Honolulu High-Capacity Transit Corridor Project

Financial Plan For Entry Into Preliminary Engineering Submittal

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LIST OF ACRONYMS

AD	Articulated Diesel
AH	Articulated Hybrid
AIP	Airport Improvement Program
ARRA	American Recovery and Reinvestment Act of 2009
Artic	Articulated
CapEx	Capital Expenditures
COR	Council on Revenues
CPI	Consumer Price Index
CY	Calendar Year
HHCTCP	Honolulu High-Capacity Transit Corridor Project
DBEDT	State of Hawaii's Department of Business, Economic Development and Tourism
DTS	Department of Transportation Services
DEIS	Draft Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FFGA	Full Funding Grant Agreement
FGM	Fixed Guideway Modernization
FTA	Federal Transit Administration
FY	Fiscal Year
GDP	Gross Domestic Product
GET	General Excise and Use Tax
H-1	Interstate H-1, which runs through the Project corridor
M	Millions
MMD	Municipal Market Data
NEPA	National Environmental Policy Act
NTD	National Transit Database
O&M	Operating and Maintenance
PB	Parsons Brinckerhoff
PE	Preliminary Engineering
PFC	Passenger Facility Charges
RCH	Revised Charter of Honolulu
ROW	Right of Way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users
SB	Standard Bus
SCC	Standard Cost Category
TECP	Tax Exempt Commercial Paper
TOD	Transit Oriented Development
WMATA	Washington Metropolitan Area Transit Authority
YOE	Year of Expenditure

CHAPTER 1: INTRODUCTION

This report provides a Financial Plan for implementing and operating the approximately 20-mile fixed guideway transit system in Honolulu from East Kapolei to Ala Moana Center via the Honolulu International Airport (thereafter referred to as "the Project"), as well as operating and maintaining its existing public transportation system. This Financial Plan is a revision to the Financial Plan submitted on May 1, 2009. It supports the City and County of Honolulu ("the City")'s submittal to the Federal Transit Administration (FTA) for approval to advance the Project to the Preliminary Engineering (PE) phase. The Financial Plan will continue to be updated during subsequent phases as changes occur to estimated costs, funding, or external factors that affect the City's finances.

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 four main components presented in the following Sections. The first component is the Capital Plan, outlining capital costs and assessing 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 funding and financial capacity to undertake the Project, while keeping its entire public transportation system in a state of good repair by replacing aging vehicles and addressing other ongoing capital expenditures (CapEx) needs. The second component is the Operating Plan which demonstrates the capacity of the City to maintain and operate the entire system including the Project. A cash flow summary is included at the end of both the Capital and the Operating Plans, and a detailed 20-year cash flow is shown in Appendix A. The third element is a cash flow summary and demonstration of the feasibility of the Financial Plan, given the baseline assumptions outlined in previous sections. The final component presents an analysis of risks and uncertainties. This section is critical in assessing the potential downside or upside risks inherent to some of the assumptions made in the Capital and Operating Plans. It also includes a comprehensive analysis of mitigating strategies to address those risks as well as a sensitivity analysis.

DESCRIPTION OF THE PROJECT SPONSOR AND FUNDING PARTNERS

PROJECT SPONSOR

The City and County of Honolulu is the project sponsor, through its Department of Transportation Services (DTS). 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 (RCH). The City's governmental structure consists of the Legislative Branch and the Executive Branch.

- 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 Hawaii 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-Kaneohe urbanized areas.

The DTS is authorized under RCH Chapter 17, and consists of an appointed DTS Director who is the administrative head of the department, a Transportation Commission, and necessary staff. The DTS Director's powers, duties, and functions include planning, operating, and maintaining transportation, including transit, systems, and the Director reports to the City Managing Director who is the principal administrative aide to the Mayor. Section 2-12.1 of the Revised Ordinances of Honolulu, as amended , assigns to the DTS Director the responsibility of planning, designing, operating, and maintaining the fixed guideway rapid transit system and for planning, administering, and coordinating those programs and projects that are proposed to be funded under the Federal Transit Act, as amended.

The DTS' Rapid Transit Division is responsible for planning, designing, and implementing the Project. The DTS' Public Transit Division, similarly, is responsible for the City's fixed route and paratransit services operated under contract by Oahu Transit Services, Inc. The City's fixed route bus system is referred to as "TheBus," and it is currently the 20th most utilized transit system in the United States. Annual transit passenger miles per-capita are higher in Honolulu than in all other major U.S. cities without a fixed guideway transit system. TheBus serves the entire island of Oahu, including the estimated 900,000 residents and 100,000 visitors on the island on

an average day. TheBus currently has 91 routes and provides more than 70 million unlinked passenger trips each year. In 1997, Oahu Transit Services 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 800,000 unlinked passenger trips per year.

FUNDING PARTNERS

The financial analysis applies and assumes capital funding projections from two major sources, including dedicated local tax receipts and federal funds. The financial analysis applies several sources of operating funds, mainly consisting of passenger revenues and federal formula grants, while additional funding for operations is provided with transfers from the City's General and Highway funds. These 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 Project is an established one-half percent (0.5 percent) surcharge on the State of Hawaii's General Excise and Use Tax (GET) In 2005, the Hawaii State Legislature authorized the counties to adopt a maximum 0.5 percent GET surcharge for public transportation projects (see Appendix C). Following this authorization, the City and County of Honolulu enacted Ordinance No. 05-027 (also see Appendix C) establishing the 0.5 percent GET County surcharge (GET Surcharge). The GET surcharge commenced on January 1, 2007, and will be levied through December 31, 2022. Business activities that are subject to the base 4% GET rate, such as 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 operating or capital expenditures of a fixed guideway system. The Hawaii State 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 for administrative purposes. The Financial Plan projects that revenues from the GET surcharge will be approximately $3.7 billion in YOE dollars (FY2007-FY2023).

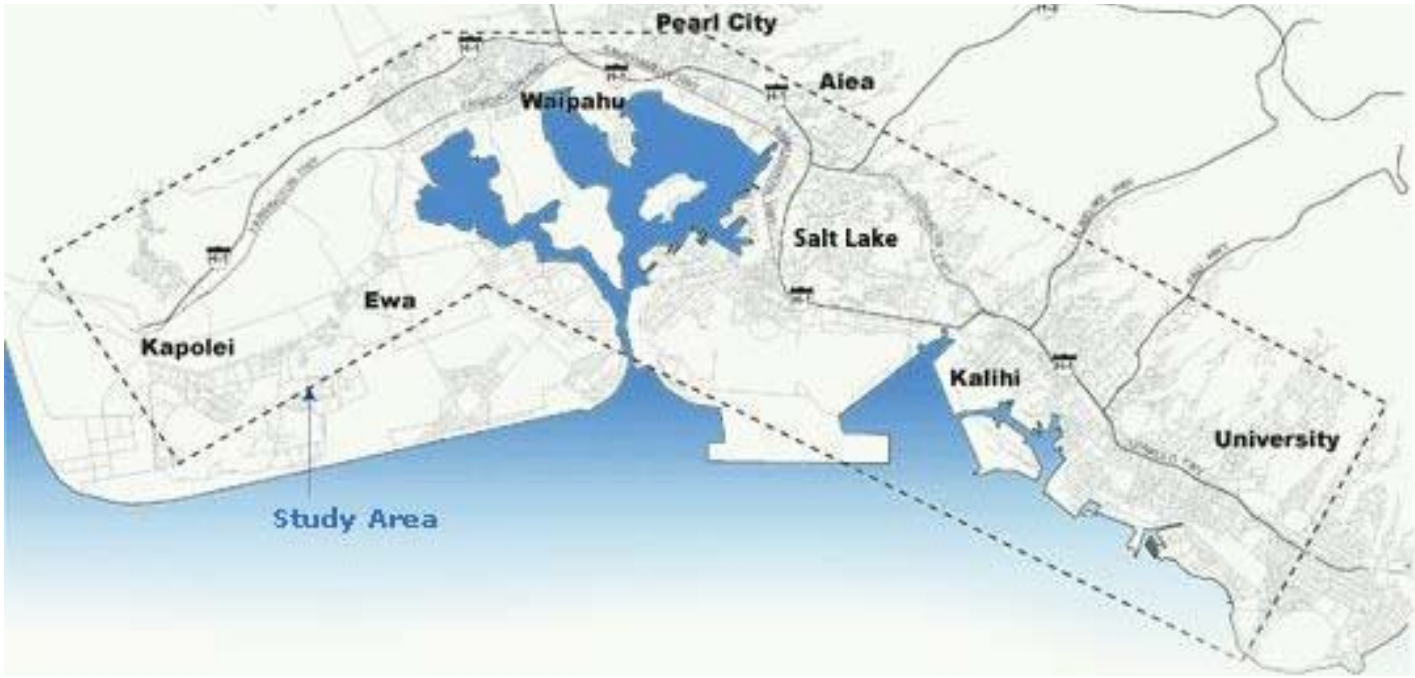
Federal Transit Administration

Federal funding assistance from the FTA is assumed in the Financial Plan, both for capital and preventive maintenance. Approximately $1.5 billion in FTA New Starts funding is assumed to be available to implement the Project. FTA Urbanized Area Formula funds and non-New Starts capital investment funds will also fund portions of the Project as well as continue to provide assistance for preventive maintenance and ongoing capital expenditures.

DESCRIPTION OF THE PROJECT

The Project's east-west corridor stretches across southern Oahu. The corridor is, at most, 4 miles wide because much of it is bounded by the Koolau 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 one mile. Figure 1-1 is a map of the study corridor.

Figure 1-1, Project Corridor Map



This corridor between Kapolei and the University of Hawaii at Manoa is highly congested with more than 60 percent of Oahu's population residing there. 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 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 cost. 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 2030. Travelers on Oahu's roadways currently experience 51,000 vehicle hours of delay, a measure of how much time is lost daily by travelers in traffic, on a typical weekday. This is expected to increase to 71,000 hours by 2030, assuming all planned improvements in the Oahu Regional Transportation Plan are implemented (excluding a fixed guideway system). Without the improvements, the vehicle hours of delay could reach as high as 326,000 vehicle hours.

Alternatives Analysis And Project Identification

The Alternatives Analysis (AA) process for the HHCTCP was initiated in August 2005 and the Honolulu High-Capacity Transit Corridor Project (HHCTCP) Alternatives Analysis Report was presented to the City Council in October 2006. The purpose of the report was to provide the City Council with the information necessary to select a mode and general alignment for high-capacity transit service on Oahu. On December 22, 2006, the City Council enacted Ordinance No. 07-001 (see Appendix B), which selected a fixed-guideway alternative from Kapolei to the University of Hawaii at Manoa and Waikiki.

The selection was made recognizing that revenues from the GET surcharge and FTA New Starts funds would not be sufficient to fund the capital cost of the full system. The City Council selected as the "Project" the segment between East Kapolei and Ala Moana Center.

In addition to a No Build Alternative, the Draft Environmental Impact Statement (DEIS), released for public comment between October 30, 2008 and February 6, 2009, evaluated the two mid-corridor alternatives resulting from the AA phase plus a third which combined the two alignments known as the Airport & Salt Lake Alternative. The DEIS assessed in detail the effects of the alternatives on the environment, land use, and economy of the corridor. As a result of the DEIS analysis, comments from agencies and the general public, and action by the City Council in February 2009, the City selected the Airport alignment as the preferred alternative to be covered in the Final EIS (FEIS).

Objectives Of The Project Sponsor

The City's goal for the Project is to provide high-capacity, high-speed transit in the congested east-west transportation corridor mentioned above, as specified in the 2030 Oahu Regional Transportation Plan (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 goals were used to select the Project:

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

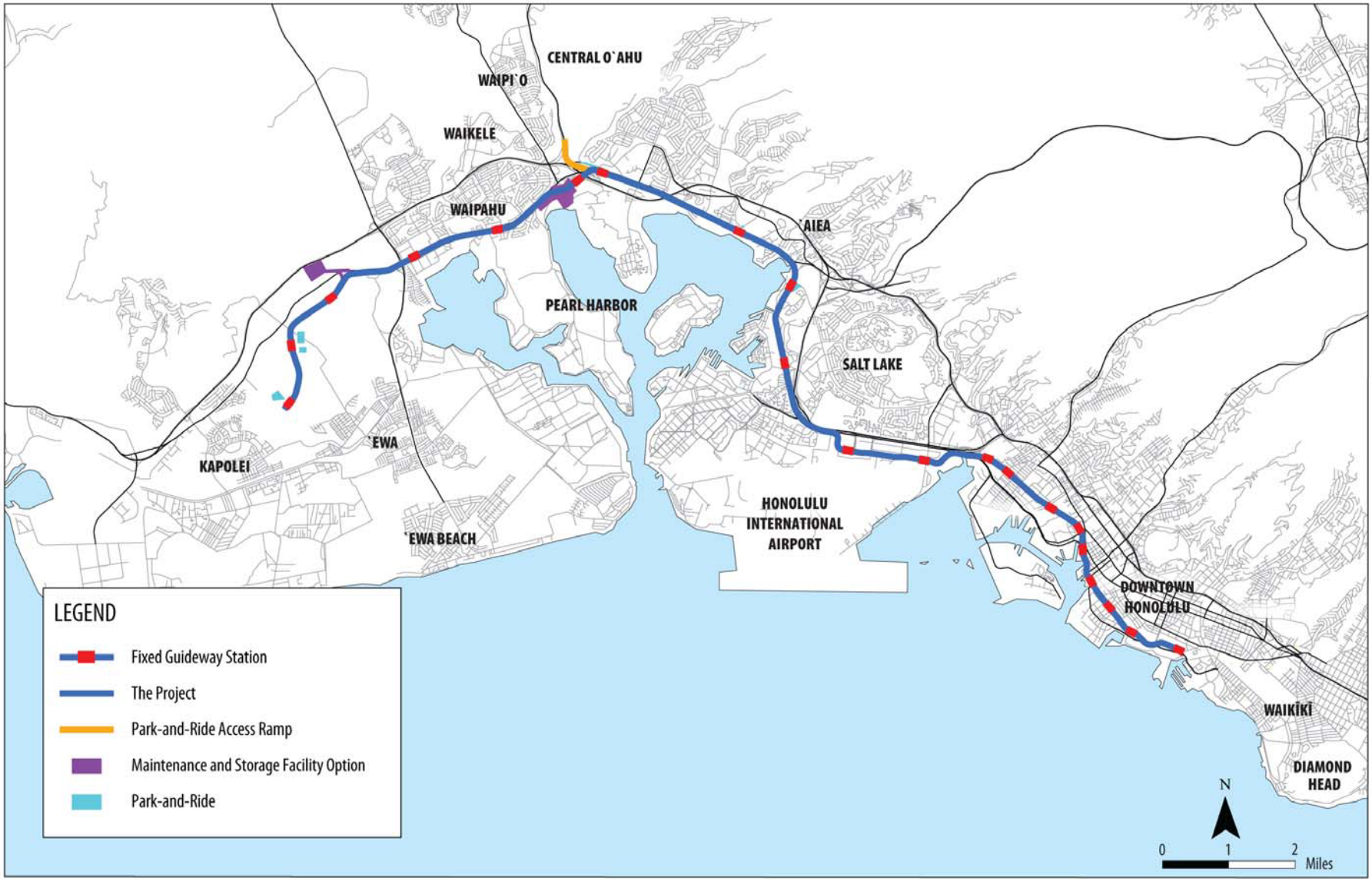
Implementation of the Project, in conjunction with other improvements in the ORTP, would moderate the growth of anticipated traffic congestion in the corridor, provide an alternative to private automobile use, and improve transit linkages within the corridor. The Project also supports the goals of the Oahu'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 20.2-mile portion extending from East Kapolei in the west to the Ala Moana Center in the east and is represented by the blue line in Figure 1-2. The alignment would include 21 stations and will be a dual guideway with 19.5 miles elevated and 0.7 miles constructed at-grade.

The Project is expected to be constructed in phases, each with similar construction activities. Phase I will be the portion between East Kapolei and Pearl Highlands, and will also include construction of the vehicle maintenance and storage facility. The remainder of the Project (Phase II) would be built in three overlapping sub-phases continuing Koko Head from Pearl Highlands

Figure 1-2, Project Location Map



first to Aloha Stadium, then to Middle Street, and finally to Ala Moana Center. Conceptual design for the Project continues and work on the first construction phase is anticipated to begin in late calendar year 2009. Construction of the rest of the Project would also be completed in phases, with the entire Project operating in FY2019. Individual construction phases would be opened as they are completed.

