millions

City Fiscal Year	New Starts Appropriation (YOE $M)	Use of New Starts Revenues (YOE $M)
2008	$15	—
2009	$20	—
2010	$30	—
2011	$55	$21
2012	$200	$99
2013	$250	$258
2014	$250	$442
2015	$250	$250
2016	$250	$250
2017	$230	$230
TOTAL	**$1,550**	**$1,550**

Note: Totals may not add due to rounding

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 PE activities.

FTA Section 5307 Formula Funds (49 USC Section 5307)

To supplement the GET Surcharge and New Starts funds mentioned above, the financial plan assumes that revenues from FTA's Section 5307 formula program will be used for the Project between FY2014 and FY2019. In total, it is expected that the Project will receive approximately $210 million from Section 5307 during the construction period, representing approximately 4 percent of total Project capital funding.

Section 5307 funds are apportioned by FTA on the basis of a formula specified in law. The statutory basis for Section 5307, as for New Starts, is assumed to be in force through continuing resolution until a new law is enacted to reauthorize surface transportation programs.

Activities eligible for Section 5307 funds include planning, engineering, design; capital investments in bus and bus-related activities, such as bus replacement and overhaul; capital investments in new and existing fixed guideway systems; and preventive maintenance. As such, Project-related expenses are eligible for Section 5307 funds.

The forecast of Section 5307 funds in the financial plan assumes that Honolulu will maintain a constant share of the total amount of the national Section 5307 program. Since the apportionment of Section 5307 funds are based in part on level of service variables, the implementation of the Project will cause the revenues to increase in FY2019, two years after the beginning of the Intermediate O&M Period. Similarly, an increase in Section 5307 revenues is expected to occur in FY2022, two years after the beginning of the Full O&M Period. Several zipper and high-occupancy vehicle (HOV) lane projects will increase Section 5307 funding if buses operate on these facilities, as these are considered fixed guideways by FTA. The schedule for these projects is assumed as follows, consistent with the ORTP:

- FY2022 – PM zipper lane on H-1 between the Keʻehi Interchange and the Kunia Interchange
- FY2025 – H-1 HOV lanes between the Waiawā Interchange and the Makakilo Interchange (one lane in each direction)

- FY2025 – HOV lanes on the Nimitz Flyover between the Ke'ehi Interchange and Pacific Street (two lanes, reversible, operating inbound in the AM and outbound in the PM)

In other years, the financial plan assumes no significant change, but modest growth of funding of 2.50 percent per year. This represents a more conservative rate than the 5.38 percent annual growth rate experienced between 1996 and 2011. Information about historical Section 5307 funds is presented in Table 2-6, along with FTA Section 5309 fixed guideway modernization (FGM) funds (described in the following section of this report). More information on the forecast of Federal funds and the impact of the Project on those revenues is presented in the section on systemwide capital funding sources.

Table 2-6, Historical FTA Section 5307 and Section 5309 FGM Apportionments, 1996 – 2011, YOE $millions

Federal Fiscal Year	FTA Sec. 5307 Apportionments (YOE $M)	*Annual Growth Rate*	FTA Sec. 5309 FGM Apportionments (YOE $M)	*Annual Growth Rate*
1996	$16.02		$0.20	
1997	$16.47	*2.80%*	$0.27	*34.58%*
1998	$17.91	*8.75%*	$0.30	*11.34%*
1999	$20.08	*12.10%*	$0.53	*77.56%*
2000	$23.89	*18.98%*	$0.63	*18.68%*
2001	$22.80	*-4.55%*	$0.93	*47.83%*
2002	$24.58	*7.80%*	$1.05	*13.19%*
2003	$27.80	*13.08%*	$1.15	*9.44%*
2004	$26.39	*-5.07%*	$1.12	*-2.59%*
2005	$27.03	*2.43%*	$1.06	*-5.05%*
2006	$24.13	*-10.70%*	$1.25	*17.51%*
2007	$26.39	*9.33%*	$1.47	*17.77%*
2008	$29.00	*9.90%*	$2.00	*35.92%*
2009	$31.06	*7.11%*	$2.12	*6.31%*
2010	$31.33	*0.87%*	$2.01	*-5.19%*
2011	$35.14	*12.17%*	$1.95	*-3.19%*
1996-2011 Compounded Annual Growth Rate		**5.38%**		**17.72%**

Note: FTA Section 5307 apportionments include apportionments to the Kailua-Kāne'ohe urbanized area
FGM = Fixed Guideway Modernization

Table 2-7 summarizes the Federal and non-Federal funding sources, as well as the level of commitment for each source based on FTA New Starts guidelines.

Table 2-7, Summary of Federal and Non-Federal Project Capital Funding Sources

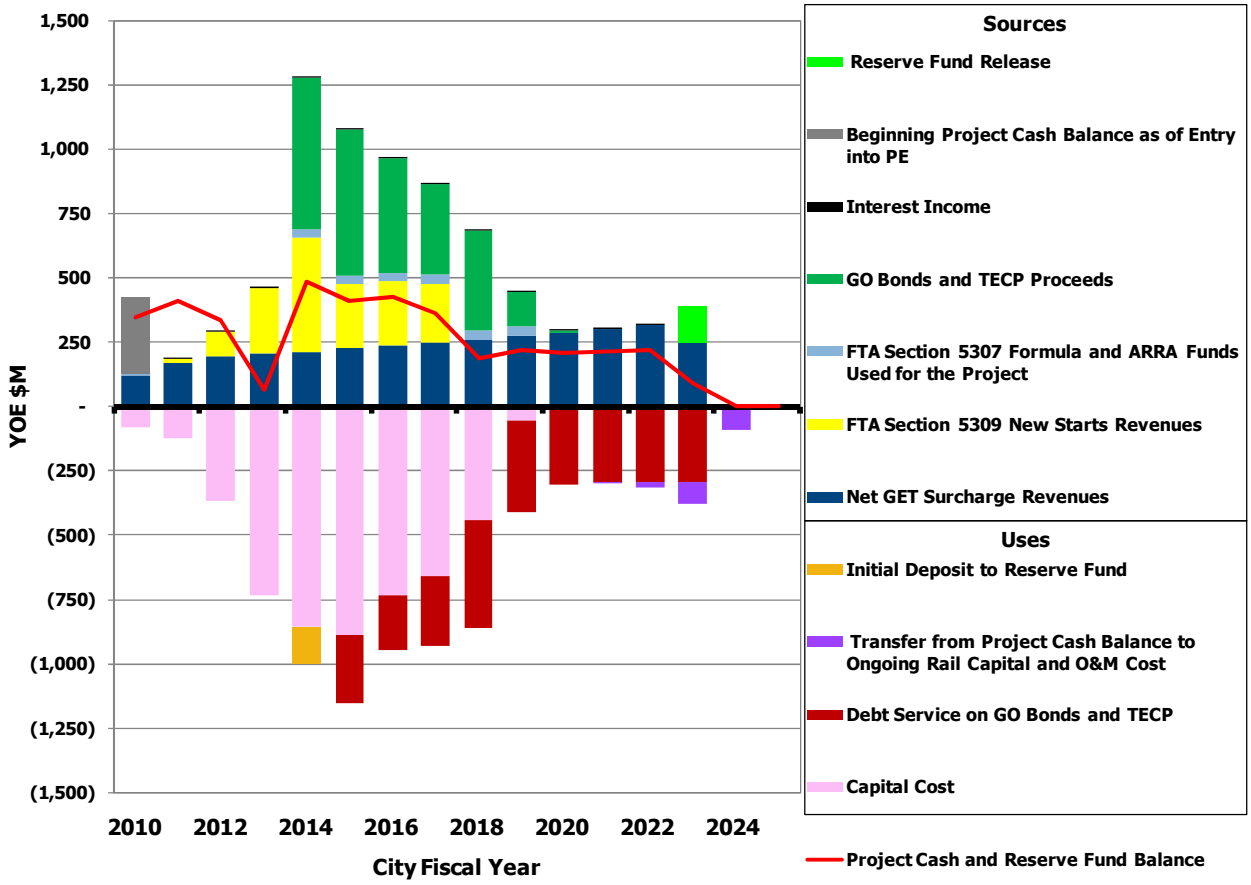
Sources of Funds	Funding Level (YOE $M)	Funding Share	Level of Commitment	Evidence of Commitment
Federal:				
FTA 5309 New Starts	**$1,550**	30.0%[1]	N/A	N/A
FTA 5307 Formula Funds Used for the Project	**$210**	4.1%	Committed	Statewide FY2011 - 2014 Transportation Improvement Program
American Recovery and Reinvestment Act Funds Used for the Project	**$4**	0.1%	Committed	FTA Grant HI-96-X001
Non Federal:				
General Excise and Use Tax 0.5% surcharge	**$3,396**[2]	65.8%	Committed and dedicated to the fixed guideway project	Enabling legislation: • State Act 247 • City and County of Honolulu Ordinance 05-027 Selection of a fixed guideway system as the Project
Interest Income	**$3**	0.1%	Committed	City & County of Honolulu Ordinance 06-37
Total Project Capital Sources of Funds	**$5,163**	**100%**		

Note: Totals may not add due to rounding
[1] Percentage used in FFGA is 30.3%, based on Project capital cost with finance charges through FY2020 of $5,122 million
[2] Includes $298 million in beginning cash balance and subtracts $193 million in ending cash balance transferred to ongoing Project capital and operating needs

FINANCING OF THE PROJECT

Figure 2-5 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. Details on the proposed financing approach are provided in the following sections.

Figure 2-5, Project Capital Sources and Uses of Funds, FY2010 – FY2030, YOE $millions



PE = Preliminary Engineering // GO = General Obligation // TECP = Tax-Exempt Commercial Paper // ARRA = American Recovery and Reinvestment Act // GET = General Excise and Use Tax

PROJECT CASH BALANCE

The cash balance as of entry into PE in October 2009 was approximately $298 million. With the GET Surcharge projections and Federal revenue assumptions described above, the Project exhibits a positive cash balance through FY2013 without the need for debt financing, as GET Surcharge and other revenues will be used on a pay as you go basis.

As shown on Figure 2-5 above, the City has the capacity to maintain a positive cash balance throughout the construction period. While the City has many options on how to utilize this excess funding capacity, the financial plan assumes that funds would be deposited in a Project reserve fund out of the first issuance of General Obligation (GO) bonds in FY2014. The amount deposited in the Project reserve fund is $139 million, which was sized in order to maintain a positive cash balance in each year until FY2023. The financial plan assumes that the Project reserve fund would be released in FY2023 to repay a portion of that year's debt service obligations, although it could also be available to cover Project capital cost increases or revenue shortfalls during the construction period if needed, as discussed in the sensitivity analysis in chapter 4.

Once construction ends in FY2020, GET Surcharge revenues continue to increase gradually through FY2023 while debt service remains constant. This, combined with the fact that the Project reserve fund is used to repay a portion of the final year's debt service payment, results in a Project cash balance in those years accruing to a total of $193 million by the end of FY2023. The financial plan assumes that this cash

balance will be first applied to CARP and rail vehicle expenditures, and then to rail O&M cost; thereby freeing up Section 5307 revenues for preventive maintenance and ongoing capital expenditures after FY2020.

GENERAL DEBT STRUCTURE AND DEBT INSTRUMENTS

In years where GET Surcharge revenues and Federal funding are not by themselves sufficient to meet the cash flow requirement to cover Project capital expenditures, a mix of GO bonds (backed by Project revenues) and short-term borrowing in the form of Tax-Exempt Commercial Paper (TECP) would be used to meet Project funding needs. Table 2-8 shows the annual mix of TECP and GO bond proceeds issued to fund the construction of the Project. The financial plan assumes that all debt proceeds and related debt service costs will be paid off in full with Project revenues by the end of FY2023.

Table 2-8, Debt Proceeds, FY2010 – FY2030, YOE $millions

City Fiscal Year	2014	2015	2016	2017	2018	2019	2020	Total
General Obligation Bond Proceeds Excluding Issuance Costs	$492	$366	$345	$251	$188	$136	$7	**$1,785**
Proceeds from Tax-Exempt Commercial Paper (rolled over)	$100	$200	$100	$100	$200	—	—	**$700**
Total Bond Proceeds	**$592**	**$566**	**$445**	**$351**	**$388**	**$136**	**$7**	**$2,485**

Note: Totals may not add due to rounding
All debt proceeds and related debt service costs are scheduled to be paid off in full with Project revenues by the end of FY2023.

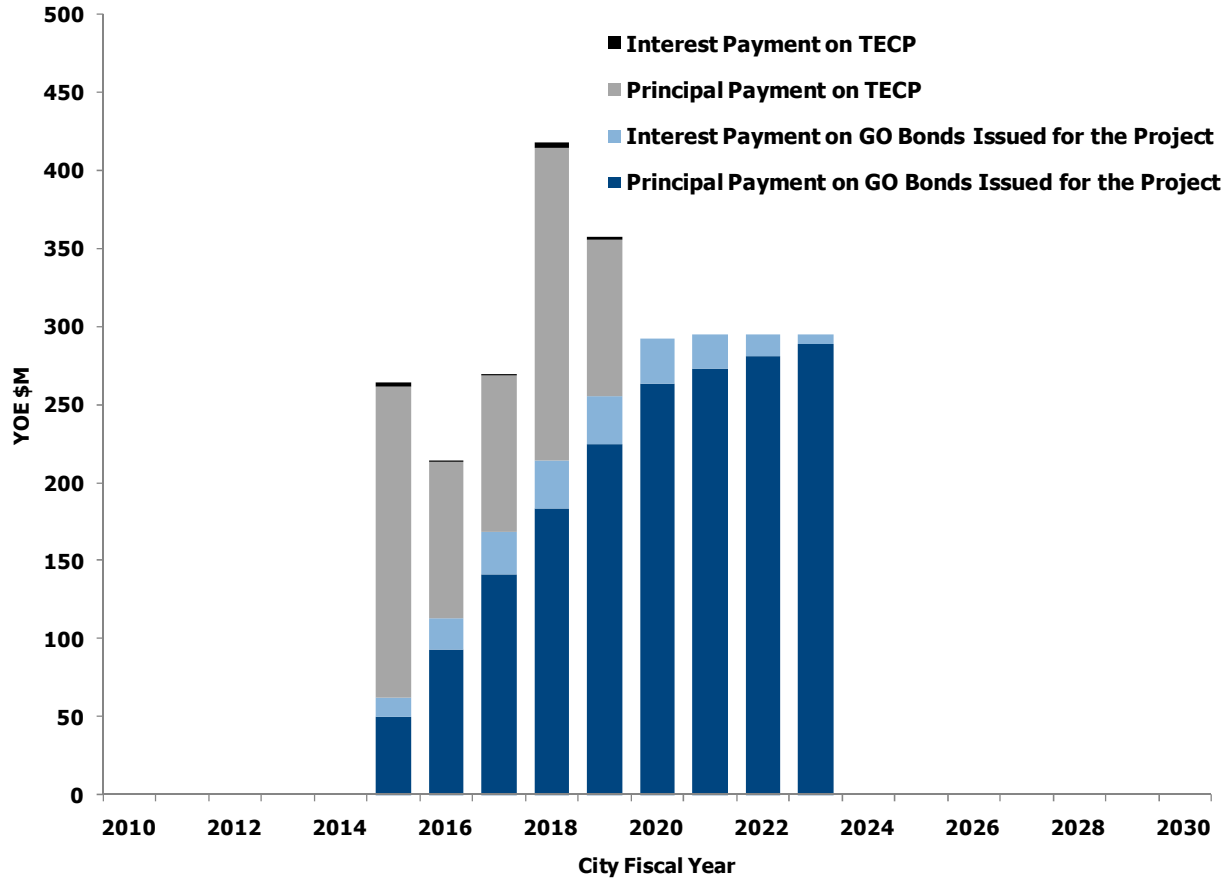
The two types of debt instruments included in the financial plan are summarized below.

Project General Obligation Bonds: Although the Project's debt requirements will be solely repaid from GET Surcharge revenues, the Hawai'i State Constitution requires that these bonds be classified as GO bonds. The financial plan assumes that Project GO bonds will be sized to account for project cash flow requirements and cost of issuance. As mentioned earlier, the first GO debt issuance in FY2014 also includes a deposit of $139 million to a Project reserve fund. The intent of such a fund is to maintain a cash reserve to be used to pay debt service if pledged revenues are insufficient to satisfy the debt service requirements, or to cover capital cost increases or revenue shortfalls during the construction period if needed. It should be noted that this structure is only one of many options available to the City on how to use the excess funding capacity and does not constitute a legal requirement under current law.

Consistent with the requirements of Chapter 47, Hawai'i Revised Statutes and the State Constitution, a conventional mortgage-type amortization schedule with a level debt service repayment is assumed for each GO bond issue (as shown on Figure 2-6). The financial plan further assumes that all GO bonds issued for the Project will mature in the year when the GET Surcharge expires. As such, the maturity of each Project GO bond issue decreases over time since the GET Surcharge sunsets in FY2023.

Tax Exempt Commercial Paper: The Project will also utilize the City's existing TECP program or other short-term construction financing that could provide a low-interest form of borrowing in which interest-only payments are made and the principal balance is repaid with available cash or rolled into Project GO bonds at the end of the 270-day maximum term. Until recently, the City had authorization to issue up to $350 million in TECP. On June 6, 2012 the City Council approved an additional $100 million in TECP capacity thus increasing the total authorized amount from $350 million to $450 million. The Project is expected to utilize $100 million of TECP between FY2014 and FY2018. The $200 million shown to be used in FY2015 and FY2018 in the capital plan cash flows result from two issuances of TECP in those years. Depending on the cash flow requirements of other projects in the City's Capital Improvement Program, the Project could make use of additional TECP if needed to meet short-term cash flow needs.