Cost estimates for the Project presented in this Financial Plan assume that the Project is a steel wheel on steel rail technology operating on a combination of at-grade and elevated portions of guideway using high floor vehicles and a barrier-free fare collection system. All of these assumptions could change as the project evolves; however, the cost assumptions that follow are based on these project characteristics.

INTEGRATION WITH THE EXISTING 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 fixed guideway service, with free transfers and passes allowed on both modes. Fare machines will be available at all rail stations, and standard fareboxes will continue to be used on all buses. More information regarding the fare structure and fare revenues can be found in Chapter 3.

PROJECT TIMING

The City initiated technical and engineering work in support of the National Environmental Policy Act (NEPA) in early FY2008 and anticipates FTA approval to proceed into PE in mid Calendar Year (CY) 2009. FTA's Record of Decision is expected to be issued in the fall of CY2009, after which the following are assumed to occur:

- Limited Notice to Proceed will be issued on a design-build contract for Phase I construction
- FTA will approve Phase II entry into Final Design

This Financial Plan assumes that the City will sign a Full Funding Grant Agreement (FFGA) with the FTA around February 2011. Local funding is expected to fund all aspects of the capital costs throughout the system and is expected to be the sole source of funding for Phase I. The project schedule identified above is subject to change as procurement and phasing decisions are finalized.

PROCUREMENT AND PROJECT DELIVERY

Alternative project delivery is a key component of the Project's implementation plan. Phase I is expected to 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 core systems contract for both Phase I and Phase II is expected to be procured under a design-build-operate-maintain agreement, with the expectation that the Operations and Maintenance component could be extended five years beyond the completion of the Project in FY2019. The existing cost estimates presented in this report were developed assuming design-build procurement, although once a contractor is selected and they break ground on the project, improvements to both cost and schedule are highly likely.

REGIONAL ECONOMIC CONDITIONS

Unlike a sales tax which is typically levied on retail activities only, the 0.5 percent County surcharge of Hawai'i's General Excise and Use Tax is levied on retail, services, contracting, theater, amusement parks, interest, commissions, hotels, all other rentals and others. Honolulu's local economic situation is therefore a crucial factor in assessing the financial capacity of the Project.

The local economy has generally followed the trends of the nation as a whole in the recent months, a trend that is also evident in Japan. Tourism plays an important role in Hawaii's economy, and historical data show there has been a strong correlation between retail sales and the number of visitors. The State of Hawaii's Department of Business, Economic Development and Tourism (DBEDT) estimates that visitors are responsible directly or indirectly for about one quarter of all economic activity in the State due to related retail, services, hotel, and other spending. The decline in tourism activity and spending due to the global recession is expected to continue through FY2010 at which point the local economy is expected to begin to recover thus, increasing GET revenues.

The volatility of the tourism sector may possibly be mitigated by the stability of military employment in Honolulu. 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 50,000 members of the armed forces each year. Federal defense spending makes up approximately 23 percent of the total O'ahu economy due to military and supporting civilian employment. While the military affiliated employment is relatively stable as compared to that in other sectors, it is not likely to offset the impact of the near term decline in the tourism sector on GET revenues.

It is also worth noting that a large contributor to Honolulu's economy is the construction and contracting sector. 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 in the latter part of CY2009. Furthermore, the infrastructure spending provisions of the Federal economic stimulus bill will take effect in FY2010 and increase demand for construction related labor, which could potentially increase tax receipts.

Together, all of these trends suggest that while Honolulu's economy is currently in a downturn along with the rest of the country, it is likely to begin to recover in FY2010, at which point GET tax receipts may also return to pre-recession annual growth rates. The local economic environment in Hawai'i is extremely important to the HHCTCP, as the project is very dependent on GET revenues to fund Project construction, and at the same time the level of local construction activity can have a direct impact on the construction costs. Additional details regarding projections of both construction prices and GET revenues can be found later in this report.

SUMMARY OF THE FINANCIAL PLAN

Table 1-1 summarizes the capital cost of the project with and without finance charges, while Table 1-2 summarizes the capital sources and uses of funds for the Project, as well as for the entire system. They are based on the baseline assumptions as defined in the subsequent chapters of this report and demonstrate that the City is expected to balance sources and uses in aggregate over the FY2009-2030 period.

Table 1-1, Capital Cost Summary with Baseline Assumptions for the Project, FY2009–2030, YOE $millions

	Millions YOE $
Total Project Cost	
Project Cost Excluding Finance Charges	$5,120
Including Finance Charges through 2030	5,513
Expected FFGA Project Cost	
Project Cost Excluding Costs before 2010/1	5,057
Including Finance Charges through 2019/2	5,348

1 Corresponds to the first year after Entry into Preliminary Engineering
2 Corresponds to the last year of construction and New Starts receipts

Table 1-2, Sources and Uses of Funds, FY2009 – 2030, YOE $millions

SOURCES OF FUNDS	YOE $M
Project Capital Sources of Funds	
Project Beginning Cash Balance	$154
Net GET Surcharge Revenues	3,524
FTA Section 5309 New Starts Revenues	1,550
FTA Section 5307 Formula Funds Used for the Project 1/	305
Interest Income on Cash Balance	11
Subtotal Project Capital Sources of Funds	**$5,544**
Ongoing Capital Sources of Funds	
FTA Section 5309 Fixed Guideway Modernization Revenues	$102
FTA Section 5309 Bus Discretionary	419
FTA Section 5307 Formula Funds Used for Ongoing CapEx	305
American Recovery & Reinvestment Act (ARRA)	20
Transfers to the State's Vanpool program	(35)
City General Obligation Bond Proceeds	571
Subtotal Ongoing Capital Sources of Funds	**$1,382**
TOTAL CAPITAL SOURCES OF FUNDS	**$6,926**
Operating Sources of Funds	
Total Fare Revenues (Bus and Rail)	2,228
Total Fare Revenues (Handi-Van)	47
Total Fare Revenues	**$2,275**
FTA Section 5307 Formula Funds Used for Preventative Maintenance	270
City's Operating Subsidy	4,726
TOTAL OPERATING SOURCES OF FUNDS	**$7,271**

USES OF FUNDS	YOE $M
Project Capital Uses of Funds	
Project Capital Cost	5,120
Subtotal Project Capital Uses of Funds	**$5,120**
Finance Charges	
Total Interest Payment on Long-term Debt	$354
Total Finance Charges on Short-term Debt	20
Other Finance Charges	19
Subtotal Finance Charges	**$393**
Project Ending Cash Balance	$31
Subtotal Project Uses of Funds	**$5,544**
Ongoing Capital Uses of Funds	
Additional Railcar Acquisitions	$75
Rail Rehab & Replacement	49
Total Bus Acquisitions	1,044
Other Ongoing Bus CapEx	124
Handi-Van Acquisitions	90
Subtotal Ongoing Capital Uses of Funds	**$1,382**
TOTAL CAPITAL USES OF FUNDS	**$6,926**
Operating Uses of Funds	
Total O&M Costs - TheBus	$5,209
Total O&M Costs - the Project	1,383
Total O&M Costs - TheHandi-Van	679
TOTAL OPERATING USES OF FUNDS	**$7,271**

1/ FTA Section 5307 Funds includes $4M from the FTA ARRA (stimulus Bill); totals may not add due to rounding

CHAPTER 2 : CAPITAL PLAN

This chapter describes the capital costs and funding sources associated with both the Project and the City's overall public transportation system. The chapter begins with the Project's base year and YOE capital costs, system-wide capital costs, and the Project schedule. This is followed by a detailed description of the project funds, including forecasts and characteristics of each funding source and the required project financing. Finally, this chapter concludes with the system-wide capital funds available. The objective of this chapter is to demonstrate that there is an adequate level of funding available to address the capital costs associated with both the Project and the system-wide needs through FY2030.

PROJECT CAPITAL COSTS

Table 2-1 presents total annual capital expenditures excluding finance charges. The total capital costs for the proposed project are $4,281 million in 2009 dollars and $5,120 million in YOE dollars. These costs are inclusive of construction services, soft costs, and unallocated contingency, but exclude finance charges that are detailed later in this chapter. This capital cost also excludes soft costs (for professional services) incurred in FY2007 and FY2008, totaling $19 million. The cash balance at the beginning of FY2009 was approximately $154 million which will be carried through the year.

Table 2-1, Annual Project Capital Cost, Excluding Finance Charges, FY2009 – 2019

City Fiscal Year	Base Year 2009 $M	YOE $M
2009	$63	$63
2010	175	180
2011	451	485
2012	642	720
2013	944	1,111
2014	803	973
2015	560	701
2016	296	392
2017	167	231
2018	124	179
2019	56	85
Total	**$4,281**	**$5,120**

Note: Totals may not add due to rounding

CAPITAL COST ESTIMATING METHODOLOGY

The 2006 FTA guidelines on cost estimating were used to calculate capital cost estimates for the proposed project. Initially, estimates were developed for each cost item. For example, a cost for trench excavation per cubic yard and labor to install direct fixation rail were identified. Then, the composite section costs were calculated using the unit costs to obtain total costs for the project. This cost estimation process established unit costs that were used throughout the cost estimating process to provide uniformity and consistency throughout the analysis. These unit costs were derived from a variety of sources, including the Hawaii Department of Transportation and the Pacific Division, Naval Facilities Engineering Command, Pearl Harbor, as well as historical sources from similar systems around the country adjusted to Hawaii.

The 2006 FTA guidelines on cost estimating were used to generate capital cost estimates in 2006 dollars, and costs were then inflated to 2009 dollars (further described below). These guidelines employ standard cost categories (SCC) to establish a consistent format for the reporting, estimating, and managing of capital costs for New Starts projects. The SCCs are divided into construction-related items (items 10 through 50) and project-related items (items 60 through 100).

It is worth noting that the professional services soft costs (SCC item 80) are generally estimated as multipliers of the construction costs associated with them. Multipliers for professional services include preliminary engineering (PE), final design, project management, and construction administration. The sum of all of the multipliers is 30 percent of the construction costs; the largest being 10 percent for construction administration and management. There are also specific professional services multipliers for vehicle cost (SCC 70) and right-of-way (SCC 60), which relate solely to the costs associated with those items.

The total costs in 2009 dollars, by category, are detailed in Table 2-2. Note that this table excludes finance charges and also excludes soft costs incurred in FY2007 and FY2008.

CONTINGENCIES

The cost estimates include a variety of contingencies to allow for potential additional expenses related to each cost category. The design/estimating construction contingency percentages are inversely proportional to the level of design detail for each element. Other contingencies include change orders, vehicles, right-of-way and project reserve (unallocated) contingency. For more details on contingency, refer to the Final Capital Costing Memorandum, dated October 23, 2006.

As a result of detailed analysis required to respond to EIS issues and comments, the level of design on the Project has reached an advanced stage of conceptual design and would normally justify lower contingencies. The contingencies as currently carried in the capital cost estimate offer additional coverage against Project cost increases should they materialize, and will be reduced as soon as preliminary engineering work is completed consistent with New Starts practices. To the extent design and the associated costs do not change

Table 2-2, Total Project Capital Costs by Standard Cost Category, Excluding Finance Charges, FY2009 – 2019

FTA Standard Cost Category	Base Year 2009 $M	YOE $M	Share of Total YOE Capital Cost
10 Guideway Construction/Track Work	$1,408	$1,678	33%
20 Stations	306	389	8
30 Yard, Shops and Support Facilities	122	138	3
40 Sitework and Special Conditions	757	895	17
50 Systems	254	311	6
60 Right of Way	128	129	3
70 Vehicles	341	399	8
80 Professional Services	810	996	19
90 Unallocated Contingency (Project Reserve)	154	184	4
Total Project Cost (Excluding Finance Charges)	**$4,281**	**$5,120**	**100%**

Note: Totals may not add due to rounding

significantly in PE, reduced contingencies could result in an overall Project cost reduction.

Project Capital Costs in YOE Dollars

Inflation

Project-specific inflation rates have been assumed based on recommendations from the Project Management Oversight Contractor's report titled: *CLIN 0005: Spot Report*, Jacobs, July 2009.

Project Schedule

This Financial Plan assumes the following milestones:

- Entry into PE in mid CY2009
- Record of Decision Issued in the fall of CY2009
- Start of construction for Phase 1 in late 2009.

In parallel and beyond the construction of Phase I, the following is expected to occur:

- FTA approval of Phase II into Final Design
- Opening of Phase I in FY2015
- Opening of the Project in mid FY2019.

Project Capital Cost Schedule (YOE Dollars)

Figure 2-1 provides a breakdown of total capital expenditures by year. The largest cost item is for the guideway and track elements, which accounts for approximately 33 percent of total capital expenditures. Professional services accounts for approximately 19 percent, while sitework and special conditions account for 17 percent. All other cost items have a share of total capital cost of 8 percent or less. Capital expenditures are expected to peak in FY2013 with a total cost during that year of $1,111 million YOE.

Figure 2-1, Capital Expenditure Schedule, by SCC, FY2009 – 2030, YOE $millions

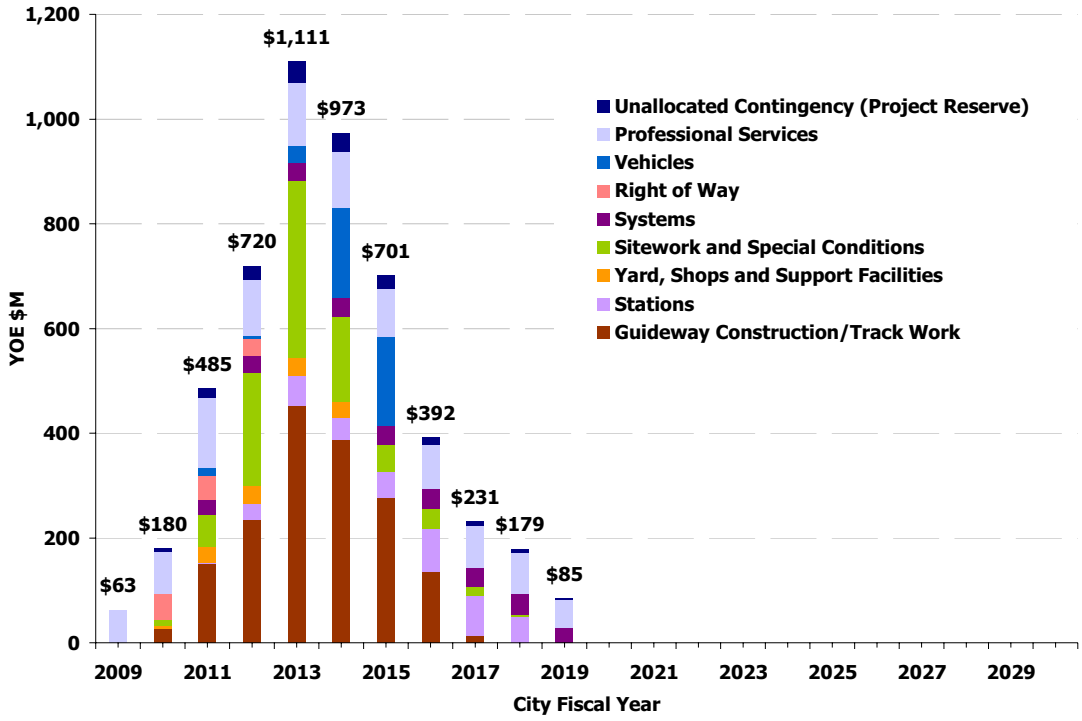
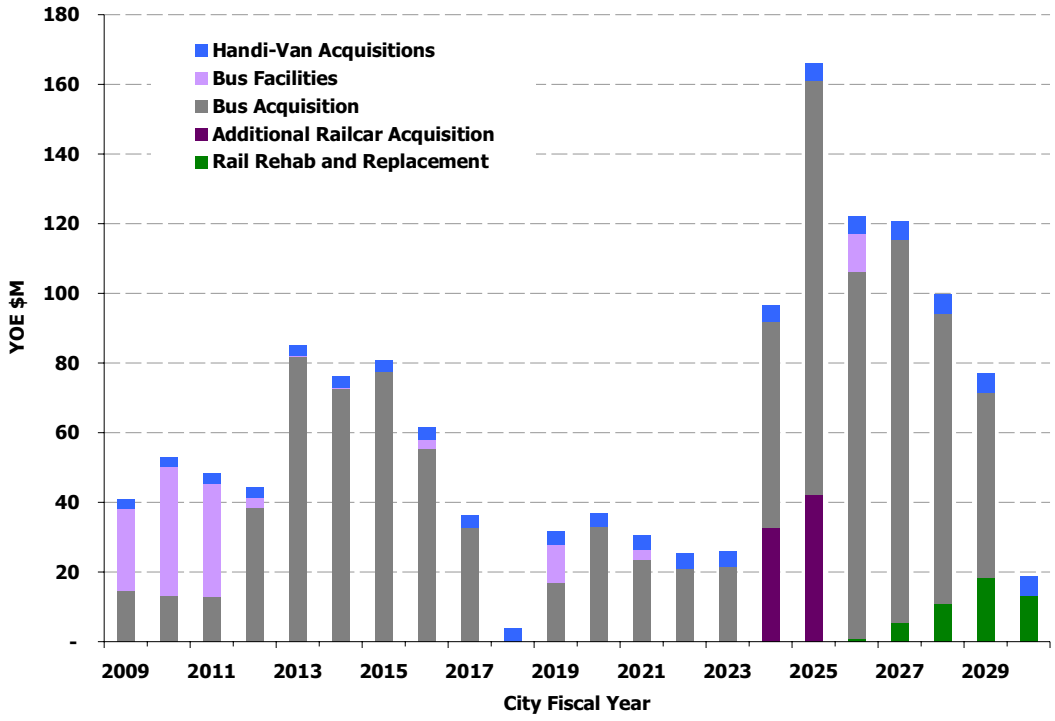


Figure 2-2, Ongoing Capital Expenditures, FY2009 – 2030, YOE $millions



total capital cost of 8 percent or less. Capital expenditures are expected to peak in FY2013 with a total cost during that year of $1,111 million YOE.