Figure 2-6, Total Annual Debt Service, FY2010 – FY2030, YOE $millions



TECP = Tax-Exempt Commercial Paper // GO = General Obligation

Financing Costs and Maturity

Interest rate: The financial plan assumes interest rates on GO bonds of 2.50 percent for issues in FY2014 and FY2015 and 3.00 percent for issues beyond FY2015, consistent with the City's current AA+ rating. The interest rate assumption is increased after FY2015 to account for the possibility that market conditions become less favorable in the future. The interest rate on TECP financing is assumed to equal 1.50 percent for FY2014 and FY2015, and 2.00 percent beyond FY2015. The interest rates are consistent with current interest rates for debt instruments with similar maturities.

Issuance cost: Upfront costs associated with the issuance of Project GO bonds are assumed to equal 0.75 percent of gross proceeds. Issuance costs for TECP financing are assumed to be included in the TECP interest rate discussed above.

Maturity: All Project GO bonds have a final maturity in FY2023, corresponding to the last fiscal year of receipt of net GET Surcharge revenues.

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 percent 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 February 2012, the City had $155.3 billion in net assessed value of real property, which represents $23.3 billion in total legal debt capacity. Of the total capacity, $21.1 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 percent of the City's total operating budget.
- Debt service on direct debt, excluding self-supported bonds, should not exceed 20 percent of the General Fund revenues.
- Other guidelines include a limitation on the City's variable debt rate and debt refunding policy.

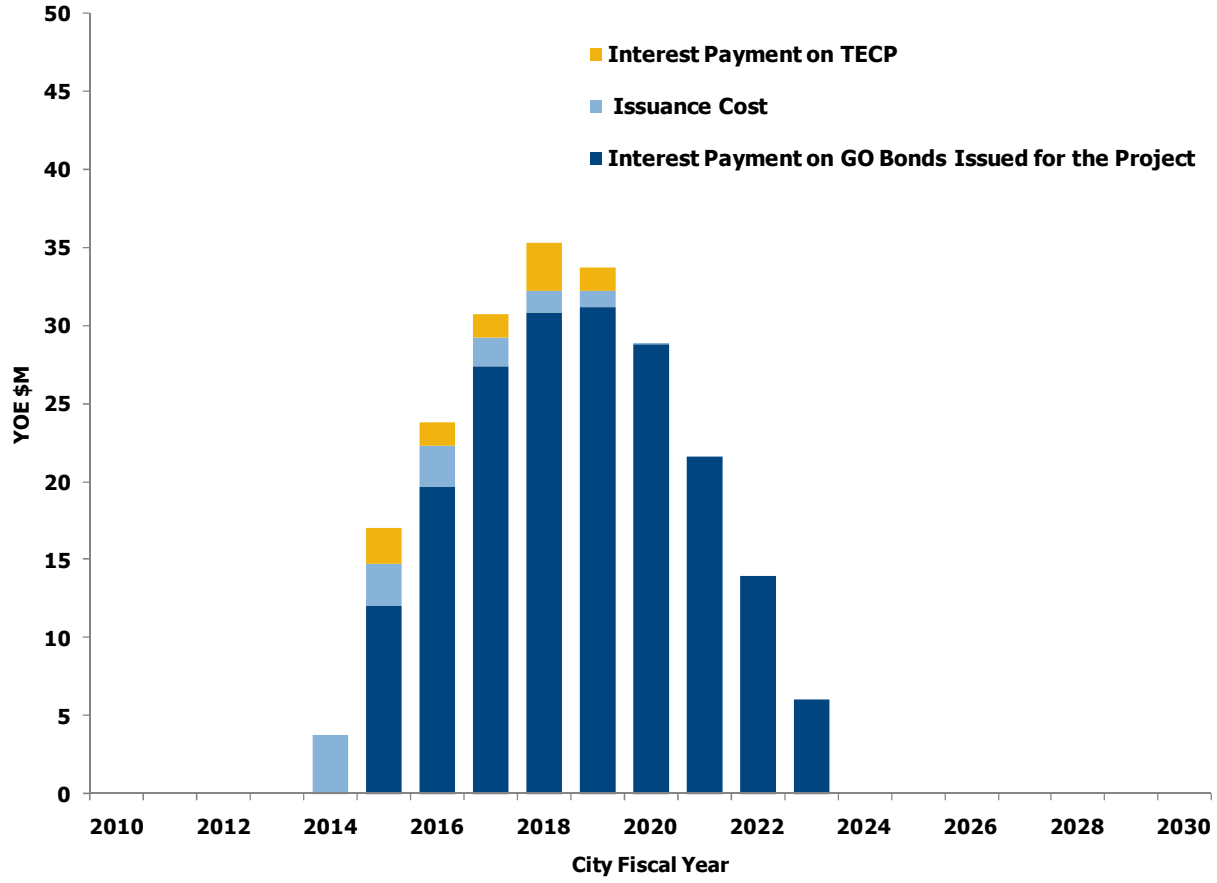
Assuming the City's affordability guidelines are applicable in future years, the limitations on future GO debt can be calculated based on growth assumptions in assessed property values, General Fund revenues, and the City's operating budget.

The resolution that adopted the affordability guidelines includes language stating that the guidelines "may be suspended for emergency purposes or because of unusual circumstances." In a letter dated October 26, 2011, the City's Department of Budget and Fiscal Services recommended, and the City's Managing Director concurred, that (1) issuing shorter than normal GO debt to fund the Project which would be repaid by GET Surcharge revenues was not contemplated at the time of Resolution No. 06-222; and (2) the affordability guidelines be suspended for the period of FY2014 to FY2023 due to unusual circumstances created by the Project's financing structure. 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.

Finance Charges

Based on the above assumptions, finance charges to be incurred for the Project are projected to total $173 million between FY 2014 and FY 2020; and $215 million between FY2014 and FY2023. As shown on Figure 2-7, the majority of finance charges correspond to interest payments on Project GO bonds.

Figure 2-7, Total Annual Finance Charges, FY2010 – FY2030, YOE $millions



TECP = Tax-Exempt Commercial Paper // GO = General Obligation

For detailed annual cash flows for the Project, refer to Attachment A.

SYSTEMWIDE CAPITAL FUNDING SOURCES

While the assumed New Starts funding, GET Surcharge revenues, and a portion of the FTA Section 5307 formula funds 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. The following section discusses these Federal and local funding sources.

FEDERAL FUNDS

The three main sources of Federal funds for systemwide 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) – FGM Program
- FTA Capital Investment Grants – Bus and Bus-Related Equipment and Facilities Program

The City should expect to see increases in the levels of funding from the first two of these sources once the Project is implemented, due to increases in the levels of transit service that are accounted for in the apportionment formula. The following sections detail the expected revenue from each source before and after the Project is in operation. As a general rule, the financial plan assumes that Congress will pass a new authorization and appropriate the authorized apportionment each year.

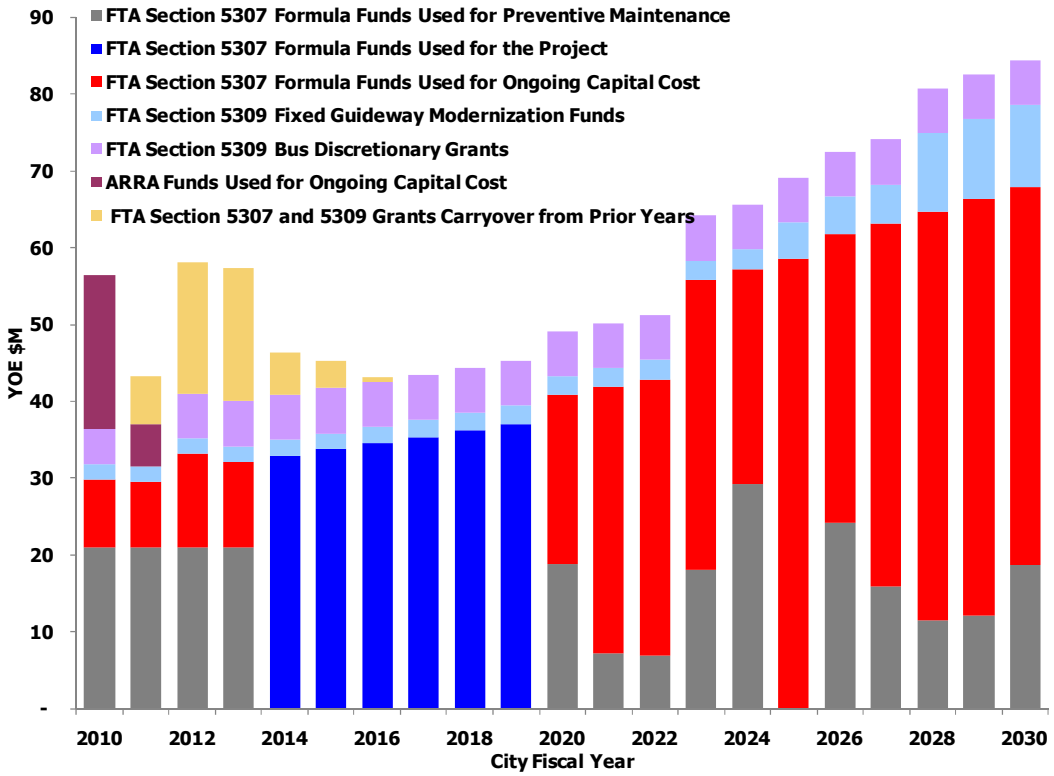
FTA Urbanized Area Formula Program (Section 5307)

Annual Section 5307 revenues are presented in the summary of non-New Starts Federal capital funding sources on Figure 2-8. Under Federal law, Section 5307 funds may be used for preventive maintenance, which is part of a transit system's operating budget. Section 5307 apportioned funds are used for the Project between FY2014 and FY2019, but will again be available for other transit uses starting in FY2020. 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. Actual apportionments made by FTA were used for FY2011. The methodology used to forecast Section 5307 funds is described below.

In addition to the base growth rate mentioned above, Section 5307 revenues are further increased two years after the opening of the main segments of the Project in FY2017 and FY2020, based on the formula method that FTA uses to apportion these funds. Similar increases occur in FY2022 and FY2025 following the implementation of other projects in the region, consistent with the ORTP. The implementation of the Project is expected to generate an additional $103 million in Section 5307 funding through FY2030. Table 2-9 presents the annual forecast of 5307 revenues, and breaks out the funds expected to be received as a result of the Project implementation.

The financial plan also takes into account Section 5307 and Section 5309 Bus Capital funds received in years prior to FY2011 that are planned to be used between FY2011 and FY2016 for bus and paratransit acquisitions. These funds are expected to total $50 million.

Figure 2-8, Use of Non-New Starts Federal Revenues, FY2010 – FY2030, YOE $millions



ARRA = American Recovery and Reinvestment Act

Table 2-9, FTA Sec. 5307 and 5309 FGM Apportionments and Impact of the Project, FY2010 – FY2030, YOE $millions

	FTA Sec. 5307 Apportionments	Impact of the Project	Total FTA Sec. 5307 Apportionments	*Annual Growth Rate*	FTA Sec. 5309 FGM Apportionments	Impact of the Project	Total FTA Sec. 5309 FGM Apportionments	*Annual Growth Rate*
2010*	$29.76	---	$29.76		$2.12	---	$2.12	
2011*	$29.46	---	$29.46	-1.01%	$2.01	---	$2.01	-5.19%
2012**	$33.20	---	$33.20	12.69%	$1.95	---	$1.95	-3.19%
2013	$32.17	---	$32.17	-3.10%	$2.00	---	$2.00	2.50%
2014	$32.94	---	$32.94	2.41%	$2.05	---	$2.05	2.50%
2015	$33.73	---	$33.73	2.40%	$2.10	---	$2.10	2.50%
2016	$34.54	---	$34.54	2.40%	$2.15	---	$2.15	2.50%
2017	$35.37	---	$35.37	2.40%	$2.21	---	$2.21	2.50%
2018	$36.22	---	$36.22	2.40%	$2.26	---	$2.26	2.50%
2019	$37.09	---	$37.09	2.40%	$2.32	---	$2.32	2.50%
2020	$38.01	$2.86	$40.87	10.20%	$2.37	---	$2.37	2.50%
2021	$38.92	$2.93	$41.86	2.40%	$2.43	---	$2.43	2.50%
2022	$39.85	$3.01	$42.86	2.40%	$2.50	---	$2.50	2.50%
2023	$45.05	$10.72	$55.77	30.11%	$2.56	---	$2.56	2.50%
2024	$46.13	$10.99	$57.12	2.42%	$2.62	---	$2.62	2.50%
2025	$47.24	$11.26	$58.50	2.42%	$2.69	$2.10	$4.79	82.54%
2026	$50.03	$11.70	$61.73	5.52%	$2.75	$2.15	$4.91	2.50%
2027	$51.23	$11.99	$63.22	2.42%	$2.82	$2.20	$5.03	2.50%
2028	$52.45	$12.29	$64.75	2.42%	$3.62	$6.52	$10.15	101.78%
2029	$53.71	$12.60	$66.31	2.42%	$3.71	$6.68	$10.40	2.50%
2030	$55.00	$12.92	$67.91	2.41%	$3.81	$6.85	$10.66	2.50%
Total	**$852.10**	**$103.28**	**$955.38**		**$53.06**	**$26.51**	**$79.57**	

Note: Totals may not add due to rounding; Section 5307 funds are net of transfers to the State's Vanpool program
* Actuals
** Based on half year apportionment data

FTA Section 5309 Capital Investment Grants – Fixed Guideway Modernization Program

Similar to Section 5307 funds, Section 5309 FGM funds are apportioned using the Federal formula specified by law. Honolulu's apportionment is based on the amount of fixed guideway directional route miles and revenue vehicle miles on facilities in operation at least seven years. Forecast fixed guideway directional route miles play an important role in the formula for calculating Section 5309 FGM apportionments. In addition to the increase due to the Project, the HOV zipper lane and other HOV projects assumed to be introduced between FY2022 and FY2025 would increase the directional route miles. As with the Section 5307 funds, the Project will lead to an increase in the formula apportionment amount due to the increased amount of service on fixed guideway facilities. Of the total $53 million expected to be received by the City from FY2011 to FY2030, $27 million is expected to be generated from the implementation of the Project.

FTA Section 5309 Bus and Bus-Related Facilities Program (Bus Capital)

Bus Capital funds can be allocated at the discretion of the Secretary of the U.S. Department of Transportation. Eligible purposes for this funding source include: acquisition of buses for fleet and service expansion; bus maintenance and administrative facilities; transfer facilities; bus malls; transportation centers; intermodal terminals; park-and-ride stations; acquisition of replacement vehicles; bus rebuilds; bus preventive maintenance; passenger amenities, such as passenger shelters and bus stop signs; accessory and miscellaneous equipment, such as mobile radio units; supervisory vehicles; fareboxes; and computers, shop, and garage equipment. Since FY2011 FTA has allocated these funds through a State of Good repair program.

The discretionary nature of this program makes the level of funding difficult to predict. Based on Honolulu's success at receiving these funds in the past, this analysis assumes that Honolulu's Bus Capital allocations between FY2012 and FY2030 will be equal to the average of Honolulu's Bus Capital funding revenues from FY1996 to FY2011, which is about $6 million per year.

LOCAL CAPITAL ASSISTANCE FOR THE SYSTEMWIDE AND ONGOING PROJECT CAPITAL NEEDS

After FY2021, the City intends to apply $54 million (in YOE dollars) of the remaining $193 million (in YOE dollars) cash balance to CARP expenditures and the purchase of 10 additional railcars.

The City is required to match all FTA funding programs with at least 20 percent in local funds. This financial plan, therefore, assumes that at least 20 percent of each year's ongoing capital needs are matched at that level. With the Federal revenues described above, the City is sometimes 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

This chapter describes the City's plan to fund the O&M costs associated with the Project and the overall transit system. The discussion begins with a summary of the O&M cost estimates and methodology and then presents the operating sources intended to fund these costs.

OPERATING COSTS

O&M cost estimates were developed for the Project, TheBus, and TheHandi-Van, and account for all costs associated with operating and maintaining these services, including labor, fringe benefits, materials and supplies, fuel, and electricity. This section describes the methodology and estimates used in the analysis.

PROJECT O&M COSTS

The O&M costs for the Project were developed using prices from the Core Systems Contract awarded in FY2011. Escalated O&M costs are provided for the Intermediate O&M Period. For the Full O&M Period and the Optional O&M Period, the Core Systems Contract provides O&M costs by year in 2011 dollars. The contract includes a formula based on indices published by the U.S. Bureau of Labor and Statistics (BLS) for labor costs, electricity prices, consumer prices, and producer prices to escalate the costs to YOE dollars.

For the financial plan, 11 years of historical data from BLS were used to escalate the O&M costs that are included in the Core Systems Contract. More details on the data used for inflating these costs and its application can be found in Table D-4 of Attachment D. It is assumed that the costs in the last year of the Optional O&M Period will continue through the end of the forecast period.

The remainder of the Project O&M services will be delivered directly by HART. These costs (excluding pass-through utility costs) account for approximately 19 percent of total Project O&M on average and include costs for guideway structure inspections and maintenance, security patrols (not including the MSF and Yard, which is covered by the Core Systems Contract), fare revenue collection and equipment servicing, fare inspection and enforcement, station maintenance (including escalators and elevators), and costs associated with staffing of administrative and management personnel, including overhead, for the HART organization. The financial plan assumes that the HART organization will include 86 full-time equivalent positions when the full O&M period begins in March 2019. During the intermediate O&M period (East Kapolei to Aloha Stadium), the size of the HART organization related to O&M is assumed to be smaller relative to the level of rail operations.

A resource build-up approach was used to determine the Project O&M costs that will be directly incurred by HART. This approach fully allocates O&M costs based on level of service variables. Table 3-1 summarizes the corresponding level of service variables and unit costs used for this purpose.