System-Wide Capital Costs

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 to the existing system in order to accommodate forecasted 2030 demand levels.

- **Additional railcar purchases:** While the 75 railcars procured during the construction period are expected to be sufficient to meet demand levels in the opening year (FY2019), further growth in demand will require the City to need 9 additional railcars (including spares) in order to meet ridership expected in FY2030. These cars are expected to be procured between 2024 and 2025 at a total cost of $75 million. This Financial Plan assumes that the additional railcars would be funded through a mix of local match and federal revenues such as FTA Section 5307 formula funds and 5309 fixed guideway modernization funds.
- **Rail rehabilitation and replacement costs:** Ongoing capital costs related to the fixed guideway project are expected to be incurred beginning 16 years after construction activities are completed. This long-term rail rehabilitation and replacement expense is estimated to be $49 million dollars total through FY2030, equal to approximately 2 percent of annual construction cost.

- **Bus Facilities:** Various facilities to accommodate ongoing operations are expected to be built and/or expanded simultaneously with aspects of the Project. The Capital Plan recognizes expenditures for bus facilities programmed in the Oahu FY2008-2013 Transportation Improvement Plan, including projects such as the design and construction of an intermodal center, maintenance facilities for TheBus and TheHandi-Van operations in West Oahu, and transit security projects.

Figure 2-2 presents the annual ongoing system-wide 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 be used to pay for these needs.

AGENCY-WIDE CAPITAL COSTS

Figure 2-3 shows total capital costs for construction of the Project as well as additional capital expenditures required for ongoing bus acquisitions, railcar acquisitions and rehab, Handi-Van acquisitions and bus facilities necessary to keep the system up to date.

CAPITAL FUNDING FOR THE PROJECT

The Project is expected to be entirely funded through two main sources: revenues from the dedicated GET surcharge and federal funds.

LOCAL GET SURCHARGE

The local funding source for the Project is a dedicated one half (0.5) percent surcharge on the State of Hawai'i's General Excise and Use Tax. 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 exclusively used for capital and/or operating expenditures of the Project. The surcharge is set to sunset on December 31, 2022 (FY2023). This Financial Plan assumes that the GET surcharge revenues would total $3,524 million (YOE $, FY2009–FY2023), accounting for about 66 percent of the Project's budget.

This section provides a summary of the net GET surcharge revenues expected to be received by the City between FY2007 and FY2023. This forecast complements and is based on the GET tax base forecast report developed in March 2009, attached to this report as Appendix D. It is important to note that given the current uncertainties in the international and US economies, this outlook is likely to evolve over time, as more actual tax collection data is received and as the economic outlook changes.

Figure 2-3, Total Agency-wide Capital Expenditures, FY2009 – 2030, YOE $millions

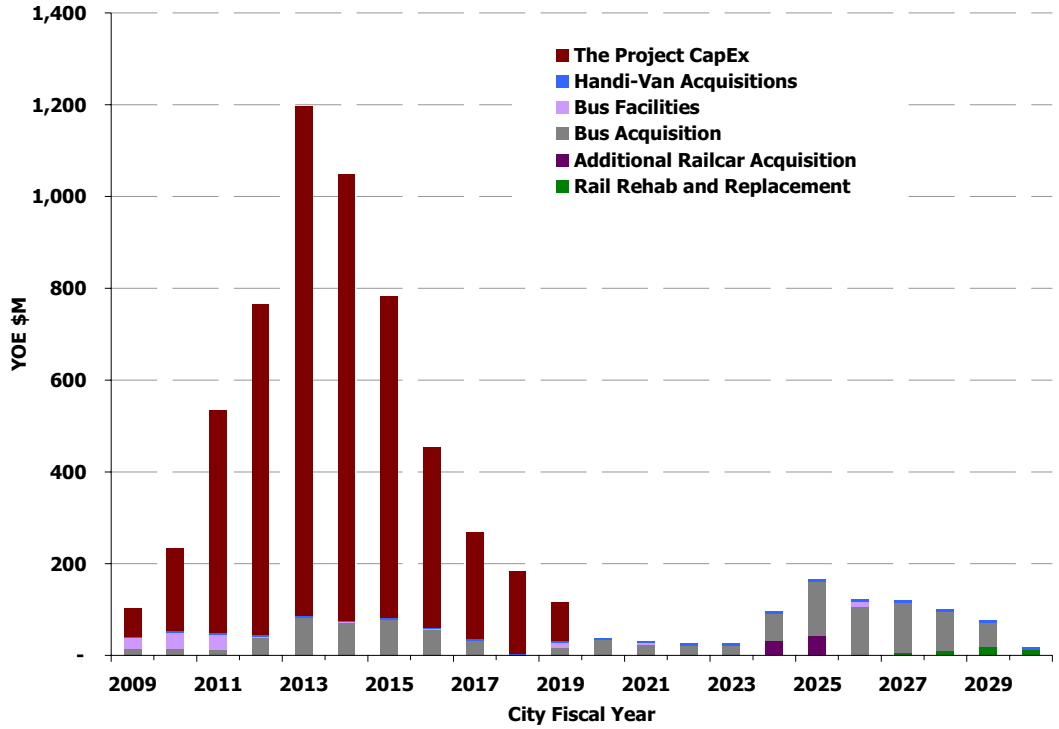
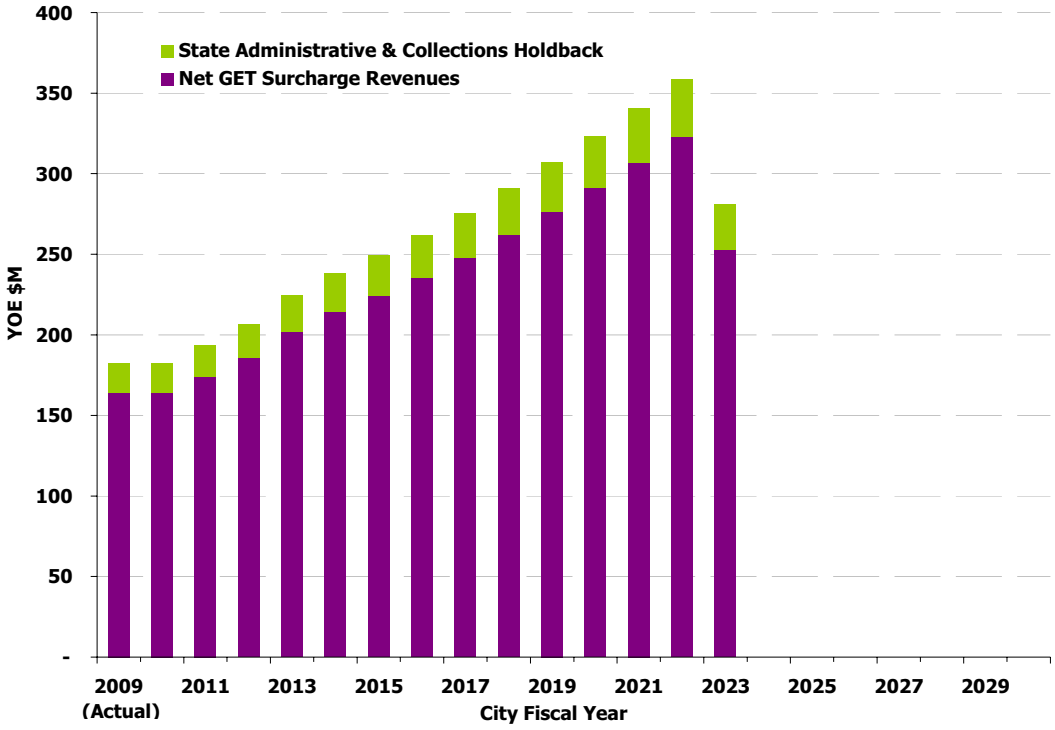


Figure 2-4, Annual Net GET Surcharge Revenues, FY2009-2030, YOE $million



SUMMARY RESULTS

Figure 2-4 presents the expected net GET surcharge revenues in YOE dollars expected to be received by the City. The Figure presents the annual amounts on a cash basis. The total amount through FY2023 is expected to equal $3,524 million YOE dollars, including $26 million expected to be received from the implementation of the Project itself. Amounts for FY2007, FY2008 and FY2009 are actuals. This forecast is net of the 10% amount retained by the State for administrative and collection purposes.

Note on actual receipts to date and FY2023 receipts: Actual GET surcharge revenues received by the City in FY2007 totaled $12.79 million, equivalent to the revenues collected during the first quarter of calendar year 2007. This number excludes the quarterly and semi-annual tax filers that account for about 7 percent of businesses. The number also excludes February tax returns due to the fact that the corresponding tax returns were not due until April 2nd and March tax returns, which were not due until April 30th. These reasons explain the relatively low revenue collection for that period. The State of Hawaii Department of Taxation also indicated that approximately 15 percent of tax returns received through March 2007 left blank the section where taxpayers report their County surcharge.

The State subsequently issued additional guidance on the most common errors to avoid when filing GET tax returns and has expressed its commitment to recover the uncollected amounts. Without specific information on timing for this recovery to occur, the forecast of net GET surcharge revenues presented herein conservatively assumes that this money is not recovered nor available to fund the fixed guideway Project.

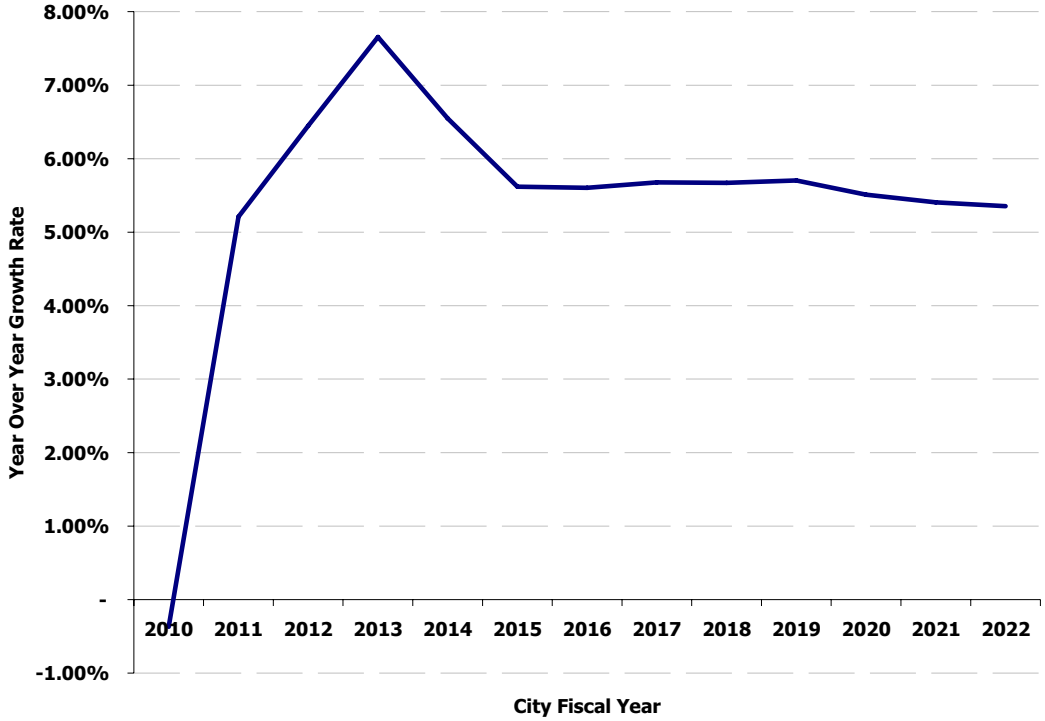
The first full fiscal year of GET surcharge revenues was FY2008, with a total of $161 million. Despite the economic recession, FY2009 receipts were slightly higher than FY2008, totaling $164 million. This increase can be explained by the 23% growth in the first quarter of receipts counting towards FY2009 from the same quarter in FY2008, which offsets the negative growth of the subsequent three quarters.

In FY2023 (from July 1, 2022 to June 30, 2023), net GET surcharge cash revenues are expected to total three quarters worth of tax collection, also explaining the lower cash revenues in that fiscal year compared to FY2022.

The net GET surcharge revenues presented above were derived by applying the following forecasting methodology to actual FY2009 GET surcharge receipts:

- For FY2010, the growth rates projected by the Council on Revenues in July 2009 were applied. The Council on Revenues is attached to the State's department of Taxation for administrative purposes and prepares government revenue estimates for the next six fiscal years on a regular basis for the Governor and State legislators. General excise and

Figure 2-5, GET Surcharge Nominal Growth Rate Forecast, FY2009-2022



use tax is forecasted as a separate line item for the State as a whole.

- For FY2011 through FY2023, the applied growth rates were derived from a comprehensive economic analysis, and forecasts based on a series of regression models using both historical data and econometric forecasts from Global Insight, Moody's Economic Service, the IMF, the United Nations Statistical Handbook to develop the tax base forecasts. The models rely on the identification of market drivers that affect the various business categories on which the surcharge is levied. The model then uses historical analysis of how the individual market drivers affect the general excise and use tax base. Finally, the analysis is adjusted based on a series of ongoing interviews with local economists, researchers and stakeholders in Honolulu. More details on the GET tax base forecast can be found in Appendix D of this Financial Plan.

The corresponding growth rates are presented in Figure 2-5. FY2009 actual collections are expected to be followed by a year of low, negative nominal growth in FY2010 equal to -0.4%. The economic recovery is expected to begin in FY2011 with a growth rate of 5.2%, followed by a peak at 7.7% in FY2013. Growth is expected to slow down in subsequent years, until reaching excepted long-term average of 5.4%.

The economy is expected to experience a more pronounced recovery from FY2011 through FY2014. The strongest expansion in the tax base is expected to occur in FY2013, where the effect of Honolulu's economic recovery is compounded with increased visitors to the island. The lagged growth in the tourist sector is due to household discretionary spending items (such as vacations to Honolulu) being put on hold until there is sustained economic recovery (which includes lower unemployment rates, which is also a lagging indicator) and higher consumer confidence. The assumptions on the pace and magnitude of recovery are supported by the Congressional Budget Office and the Federal Reserve. Beginning in FY2015, economic growth is expected to be moderate with long-term growth levels which will continue through FY2023. Over this period, increases in the tax base are projected to occur at a CAGR of 5.5% in nominal terms and 3.3% in real terms. These growth rates are close to the 5.2% and 2.7% growth rates seen over the 1995 – 2007 period.