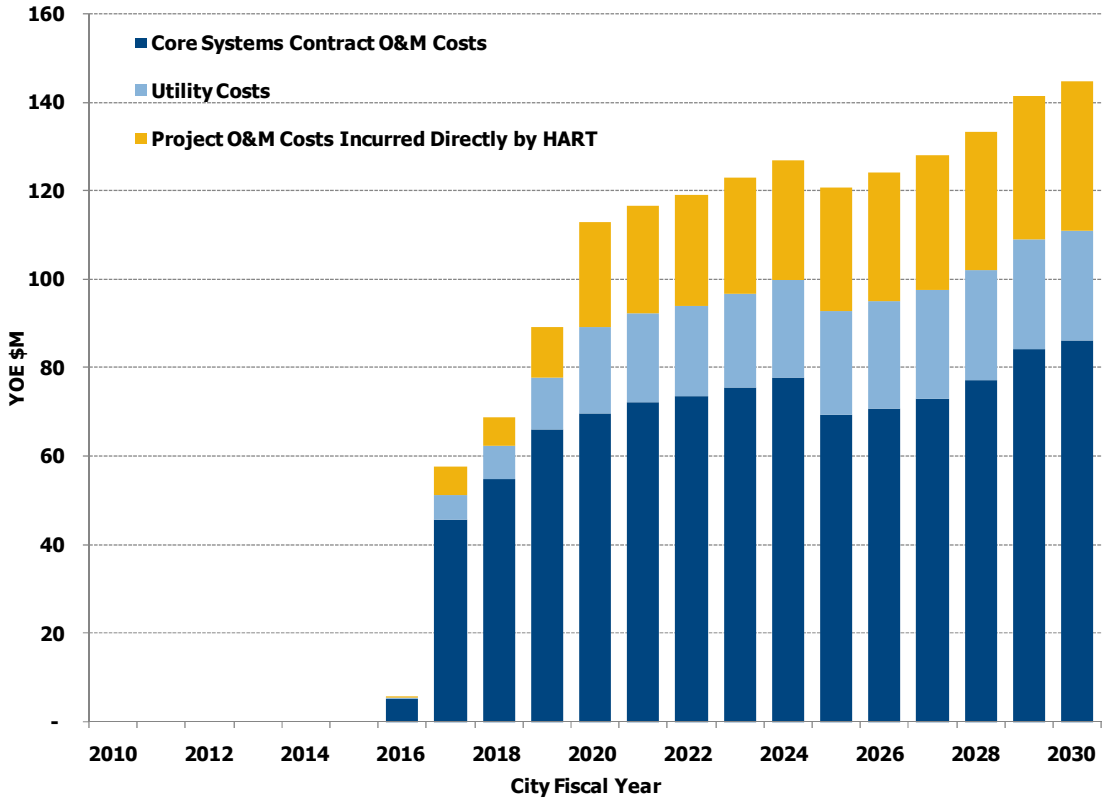
Table 3-1, Level of Service Variables and Unit Costs for O&M Costs Incurred Directly by HART

Cost Item	Resource Variable	Unit Costs (2012$)
Guideway structure inspections/maintenance	DRM	$46,598
Security patrols, not including MSF	DRM	$16,132
Fare revenue collection/equipment servicing	S	$115,864
Fare inspection/enforcement	S	$86,035
Station maintenance, including escalator/elevator	S	$98,682
HART staff and overhead	PV	$165,956

MSF = Maintenance Storage Facility and Yard // DRM= Directional Route Miles // S = Stations // PV = Peak Vehicles

Figure 3-1 shows the total O&M costs for the Project including the Core Systems Contract, HART, and utility costs (pass-through costs from the Core Systems Contract to HART).

Figure 3-1, Project O&M Costs, FY2010 – FY2030, YOE $millions



THEBUS O&M COSTS

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. This approach is consistent with Section 4 of FTA's *Procedures and Technical Methods for Transit Project Planning*, *Draft Version 3 dated August 28, 2008*. More details on TheBus O&M cost model can be found in the *Memorandum on O&M Cost Models*, *dated May 2009*.

Level of Service

The City currently operates standard buses (including 29 foot, 30 foot, 35 foot, and 40 foot buses) and a mixture of articulated 60-foot diesel and hybrid buses. As described in Chapter 2, the City will replace its articulated hybrid buses with articulated clean diesel buses. The peak vehicle requirements and revenue vehicle miles for TheBus system are shown on Figure 3-2 and Figure 3-3, respectively. The financial plan assumes straight-line growth in bus level-of-service between FY2020 and FY2030.

Figure 3-2, TheBus Peak Vehicles by Bus Type, FY2010 – FY2030

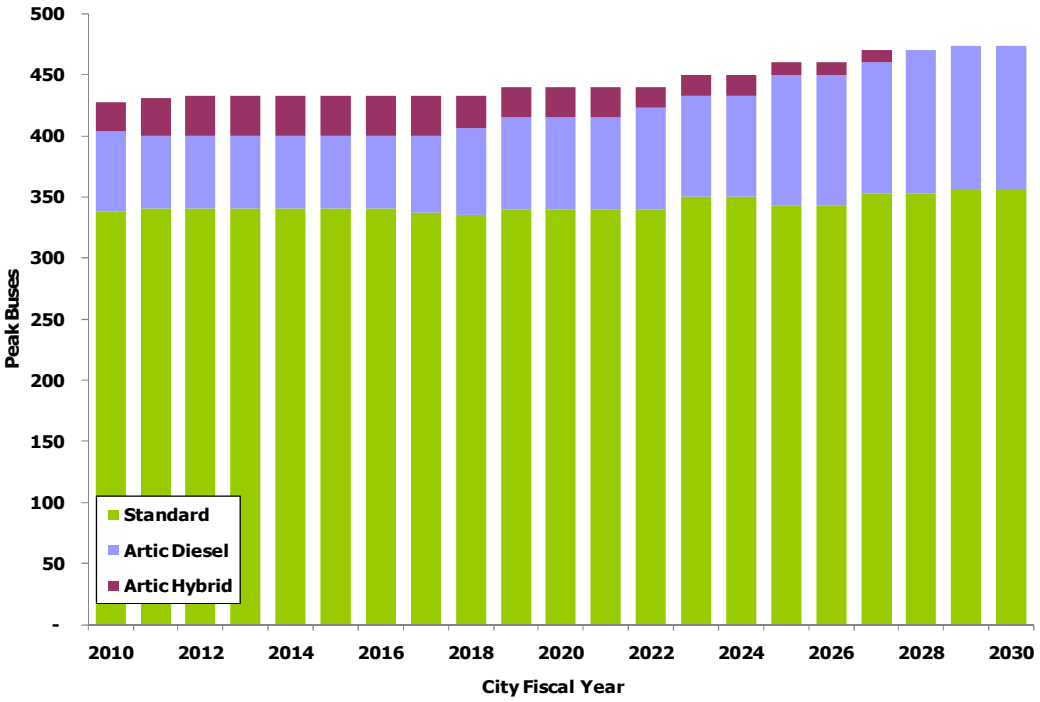
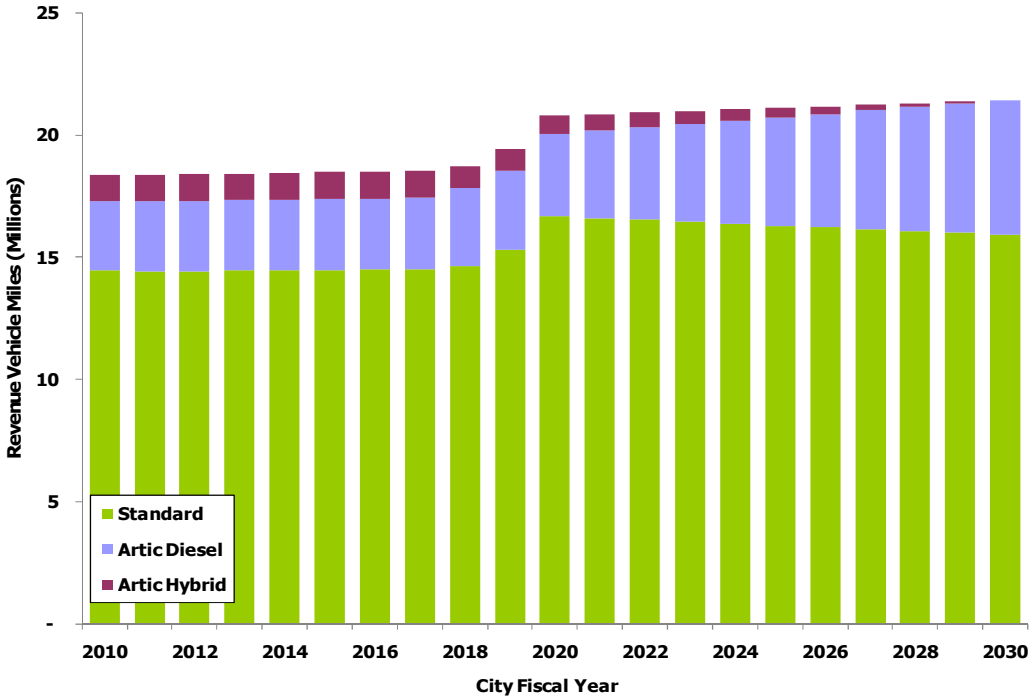


Figure 3-3, TheBus Revenue Vehicle Miles, FY2010 – FY2030



Unit Costs

An O&M cost allocation model was used to estimate O&M costs for each bus system component. The model identified nine level of service variables as shown in Table 3-2 and six object classes – including wages and salaries, health care, other benefits, materials and supplies, fuel and lubricants, and other costs. One level of service variable was assigned to each O&M expense line item, based on that item's sensitivity to given O&M cost drivers. Total costs were then summed for each level of service variable and divided by that variable's annual total amount to calculate unit costs, which were further broken down by object class. One more object class was added to this analysis to cover the general administrative and management expenses that DTS allocates to TheBus (including office equipment costs and other expenses associated with managing the contract with OTS. Total peak vehicles was also added as a level of service variable associated with DTS' contract administration expenses, as a proxy for the overall size of the operations. Table 3-2 summarizes the unit costs and the associated level of service in FY2020 and FY2030.

Table 3-2, TheBus Level of Service Variables and Unit Costs

Level of Service Variable	FY2020	FY2030	Unit Costs (2011$)
Revenue Vehicle Miles SB	16,675,869	15,920,221	$3.21
Revenue Vehicle Miles AD	3,353,942	5,505,873	$4.46
Revenue Vehicle Miles AH	767,844	-	$3.79
Revenue Vehicle Hours	1,577,552	1,659,823	$63.17
Peak Vehicles SB	340	357	$26,947
Peak Vehicles AD	75	117	$32,067
Peak Vehicles AH	25	-	$27,257
Total Peak Vehicles	440	474	$32,553
Maintenance Facilities	3	3	$930,706
Unlinked Passenger Trips	100,091,996	109,134,334	$0.096

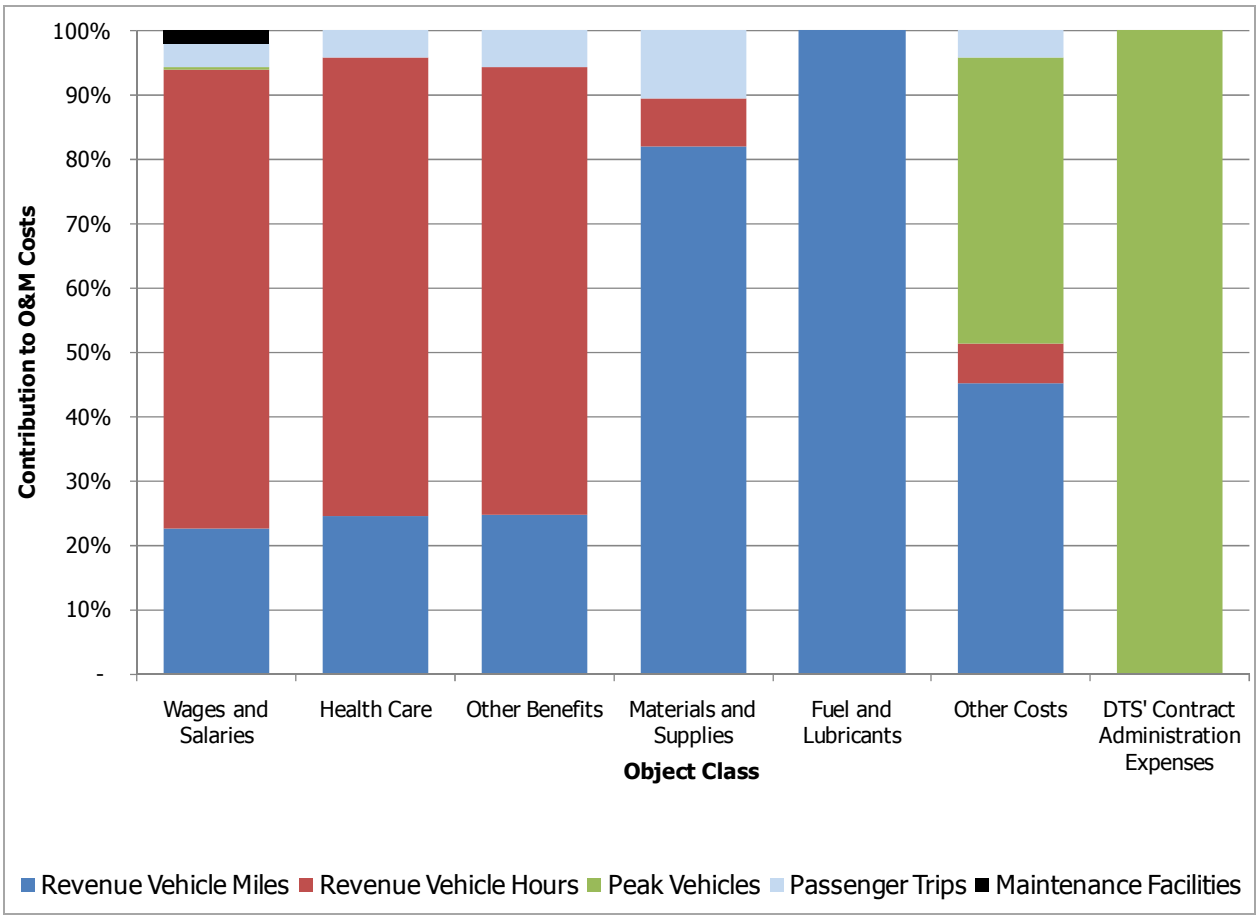
SB = Standard Bus // AD = Articulated Diesel // AH = Articulated Hybrid

Inflation

The unit costs developed and calculated in 2011 dollars were then inflated to YOE dollars. The actual operating expenses of the TheBus were first analyzed for the last five fiscal years (FY2006 to FY2011) to determine the principal driving level of service variable for each object class. Historical trends in the corresponding unit costs were then developed and compared to general inflation, as measured by the Honolulu Consumer Price Index (CPI-U) over the analysis period. The same spread was then applied to projected CPI-U inflation over the forecast period. This methodology and results are presented below.

As a first step, detailed actual cash-basis expenses were provided at the expense line item level. This allowed for assigning level of service variables to expenses in accordance with the O&M cost allocation model. Figure 3-4 depicts the average contribution of each level of service variable to total expenses by object class over the past five years. As shown, each object class has one principal explanatory level of service variable. Expenses associated with wages and salaries, health care, and other benefits, such as pensions, are driven by revenue vehicle hours; expenses associated with materials and supplies, fuel and lubricants, and other items are driven by revenue vehicle miles; DTS' contract administration expenses are driven by total peak vehicles.

Figure 3-4, TheBus Level of Service Variables by Object Class, FY2006 – FY2011



Historical trends were then established for unit O&M costs of each object class by its principal driving level of service variable (as presented in Table D-1 of Attachment D). The CAGRs were also calculated for each unit cost and compared to the CAGR of general inflation, as measured by the Honolulu CPI-U over the analysis period FY2006 - FY2011. Inflation assumptions by object class were established, as shown in Table 3-3, to define the relationship between the growth in unit cost for each object class and the growth in Honolulu's CPI-U forecasted for the next 20 years. From FY2012 through FY2015, this forecast is based on the quarterly outlook of key economic indicators from the DBEDT as of February 2012. The financial plan adjusts the projected growth from calendar year to fiscal year. The resulting growth rate in FY2015, equal to 2.50 percent, is then assumed to remain constant through FY2030. Inflation assumptions for each object class are as follows:

- Wages and Salaries are assumed to increase at 1.08 times the rate of general inflation.
- Health Care costs are assumed to grow at a faster rate, equal to 2.16 times the rate of general inflation.
- Other Benefits costs are assumed to grow at 2.08 times the rate of general inflation for FY2012 and FY2013. Starting in FY2014, these costs are assumed to grow at the same rate as wages and salaries. The higher historical rate for this object class is mainly a result of the higher pension costs; the Teamsters were successful in negotiating pension pay for TheBus operators comparable to pay negotiated by other organized labor (such as cement and United Parcel Service truck drivers). This high rate was negotiated in July 2008, prior to the recent economic downturn. The operating plan assumes future near-term negotiations will not be as favorable for TheBus operators. As such, the higher rate is assumed to carry forward through FY2013 when

the current contract is set to expire, but then grow at the lower rate of wages and salaries thereafter.

- Materials and supplies are assumed to grow at 1.43 times the rate of general inflation.
- Bus Fuel costs are increased based on the Energy Information Administration forecast for diesel fuel used in the transportation sector through FY2030, as published in its *2012 Annual Energy Outlook dated January 23, 2012*.
- Other Bus O&M costs and DTS' Contract Administration expenses are assumed to grow at the same rate as general inflation. This is a conservative assumption given that these costs have been growing at a lower rate historically.