As mentioned earlier, the growth rates assumed in this base case are subject to numerous risks and uncertainties, including the magnitude and timing of the economic recovery, future inflationary pressures, the strength of the US dollar, especially relative to the East Asian currencies and US monetary policy. At the local level, the real estate and tourism markets are likely to be key underlying factors in the GET forecast.

Federal Funding Sources

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

Table 2-3, Assumed 5309 New Starts Revenues, YOE $millions

City Fiscal Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
New Starts Revenues (YOE $M)	$0	$35	$80	$200	$250	$250	$200	$200	$200	$135	$1,550

As shown in Table 2-3, New Starts funding is assumed to provide a total of $1,550 million to the Project over a nine year period, with annual amounts of up to $250

million per year. The $35 million amount shown as coming to the Project as a grant in FY2010 corresponds to the $15 million earmark appropriated in FY2008 and the $20 million earmark appropriated in FY2009. The grant amount shown in FY2011 includes an assumed $30 million appropriation in FY2010 as well as a $50 million appropriation in FY2011.

Except for recent transit projects in New York City, this is an extraordinary level of New Starts funding in absolute terms. Nonetheless, it is worth noting that, after adjusting for construction inflation, the assumed $1.55 billion (YOE $) is very close to the $618 million YOE amount that the Intermodal Surface Transportation Efficiency Act authorized for the Honolulu Rapid Transit Program in 1991, and that was the basis for FTA approvals that advanced the project in subsequent years. Moreover, the New Starts share of total project capital cost is still approximately 30%, as it was in the 1990s.

The availability of New Starts funding between 2010 and 2018 will depend on future actions by Congress to authorize the program. The current authorization expires on September 30, 2009. Future funding also depends on annual appropriations by Congress, as well as the nationwide competitive landscape for funding major transit capital investments. For these reasons, the assumption on New Starts funding are discussed more extensively in Chapter 5 on Risks and Uncertainties, where several scenarios are analyzed.

American Recovery and Reinvestment Act of 2009 (ARRA) Funding

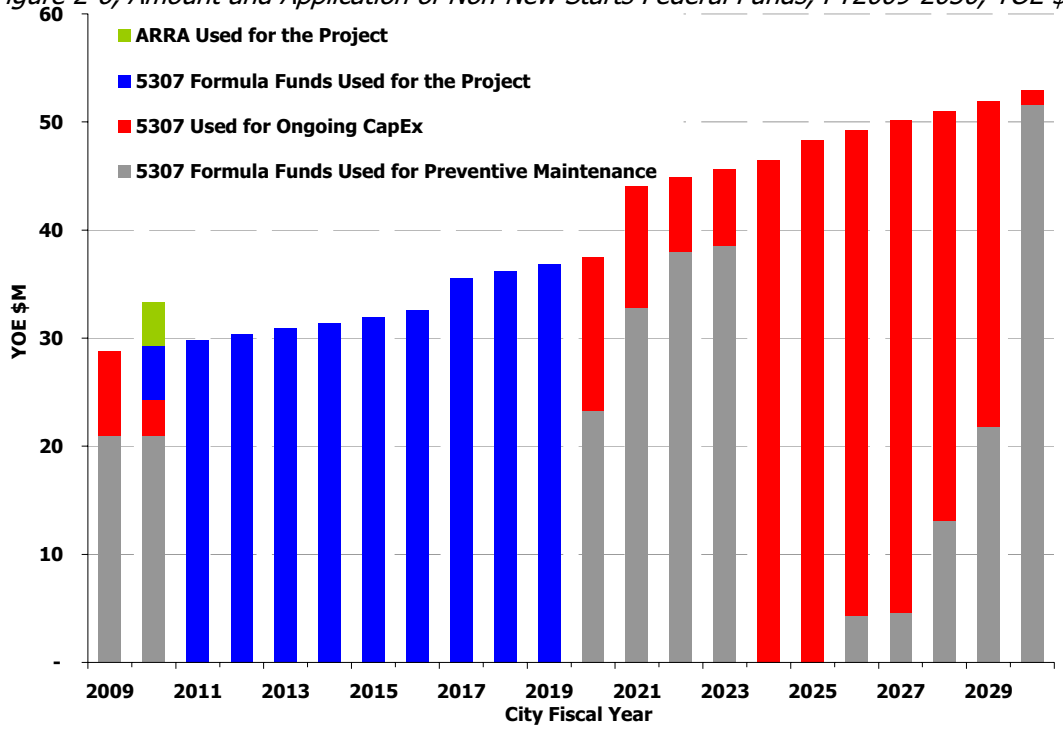
The HHCTCP assumes a minimal level of funding will be provided through stimulus monies received by the City. Specifically, $4 million has been identified to support PE activities and is assumed to be available in FY2010.

FTA Section 5307 Formula Funds (49 USC Section 5307)

To supplement the GET and New Starts funds mentioned above, the Financial Plan assumes that revenues from FTA's 5307 formula program will be directed to the Project between FY2011 and FY2019. In total, it is expected that the Project will receive approximately $300 million from Section 5307.

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, expires at the end of the current Federal fiscal year, and the formula and

Figure 2-6, Amount and Application of Non-New Starts Federal Funds, FY2009-2030, YOE $millions



eligibility requirements could change in the future.

Activities eligible for Section 5307 funds include planning, engineering design, and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities, such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment, and construction of maintenance and passenger facilities; capital investments in new and existing fixed guideway systems; and preventive maintenance. As such, the Project is an eligible expense for 5307 funds.

Figure 2-6 presents a forecast of the major Non-New Starts federal revenues and how they would be applied through FY2030. As shown in this figure, 5307 funds directed to the Project are assumed to total about $5 million in FY2010, after which all 5307 revenues will be directed to the Project through FY2019. The year by year increase is based on Honolulu keeping a constant share of the total amount of the 5307 program. Since 5307 apportionments are based on level of services variables, the implementation of the Project will cause the revenues to increase in FY2017, two years after the implementation of the segment from East Kapolei to Pearl Highlands. Similarly, an increase in 5307 revenues is expected to occur in FY2021 following the full opening of the Project two years earlier. In other years, the Financial Plan assumes no significant change, but modest growth of funding in line with the growth in revenues currently expected to flow to the Mass Transit Account of the Highway Trust Fund.

FINANCING OF THE PROJECT

Figure 2-7 shows the aggregate Project sources and uses of funds for capital before financing. In the years in which capital expenditures are greater than the funding available on a pay as you go basis, debt financing is needed, as further described in the next sections of this Chapter.

FINANCING AND PROJECT CASH BALANCE

With the GET projections and federal revenues assumptions described above, the Project exhibits a positive cash balance through FY2011 without the need for debt financing, as GET and other revenues will be consumed on a pay as you go basis. Starting in FY2012, the amount of financing needed in a year is sized such that the Project cash balance remains positive. Once construction ends in FY2019, GET revenues continue to increase gradually through FY2023 while debt service remains constant, thereby increasing the cash balance in those years to a total of $29 million by the end of FY2023. This cash balance is not assumed to be utilized in subsequent years but could potentially

Figure 2-7, Proposed Project Sources and Uses of Funds, FY2009 – 2030, YOE $millions

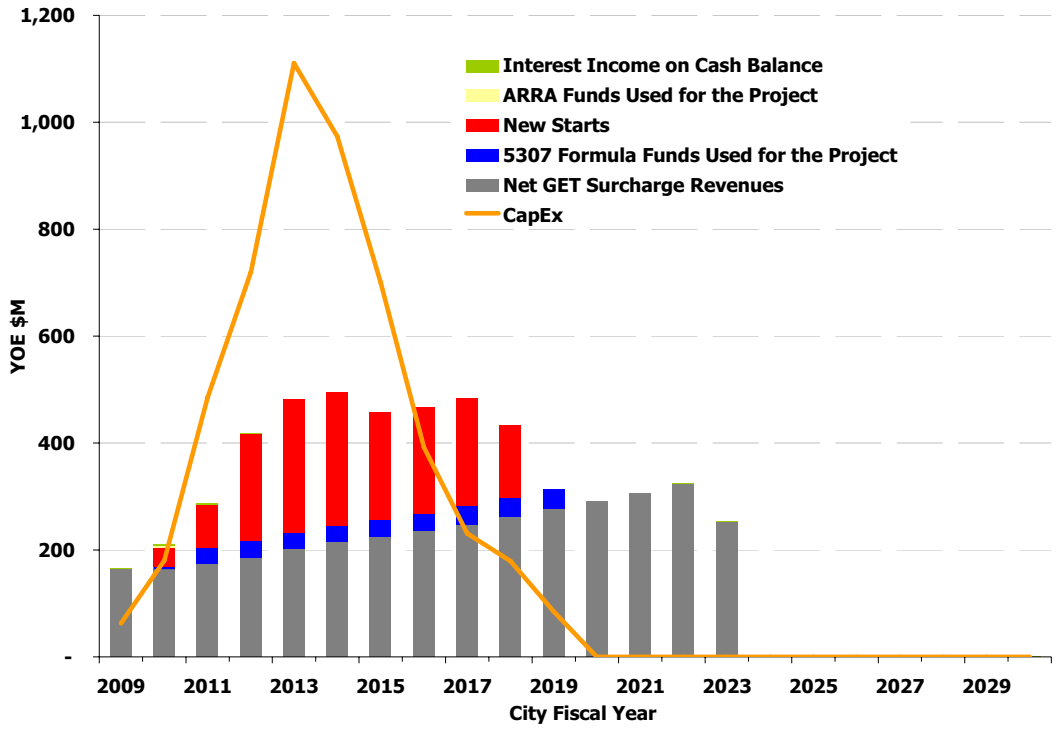
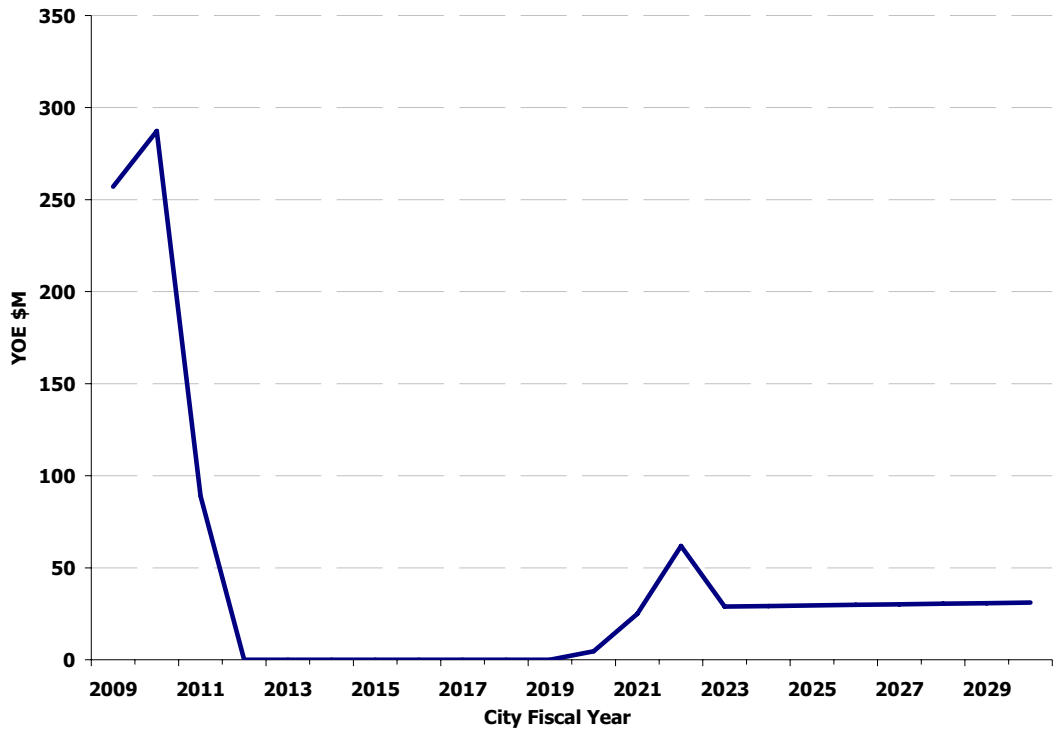


Figure 2-8. Total Annual Debt Service on Long-term Debt, FY2009 – 2030, YOE $millions

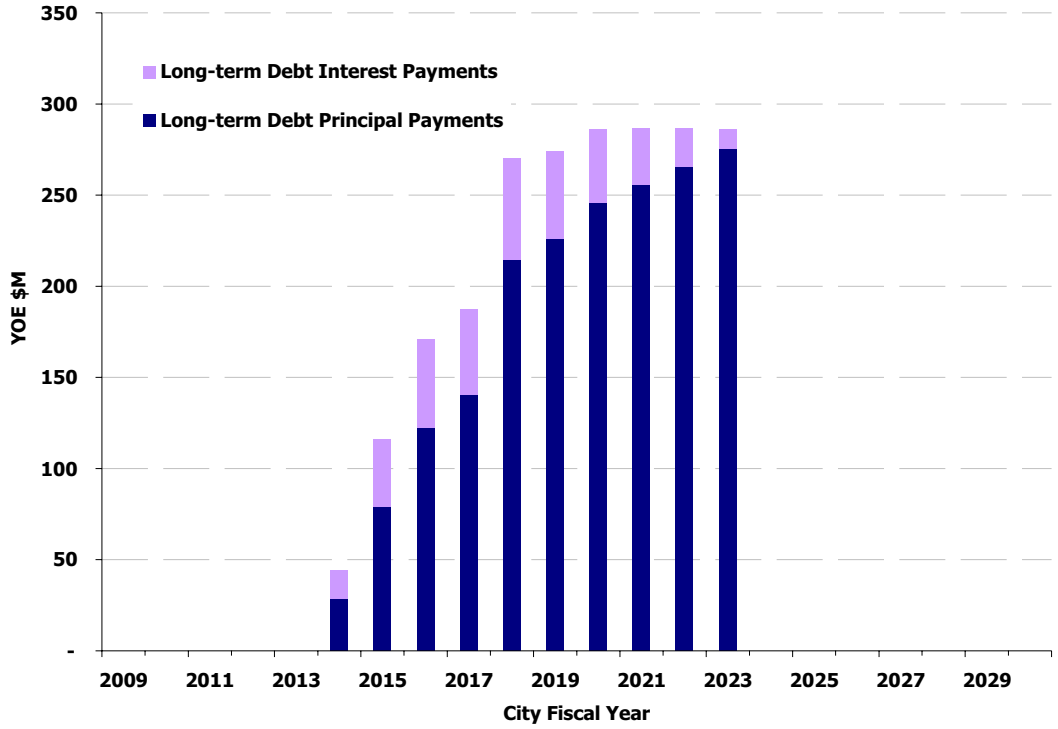


be used to pay for a portion of fixed guideway operations or retire debt early. Alternatively, this cash balance could be saved for later years and used to offset the purchase of the additional 9 rail cars or when rehabilitation of the fixed guideway system becomes necessary. Figure 2-8 presents the Project cash balance through FY2030. The Financial Plan assumes that any positive cash balance will earn interest income at a conservative rate of 1.00 percent per year.

General Debt Structure and Debt Instruments

In years where GET surcharge revenues and/or New

Figure 2-9. Total Annual Debt Service on Long-term Debt, FY2009 – 2030, YOE $millions



Starts funding are not by themselves sufficient to meet the cash flow requirement to cover capital expenditures, a mix of long-term bonds backed by future GET surcharge revenues and short-term construction borrowing would be used to bridge the funding gap. A conventional mortgage-type amortization schedule with a level debt service repayment is assumed for each bond issue, which implies an increasing total debt service profile through FY2023 (as shown in Figure 2-9), given that each year bonds are issued the final maturity decreases, as the GET surcharge sunsets in FY2023. Given that these long-term bonds would be issued by the City and supported by the GET surcharge revenues, no coverage or reserve fund requirements have been included in the financial analysis.

The use of short-term debt during construction is necessary, and advantageous because debt instruments of shorter maturity generally have lower interest rates than longer term debt. Short-term financing assistance could utilize the City's existing tax exempt commercial paper (TECP) program. Short-term construction finance provides a particularly low-interest form of borrowing in which interest-only payments are made and the principal balance is simply either rolled over or repaid with available cash annually during construction, and ultimately refinanced with longer term debt towards the end of the construction period. Other short-term construction finance instruments could include a line of credit or innovative financing mechanisms such Bond or Grant Anticipation Notes. Figure 2-10 shows the cumulative bond proceeds issued to fund the construction of the fixed guideway project.

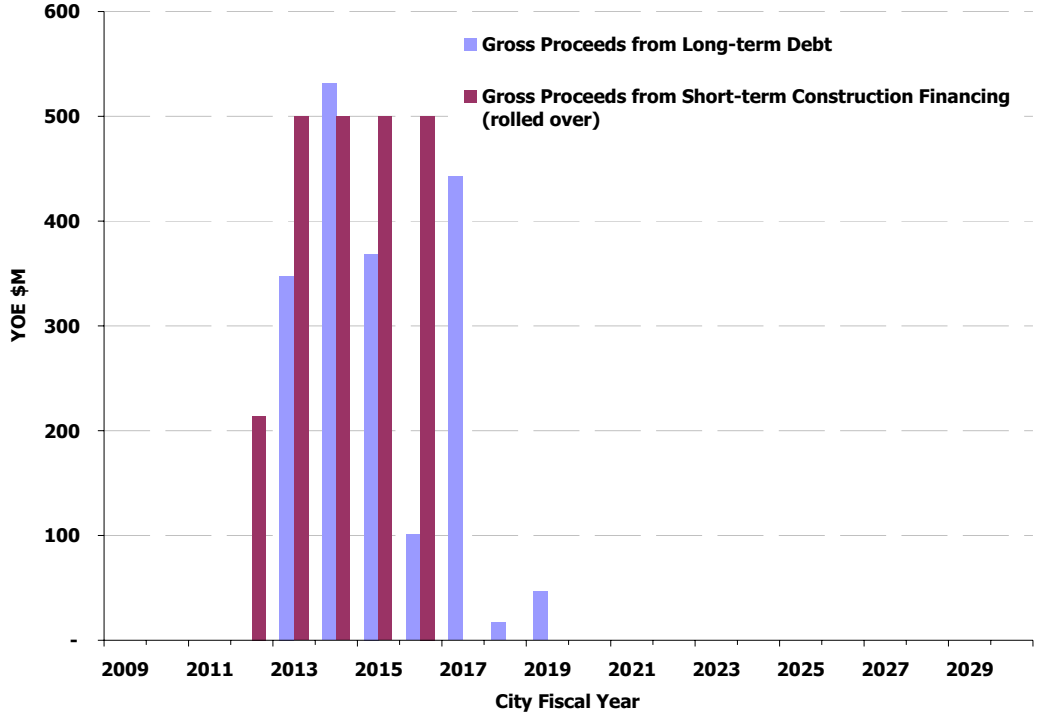
Financing Costs and Maturity

Interest rate: The Financial Plan assumes a weighted average interest rate on long term debt of 3.96 percent, consistent with the City's current AA rating. Municipal Market Data (MMD) rates as of August 5, 2009 are used to form the yield curve used for financing analysis, and considering that interest rates are currently close to historical lows, the Financial Plan adds a 100 basis point contingency above current rates. Interest rates on short-term construction financing are assumed to equal 1.66% which also includes the 100 basis point add-on to the current 1-year MMD AA rate.

Issuance cost: Costs associated with the issuance of long-term bonds and short-term finance is assumed to equal 1.00 percent and 0.25 percent of the par amount, respectively. This cost is assumed to include all upfront costs of issuance associated with the debt issuances.

Maturity: All long-term bonds are assumed to mature in FY2023, corresponding to the last fiscal year of receipt of GET revenues. The corresponding weighted average life on these bonds is 8 years. Short-term construction financing issues are

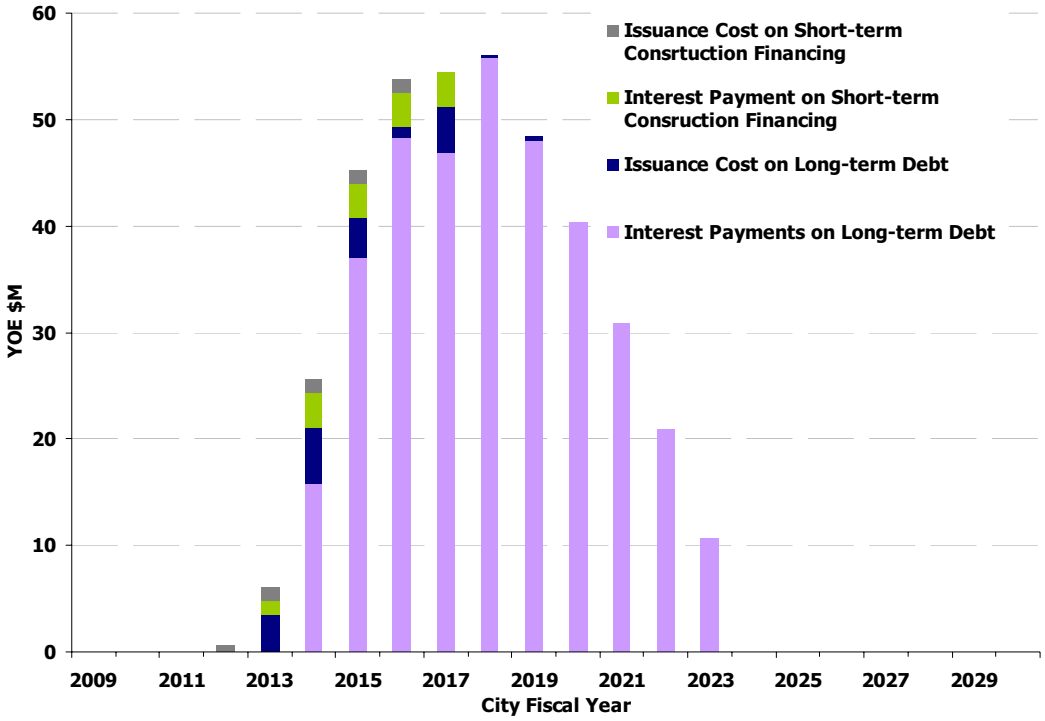
Figure 2-10, Bond Proceeds, FY2009 – FY2030, YOE $millions



assumed to be either refinanced annually or repaid through a combination of available cash or refinanced into long-term debt.

The remainder is composed of finance charges related to the cost of issuance of long-term and short-term debt as well as interest expense on short-term debt. Figure 2-11 also shows finance costs

Figure 2-11, Total Annual Finance Charges on Bond and TECP Proceeds, FY2009 – 2030, YOE $millions



Finance Charges

Based on the above assumptions, finance charges incurred for the Project are projected to total $393 million. As shown in Figure 2-11, the majority of finance charges correspond to interest payments on long-term bonds backed by GET surcharge revenues.

throughout the financial analysis period for both types of debt instruments assumed to be issued.

Project Sources and Uses

Table 2-4 summarizes the sources and uses of funds for

Table 2-4, Total Sources and Uses of Funds for the Project, YOE $millions

Sources of Funds	FY2009-2030
Project Beginning Cash Balance	$154
Net GET Surcharge Revenues	3,524
FTA Section 5309 New Starts	1,550
FTA Section 5307 Formula Funds (including $4m ARRA)	305
Interest Income on Cash Balance	11
Total Sources Funds	**$5,544**

Uses of Funds	FY2009-2030
Capital Cost	$5,120
Interest Payment on Long-term Debt	354
Finance Charges on Short-term Construction Financing	20
Other Finance Charges	19
Project Ending Cash Balance	31
Total Uses Funds	**$5,544**

Totals may not ad due to rounding

the Project. Table 2-5 shows additional details on the federal and non-federal sources of funds. For detailed annual cash flows for the Project, refer to Appendix A.

Table 2-5, Summary of Federal and Non-Federal Fund Sources

Sources of Funds	Funding Level (Base Case) YOE $millions	Funding Share	Level of Commitment	Evidence of Commitment
Federal:				
FTA 5309 New Starts	**$1,550**	27.9%	N/A	N/A
FTA 5307 Formula Funds	**$301**	5.4%	N/A	N/A
ARRA Funds	**$4**	0.1%	N/A	N/A
Non Federal:				
General Excise and Use Tax 0.5% surcharge	**$3,698**	66.5%	Committed and dedicated to a fixed guideway project	Enabling legislation: • State Act HB 1309 CD-1 (see Appendix C) ; • City and County of Honolulu Ordinance 05-027 (see Appendix C) • Selection of a fixed guideway system as the Project (see Appendix B)
Interest Earnings	**$11**	0.2%	Committed	City & County of Honolulu ORD 06-37 (see Appendix C)
Total Project Budget	**$5,564**	**100%**		

Notes: Includes FY2007-08 actual amounts; Totals may not add due to rounding

OTHER POTENTIAL CAPITAL SOURCES

Based on the forecasted GET surcharge revenues and the assumed Federal funding level, the Project is not expected to require any other source of funds, however, at this stage in the Project's development there are numerous risks and uncertainties that can impact the Project's funding (see Chapter 5). Accordingly, the City recognizes the need to identify potential additional capital funding sources to the Project to enhance the strength and robustness of this Financial Plan.

Three potential sources of added capital funding have been identified and seen to be the most promising as the Project moves forward (these potential funding sources are further described in Chapter 5):

1. **Private Funds.** The City and County of Honolulu will look to the private sector to help fund the Project. A variety of mechanisms are potentially available, if necessary. This might include donations of right-of-way, contributions toward the cost of building stations and other project components that directly benefit private entities through Transit Oriented Development or the creation of benefit assessment districts around one or more stations.

2. **Airport Funds.** The Council's decision to realign the Project to directly serve the Honolulu International Airport will benefit both airport passengers and employees, but adds over $200 million to the Project's capital cost. In similar situations elsewhere in the US – e.g., San Francisco, Portland, Minneapolis, Northern Virginia – the responsible airports authorities have contributed amounts toward the construction of rail projects. Funds could come from Passenger Facility Charges (PFCs), Airport Improvement Program (AIP) Funds, and general airport revenues. In addition, the Federal Aviation Administration reauthorization bill now being considered by Congress would expand opportunities to use PFCs for transit projects serving airports.

CAPITAL FUNDING SOURCES FOR THE SYSTEM

While the assumed New Starts funding, GET surcharge revenues, and a portion of the FTA Section 5307 formula funds are projected to be adequate to fund the Project costs, other sources of funds will continue to be relied upon to fund 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 for federal funds are as follows:

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

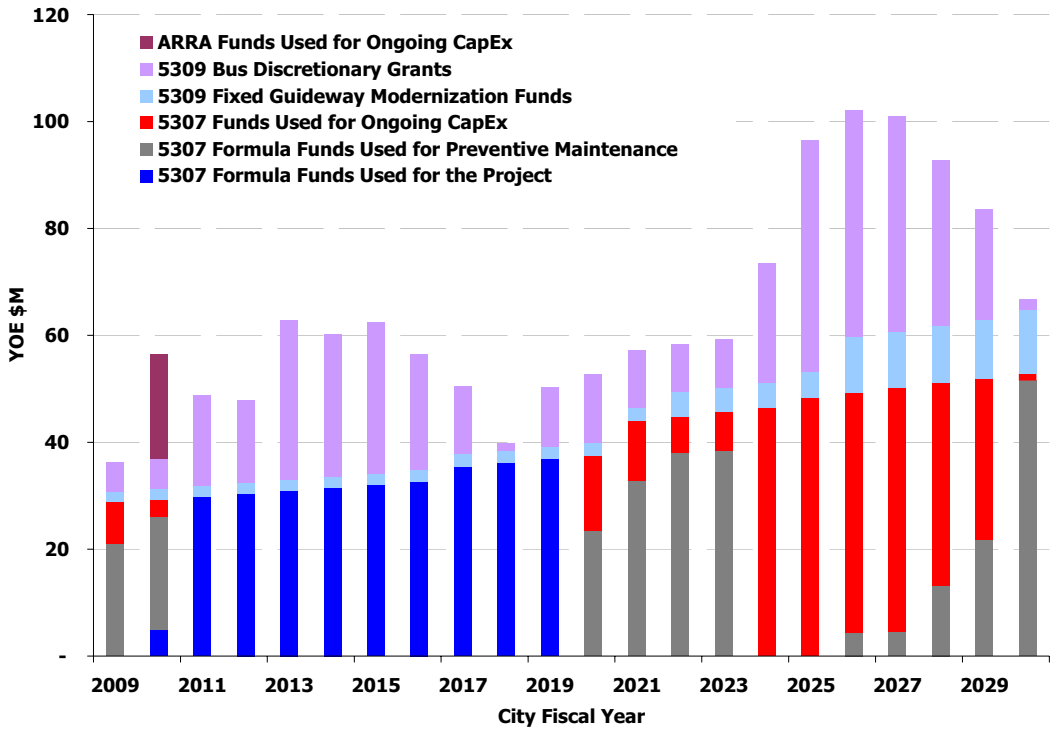
The City should expect to see increases in the levels of these funding sources once the Project is implemented. Each of the following sections details the expected revenues from each source before and after the Project is in operation. As a general rule, the following assumes that Congress will appropriate the authorized apportionment each year.

FTA Urbanized Area Formula Program (Sec. 5307)

Year-by-year Section 5307 revenues are presented in the summary capital funding sources in Figure 2-12. Under Federal law, it is possible for 5307 funds to be used for preventive maintenance, which is part of a transit system's operations and maintenance (O&M) cost. In Honolulu, as a general rule, 5307 funds are first applied to ongoing capital needs, with any surplus being transferred to preventive maintenance. As explained earlier, between FY2011 and FY2019, all of the 5307 apportioned funds are used for the rail project.

Estimated apportionments have been made by FTA for FY 2009. For all subsequent years, the methodology used to forecast 5307 funds is as follows:

Figure 2-12, Use of Non New Starts Federal Revenues, FY2009 – 2030, YOE $millions



First the total national funding available for the 5307 program was projected using a modest growth factor in line with the growth in revenues currently expected to flow to the Highway Trust Fund was applied starting in FY 2010. Honolulu's share of the total nationwide 5307 amount was then assumed to remain equal to the FY 2009 year average of 0.69 percent. This share was applied to the forecasted national amount, and an adjustment was then made by deducting a funding transfer to the State for its vanpool program (this transfer totaled $1.5 million in FY 2008 and is expected to grow at the same rate as the national total). In addition to the base growth rate obtained with the first three steps, 5307 revenues are further increased two years after the opening of the main segments of the rail fixed guideway system in FY 2015 and FY 2019. To a lesser extent, a similar jump occurs in FY 2025, following the implementation of a new two-lane HOV facility, consistent with the Oahu long range transportation plan.

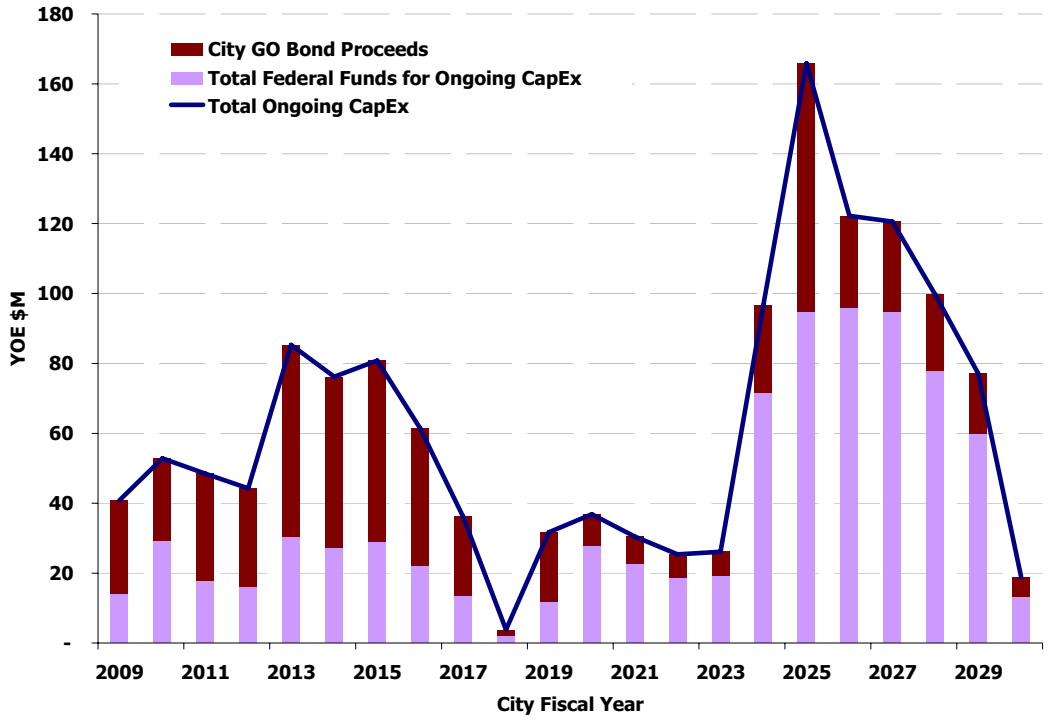
Section 5309 Capital Investment Grants – Fixed Guideway Modernization Program (FGM)

Similar to Section 5307 funds, FGM funds are apportioned using the federal formula specified by law. Honolulu's apportionment is based on the amount of fixed guideway directional and revenue vehicle miles on facilities in operation at least seven years. Forecast directional fixed guideway route miles play an important role in the formula for calculating Section 5309 FGM apportionments. In addition to the increase due to the Project, a new HOV project is assumed to be introduced in FY2023, thereby increasing the directional route miles in that year. Apportionment amounts for FY2009 reflect FTA's estimates. 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.