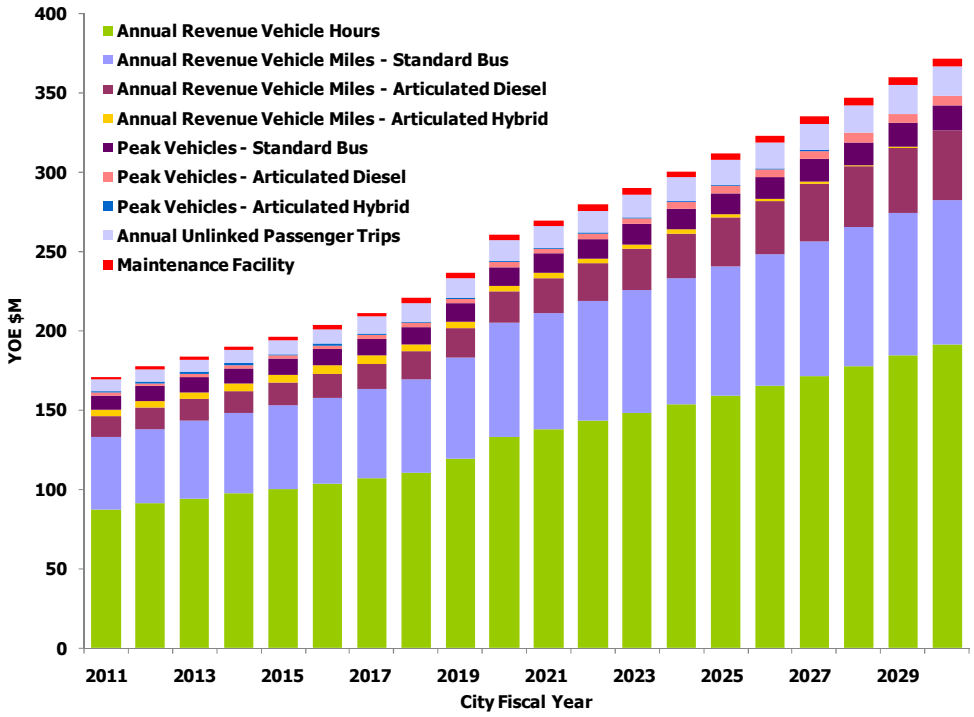
Table 3-3, TheBus Unit O&M Cost Inflation Assumptions

Object Class	Principal Explanatory Level of Service Variable	Actual FY2006-FY2011 Unit O&M Cost CAGR	Basis for Inflation of Unit O&M Cost in Financial Plan
Honolulu CPI-U		3.23%	
Wages and Salaries	RVH	3.50%	1.08 x CPI-U
Health Care	RVH	6.98%	2.16 x CPI-U
Other Benefits	RVH	6.71%	2.08 x CPI-U for FY2012 and FY2013; 1.08 x CPI-U thereafter
Materials and Supplies	RVM	4.60%	1.43 x CPI-U
Fuel and Lubricants	RVM	5.51%	EIA - 2012 Annual Energy Outlook Forecast for Diesel Fuel
Other Costs	RVM	1.78%	1.00 x CPI-U
DTS' Contract Administration	PV	-4.13%	1.00 x CPI-U

RVH = Revenue Vehicle Hour // RVM = Revenue Vehicle Mile // DTS = Department of Transportation Services // PV = Peak Vehicle // CPI-U = Consumer Price Index // EIA = Energy Information Administration

Inflated unit costs by object class were applied to level of service variable data taken from the transit service plan and forecast model output for the Project. Figure 3-5 shows the composition of total operating costs for TheBus system through FY2030, with the contribution to total cost of each level of service variable. As shown, revenue vehicle hours is the principal driving level of service variable for TheBus O&M costs. Table D-2 of Attachment D presents the transit operating measures of TheBus and compares historical growth rates to those assumed in the financial plan.

Figure 3-5, TheBus Total O&M Costs, FY2011 – FY2030, YOE $millions



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.

TheHandi-Van O&M costs have been increasing at a rapid rate for the past few years, mostly driven by passenger growth. In addition to providing public transportation service to the general public, TheHandi-Van has also been increasingly servicing various non-profit social service programs, generally administered or funded by the State of Hawai'i with Federal financial assistance through the Medicaid program. The nature of these latter trips is not necessarily correlated with the ageing population in Honolulu, but rather with the general resident population. As such, the financial plan assumes that TheHandi-Van ridership grows at an average rate, weighted 30 percent by the growth in general resident population in Honolulu and 70 percent by the growth in the resident population in Honolulu above 65 years old as forecasted by the DBEDT in its 2035 outlook dated August 2009 (see Table D-3 in Attachment D for historical and forecast resident population data). The resulting ridership is expected to grow at an average annual rate of 1.79 percent from FY2011 to FY2030.

Analysis of TheHandi-Van actual unit O&M cost per rider between FY2006 and FY2011 showed that unit cost increased at 1.61 times the rate of general inflation. The financial plan assumes this same relationship between the growth in unit O&M cost per rider and the growth in Honolulu's CPI-U forecasted for the next 20 years. It should be noted that the historical period used for this analysis experienced favorable negotiated wage increases with the Teamsters and significant investments by OTS to increase its workforce (particularly schedulers and dispatchers) in an effort to improve TheHandi-Van quality of service. DTS does not expect future near-term negotiations to be as favorable. DTS will also be collaborating with the social service programs to explore options for containing TheHandi-Van subscription service cost and enhancing its revenue.

Applying the projected ridership growth to the adjusted unit O&M cost yields an average annual growth rate for TheHandi-Van O&M costs of 5.96 percent per year.

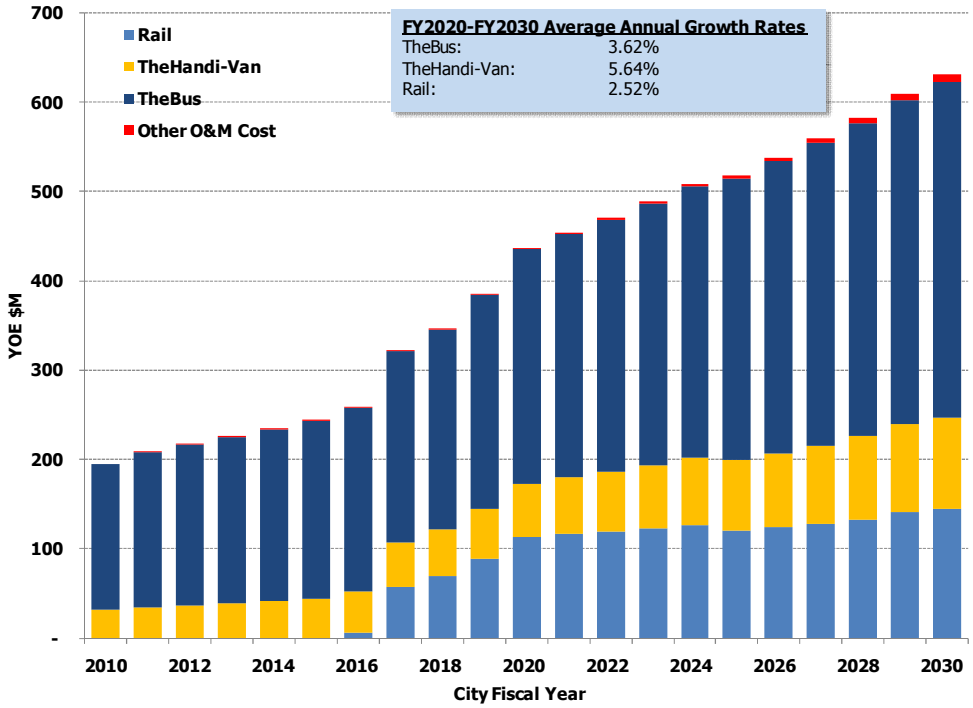
OTHER O&M COSTS

Other minor O&M costs are expected throughout the planning horizon. On average, these costs account for only $3 million per year and correspond to operating costs associated with establishing selected human service agencies as transportation providers to serve clients currently riding TheHandi-Van, and maintaining and expanding shuttle services for low-income persons working in Kapolei and Makakilo areas. Both of these efforts are included in the FY2011 – FY2014 Transportation Improvement Program.

SYSTEMWIDE O&M COSTS

Figure 3-6 illustrates the forecasted total annual O&M costs for the system broken down by mode. As seen on this figure, the O&M costs for TheBus and TheHandi-Van are increasing at a greater rate than the Project once fully implemented. TheHandi-Van is expected to grow at 5.64 percent on average per year between FY2020 and FY2030, TheBus at 3.62 percent, and the Project at 2.52 percent. The costs to operate the City's transit system are still expected to be attributable mostly to bus operations, as the Project is expected to account for about 23 percent of total O&M cost between FY2017 and FY2030.

Figure 3-6, Total Systemwide O&M Costs, FY2010 – FY2030, YOE $millions



Note: Project Core Systems O&M cost in FY2030 was extrapolated

OPERATING REVENUES

This section describes the sources of funds that the City intends to use to fund the O&M costs for the Project and the transit system as a whole. Operating revenues include passenger fares, while other revenues are comprised mainly of transfers from the City's General and Highway Funds and FTA Section 5307 formula funds.

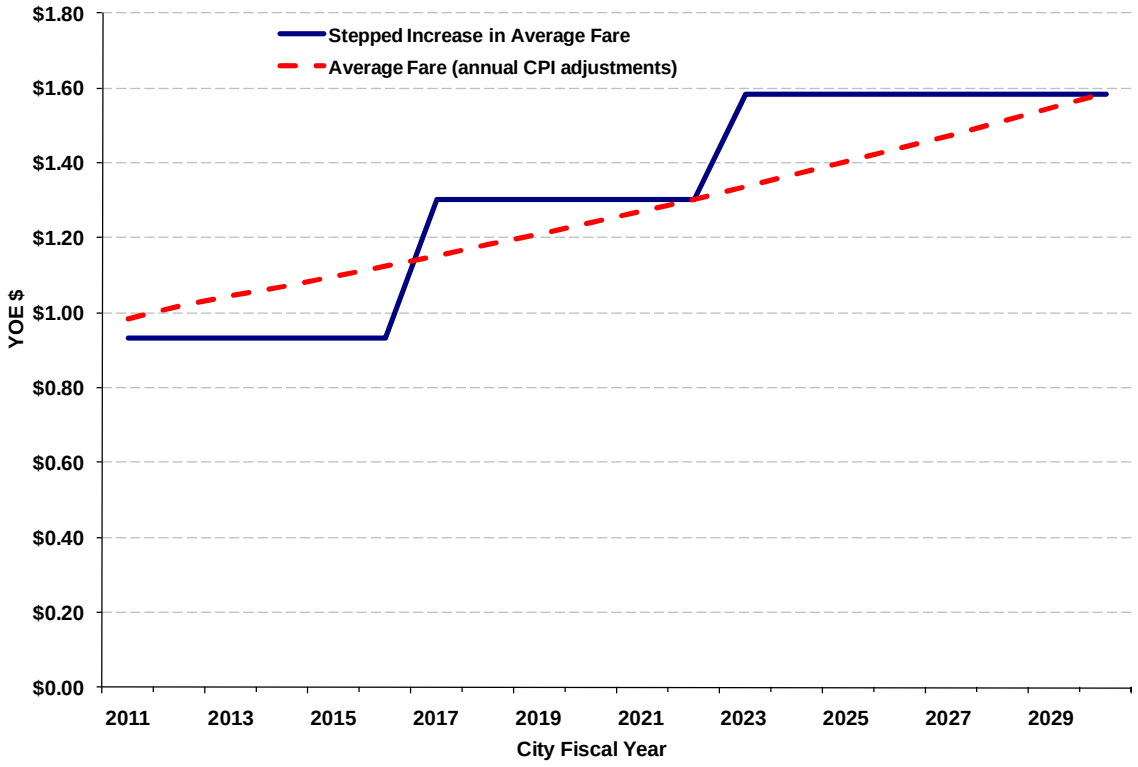
PASSENGER FARES

In FY2011, TheBus reported 73.8 million boardings, corresponding to about 55.5 million linked trips (taking transfers into account). On July 1, 2010 (beginning of FY2011), the City increased fares by approximately 12 percent on average. Accordingly, the FY2011 average fare per linked trip was $0.93.

A City resolution (00-29 CD1) stipulates that the farebox recovery ratio (FRR) for TheBus be maintained between 27 percent and 33 percent, which demonstrates a commitment of the City to keep operating costs and revenues growing at a comparable rate on average. This financial plan assumes that the same fare structure will be maintained for both TheBus and the Project, with free transfers assumed between both modes.

Figure 3-7 illustrates the assumed future fare increases that are used as the basis for the fare revenue forecast, as compared to a constantly increasing average fare, which is assumed implicitly in the travel demand model. Fares are increased such that the 2030 average fare matches the average fare assumed in the travel demand model in real terms.

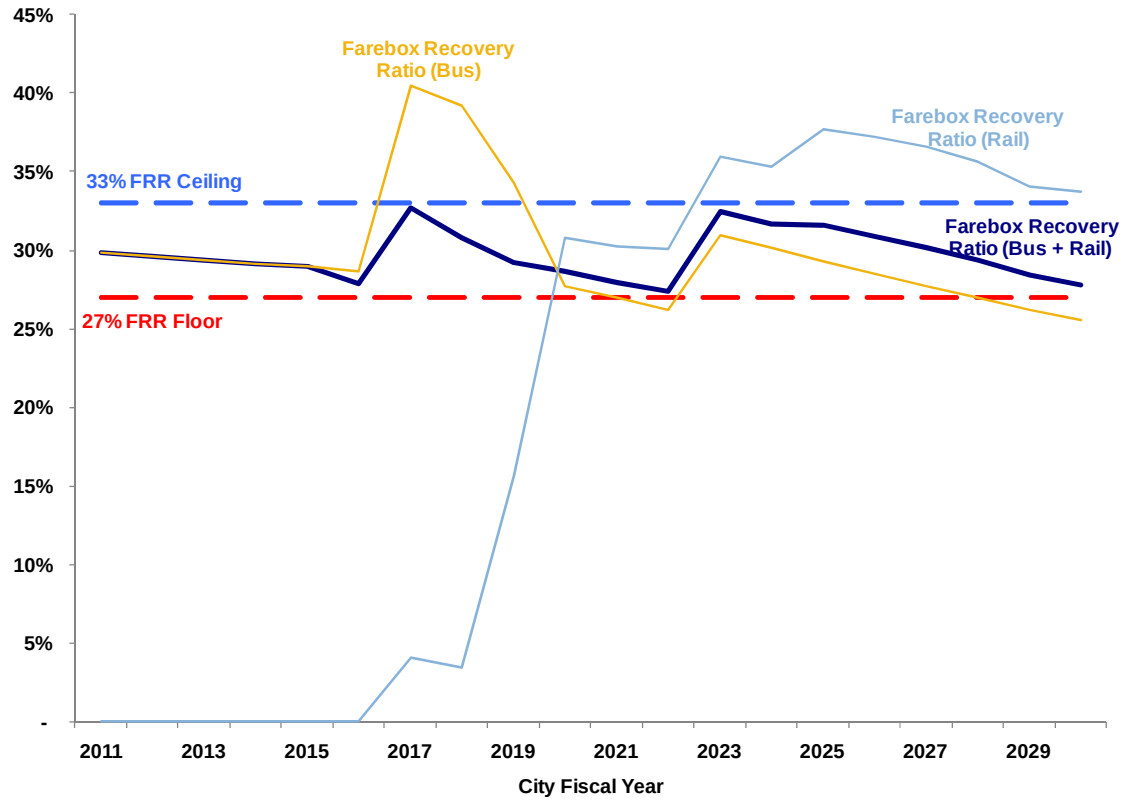
Figure 3-7, Average Fare Grown at CPI-U vs. Periodic Increases, FY2011 – FY2030, YOE $



CPI -U= Consumer Price Index All Urban Consumers

The growth in average fare is assumed as a "step function" with increases of approximately $0.37 in FY2017 and $0.28 in FY2023. Figure 3-8 shows the FRR for TheBus and the Project combined, as well as for TheBus and the Project separately. Consistent with City policy, the combined FRR for bus and rail remains between 27 percent and 33 percent through FY2030. This figure also demonstrates that, once fully implemented, the Project is expected to carry a larger load relative to its O&M cost than TheBus, as illustrated by the higher FRR for rail alone than for bus alone. In part, this reflects the fact that riders are expected to rely on rail for longer trips on average, and is also consistent with general industry benchmarks. The FRR by mode was obtained by proportioning total fare revenues between bus and rail - 50 percent based on boardings and 50 percent based on passenger miles. The breakdown of fare revenues by mode is presented in the operating plan cash flow in Appendix A.

Figure 3-8, Rail and Bus Farebox Recovery Ratio (FRR), FY2011 – FY2030



Note: TheBus and Project forecasted fare revenues as a percentage of TheBus and Project forecasted O&M costs
FRR = Farebox Recovery Ratio

The timing of the fare increases assumed in the financial plan is conservative compared to the City's past history. As illustrated in Table 3-4, the City has increased fares five times over the past 10 years.