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, although Congress has been fully earmarking all available funding. 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. The discretionary nature of this program makes the level of funding difficult to predict.

Figure 2 13, Ongoing Capital Sources of Funds for the System, FY2009 – FY2030, YOE $millions



Based on Honolulu's success at receiving earmarks in the past, this analysis assumes that Honolulu's Bus Capital allocations between 2009 and 2030 will be equal to approximately 35 percent of each years' bus and Handi-Van Ongoing Background System costs. See Figure 2-12 for project apportionments.

Local Capital Assistance for the System

The City is expected to continue to issue General Obligation debt to construct bus facilities and to purchase equipment and rolling stock as it has done in the past. The City is required to match all FTA funding programs with at least 20 percent of local funds. This Financial Plan, therefore, assumes that at least 20 percent of each year's ongoing capital needs is 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. As shown in Figure 2-13, that is especially true in the years prior to completion of the Project, where Total Ongoing Capital Expenditures excludes construction of the Project.

Borrowing, Debt Level, and Ratings

As mentioned previously, additional local capital assistance may be needed in the event that GET surcharge revenues and New Starts funds are insufficient to meet the capital requirements of the Project. The City's ability to issue debt and maintain its current credit rating depends in large part on its ability to follow the following rules and guidelines:

- **Legal Debt Limit:** The State of Hawaii 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.
- **City Council "Affordability Guidelines":** To preserve its credit quality, the City Council further developed affordability guidelines, last amended by Resolution 03-59, CD1, "which may be suspended for emergency purposes or because of unusual circumstances." These guidelines include the following:
  - Debt service for general obligation 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 Standard & Poor's credit rating of AA is maintained and the affordability guidelines are applicable in future years, the limitations on GO debt can be calculated for future years based on growth assumptions in assessed property values, General Fund revenues, and the Operating Budget. This analysis reveals that the affordability guideline on the percentage of General Fund revenue mentioned above is expected to be the most limiting factor in calculating the debt margin.

The Project would need to compete with other City projects requiring debt financing. The debt limits above are applicable to any projects being financed by the City and County of Honolulu, given that the debt is not self-supported or in the form of revenue bonds. The extent to which the City can issue debt for the Project will depend on how much debt issuance is needed for other high priority projects. The major capital improvements that the City is likely to undertake in the coming years are sanitation projects, such as sewage collection and disposal projects. The bond proceeds used to fund these capital investments are expected to be self-supported by increases in sewer service charges and are unlikely to require the issuance of GO debt.

CHAPTER 3 : OPERATIONS AND MAINTENANCE PLAN

This chapter describes how the City intends to fund the operating and maintenance costs associated with the Project and the resulting overall transit system. This discussion begins with a summary of the O&M cost estimate and methodology, and then presents the planned funding sources for O&M.

OPERATING COSTS

The Project's O&M cost models were developed for both TheBus and the fixed guideway project. Project O&M costs include all costs associated with labor, fuel, electricity, and other costs inherent in providing the rail service that is a part of the Project, as well as operating and maintaining a complementary bus system. The following section describes the methodology and estimates used in this analysis.

Historical operating and financial data for TheBus were obtained from both DTS and the National Transit Database (NTD). The data were collected from detailed budget statements and operating reports from a recent, stable, and representative year from the system. More information about the O&M costing methodology can be found in the Memorandum on O&M Cost Models, April 2009.

Similar to the methodology of TheBus and rail, the operating costs for TheHandi-Van are also based on vehicle miles, hours and the fleet of paratransit vehicles.

THEBUS O&M COSTS

TheBus O&M costs were developed using existing bus operations as the baseline, as well as the anticipated service levels once the Project becomes fully operational. TheBus O&M costing methodology is also consistent with Section 4 of the FTA's Procedures and Technical Methods for Transit Project Planning, Draft Version 3 dated August 28, 2008. Recommendations provided by the FTA in its memorandum dated July 29, 2008 have also been incorporated into the cost model.

Level of Service

The City currently operates standard buses, which includes a mixture of diesel and hybrid buses, articulated 60 ft diesel buses and articulated 60 ft hybrid buses. As the graphs below show, the City plans to modify the fleet mix so articulated diesel buses are replaced with articulated hybrid buses. For more details on the varying fleet mix and bus acquisition schedule, refer to the TheBus Fleet Maintenance Plan, April 2008.

The peak vehicle requirements for TheBus system are shown in Figure 3-1. The change in the vehicle requirements for each bus type in the peak period is similar to the trend for the revenue vehicle miles shown in Figure 3-2.

Other level of service variables from which operating costs were estimated are shown in Table 3-1. After the opening year of the fixed guideway, level of service for TheBus is expected to remain relatively steady until FY2030. The Financial Plan assumes straight-line growth in bus level of service and ridership between the milestone years shown in Figure 3-2.

Unit Costs

A cost allocation model was used to estimate O&M costs

Figure 3-1, TheBus Peak Vehicles by Bus Type, FY2009 - 2030

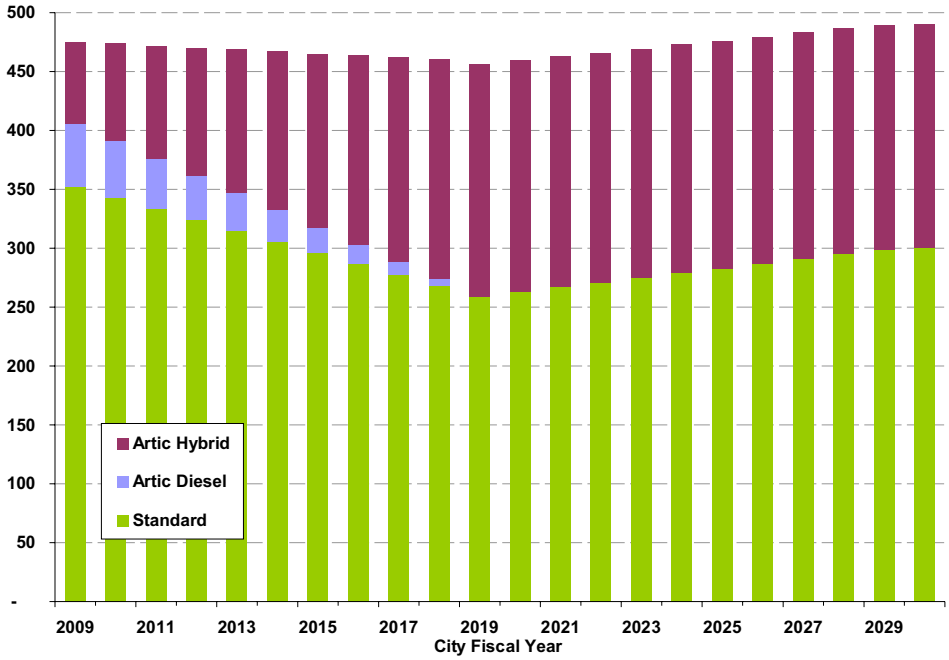
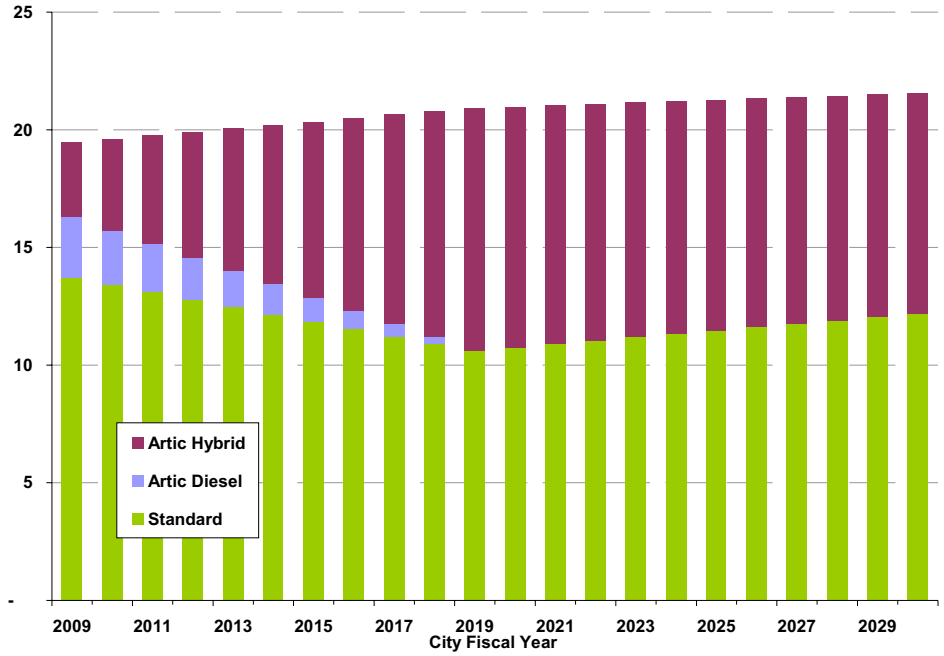


Figure 3-2, TheBus Revenue Vehicle Miles, FY2009 - 2030



for each bus system component, where each O&M cost item was assigned to one of several variables, based on its sensitivity to given O&M driving variables. Costs assigned to each variable were summed and divided by each variable's annual total. Aggregate unit costs were applied to data taken from the transit service plan and forecast model output for the Project. Table 3-1 summarizes the unit costs and the associated level of service in FY2019 and FY2030, as these years represent the opening of the Project and the design year. For more details on the cost components refer to the Memorandum on O&M Cost Models, dated April 2009.

Table 3-1, TheBus Level of Service Variables & Unit Costs

Level of Service Variable	FY2019	FY2030	Unit Costs ($2007)
Revenue Vehicle Miles SB	10,606,000	12,189,000	2.8
Revenue Vehicle Miles AD	-	-	3.9
Revenue Vehicle Miles AH	10,317,000	9,363,000	3.3
Revenue Vehicle Hours	1,588,000	1,670,000	56.4
Peak Vehicles SB	259	300	26,443
Peak Vehicles AD	-	-	31,467
Peak Vehicles AH	197	190	26,747
Maintenance Facilities	2	2	843,585
Service Centers	1	1	527,241
Unlinked Passenger Trips	100,543,000	112,585,000	0.06

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

Total TheBus O&M Costs

Figure 3-3 shows the total operating costs for TheBus system through FY2030, with the contribution to total cost of each cost variable. Revenue vehicle miles, particularly for standard buses as these are the most operated bus type, is the most important cost variable for operating costs.

Fixed Guideway O&M Costs

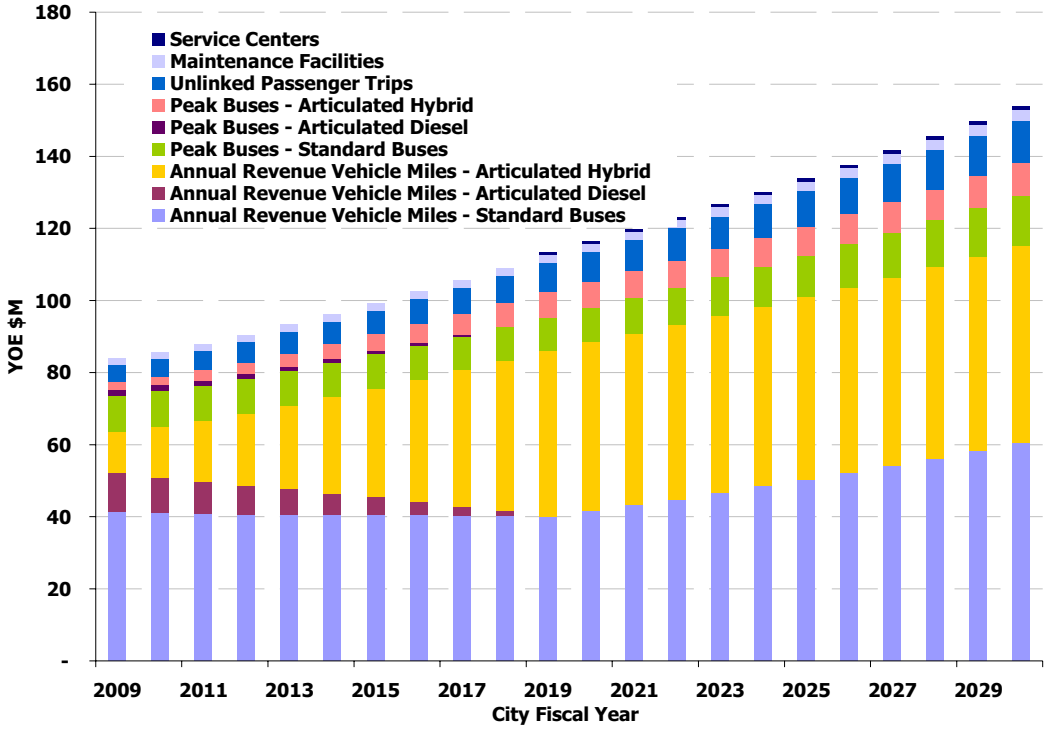
The O&M costs for the fixed guideway system were developed using peer agencies with similar operating characteristics as well as available and up to date operating data. The Washington Metropolitan Area Transit Authority (WMATA) was selected as an example that could be used as a basis for developing O&M costs. The Memorandum on Forecasts of O&M Costs dated April 2009 explains the selection process and overall cost methodology in more detail. The O&M costing model developed for the Project is in line with Section 4 of the FTA's Procedures and Technical Methods for Transit Financial Project Planning.

Level of Service

Level of service for the fixed guideway system was developed in coordination with travel demand modeling, physical characteristics of the project and alignment such as stations, directional route miles, etc., and the determined Operating Plan. Vehicle miles, hours and fleet size assumed for the fixed guideway reflects the latest Operating Plan, which has been calibrated with the latest travel demand forecast.

Figures 3-4 and 3-5 show the growth in peak vehicles and revenue vehicle miles for the fixed guideway system to and beyond the milestone modeling year of FY2019, respectively. The growth has been determined by the number of stations opening in any given year and the general level of service required to meet projected ridership. Starting in FY2013, limited service will be operated between two stations. In FY2015, the segment stretching from East Kapolei to Pearl Highlands is expected to be operational and cover 7 stations.

Figure 3-3, TheBus Total O&M Costs, FY2009 – 2030, YOE $millions



Train frequency will be the same as the ultimate system, but train consists will be shorter until the system opens to downtown in 2019.

Unit Costs

Unit costs for the fixed guideway system were developed using a cost allocation model with 10 primary cost categories: labor, fringe benefits, services, materials and supplies, utilities, casualty and liability costs, taxes, miscellaneous expenses, expense transfers, and leases and rentals. Although, the O&M cost model was based on WMATA, adjustments were made to better reflect the Project's system and operating

Figure 3-4, Fixed Guideway Peak Vehicles, FY2009 – 2030

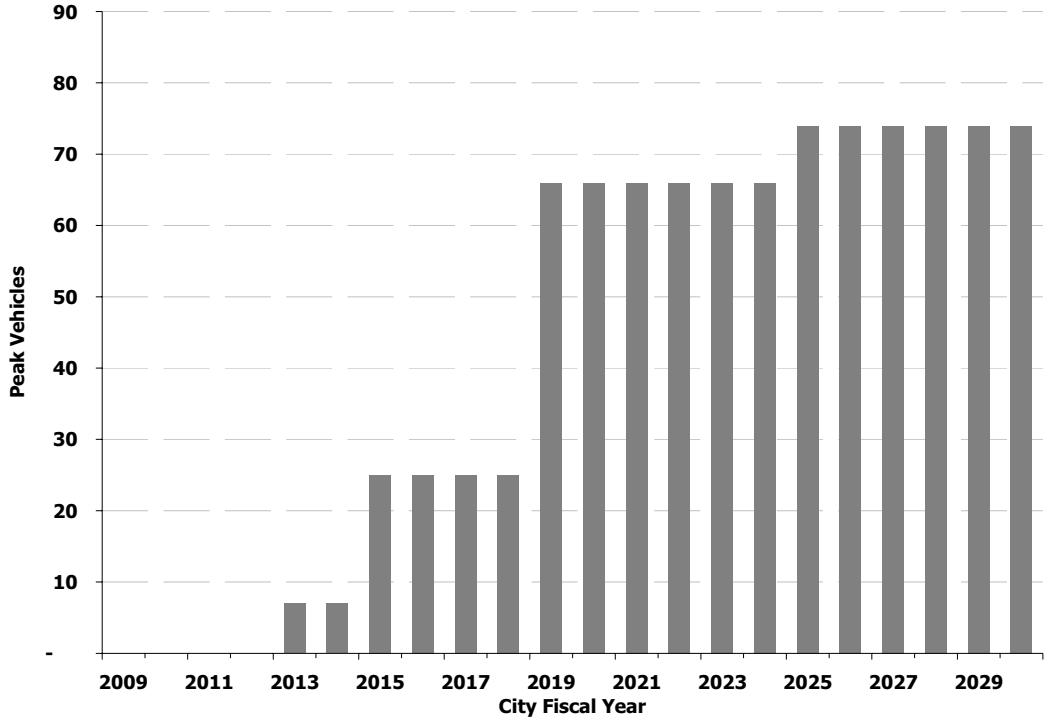
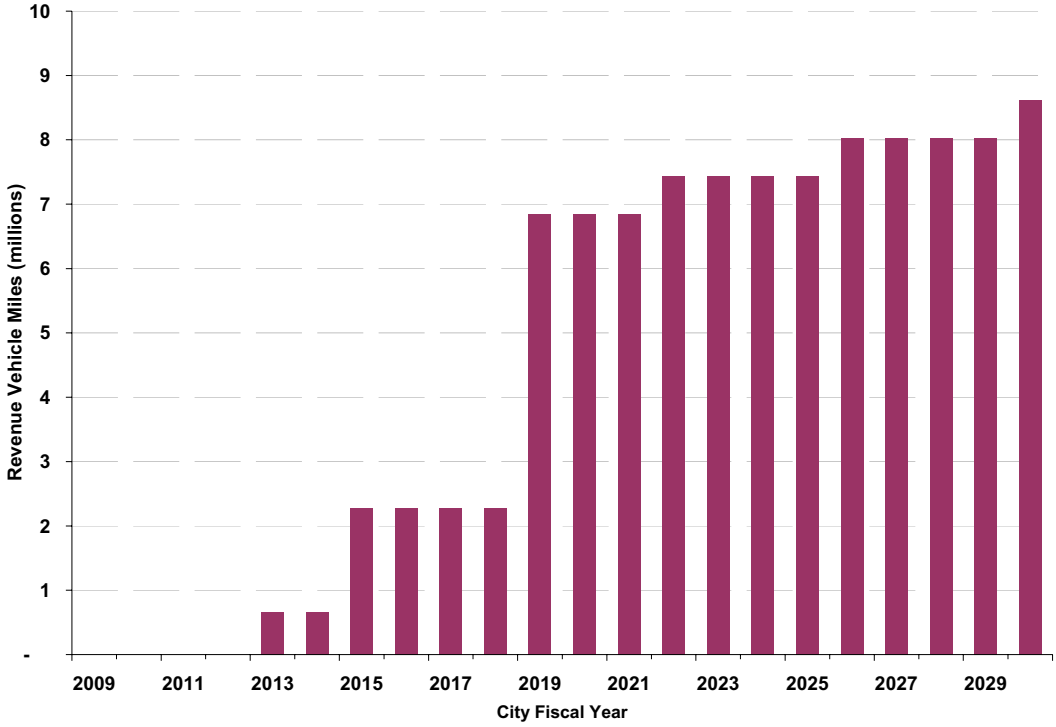


Figure 3-5, Fixed Guideway Revenue Vehicle Miles, FY2009 – 2030



characteristics. For more details on the fixed guideway cost allocation model refer to the Memorandum on O&M Cost Models, dated April 2009. The unit cost estimates were developed using cost categories mentioned above and the resource allocation for each of the level of service variables are shown in Table 3-2.

Table 3-2, Level of Service Variables & Unit Costs for the Fixed Guideway System

Level of Service Variable	FY2019	FY2030	Unit Costs ($2007)
Revenue Vehicle Miles	6,840,000	8,624,000	3.3
Revenue Train Hours	119,500	113,600	100.6
Directional Route Miles	40	40	35,784
Stations	21	21	904,484
Peak Vehicles	66	74	234,687
Maintenance Facilities	1	1	319,968
Unlinked Passenger Trips	25,267,000	35,398,000	0.04

Fixed Guideway O&M Costs

The O&M cost estimate for the Project includes the cost to maintain and operate the fixed guideway system and cost to operate and maintain the assumed level of bus service. It includes the cost of fully developed support functions and departments for both bus and fixed guideway, such as legal, finance, marketing, public relations, human resources/administration, etc . Figure 3-6 shows the total O&M costs for the Fixed Guideway separated by the costs associated for each level of service variable.

THEHANDI-VAN O&M COSTS

TheHandi-Van is a paratransit service operated in tandem with the current transit system and has been operating since 1999. The projected operating costs for TheHandi-Van are based on vehicle miles, hours and the fleet of paratransit vehicles. Handi-Van operating costs are expected to grown at approximately 3.6 percent per year. In 2008 the total paratransit trips were approximately 830,000, 3 percent higher than 2007, according to NTD. The O&M costs for TheHandi-Van over time are shown in figure 3-7.

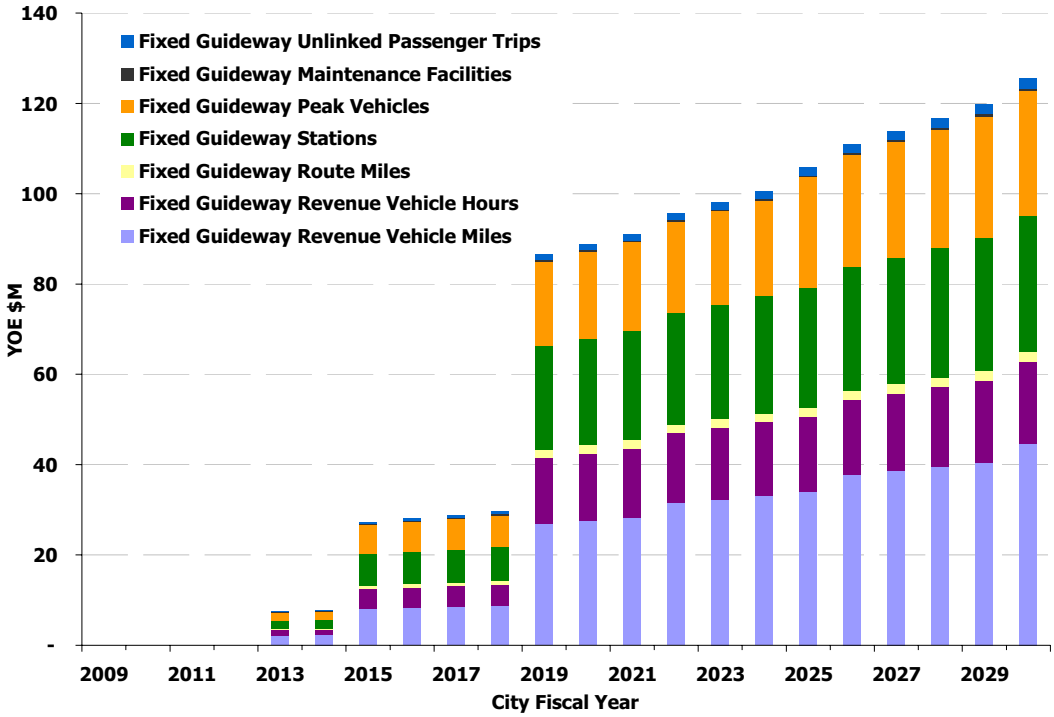
AGENCY-WIDE O&M COSTS

Figure 3-7, graphically displays the historical and forecasted total O&M costs for the system. The most significant increases in total costs correspond to the segment of the Project opening in FY2015 and the full opening year of FY2019. Assumed inflation rates for both TheBus unit costs and the fixed guideway unit costs are based on the DBEDT's inflation forecast between 2009 and 2012, following which the 2013 to 2030 inflation rate is assumed to be constant at 2.5 percent. As shown in Figure 3-7, the costs to operate the City's transit system are mostly attributable to bus operations.

OPERATING REVENUES

The following section describes the operating 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 for operations are expected to include transfers from the City's General and Highway Fund and from Section 5307 formula funds.

Figure 3-6, Total Fixed Guideway O&M Costs, FY2009 – 2030, YOE $millions



PASSENGER FARES

In 2007, TheBus reported 52.5 million linked trips at an average fare per trip of $0.77, and fares have remained constant through 2008. The City's proposed FY2010 operating budget includes a fare increase. This Financial Plan assumes that a single and equal fare structure will be maintained for both TheBus and fixed guideway when the Project comes online.

The average fare incorporated into the financial analysis model following the fare increase is estimated at $0.95, which is derived from inflating the 1995 average fare of $0.68 used throughout the travel demand modeling to FY2010 dollars. Figure 3-8, shows a comparison of assumed future fare increases in the financial analysis with a constantly-increasing average fare (such as is assumed implicitly in the travel demand analysis).

Figure 3-7, Total Agency-wide O&M Costs, FY2009 – 2030, YOE $millions

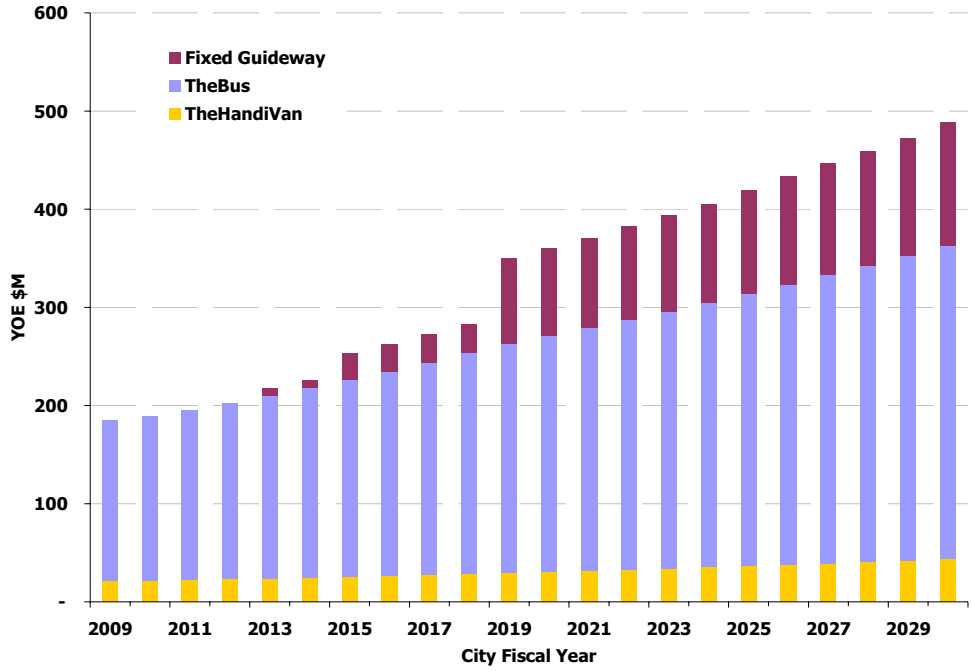
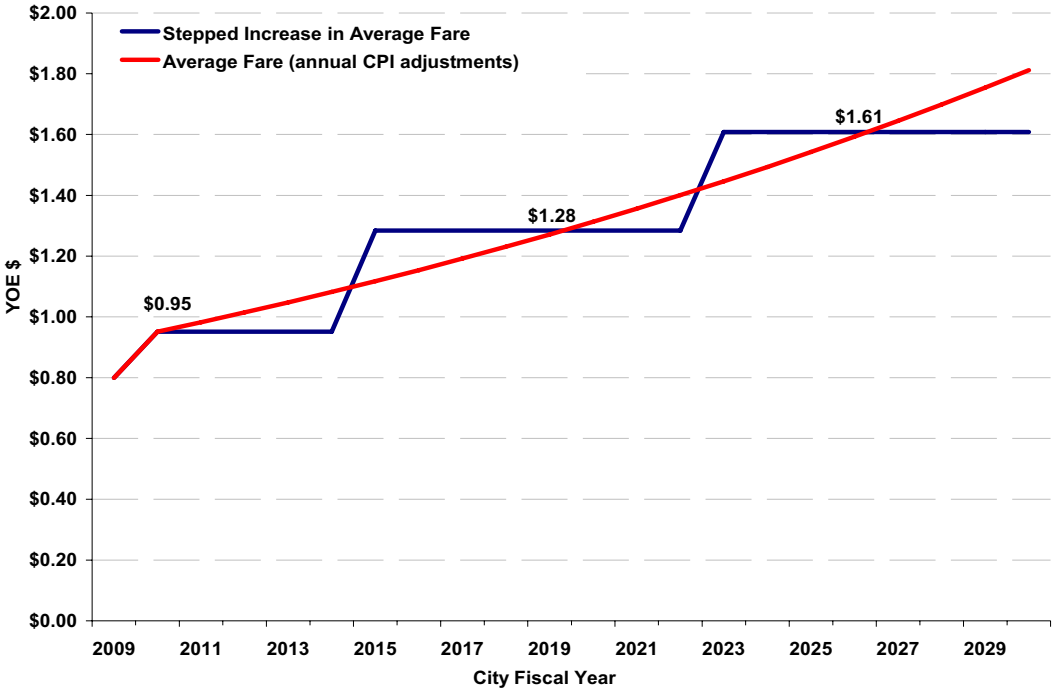


Figure 3-8, Average Fare growing at CPI vs. Periodic Increases, FY2009 – 2030, YOE $



The growth in average fare shown as a 'step function' with increases of approximately $0.33 in FY2015 and FY2023 are reasonable considering the City's historical fare increases, and assumes a reasonable timetable for future fare increases, while staying consistent with the travel demand analysis which assumes fare adjustments are in line with inflation. A City resolution (00-29 CD1) currently stipulates that the farebox recovery ratio for TheBus be maintained between 27% and 33%, which demonstrates a commitment of the City to keep operating costs and revenues growing at a comparable rate ion average.

Ridership estimates, shown below, used in the financial analysis were developed from the travel demand model. Approximately 281,000 linked trips per day are forecasted in 2030, for both the bus and rail system combined. Once the fixed guideway is operational, transfers between TheBus and the fixed guideway system would also be free and seamless. Both TheBus and the fixed guideway systems are expected to operate under a unified fare structure. This yields projected farebox revenues of $151 million in FY2030.

Figure 3-9 illustrates the City's forecasted linked trips, and shows an increase in linked trips of 11 percent in FY2015 when the first segment opens and 23 percent in 2019 when the fixed guideway becomes fully operational.