Table 3-4, TheBus Fare Structure and History

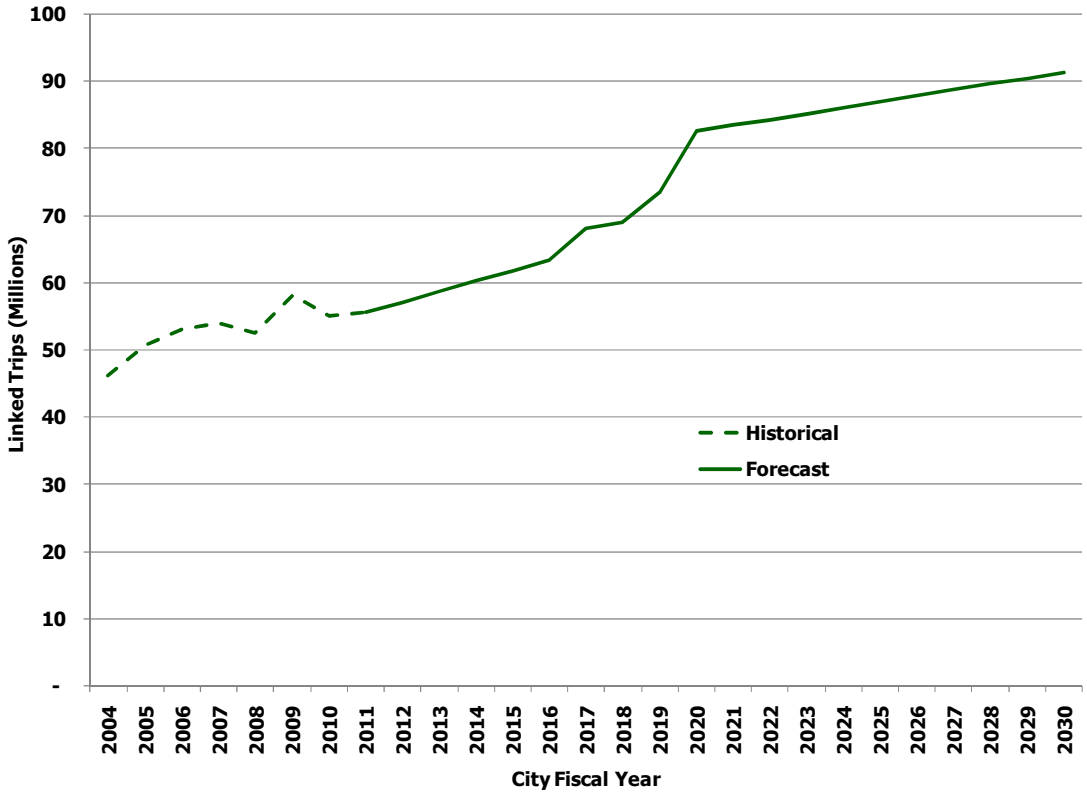
Effective Date	One-way Cash Fare		Monthly Pass	
	Adult	Youth	Adult	Youth
March 1, 1971	0.25	0.15	N/A	N/A
March 2, 1971	0.25	0.10	N/A	N/A
June 9, 1972	0.25, 0.50	0.10, 0.25	N/A	N/A
March 15, 1974	0.25	0.10	N/A	N/A
November 1, 1979	0.50	0.25	15.00	7.50
June 18, 1984	0.60	0.25	15.00	7.50
October 1, 1993	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 estimates used in the financial plan were taken from the travel demand model. Approximately 280,000 linked trips per day are forecasted in 2030 for the bus and rail system combined. Significant ridership increases are observed in FY2017 and FY2020 corresponding to the first full years following opening of the Intermediate O&M Period and the Full O&M Period, respectively. Once the Project is operational, transfers between TheBus and the Project would also be free and seamless. These assumptions yield projected fare revenues for bus and rail of $145 million in FY2030. The assumed growth during the intermediate O&M period is based on a linear interpolation between the opening and forecast years. Growth prior to the Intermediate O&M Period is commensurate with projected growth in population and employment.

Figure 3-9 illustrates the City's forecasted linked trips, and shows an increase of 2.5 percent in FY2016 corresponding to one month of the first phase opening. Linked trips are expected to increase by 7.5 percent in FY2017 which is the first full year of the Intermediate O&M Period. In FY2019, linked trips are expected to increase by 6.5 percent, corresponding to the Project being open for the last four months of the fiscal year. FY2020 will be the first full operating year with linked trips expected to grow by 12.3 percent in that year.

Figure 3-9, Historical and Forecasted Linked Trips for TheBus and the Project, FY2004 – FY2030, millions of Trips



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.

Once the Project is operational, the City is expected to receive additional Section 5307 funds based on the higher level of bus service and the addition of rail service. 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. Increased Section 5307 funding attributable to the full Project opening for revenue service does not become available until FY2022 because of the 2-year lag between the start of service and the National Transit Database report containing increased service data used by FTA to calculate the formula.

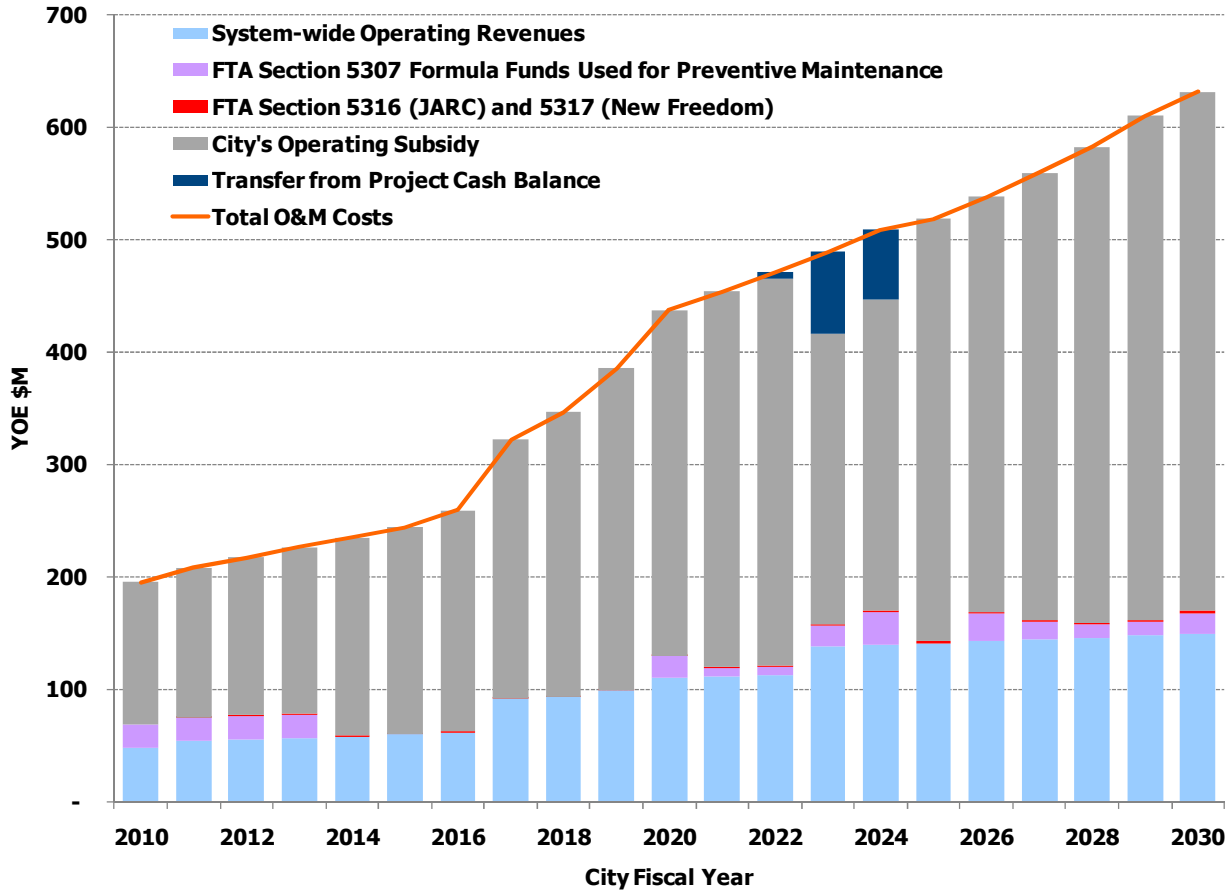
Over the long term, the City is expected to receive a cumulative amount of approximately $926 million from FY2011 through FY2030 from Section 5307 funds, including $103 million in additional funds generated from the implementation of the Project. Of the total Section 5307 funds, $490 million is anticipated to be used for ongoing transit capital needs and the remaining $226 million is assumed to be used for preventive maintenance.

The City is also expected to continue receiving funds from the FTA Section 5316 (Job Access Reverse Commute) and Section 5317 (New Freedom) programs to fund operations for projects serving low-income persons. The corresponding amount is projected to range from $1 to $2 million annually.

SYSTEMWIDE OPERATING PLAN

Given the assumptions in this financial plan, the Federal and local revenues are assumed to be sufficient to operate and maintain the Project while continuing the operation and maintenance of the existing bus and paratransit systems. This further assumes that the City will continue to support transit operations through transfers from its General and Highway Funds, as it has done in the past. Before the Project opens, between FY2010 and FY2015, the City is expected to subsidize on average 68 percent of TheBus and TheHandi-Van O&M costs. The average subsidy is expected to increase slightly, averaging 70 percent of total O&M costs between FY2016 and FY2030 once the Project opens, with an average FRR of 30 percent during that period (including bus, rail, and paratransit). Figure 3-10 shows the breakdown of operating revenues compared to total operating costs.

Figure 3-10, Operating Costs and Revenues, FY2010 – FY2030, YOE $millions



JARC = Job Access Reverse Commute

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 – 7.25 percent 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 – City receives 1.885 percent 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 percent tax on all electric power and gas companies' gross sales receipts.

During the period from FY1994 to FY2011, revenues from these sources totaled $14.0 billion, of which approximately $1.5 billion (11 percent) went to transit.

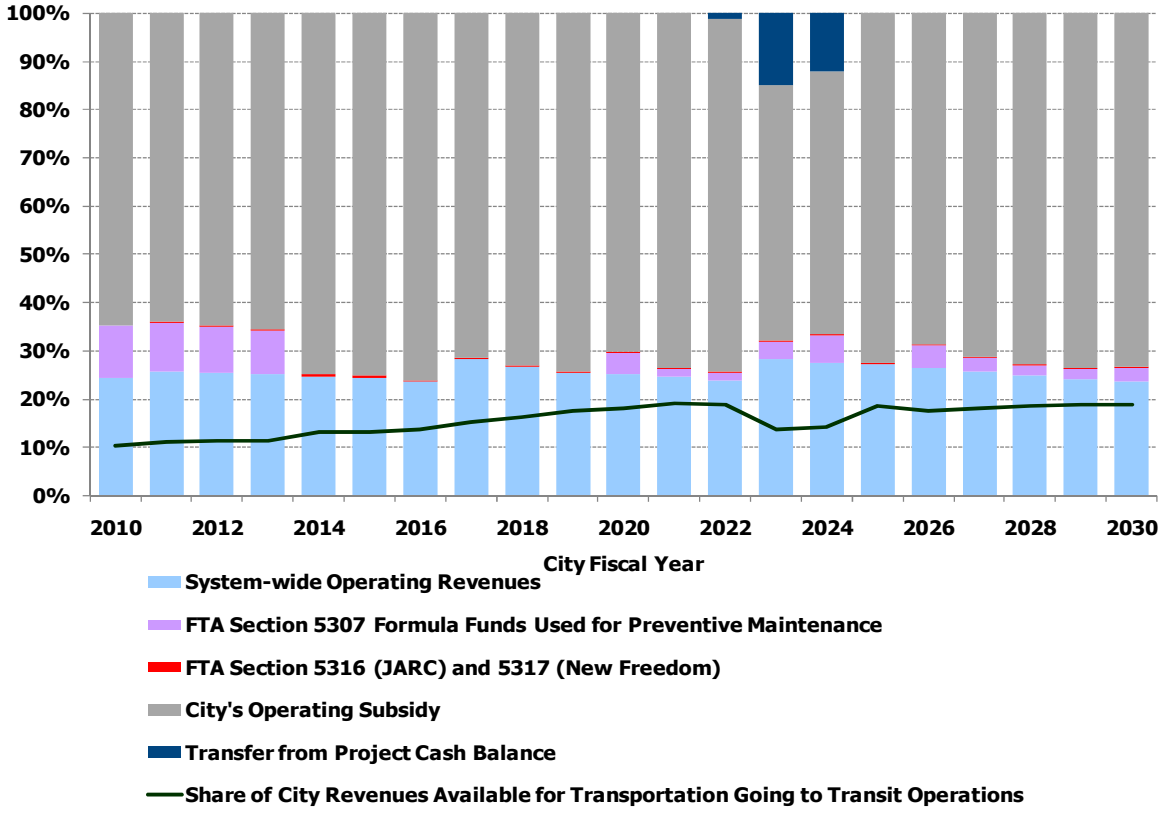
The financial plan forecasts the growth in these City Funds at an aggregate level and the resulting share that will be needed for transit operations. This forecast applies the aforementioned CPI-U inflation forecast in Honolulu as well as a real rate of growth equal to 1.30 percent, which is equal to the real growth experienced between FY1996 and FY2011.

Between FY2011 and FY2015, TheBus and TheHandi-Van services are expected to receive, on average, 12 percent of these funds' revenues. To meet the O&M funding requirements for the Project and planned bus system after FY2016, the City contribution is expected to average 17 percent through FY2030.

Increases in other transit revenue sources, such as advertising, or increases to the overall Section 5307 program could reduce the amounts required to be transferred from the City's General and Highway Funds. In addition, it should be noted that the implementation of the Project is expected to result in an additional $27 million and $103 million from Section 5309 FGM and Section 5307 funds respectively through FY2030, thereby increasing the amount of Section 5307 funds that can be used for preventive maintenance.

Figure 3-11 shows the breakdown of operating revenues and the City contribution as a percentage of City revenues available for public transportation, including the fund sources described above. In addition to the sources mentioned above, a total of $140 million from the Project's cash balance is expected to be transferred to fund rail O&M cost from FY2022 to FY2024 (see Chapter 2 for more details on the use of the Project's cash balance).

Figure 3-11, Operating Revenues and City Contribution, FY2010 – FY2030



Chapter 4: RISKS AND UNCERTAINTIES

The preceding chapters presented the financial plan with baseline assumptions for revenues and costs. This chapter discusses the risks and uncertainties around many of the key assumptions, and presents the results of several capital and operating stress tests. The detailed cash flows summarizing the results of the stress tests are included in Attachment B.

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 on already awarded contracts that make up 41 percent of the Project capital cost estimate in YOE dollars (without contingency). These include the design-build contracts awarded for the West O'ahu-Farrington Highway Guideway; the Kamehameha Highway Guideway; the Maintenance Storage Facility and Yard; and the design-build portion of the Core Systems DBOM Contract. Additionally, other contract awards include engineering service agreements with utility companies for Sections I and II (partial); design of the Farrington Highway station group; and design of the Airport section guideway and utilities. The remainder of the capital cost not covered by these contracts reflects a "bottom-up" cost estimate.

Inflation

As described in Chapter 2, Project construction costs have been escalated using individual cost component rates which vary according to demand and supply at a global, regional, and local level. In general, commodity prices tend to be more sensitive to global economic pressures with some construction cost components being more volatile than others. Steel prices increased slightly in 2011, fueled mainly by increases in production capacity utilization. Other commodity components (concrete and other materials) might be subject to similar fluctuations in prices and could have similar impact of increasing Project costs.

The majority of labor contracts are due to be renegotiated in FY2013 and 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 15 percent of the total base-year cost without contingencies, or approximately $560 million in 2012 dollars or $644 million in YOE dollars. 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.

The Project's master schedule has been developed in close coordination with FTA, and reflects input on the baseline assumption of executing an FFGA by October 2012. Any potential shift in the FFGA date beyond the expiration date of the LONP (issued in February 2012) could impact the Project construction schedule, although it is likely that the City would be able to implement schedule mitigation measures to reduce such an impact. 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 any 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 construction financing. Each of 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. These rates were adjusted upward by 50 basis points for bonds issued between FY2016 and FY2019 to account for potential future interest rate increases.

Credit Rating

This financial plan assumes that Project-related debt will not impact the credit quality 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 has been extended until June 30, 2012. While these programs have been in place for many years, through several authorization cycles, there is 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.

U.S. Department of Transportation's FY 2013 budget proposal includes increasing levels of funding available for transit projects; including $2.2 billion of funds for "Transit Expansion and Livable Communities" projects, which would include the New Starts program. While it is unlikely that these exact amounts will be enacted by Congress, the budget proposal signals a strong commitment from the Administration to the New Starts program.

The timing of New Starts funding is also subject to appropriation uncertainties. The total amount of the FTA contribution will be specified in an FFGA between FTA and the City. The FFGA will also identify the amounts to be made available each year, subject to annual appropriations legislation. History has shown that Congress ultimately honors and appropriates the full amount of New Starts funds awarded in an FFGA. Congress could 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 capital cost.

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.

CAPITAL PLAN SENSITIVITY ANALYSES

Sensitivity analyses were run to assess the City's capacity to cover unexpected cost increases or revenue shortfalls. This section presents the results of a potential increase in Project capital cost, and a reduction in the growth rate in net GET Surcharge revenues.

The City has developed a risk management plan and is committed to enacting cost containment measures as a primary tool to maintain the Project's capital cost within the established budget. If needed, the City also has various strategies to mitigate these downside risks using mechanisms that are currently in place, including additional debt capacity available to the City through the issuance of GO debt backed by excess Project revenues. This would result in a reduction in the amount deposited to the Project reserve fund or earlier release of those funds. As a last source of mitigation, the City could also utilize its existing TECP program for short-term financing needs. Other potential mitigating strategies that could be utilized by the City include value capture mechanisms, advertising and parking revenues, and extending the GET Surcharge revenues (although this would require legislative amendment).

Scenario 1 – 10 Percent Project Capital Cost Overrun

This scenario illustrates the impact of a 10 percent overrun in the Project's capital cost (SCCs 10 – 90) starting in FY2014, over and above the 15 percent contingency of $644 million in YOE dollars that is already included in the base cost. The basis of this assumption is that any costs incurred through FY2013 are actual expenditures; or potential changes that are already known and have been accounted for in the contingency level of the Baseline Cost Estimate. The total capital cost impact of this scenario, including additional financing costs, is an additional $416 million in YOE dollars.

Under this scenario the City would still deposit $139 million from the FY2014 debt issuance in a Project reserve fund. Starting in FY2015, these reserve funds would be released to pay for 50 percent of the increase in Project capital cost each year. The City would also issue additional GO bonds on an annual basis from FY2014 to FY2020 to fund the remaining 50 percent of the increase in Project capital cost.

As in the Base Case, this scenario assumes that the City would use $100 million in the existing TECP capacity on a 270-day revolving basis for the years FY2014 to FY2018. During this period the City would still have access to an additional $350 million in TECP capacity that has already been authorized. After FY2018, when the $100 million in TECP capacity is no longer needed to finance Project construction, the City would have access to the $450 million in authorized TECP capacity.

Under this scenario the Project's cash flow would still exhibit a positive cash balance in each year until FY2020. From FY2021 through FY2023, the City would use its TECP capacity or other resources to fund approximately $223 million in outstanding debt service obligations. If TECP is used, the City would still have approximately $227 million of available TECP capacity out of the $450 million that is currently authorized. It is important to note that under this scenario the City would not need to access the TECP program until FY2021, which is well after the last year in which the City uses the $100 million on a revolving basis during the construction period. At the end of FY2023, the City would not transfer any GET Surcharge funds to rail O&M or ongoing capital needs.

Table 4-1 summarizes the results of this stress test scenario, including the amount of the projected cost increases that is absorbed by the Project reserve fund, and the amount that is absorbed by the TECP or other resources through FY2023.

Table 4-1. Summary of Stress Test Results for Capital Plan Sensitivity Scenario 1

Total Capital Cost Impact of Stress Test (including Financing)	$416M
Cost Increase Absorbed by Project Cash Balance and Reserve Fund	$193M
Cost Increase Absorbed by TECP/Other Resources	$223M

At this time, the City expects to use TECP capacity for any additional funding requirements generated by this stress test scenario. This scenario has a forecasted need for $223 million in TECP which is less than half the $450 million TECP program currently authorized by the City Council. GO bond funds are currently used to refund TECP. However, since the stress test scenario identifies that additional funding capacity would not be needed until at least FY2021, the City Department of Budget and Fiscal Services would work with HART to determine the most cost-effective option for funding the $223 million based on prevailing market conditions and the financing tools available to the City at that point in time. HART has committed to reimburse the General Fund for any outstanding principal, interest or issuance costs associated with the TECP. The detailed capital plan cash flow tables for this scenario are presented in Table B-1 of Attachment B.

Scenario 2 – Lower Net GET Surcharge Growth

The second stress test scenario examines the impact of a potential reduction in net GET Surcharge growth in future years. This scenario assumes that net GET Surcharge revenues will grow at a lower rate that correlates to a Congressional Budget Office (CBO) forecast for the U.S. gross domestic product (GDP). This scenario assumes a 4.3 percent annual growth in net GET Surcharge revenues, as opposed to 5.04 percent annual growth in the Base Case, which results in a reduction of net GET Surcharge revenues of $123 million between FY2013 and FY2023.

The reduced growth rate of 4.3 percent was derived by calculating the historical difference in growth between the State of Hawai'i's (State's) 4 percent GET revenues and the U.S. GDP, and applying that difference to the CBO's forecast of U.S. GDP. The CAGR for the historical FY1981 to FY2010 revenues from the State's 4 percent GET is 5.04 percent. The FY1981 to FY2010 historical growth in U.S. GDP was derived from the Bureau of Economic Analysis, resulting in a CAGR of 5.6 percent. Finally, the CAGR was calculated for the FY2012 to FY2023 U.S. GDP forecast, using the CBO's Long-Term Budget Outlook dated June 2011. The resulting CAGR was 4.9 percent. The 4.3 percent growth rate was obtained by subtracting the difference between the CAGR for the U.S. GDP historical growth and the CAGR for the State's 4 percent GET revenues (approximately 0.6 percent) from the 4.9 percent CAGR for the forecast of U.S. GDP growth.

Based on this scenario, the City is still able to implement the Project while maintaining a positive cash balance in each year until FY2023. The City would mitigate the reduction in net GET Surcharge revenues by depositing a lower amount in the Project reserve fund equal to $41 million (compared to the $139 million deposit in the Base Case). The Project reserve fund would be released in FY2023 to repay a portion of that year's debt service obligations. The City would still transfer $86 million to rail O&M or ongoing capital needs from FY2021 to FY2023. There would be no need to utilize the City's TECP program under this scenario. The detailed capital plan cash flow tables for this scenario are presented in Table B-2 of Attachment B.

OPERATING PLAN

OPERATING COST RISKS

Core Systems Contract

As described in Chapter 3, about 80 percent 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 through FY2029.

Cost Escalation: Health Care and Energy Prices

Inflation assumptions for O&M cost used in this financial plan are considered to be reasonably conservative. 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 health care or fuel prices, which are 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.

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 FRR for TheBus and rail between 27 percent and 33 percent, 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.

OPERATING PLAN SENSITIVITY ANALYSIS

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. This section presents the results of a sensitivity analysis consisting of two combined downside scenarios, as further detailed below:

1) **Higher TheBus Operating Subsidy**

   The CAGR in TheBus operating subsidy (as measured by TheBus O&M cost minus TheBus fare revenues) per Revenue Vehicle Hour (RVH) was revised upward between FY2011 and FY2030, from the 3.5 percent calculated in the Base Case to 3.8 percent. The latter CAGR corresponds to the historical growth in TheBus subsidy per RVH experienced between FY2006 and FY2011. This downside scenario assumes that TheBus operating subsidy increases but bus fare revenues and Federal funding levels used for O&M remain unchanged from the Base Case. Under this scenario, the absolute total additional operating subsidy for TheBus would increase by $135 million between FY2011 and FY2030.

2) **Higher TheHandi-Van Service Levels**

   TheHandi-Van service levels are driven directly by ridership growth. For this scenario, the annual growth rate in TheHandi-Van ridership was revised upward by assuming that 100 percent of the growth in ridership would be driven by the projected growth in population above 65 years old, as opposed to the lower share of 70 percent assumed in the Base Case. This results in TheHandi-Van ridership growing at a CAGR of 2.33 percent between FY2011 and FY2030 instead of the 1.79 percent assumed in the Base Case. It should be noted that this scenario would lead to a small increase in TheHandi-Van fare revenues, thereby keeping the TheHandi-Van's FRR the same. However, the absolute total additional amount of TheHandi-Van subsidy would still increase by $82 million between FY2011 and FY2030.

The combination of these two scenarios would result in a slight increase in average subsidy between FY2011 and FY2030 from 15.6 percent to 16.1 percent, expressed as a percentage of forecasted General and Highway Fund revenues. In absolute terms, this represents an increase of about $28 million in FY2030, corresponding to about 4 percent of FY2030 O&M costs. The detailed operating plan cash flow tables for this scenario are presented in Table B-3 of Attachment B. The following section presents several options available to the City that could be used to mitigate this downside risk.

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

Assuming the 5.04 percent annual growth rate assumed in the Base Case, an additional year of GET Surcharge revenues would generate approximately $345 million in YOE dollars. However, extending the GET Surcharge beyond December 31, 2022 would require a State legislative amendment as well as

approval from the City Council. These funds could generate additional financial capacity for the Project capital plan, and could also be used for ongoing rail capital needs or operating subsidies.

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.

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 -1.86 percent. However, the paratransit system experienced its first productivity gain in six years in FY2011, with riders per RVH increasing by 3.30 percent. 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 – Base Case

Table A-1, Capital Plan Cash Flows

City Fiscal Year	Units	Total	2010 Actual	2011 Actual	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Project Funding Sources																							
Net GET Surcharge Revenues	YOE $M	3,291	121	166	194	203	214	224	236	247	260	273	287	301	316	249	-	-	-	-	-	-	-
FTA Section 5309 New Starts Revenues	YOE $M	1,550	-	21	99	258	442	250	250	230	-	-	-	-	-	-	-	-	-	-	-	-	-
FTA Section 5307 Formula Funds Used for the Project	YOE $M	210	-	-	-	-	33	34	35	35	36	37	-	-	-	-	-	-	-	-	-	-	-
ARRA Funds Used for the Project	YOE $M	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Obligation (GO) Bond Proceeds (net of issuance cost and deposit to reserve fund)	YOE $M	1,645	-	-	-	-	353	366	345	251	188	136	7	-	-	-	-	-	-	-	-	-	-
Proceeds from Tax Exempt Commercial Paper (TECP)	YOE $M	700	-	-	-	-	100	200	100	100	200	-	-	-	-	-	-	-	-	-	-	-	-
Reserve Fund Release	YOE $M	140	-	-	-	-	-	-	-	-	-	-	-	-	-	140	-	-	-	-	-	-	-
Interest Income	YOE $M	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
Additional Funds	YOE $M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Project Sources of Funds	**YOE $M**	**7,543**	**125**	**187**	**293**	**462**	**1,141**	**1,074**	**965**	**864**	**684**	**446**	**294**	**301**	**316**	**390**	**0**	**-**	**-**	**-**	**-**	**-**	**-**
Project Capital Costs																							
Total Capital Cost	YOE $M	4,949	79	124	366	734	858	887	733	659	443	55	12	-	-	-	-	-	-	-	-	-	-
Debt Service and Transfers																							
Principal Payment on GO Bonds Issued for the Project	YOE $M	1,798	-	-	-	-	-	50	93	141	184	224	263	273	281	289	-	-	-	-	-	-	-
Interest Payment on GO Bonds Issued for the Project	YOE $M	191	-	-	-	-	-	12	20	27	31	31	29	22	14	6	-	-	-	-	-	-	-
Principal Payment on TECP	YOE $M	700	-	-	-	-	-	200	100	100	200	100	-	-	-	-	-	-	-	-	-	-	-
Interest Payment on TECP	YOE $M	10	-	-	-	-	-	2	2	2	3	2	-	-	-	-	-	-	-	-	-	-	-
Transfer from Project Cash Balance to Ongoing Rail Capital and O&M Cost	YOE $M	193	-	-	-	-	-	-	-	-	-	-	-	1	18	85	89	-	-	-	-	-	-
Total Project Uses of Funds	**YOE $M**	**7,841**	**79**	**124**	**366**	**734**	**858**	**1,151**	**947**	**929**	**861**	**412**	**304**	**296**	**313**	**380**	**89**	**-**	**-**	**-**	**-**	**-**	**-**
Total Finance Charges	YOE $M	215	-	-	-	-	4	17	24	31	35	34	29	22	14	6	-	-	-	-	-	-	-
FFGA Eligible Finance Charges	YOE $M	173	-	-	-	-	4	17	24	31	35	34	29	-	-	-	-	-	-	-	-	-	-
Project Cash Balance																							
Beginning Project Cash Balance*	**YOE $M**		**298**	**344**	**408**	**335**	**63**	**346**	**269**	**287**	**222**	**46**	**80**	**70**	**75**	**79**	**89**	**-**	**-**	**-**	**-**	**-**	**-**
Additions (deletions) to Cash	YOE $M	(298)	46	63	(73)	(272)	284	(77)	18	(65)	(176)	34	(10)	5	4	10	(89)	-	-	-	-	-	-
Ending Project Cash Balance	**YOE $M**		**344**	**408**	**335**	**63**	**346**	**269**	**287**	**222**	**46**	**80**	**70**	**75**	**79**	**89**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Reserve Fund Balance																							
Beginning Reserve Fund Balance	**YOE $M**		**-**	**-**	**-**	**-**	**-**	**139**	**139**	**139**	**140**	**140**	**140**	**140**	**140**	**140**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Initial Deposit to Reserve Fund**	YOE $M	139	-	-	-	-	139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Income on Reserve Fund	YOE $M	1	-	-	-	-	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-
Reserve Fund Release	YOE $M	140	-	-	-	-	-	-	-	-	-	-	-	-	-	140	-	-	-	-	-	-	-
Ending Reserve Fund Balance	**YOE $M**		**-**	**-**	**-**	**-**	**139**	**139**	**139**	**140**	**140**	**140**	**140**	**140**	**140**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

** : beginning balance shown in FY2010 equal to the Transit Fund Balance as of 10/16/2009 (start of PE)*
*** : initial deposit to reserve fund represents the amount deposited from the FY2014 bond issuance to a Project reserve.*
The financial plan assumes that the City would use this fund to repay a portion of the final year's debt service obligations, although it could also be available to cover Project capital cost increases or revenue shortfalls, if needed.

City Fiscal Year	Units	Total	2010 Actual	2011 Actual	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Funding Sources for On-going System-wide Capital Cost																							
Federal Assistance for On-going Capital Cost																							
FTA Section 5309 Fixed Guideway Modernization Funds	YOE $M	80	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	5	5	5	10	10	11
FTA Section 5309 Bus Discretionary Grants	YOE $M	116	4	-	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
FTA Section 5307 Formula Funds Used for Ongoing Capital Cost	YOE $M	499	9	8	12	11	-	-	-	-	-	-	22	35	36	38	28	58	38	47	53	54	49
FTA Section 5307 and 5309 Grants Carryover from Prior Years	YOE $M	50	-	6	17	17	5	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARRA Funds Used for Ongoing Capital Cost	YOE $M	26	20	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FTA Section 5316 (JARC) and 5317 (New Freedom)	YOE $M	0	-	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfers to the State's Vanpool Program	YOE $M	(3)	(1)	(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Federal Assistance for Ongoing Capital Cost	**YOE $M**	**768**	**34**	**20**	**37**	**36**	**13**	**12**	**9**	**8**	**8**	**8**	**30**	**43**	**44**	**46**	**36**	**69**	**48**	**58**	**69**	**70**	**66**
On-going City Capital Funding																							
Transfer from Project Cash Balance to Ongoing Rail Capital	YOE $M	54	-	-	-	-	-	-	-	-	-	-	-	1	12	12	28	-	-	-	-	-	-
City General Obligation Bond Proceeds	YOE $M	404	6	9	9	7	8	29	60	87	29	36	8	10	-	0	-	28	12	15	17	18	16
Total On-going City Capital Funding	**YOE $M**	**457**	**6**	**9**	**9**	**7**	**8**	**29**	**60**	**87**	**29**	**36**	**8**	**11**	**12**	**12**	**28**	**28**	**12**	**15**	**17**	**18**	**16**
Total Funding Sources for Ongoing Capital Cost	**YOE $M**	**1,225**	**40**	**30**	**46**	**43**	**21**	**40**	**68**	**96**	**37**	**44**	**38**	**54**	**57**	**59**	**64**	**98**	**61**	**73**	**87**	**88**	**82**
On-going Capital Costs																							
Additional Railcar Acquisitions	YOE $M	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	18	-	-	-	-	-
Rail Capital Asset Replacement Program (CARP)	YOE $M	150	-	-	-	-	-	-	-	-	-	1	6	11	12	12	10	8	14	18	18	19	19
Bus Acquisitions	YOE $M	667	21	15	26	27	28	28	11	26	26	32	21	30	32	34	24	59	33	41	54	54	47
Other Capital Cost	YOE $M	235	8	24	1	2	6	13	52	64	5	5	5	5	5	5	5	5	5	5	5	5	5
Handi-Van Acquisitions	YOE $M	138	-	2	5	5	5	5	6	6	6	6	7	7	7	8	8	8	9	9	9	10	10
Total On-going Capital Cost	**YOE $M**	**1,225**	**29**	**41**	**32**	**34**	**39**	**46**	**68**	**96**	**37**	**44**	**38**	**54**	**57**	**59**	**64**	**98**	**61**	**73**	**87**	**88**	**82**

Table A-2, Operating Plan Cash Flows

City Fiscal Year	Units	Total	2010 Actual	2011 Actual	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Revenues																							
Fare Revenues (Bus)	YOE $M	1,601	46	52	53	55	56	58	59	86	88	82	73	73	74	91	91	92	93	94	94	95	96
Fare Revenues (Rail)	YOE $M	497	-	-	-	-	-	-	-	2	2	14	35	35	36	44	45	46	46	47	47	48	49
Fare Revenues (Handi-Van)	YOE $M	60	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4
Total Fare Revenues	**YOE $M**	**2,158**	**48**	**54**	**55**	**57**	**58**	**60**	**61**	**91**	**93**	**99**	**110**	**112**	**113**	**138**	**140**	**141**	**143**	**144**	**146**	**147**	**149**
Federal Operating Assistance																							
FTA Section 5307 Formula Funds Used for Preventative Maintenance	YOE $M	247	21	21	21	21	-	-	-	-	-	-	19	7	7	18	29	-	24	16	11	12	19
FTA Section 5316 (JARC) and 5317 (New Freedom)	YOE $M	20	-	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2
Total Federal Operating Assistance	**YOE $M**	**267**	**21**	**22**	**22**	**21**	**1**	**1**	**1**	**1**	**1**	**1**	**20**	**8**	**8**	**19**	**30**	**1**	**25**	**17**	**13**	**14**	**20**
Local Operating Assistance																							
Transfer from Project Cash Balance to Rail O&M Cost	YOE $M	140	-	-	-	-	-	-	-	-	-	-	-	-	6	72	62	-	-	-	-	-	-
City Operating Subsidy	YOE $M	5,871	127	133	140	148	176	183	197	230	253	286	307	334	344	259	277	376	370	398	424	449	462
Total Local Operating Assistance	**YOE $M**	**6,011**	**127**	**133**	**140**	**148**	**176**	**183**	**197**	**230**	**253**	**286**	**307**	**334**	**350**	**332**	**339**	**376**	**370**	**398**	**424**	**449**	**462**
Total Operating Revenues	**YOE $M**	**8,436**	**195**	**208**	**217**	**226**	**235**	**244**	**259**	**322**	**346**	**386**	**437**	**454**	**471**	**489**	**509**	**518**	**538**	**559**	**582**	**610**	**631**
Operations and Maintenance (O&M) Costs																							
TheBus O&M Costs	YOE $M	5,459	163	173	180	186	192	199	206	214	223	239	263	272	283	293	304	315	326	338	350	363	375
Rail O&M Cost	YOE $M	1,613	-	-	-	-	-	-	6	58	69	89	113	117	119	123	127	121	124	128	133	141	145
TheHandi-Van O&M Costs	YOE $M	1,310	32	34	37	39	42	44	47	50	53	56	59	63	67	71	75	79	83	88	93	98	103
Other O&M Cost	YOE $M	55	-	0	1	1	1	1	1	1	1	1	2	2	2	3	3	4	4	5	6	7	8
Total O&M Costs	**YOE $M**	**8,436**	**195**	**208**	**217**	**226**	**235**	**244**	**259**	**322**	**346**	**386**	**437**	**454**	**471**	**489**	**509**	**518**	**538**	**559**	**582**	**610**	**631**
Farebox Recovery Ratio (Bus and Rail)*			**28%**	**30%**	**30%**	**29%**	**29%**	**29%**	**28%**	**33%**	**31%**	**29%**	**29%**	**28%**	**27%**	**32%**	**32%**	**32%**	**31%**	**30%**	**29%**	**28%**	**28%**
Farebox Recovery Ratio (Bus)			28%	30%	30%	29%	29%	29%	29%	40%	39%	34%	28%	27%	26%	31%	30%	29%	29%	28%	27%	26%	26%
Farebox Recovery Ratio (Rail)									-	4%	3%	16%	31%	30%	30%	36%	35%	38%	37%	37%	36%	34%	34%

** : Fare revenues are proportioned between bus and rail, 50% by boardings by mode and 50% by passenger-miles by mode*

Attachment B: Summary Cash Flows – Sensitivity Analyses

Table B-1, Sensitivity Analysis – Scenario 1: Ten Percent Increase in Project Capital Cost Starting in FY2014, Project Capital Plan Cash Flow

City Fiscal Year	Units	Total	2010 Actual	2011 Actual	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Project Funding Sources																							
Net GET Surcharge Revenues	YOE $M	3,291	121	166	194	203	214	224	236	247	260	273	287	301	316	249	-	-	-	-	-	-	-
FTA Section 5309 New Starts Revenues	YOE $M	1,550	-	21	99	258	442	250	250	230	-	-	-	-	-	-	-	-	-	-	-	-	-
FTA Section 5307 Formula Funds Used for the Project	YOE $M	210	-	-	-	-	33	34	35	35	36	37	-	-	-	-	-	-	-	-	-	-	-
ARRA Funds Used for the Project	YOE $M	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Obligation (GO) Bond Proceeds (net of issuance cost and deposit to reserve fund)	YOE $M	2,131	-	-	-	-	469	424	409	319	250	201	60	-	-	-	-	-	-	-	-	-	-
Proceeds from Tax Exempt Commercial Paper (TECP)	YOE $M	700	-	-	-	-	100	200	100	100	200	-	-	-	-	-	-	-	-	-	-	-	-
Reserve Fund Release	YOE $M	139	-	-	-	-	-	44	37	33	22	3	1	-	-	-	-	-	-	-	-	-	-
Interest Income	YOE $M	2	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-
Additional Funds	YOE $M	223	-	-	-	-	-	-	-	-	-	-	-	85	77	61	-	-	-	-	-	-	-
Total Project Sources of Funds	**YOE $M**	**8,251**	**125**	**187**	**293**	**462**	**1,257**	**1,177**	**1,066**	**965**	**768**	**514**	**347**	**386**	**394**	**311**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Project Capital Costs																							
Total Capital Cost	YOE $M	5,313	79	124	366	734	943	976	806	725	487	60	13	-	-	-	-	-	-	-	-	-	-
Debt Service and Transfers																							
Principal Payment on GO Bonds Issued for the Project	YOE $M	2,287	-	-	-	-	-	62	112	169	223	276	332	361	371	382	-	-	-	-	-	-	-
Interest Payment on GO Bonds Issued for the Project	YOE $M	239	-	-	-	-	-	15	24	33	37	38	36	29	19	8	-	-	-	-	-	-	-
Principal Payment on TECP	YOE $M	700	-	-	-	-	-	200	100	100	200	100	-	-	-	-	-	-	-	-	-	-	-
Interest Payment on TECP	YOE $M	10	-	-	-	-	-	2	2	2	3	2	-	-	-	-	-	-	-	-	-	-	-
Transfer from Project Cash Balance to Ongoing Rail Capital and O&M Cost	YOE $M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Project Uses of Funds	**YOE $M**	**8,549**	**79**	**124**	**366**	**734**	**943**	**1,255**	**1,043**	**1,028**	**951**	**477**	**382**	**390**	**390**	**390**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Finance Charges	YOE $M	266	-	-	-	-	5	20	28	37	42	41	37	29	19	8	-	-	-	-	-	-	-
FFGA Eligible Finance Charges	YOE $M	210	-	-	-	-	5	20	28	37	42	41	37	-	-	-	-	-	-	-	-	-	-
Project Cash Balance																							
Beginning Project Cash Balance*	**YOE $M**		**298**	**344**	**408**	**335**	**63**	**377**	**299**	**322**	**259**	**77**	**114**	**79**	**75**	**79**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Additions (deletions) to Cash	YOE $M	(298)	46	63	(73)	(272)	314	(78)	23	(63)	(182)	37	(35)	(4)	4	(79)	-	-	-	-	-	-	-
Ending Project Cash Balance	**YOE $M**		**344**	**408**	**335**	**63**	**377**	**299**	**322**	**259**	**77**	**114**	**79**	**75**	**79**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Reserve Fund Balance																							
Beginning Reserve Fund Balance	**YOE $M**		**-**	**-**	**-**	**-**	**-**	**139**	**95**	**58**	**26**	**3**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Initial Deposit to Reserve Fund**	YOE $M	139	-	-	-	-	139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Income on Reserve Fund	YOE $M	0	-	-	-	-	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
Reserve Fund Release	YOE $M	139	-	-	-	-	-	44	37	33	22	3	1	-	-	-	-	-	-	-	-	-	-
Ending Reserve Fund Balance	**YOE $M**		**-**	**-**	**-**	**-**	**139**	**95**	**58**	**26**	**3**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

** : beginning balance shown in FY2010 equal to the Transit Fund Balance as of 10/16/2009 (start of PE)*
*** : initial deposit to reserve fund represents the amount deposited from the FY2014 bond issuance to a Project reserve.*
The financial plan assumes that the City would use this fund to repay a portion of the final year's debt service obligations, although it could also be available to cover Project capital cost increases or revenue shortfalls, if needed.

Table B-2, Sensitivity Analysis – Scenario 2: Lower Growth in Net GET Surcharge Revenues (4.3% instead of 5.0%), Project Capital Plan Cash Flow

City Fiscal Year	Units	Total	2010 Actual	2011 Actual	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Project Funding Sources																							
Net GET Surcharge Revenues	YOE $M	3,168	121	166	194	202	211	220	229	239	249	260	271	283	295	231	-	-	-	-	-	-	-
FTA Section 5309 New Starts Revenues	YOE $M	1,550	-	21	99	258	442	250	250	230	-	-	-	-	-	-	-	-	-	-	-	-	-
FTA Section 5307 Formula Funds Used for the Project	YOE $M	210	-	-	-	-	33	34	35	35	36	37	-	-	-	-	-	-	-	-	-	-	-
ARRA Funds Used for the Project	YOE $M	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Obligation (GO) Bond Proceeds (net of issuance cost and deposit to reserve fund)	YOE $M	1,616	-	-	-	-	353	359	339	246	181	134	4	-	-	-	-	-	-	-	-	-	-
Proceeds from Tax Exempt Commercial Paper (TECP)	YOE $M	700	-	-	-	-	100	200	100	100	200	-	-	-	-	-	-	-	-	-	-	-	-
Reserve Fund Release	YOE $M	41	-	-	-	-	-	-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-
Interest Income	YOE $M	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-
Additional Funds	YOE $M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Project Sources of Funds	**YOE $M**	**7,291**	**125**	**187**	**293**	**460**	**1,139**	**1,062**	**952**	**850**	**666**	**431**	**276**	**283**	**295**	**272**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Project Capital Costs																							
Total Capital Cost	YOE $M	4,949	79	124	366	734	858	887	733	659	443	55	12	-	-	-	-	-	-	-	-	-	-
Debt Service and Transfers																							
Principal Payment on GO Bonds Issued for the Project	YOE $M	1,669	-	-	-	-	-	40	82	129	171	210	248	256	263	271	-	-	-	-	-	-	-
Interest Payment on GO Bonds Issued for the Project	YOE $M	176	-	-	-	-	-	10	17	25	29	29	27	20	13	6	-	-	-	-	-	-	-
Principal Payment on TECP	YOE $M	700	-	-	-	-	-	200	100	100	200	100	-	-	-	-	-	-	-	-	-	-	-
Interest Payment on TECP	YOE $M	10	-	-	-	-	-	2	2	2	3	2	-	-	-	-	-	-	-	-	-	-	-
Transfer from Project Cash Balance to Ongoing Rail Capital and O&M Cost	YOE $M	86	-	-	-	-	-	-	-	-	-	-	-	1	15	69	-	-	-	-	-	-	-
Total Project Uses of Funds	**YOE $M**	**7,589**	**79**	**124**	**366**	**734**	**858**	**1,139**	**934**	**915**	**845**	**395**	**287**	**278**	**292**	**345**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Finance Charges	YOE $M	199	-	-	-	-	3	15	21	28	33	32	27	20	13	6	-	-	-	-	-	-	-
FFGA Eligible Finance Charges	YOE $M	160	-	-	-	-	3	15	21	28	33	32	27	-	-	-	-	-	-	-	-	-	-
Project Cash Balance																							
Beginning Project Cash Balance*	**YOE $M**		**298**	**344**	**408**	**335**	**62**	**343**	**266**	**284**	**220**	**41**	**76**	**65**	**70**	**74**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Additions (deletions) to Cash	YOE $M	(298)	46	63	(73)	(273)	281	(77)	18	(65)	(179)	36	(11)	5	3	(74)	-	-	-	-	-	-	-
Ending Project Cash Balance	**YOE $M**		**344**	**408**	**335**	**62**	**343**	**266**	**284**	**220**	**41**	**76**	**65**	**70**	**74**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Reserve Fund Balance																							
Beginning Reserve Fund Balance	**YOE $M**		**-**	**-**	**-**	**-**	**-**	**41**	**41**	**41**	**41**	**41**	**41**	**41**	**41**	**41**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Initial Deposit to Reserve Fund**	YOE $M	41	-	-	-	-	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Income on Reserve Fund	YOE $M	0	-	-	-	-	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-
Reserve Fund Release	YOE $M	41	-	-	-	-	-	-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-
Ending Reserve Fund Balance	**YOE $M**		**-**	**-**	**-**	**-**	**41**	**41**	**41**	**41**	**41**	**41**	**41**	**41**	**41**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

** : beginning balance shown in FY2010 equal to the Transit Fund Balance as of 10/16/2009 (start of PE)*

*** : initial deposit to reserve fund represents the amount deposited from the FY2014 bond issuance to a Project reserve.*
The financial plan assumes that the City would use this fund to repay a portion of the final year's debt service obligations, although it could also be available to cover Project capital cost increases or revenue shortfalls, if needed.

Table B-3, Sensitivity Analysis – Scenario 3: Higher Operating Subsidy Requirement, Operating Plan Cash Flow

City Fiscal Year	Units	Total	2010 Actual	2011 Actual	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Revenues																							
Fare Revenues (Bus)	YOE $M	1,601	46	52	53	55	56	58	59	86	88	82	73	73	74	91	91	92	93	94	94	95	96
Fare Revenues (Rail)	YOE $M	497	-	-	-	-	-	-	-	2	2	14	35	35	36	44	45	46	46	47	47	48	49
Fare Revenues (Handi-Van)	YOE $M	64	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	5
Total Fare Revenues	**YOE $M**	**2,161**	**48**	**54**	**55**	**57**	**58**	**60**	**61**	**91**	**93**	**99**	**111**	**112**	**113**	**138**	**140**	**141**	**143**	**145**	**146**	**148**	**149**
Federal Operating Assistance																							
FTA Section 5307 Formula Funds Used for Preventative Maintenance	YOE $M	247	21	21	21	21	-	-	-	-	-	-	19	7	7	18	29	-	24	16	11	12	19
FTA Section 5316 (JARC) and 5317 (New Freedom)	YOE $M	20	-	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2
Total Federal Operating Assistance	**YOE $M**	**267**	**21**	**22**	**22**	**21**	**1**	**1**	**1**	**1**	**1**	**1**	**20**	**8**	**8**	**19**	**30**	**1**	**25**	**17**	**13**	**14**	**20**
Local Operating Assistance																							
Transfer from Project Cash Balance to Rail O&M Cost	YOE $M	140	-	-	-	-	-	-	-	-	-	-	-	-	6	72	62	-	-	-	-	-	-
City Operating Subsidy	YOE $M	6,088	127	133	141	149	178	186	201	234	258	293	316	344	356	272	292	392	388	418	447	474	490
Total Local Operating Assistance	**YOE $M**	**6,228**	**127**	**133**	**141**	**149**	**178**	**186**	**201**	**234**	**258**	**293**	**316**	**344**	**361**	**345**	**353**	**392**	**388**	**418**	**447**	**474**	**490**
Total Operating Revenues	**YOE $M**	**8,656**	**195**	**208**	**218**	**227**	**237**	**247**	**263**	**327**	**352**	**392**	**446**	**464**	**483**	**502**	**524**	**535**	**557**	**580**	**606**	**636**	**660**
Operations and Maintenance (O&M) Costs																							
TheBus O&M Costs	YOE $M	5,593	163	173	180	187	194	201	208	216	226	243	269	279	290	301	313	325	337	351	365	379	393
Rail O&M Cost	YOE $M	1,613	-	-	-	-	-	-	6	58	69	89	113	117	119	123	127	121	124	128	133	141	145
TheHandi-Van O&M Costs	YOE $M	1,395	32	34	37	40	42	45	48	51	55	59	63	67	71	76	81	86	91	96	102	108	113
Other O&M Cost	YOE $M	55	-	0	1	1	1	1	1	1	1	1	2	2	2	3	3	4	4	5	6	7	8
Total O&M Costs	**YOE $M**	**8,656**	**195**	**208**	**218**	**227**	**237**	**247**	**263**	**327**	**352**	**392**	**446**	**464**	**483**	**502**	**524**	**535**	**557**	**580**	**606**	**636**	**660**
Farebox Recovery Ratio (Bus and Rail)*			**28%**	**30%**	**30%**	**29%**	**29%**	**29%**	**28%**	**32%**	**30%**	**29%**	**28%**	**27%**	**27%**	**32%**	**31%**	**31%**	**30%**	**29%**	**29%**	**28%**	**27%**
Farebox Recovery Ratio (Bus)			28%	30%	30%	29%	29%	29%	28%	40%	39%	34%	27%	26%	26%	30%	29%	28%	28%	27%	26%	25%	24%
Farebox Recovery Ratio (Rail)									-	4%	3%	16%	31%	30%	30%	36%	35%	38%	37%	37%	36%	34%	34%

** : Fare revenues are proportioned between bus and rail, 50% by boardings by mode and 50% by passenger-miles by mode*

Attachment C: Historical GET Data

Table C-1, Historical 4.00% Statewide GET Revenues Since 1981

City Fiscal Year	GET 4.00% Revenues	Annual Growth Rates	City Fiscal Year	GET 4.00% Revenues	Annual Growth Rates
1981	$515,952,541		**1996**	$1,306,485,667	4.31%
1982	$542,253,113	5.10%	**1997**	$1,342,627,310	2.77%
1983	$562,797,732	3.79%	**1998**	$1,318,387,286	-1.81%
1984	$607,987,568	8.03%	**1999**	$1,326,629,646	0.63%
1985	$644,712,809	6.04%	**2000**	$1,407,794,620	6.12%
1986	$707,930,438	9.81%	**2001**	$1,484,880,213	5.48%
1987	$781,662,134	10.42%	**2002**	$1,477,916,046	-0.47%
1988	$845,785,351	8.20%	**2003**	$1,615,351,758	9.30%
1989	$936,226,844	10.69%	**2004**	$1,710,913,530	5.92%
1990	$1,056,199,616	12.81%	**2005**	$1,950,030,632	13.98%
1991	$1,170,615,754	10.83%	**2006**	$2,224,511,711	14.08%
1992	$1,208,723,624	3.26%	**2007**	$2,380,677,790	7.02%
1993	$1,210,512,109	0.15%	**2008**	$2,379,880,665	-0.03%
1994	$1,230,387,345	1.64%	**2009**	$2,251,546,329	-5.39%
1995	$1,252,463,263	1.79%	**2010**	$2,147,251,742	-4.63%
			2011	$2,294,595,989	6.86%
				1981 to 2010 CAGR	5.04%*

*Rate used in financial plan to forecast GET Surcharge revenues.
GET = General Excise and Use Tax // CAGR = Compounded Annual Growth Rate

Attachment D: O&M Cost Escalation Assumptions

Table D-1, Historical Trend of TheBus Unit O&M Costs by Object Class and Principal Explanatory Level of Service Variable

Unit O&M Cost	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	Actual FY2006-FY2011 Unit O&M Cost CAGR
Wages and Salaries per RVH	$54.34	$55.30	$56.36	$57.84	$60.34	$61.64	$65.67	
		1.8%	1.9%	2.6%	4.3%	2.2%	6.5%	3.5%
Health Care per RVH	$7.39	$8.01	$9.10	$9.51	$9.39	$10.11	$11.22	
		8.4%	13.6%	4.5%	-1.2%	7.6%	11.0%	7.0%
Other Benefits per RVH	$7.86	$8.36	$8.87	$9.28	$10.38	$10.87	$11.57	
		6.3%	6.1%	4.6%	11.9%	4.8%	6.4%	6.7%
Materials and Supplies per RVM	$0.11	$0.14	$0.13	$0.15	$0.18	$0.16	$0.17	
		20.4%	-4.3%	14.7%	21.9%	-11.2%	5.4%	4.6%
Fuel and Lubricants per RVM	$0.65	$0.80	$0.78	$1.04	$0.89	$0.88	$1.05	
		22.6%	-2.0%	32.6%	-14.4%	-1.0%	18.8%	5.5%
Other Costs per RVM	$1.11	$1.33	$1.30	$1.42	$1.47	$1.50	$1.46	
		20.1%	-2.4%	8.7%	3.7%	2.1%	-2.8%	1.8%
DTS' Contract Administration per PV	$3,745	$6,030	$4,485	$6,144	$6,092	$5,715	$4,883	
		61.0%	-25.6%	37.0%	-0.8%	-6.2%	-14.6%	-4.1%

RVH = Revenue Vehicle Hour // RVM = Revenue Vehicle Mile // DTS = Department of Transportation Services // PV = Peak Vehicle // CAGR = Compounded Annual Growth Rate

Table D-2, Transit Operating Measures for TheBus

Level of Service Variable	Actual FY2006-FY2011 Historical Growth Rate	Forecast FY2011-FY2030 Growth Rate
TheBus O&M Cost per Revenue Vehicle Hour (RVH) [1]	4.30%	3.30%
TheBus O&M Cost per Revenue Vehicle Mile [2]	3.32%	2.96%
TheBus O&M Cost per Peak Vehicle [3]	-4.13%	2.55%
Total TheBus O&M Cost per RVH	3.85%	3.15%
Fare Revenue per RVH	3.94%	2.30%
Total Subsidy per RVH [4]	3.80%	3.47%

1/ Includes costs associated with salaries and wages, health care and other benefits

2/ Includes costs associated with materials and supplies, fuel and lubricants and other items

3/ Includes costs associated with Department of Transportation Services' contract administration

4/ Total subsidy is calculated as the difference between O&M cost and fare revenue; historical O&M cost is based on cash-basis information provided by Department of Transportation Services

Table D-3, Honolulu Actual and Forecasted Resident Population

	Honolulu County Total Resident Population	Compounded Annual Growth Rate	Honolulu County Resident Population Over 65 Years Old	Compounded Annual Growth Rate
1980[1]	764,600	--	56,282	--
1990[1]	838,534	0.93%	91,788	5.01%
2000[1]	875,054	0.43%	118,306	2.57%
2005[1]	899,673	0.56%	127,692	1.54%
2010	911,833	0.27%	145,148	2.60%
2015	941,824	0.65%	165,988	2.72%
2020	969,462	0.58%	189,347	2.67%
2025	994,610	0.51%	213,784	2.46%
2030	1,017,565	0.46%	234,502	1.87%
2035	1,038,316	0.40%	248,215	1.14%

1/ Actuals per Revised Estimates from US Census Bureau (release date May 2009)
Source: DBEDT 2035 Series Report (Revised), Table A.13

Table D-4, O&M Inflation Costs Applied to Project CARP and Core Systems O&M Costs

	Hourly Earnings – Transportation and Utilities Industry[1]	Hourly Earnings – Services to Buildings and Dwellings Industry[2]	Street, Subway and Rapid Transit PPI[3]	Line Haul Railroads PPI[4]	Average of PPI Indices
2001	N/A	N/A	N/A	N/A	N/A
2002	3.55%	3.16%	0.18%	2.26%	1.15%
2003	6.92%	3.16%	-0.83%	1.72%	0.37%
2004	3.13%	1.91%	-0.23%	2.63%	1.14%
2005	-6.45%	2.17%	2.60%	6.98%	4.72%
2006	0.03%	2.72%	2.27%	11.23%	6.70%
2007	2.98%	2.87%	2.52%	4.83%	3.71%
2008	2.61%	4.50%	1.86%	8.36%	5.25%
2009	7.26%	3.15%	2.24%	2.99%	2.64%
2010	0.40%	0.51%	3.45%	-0.84%	1.14%
2011	1.43%	0.99%	0.81%	6.53%	3.83%
2001-2011 CAGR	**2.12%**	**2.51%**	**1.48%**	**4.61%**	**3.05%**
Application in Financial Plan	O&M Labor Costs	CARP Labor Costs	CARP Subcontract Costs	CARP Subcontract Costs	O&M Materials Costs and CARP Materials and Special Equip. Costs

1/ BLS, Hourly Earnings for Production Employees, Transportation and Utilities Industry, Honolulu, SMU15261804000000001
2/ BLS, Hourly Earnings for Buildings and Dwellings Industry, U.S., CEU6056170008
3/ BLS, Producer Price Index, Street, Subway and Rapid Transit, U.S.,PCU3365103365105
4/ BLS, Producer Price Index, Line Haul Railroads, U.S., PCU482111482111
Note: CARP subcontract costs escalated using 50% average PPI of 'Line Haul Railroads', and 'Street Subway, Trolley and Rapid Transit', and 50% BLS Honolulu, Hourly Earnings, Production Employees, Transportation and Utilities
CARP = Capital Asset Replacement Program // BLS = Bureau of Labor Statistics

Attachment E: SCC Worksheet

MAIN WORKSHEET-BUILD ALTERNATIVE (Rev.14, August 5, 2011)

City and County of Honolulu - Honolulu Authority for Rapid Transportation		Today's Date	**June 13, 2012**
Honolulu Rail Transit Project, East Kapolei to Ala Moana Center		Yr of Base Year $	2012
FFGA		Yr of Revenue Ops	2019

	Quantity	Base Year Dollars w/o Contingency (X000)	Base Year Dollars Allocated Contingency (X000)	Base Year Dollars TOTAL (X000)	Base Year Dollars Unit Cost (X000)	Base Year Dollars Percentage of Construction Cost	Base Year Dollars Percentage of Total Project Cost	YOE Dollars Total (X000)
10 GUIDEWAY & TRACK ELEMENTS (route miles)	**20.05**	955,497	136,580	**1,092,076**	**$54,459**	**39%**	**24%**	**1,275,329**
10.01 Guideway: At-grade exclusive right-of-way		0	0	0				0
10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)		0	0	0				0
10.03 Guideway: At-grade in mixed traffic			0	0				0
10.04 Guideway: Aerial structure	19.45	873,608	129,364	1,002,973	$51,562			1,175,328
10.05 Guideway: Built-up fill		0	0	0				0
10.06 Guideway: Underground cut & cover		0	0	0				0
10.07 Guideway: Underground tunnel		0	0	0				0
10.08 Guideway: Retained cut or fill	0.60	6,926	540	7,466	$12,416			8,077
10.09 Track: Direct fixation		70,630	6,163	76,793				86,332
10.10 Track: Embedded		0	0	0				0
10.11 Track: Ballasted		2,903	226	3,130				3,551
10.12 Track: Special (switches, turnouts)		1,429	286	1,715				2,041
10.13 Track: Vibration and noise dampening		0	0	0				0
20 STATIONS, STOPS, TERMINALS, INTERMODAL (number)	**21**	351,188	70,238	**421,425**	**$20,068**	**15%**	**9%**	**506,166**
20.01 At-grade station, stop, shelter, mall, terminal, platform	1	5,525	1,105	6,630	$6,630			7,334
20.02 Aerial station, stop, shelter, mall, terminal, platform	20	244,862	48,972	293,835	$14,692			353,476
20.03 Underground station, stop, shelter, mall, terminal, platform		0	0	0				0
20.04 Other stations, landings, terminals: Intermodal, ferry, trolley, etc.		0	0	0				0
20.05 Joint development		0	0	0				0
20.06 Automobile parking multi-story structure		53,637	10,727	64,364				79,691
20.07 Elevators, escalators		47,164	9,433	56,596				65,665
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	20.05	85,010	6,326	**91,336**	**$4,555**	**3%**	**2%**	**99,425**
30.01 Administration Building: Office, sales, storage, revenue counting		0	0	0				0
30.02 Light Maintenance Facility		6,970	523	7,493				8,161
30.03 Heavy Maintenance Facility		35,033	2,578	37,611				40,907
30.04 Storage or Maintenance of Way Building		7,159	537	7,696				8,382
30.05 Yard and Yard Track		35,848	2,689	38,537				41,975
40 SITEWORK & SPECIAL CONDITIONS	20.05	891,846	108,839	**1,000,685**	**$49,902**	**36%**	**22%**	**1,103,867**
40.01 Demolition, Clearing, Earthwork		26,927	4,192	31,118				34,696
40.02 Site Utilities, Utility Relocation		274,431	46,301	320,732				350,695
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		6,107	585	6,692				7,229
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		24,421	3,422	27,843				30,842
40.05 Site structures including retaining walls, sound walls		7,439	593	8,033				8,638
40.06 Pedestrian / bike access and accommodation, landscaping		34,699	6,035	40,733				48,263
40.07 Automobile, bus, van accessways including roads, parking lots		156,253	25,699	181,952				212,536
40.08 Temporary Facilities and other indirect costs during construction		361,569	22,013	383,582				410,969
50 SYSTEMS	20.05	188,204	22,163	**210,367**	**$10,491**	**7%**	**5%**	**247,461**
50.01 Train control and signals		70,594	8,189	78,783				91,493
50.02 Traffic signals and crossing protection		8,414	1,661	10,075				12,524
50.03 Traction power supply: substations		24,761	2,827	27,588				32,874
50.04 Traction power distribution: catenary and third rail		28,811	3,061	31,872				36,426
50.05 Communications		44,946	5,186	50,132				59,889
50.06 Fare collection system and equipment		7,657	888	8,545				10,222
50.07 Central Control		3,021	350	3,372				4,033
Construction Subtotal (10 - 50)	20.05	2,471,745	344,146	**2,815,890**	**$140,422**	**100%**	**62%**	**3,232,248**
60 ROW, LAND, EXISTING IMPROVEMENTS	20.05	180,327	22,431	**202,757**	**$10,111**		**4%**	**222,188**
60.01 Purchase or lease of real estate		164,016	20,181	184,196				201,659
60.02 Relocation of existing households and businesses		16,311	2,250	18,561				20,529
70 VEHICLES (number)	**80**	159,603	18,514	**178,117**	**$2,226**		**4%**	**208,501**
70.01 Light Rail		0	0	0				0
70.02 Heavy Rail	80	142,794	16,564	159,358	$1,992			186,061
70.03 Commuter Rail		0	0	0				0
70.04 Bus		0	0	0				0
70.05 Other		0	0	0				0
70.06 Non-revenue vehicles		11,994	1,391	13,385				16,011
70.07 Spare parts		4,816	559	5,375				6,429
80 PROFESSIONAL SERVICES (applies to Cats. 10-50)	20.05	1,024,627	85,753	**1,110,379**	**$55,372**	**39%**	**24%**	**1,183,826**
80.01 Preliminary Engineering		93,009	1,015	94,024				95,120
80.02 Final Design		218,749	28,305	247,054				257,935
80.03 Project Management for Design and Construction		351,899	18,069	369,969				385,826
80.04 Construction Administration & Management		184,367	16,575	200,941				218,156
80.05 Professional Liability and other Non-Construction Insurance		39,921	4,786	44,708				52,138
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.		60,324	7,605	67,929				76,135
80.07 Surveys, Testing, Investigation, Inspection		20,258	2,971	23,229				24,955
80.08 Start up		56,100	6,426	62,526				73,561
Subtotal (10 - 80)	20.05	3,836,302	470,843	**4,307,144**	**$214,788**		**95%**	**4,846,764**
90 UNALLOCATED CONTINGENCY				88,666			**2%**	**101,871**
Subtotal (10 - 90)	20.05			**4,395,810**	**$219,209**		**97%**	**4,948,635**
100 FINANCE CHARGES				**140,596**			**3%**	**173,058**
Total Project Cost (10 - 100)	20.05			**4,536,406**	**$226,220**		**100%**	**5,121,693**
Allocated Contingency as % of Base Yr Dollars w/o Contingency				12.27%				
Unallocated Contingency as % of Base Yr Dollars w/o Contingency				2.31%				
Total Contingency as % of Base Yr Dollars w/o Contingency				14.58%				
Unallocated Contingency as % of Subtotal (10 - 80)				2.06%				
YOE Construction Cost per Mile (X000)								$161,185
YOE Total Project Cost per Mile Not Including Vehicles (X000)								$245,010
YOE Total Project Cost per Mile (X000)								$255,407

Attachment F: Local Financial Commitment Checklist

GRANTEE FINANCIAL SUBMITTAL	Included (check one)		Reason Why Information Has Not Been Provided
	Yes	No	
20-year cash flow statement (in year of expenditure dollars) including capital and operating financial plans (provided both electronically and in hardcopy). The cash flow statement should clearly show revenues and expenses for the project separated from those for the remainder of the transit system.	X		
Detailed written description/discussion of all assumptions used in the financial plan including: Federal/State/local/debt proceeds funding assumptions Average fare assumption Average weekday ridership assumptions Debt coverage requirements/assumptions Assumptions used in the calculation of operating expenses for each mode (i.e. -- vehicle miles, vehicle hours of service provided, etc.)	X		
Project Description and New Starts Project Finance Template	X		
Capital cost estimate for the proposed project (in year of expenditure dollars) in the FTA standardized cost category worksheet format	X		
Sensitivity Analysis (spreadsheet calculations as well as narrative summary)	X		
Supporting Documentation Including:			
Background information and description of the New Starts fixed guideway project, including project status		X	Previously provided to FTA
Historical revenue and expense data (minimum of 5 years required, more than 5 years appreciated)	X		
Commitment letters, contracts, agreements, legislative referendums or other documents demonstrating local share commitment of non-Federal funding partners		X	Previously provided to FTA
Enacting legislative documents for tax referenda		X	Previously provided to FTA
Joint development agreements, or description and supporting documentation of other innovative financing techniques, if applicable		X	Previously provided to FTA
Annual Operating and Capital Budgets for the past 3 years		X	Previously provided to FTA
Audited Financial Statements and Compliance Reports for the past 3 years		X	Previously provided to FTA
Annual Reports/Comprehensive Annual Financial Reports (CAFR) for the past 3 years		X	Previously provided to FTA
Background information and description of the transit agency, including organizational structure and grantee enabling legislation		X	Previously provided to FTA
TIP, STIP and Short Range Transit Plan (SRTP), if available (please provide only relevant pages of these documents)		X	Previously provided to FTA
Regional Long Range Transportation Plan (please provide only relevant pages)		X	Previously provided to FTA
Sponsoring Agency's Capital Improvement Program Document		X	Previously provided to FTA
Bus and Rail Fleet Management Plans including fleet replacement schedules		X	Previously provided to FTA
Latest bonding prospectus/credit facility documents (credit lines, commercial paper, etc.)		X	Previously provided to FTA
Local development, demographic and economic studies used in preparing the financial plan, plus documentation supporting efficiency or productivity gain assumptions		X	Previously provided to FTA
Other materials (if any), please describe:			

Attachment G: Changes to Financial Plan since the Request to Enter Final Design

The prior version of the financial plan was submitted to FTA in September 2011 as part of the City's request to enter the Final Design (FD) phase of project development. This version of the financial plan has been revised to reflect the current project status, costs, and revenue forecasts that have been input into a quarterly cash flow model. The financial plan also reflects a financing structure based on current market conditions. Finally, the plan reflects changes to respond to comments from FTA, local officials and the public on the previous financial plan.

The following list summarizes the most significant changes to the financial plan since it was submitted in September 2011. Assumptions are described in more detail in Chapters 2 and 3.

Capital Cost: The capital cost estimate reflects advanced preliminary engineering, cost estimation methodologies, and actual contract bid prices. The total capital cost before financing is $4.949 billion in YOE dollars. Approximately $1.9 billion, or 41 percent of the capital cost in YOE dollars (without contingency), is based on actual contracts awarded through June 2012, including the West O'ahu-Farrington Highway Guideway Design-Build Contract; the Kamehameha Highway Guideway Design-Build Contract; the MSF Design-Build Contract; and the Core Systems Design-Build-Operate-Maintain Contract. Additionally, other contract awards include engineering service agreements with utility companies for Sections I and II (partial); design of the Farrington Highway station group; and design of the Airport section guideway and utilities. The remainder of the capital cost not covered by these contracts reflects a "bottom-up" cost estimate.

Capital Revenues: The forecast of GET Surcharge revenues, which is the main source of non-Federal revenue for the Project, has been revised to reflect actual collections through March 2012. GET Surcharge revenues are expected to grow at a constant rate of roughly 5 percent per year, which is in line with long-term historical growth of statewide GET revenues. This growth rate is unchanged from the September 2011 financial plan; however the total amount of GET Surcharge revenues between Q2 of FY2010 and FY2023 has increased from $3.2 billion to $3.3 billion in this financial plan based on the inclusion of recent actual collections.

The financial plan also includes a revised forecast for FTA Section 5307 revenues. The amount of Section 5307 funding being used for the Project has been reduced from $244 million to $210 million, and does not include any Section 5307 revenues going to the Project until FY2014. The forecasted Section 5307 amounts have also been revised slightly downward to reflect a discontinuation of the State's vanpool program, elimination of the second intermediate Project opening, and a one-year lag between the time when funds are apportioned by FTA and the time of disbursement.

The forecast for Section 5309 Bus and Bus Facilities Funds, which is used to support bus capital expenditures, has been revised to reflect funds that were allocated to the City in FY2011. The forecast is still based on City average historical receipts of Section 5309 Bus Discretionary funding.

Operating Plan: O&M cost estimates for the Project reflect the terms of the Core Systems Contract. Rail O&M costs that fall outside the Core Systems Contract (and are thus incurred directly by HART) were calculated separately using FTA's resource build-up approach, which applies unit cost elements to key level of service variables. These costs have been revised upward to reflect the full complement of HART staff that will oversee the O&M of the Project. Additionally, the rail O&M costs have increased due to the inclusion of additional utility costs and updated escalation rates.

TheBus O&M costs have been revised to reflect the City's FY2011 actual costs. Refined inflation assumptions were also applied to TheBus O&M costs and TheHandi-Van O&M costs for each object class, including wages & salaries, health care, other benefits, materials and supplies, fuel, and other costs. These growth rates are comparable to growth rates experienced during the FY2006 to FY2011 period.

This has caused the O&M costs for both TheBus and TheHandi-Van to increase as compared to the September 2011 financial plan.

Cash Flow/Financing: The financing structure is based on debt structure that consists of GO bonds issued by the City and $100 million of short-term tax-exempt commercial paper that would be rolled over on a 270-day basis. The financial plan no longer assumes that the City would issue Grant Anticipation Notes or Bond Anticipation Notes. The financing assumptions have been changed to reflect lower interest rates that are more consistent with current and expected market conditions.

Based on revised assumptions summarized above, and described in more detail in the following sections, the financial plan is expected to result in excess funding capacity. While the City has several options available on how to use these funds, this financial plan assumes that the excess funding capacity would be deposited in a Project reserve fund out of the first debt issuance of GO bonds in FY2014. This reserve fund would be maintained throughout the construction period and used to repay a portion of the final year's debt service obligations, although it could also be available to cover Project capital cost increases or revenue shortfalls if needed.

Risks and Uncertainties: This section addresses a more thorough knowledge of the Project's capital cost risks that has been gained as the Project's design and procurements progress, and input from the FTA risk assessment process. A series of sensitivity scenarios were produced to develop strategies to overcome the following: a 10 percent overrun for Project capital costs incurred after the FFGA; lower than anticipated growth in net GET Surcharge revenues; and an increase in the City's operating subsidy. The financial plan presents mitigation strategies that may be employed by the City to address these Project risks.