Federal Funds

The City currently receives federal funds through FTA's Section 5307 Urbanized Area Formula Program. As mentioned in the system-wide Capital Plan chapter of this Financial Plan, the majority of Section 5307 funds are used for capital purposes; however, when these funds are not needed for capital assistance they can also be used for preventive maintenance

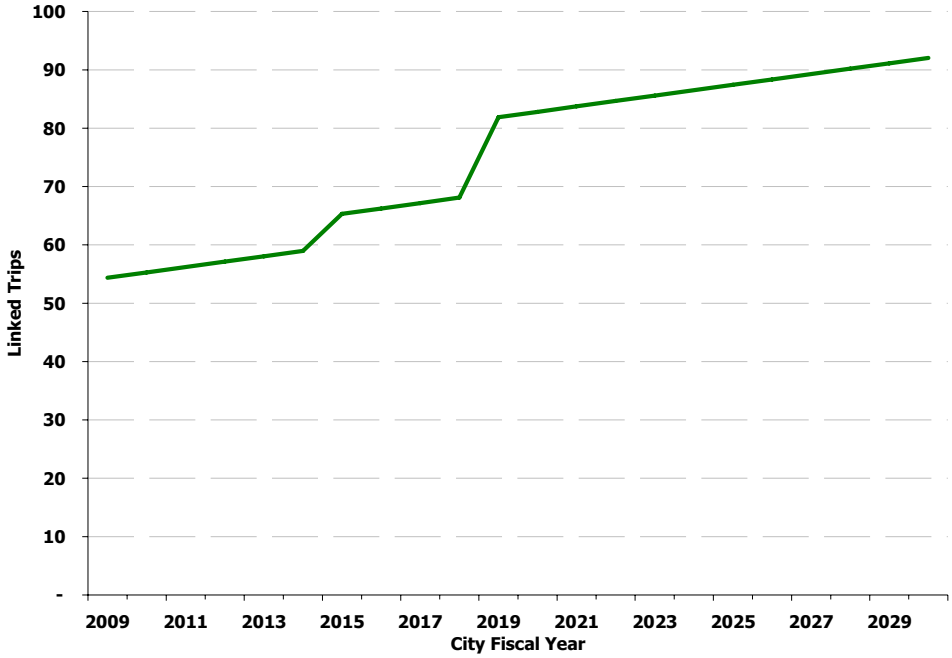
Once the Project is operational, Honolulu is expected to receive additional Section 5307 funds based on the higher level of bus service, ridership, and the addition of rail service. This Financial Plan assumes that Honolulu will distribute Section 5307 funds first to reimburse capital expenditures beyond the project construction period, and then allocate any remainder to cover preventive maintenance costs. Increased Section 5307 funding attributable to the Project does not become available until 2021 because of the two-year lag between the start of service and the reporting of that increased service to the National Transit Database.

Over the long term, the City is expected to receive a cumulative amount of approximately $876 Million from FY2009 through FY2030 from Section 5307, $270 million of which is assumed to be used for preventive maintenance and the remainder ($606 million) going to the Project and ongoing capital needs, as shown in Figure 3-10.

Agency-Wide Operating Plan

Given the assumptions in this financial analysis, the federal and local revenues are assumed to be adequate to operate and maintain the Project while continuing the existing bus and paratransit systems. These assumptions include that the City will continue to support transit operations through transfers from its General and Highway Funds. Between 2009 and 2030, the City is expected to contribute on average 65 percent of the total operating costs while fare revenues will

Figure 3-9, Forecasted Linked Trips for TheBus and Rail systems, FY2009 – 2030, Millions of Trips



average approximately 31 percent of operating costs. Figure 3-11 shows the break down of operating revenues compared to total operating costs.

CITY CONTRIBUTION

The City's contribution to transit operating and maintenance expenses is funded using local revenues from the General and Highway Funds. The General Fund is comprised of 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 and County of Honolulu has historically received a portion of these revenues.
- Public Service Company Tax – City and County receives 1.885% of all public service companies' gross income.

Figure 3-10, Allocation of 5307 Funds, FY2009 - 2030, YOE $millions

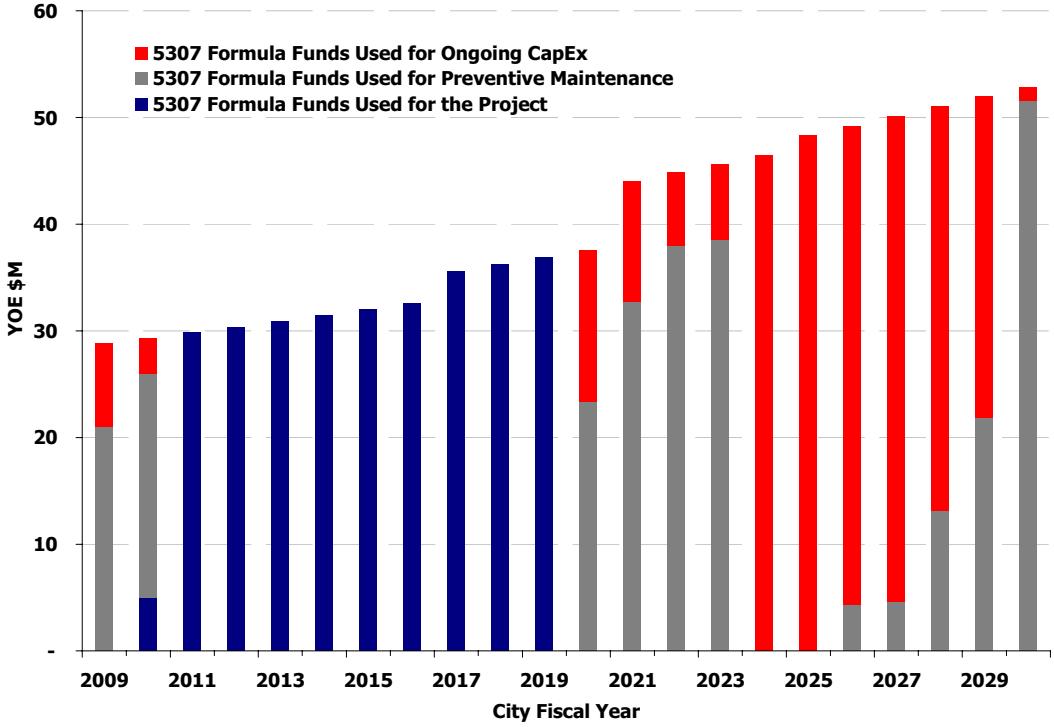
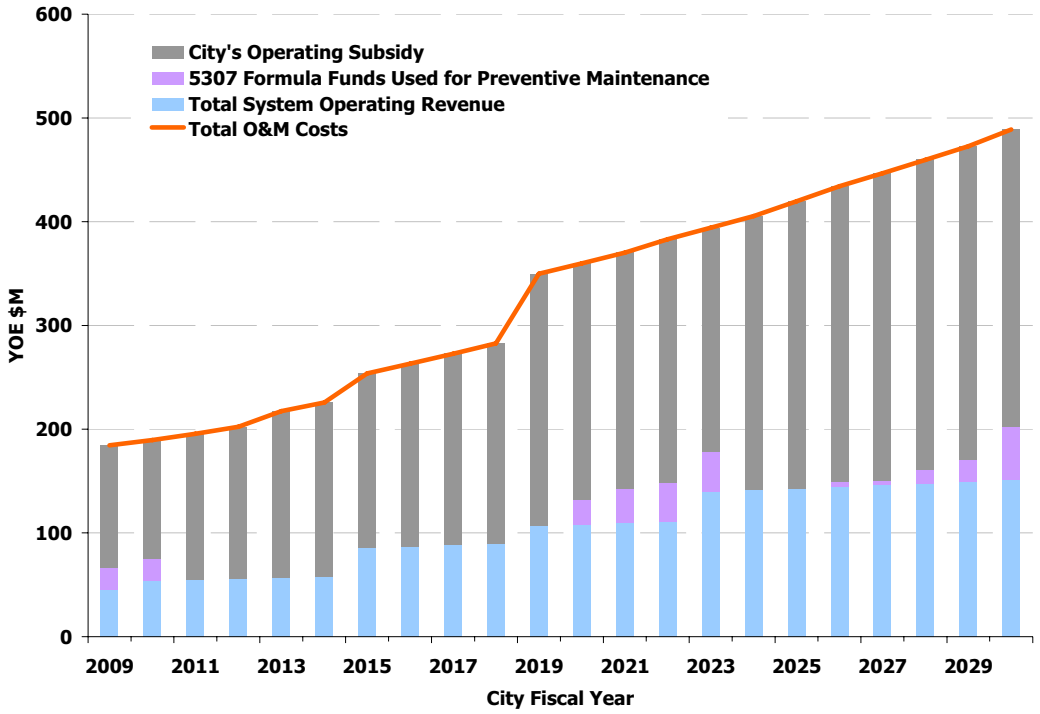


Figure 3-11, Operating Costs and Revenues, FY2009-2030, YOE $millions



The Highway Fund is comprised of 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 (3 cents per pound) and motor vehicles and non-passenger-carrying vehicles (3.5 cents per pound).
- Public Utility Franchise Tax – a 2.5 percent tax on all electric power and gas companies' gross sales receipts.

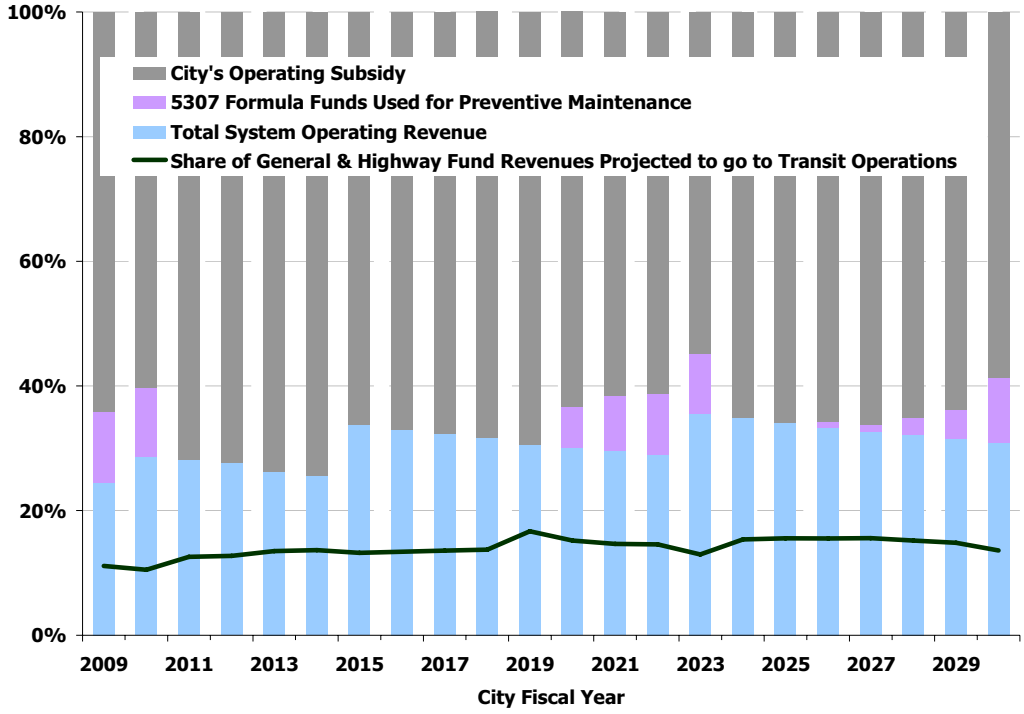
During the period from 1994 to 2008, revenues from these sources totaled $11.6 billion, of which approximately $1.2 billion (11 percent) went to transit.

The financial analysis forecasts the growth in these City Funds and the share that will be needed for transit operations. The 2009 revenues are based on the City's budget, while the 2010-2030 revenues are based on analysis incorporating components of both inflation and real growth. The real growth rate is assumed to be 0.9 percent each year, which is the historical compound annual growth rate between 1994 and 2008 of the two city funds. Assumed inflation rates are based on the DBEDT's inflation forecast between 2009 and 2012, following which the 2013 to 2030 inflation rate is assumed to be constant at 2.5 percent. Based on these assumptions, the total amount of General and Highway Funds are forecasted to total approximately $33 billion between 2009 and 2030.

Between 1994 and 2008 transit received, on average, 11 percent of these funds' revenues. To meet the O&M funding requirements for the Project and planned bus system, the City contribution is expected to average 14.0 percent over the analysis period with a peak at 16.7 percent in FY2019. While higher than the historical average, this increased amount is not unprecedented. In 2001, the City spent approximately 15 percent of its General and Highway Fund revenues on transit, and the Project assumes considerably more overall service than was provided at that time (or is provided today).

Starting in 2026, seven years after the start of full revenue operations, it is expected that the City's Section 5309 Fixed Guideway Modernization apportionment will increase. The availability of 5309 funds for capital assistance starting in 2026 will enable more of the 5307 funds to be applied to the preventive maintenance portion of O&M costs, thereby decreasing the share of General Fund and Highway Fund revenues required for transit operating subsidy. Similarly, increases to the overall 5307 program or higher shares being apportioned to Honolulu could also have an effect on the amounts required to be transferred from the City's General and Highway Funds. Figure 3-12 shows the breakdown of operating revenues and the City contribution as a percentage of the City's Highway and General Fund revenues expected to be used for transit operations.

Figure 3-12, Operating Revenues and City Contribution as a Share of the City's Highway and General Fund Revenues for Transit, FY2009 - 2030



CHAPTER 4 : CONCLUSIONS

While the financial magnitude of the fixed guideway Project is unprecedented in Honolulu, the Financial Plan and assumptions presented above demonstrates that the City has the capacity to undertake the Project and continue operating and upgrading the rest of the public transportation system. Based on the baseline assumptions described in the foregoing analysis, the Capital and Operating plans are both balanced, with sufficient funding to meet annual capital and operating needs for the Project and the public transportation system as a whole. Beyond the assumptions included in the baseline Financial Plan, several other factors further reinforce both the City's commitment to the Project and their ability to adequately fund it, even under less favorable scenarios.

The robustness of the Capital Plan is illustrated by the fact that the major source of funding is a local tax surcharge solely dedicated to the implementation of the fixed guideway Project. In addition, the low New Starts funding share of 30% is in line with the percentage authorized under the Intermodal Surface Transportation Efficiency Act in the early 1990s, thereby showing no significant increase in the amount of New Starts requested in real terms.

Key Funding Aspect #1: 30% New Starts Share

The underlying characteristics and assumptions around the local GET surcharge are also of critical importance. The breadth of the GET tax base compared to a typical sales tax is a strong benefit for the City, especially as the economy comes out of the current recession and moves towards recovery. Additionally, many fundamental underlying assumptions, such as assuming that none of the early uncollected GET surcharge revenues would be recovered by the State, are conservative. More importantly, the analysis assumes that the next year would continue to exhibit limited growth in the overall GET tax base, which may prove to be a pessimistic assumption, especially if the local and national economic recovery is stronger than anticipated.

Key Funding Aspect #2: Conservative Economic Recovery Projections

From a capital cost standpoint, it is also important to note that, although the Project has already gone through an advanced stage of conceptual engineering, the capital cost estimate includes a sizeable contingency amount. The level of design work already completed reasonably exceeds the efforts typically done in advance of entering PE. In keeping with FTA guidelines, the contingency factors have not yet been lowered to reflect advanced engineering efforts. Despite these assumptions, the Project's sources and uses lead to a positive cash balance at the end of the Project's implementation period and demonstrate the City's financial capacity to undertake the Project without having to rely on any sources of funds other than GET and Federal revenues.

Key Funding Aspect #3: Well-Advanced Engineering Relative to Contingency Levels

On the operating side, the City's strategy adequately funds not only the implementation and ongoing operations of fixed guideway service, but also a substantial underlying and feeder bus system. Past experience locally suggests that the frequency and magnitude of fare increases included in the Financial Plan over the analysis period is in line with historical data in Honolulu. Moreover, these fare increases are expected to allow operating revenues to keep pace with rising operating costs resulting from the implementation of the Project as well as general inflation.

This is further reflected in the fact that the share of the City's operating budget going to transit is only expected to increase from a historical average of 11% to 14%, which is still close to 1% lower than the 14.8% experienced in 2001. Furthermore, it is important to note that the City's budget sometimes fluctuates in any given fiscal year by more than one or two percentage points.

Key Funding Aspect #4: level of City Subsidy is Consistent With Historical Levels Even With the Introduction of Rail

The Federal grants and formula funds used for ongoing capital needs and preventive maintenance also assume no significant increase from one authorization Bill to the next, even though historical data has shown sizable increases in authorization levels for programs such as FTA Sec. 5307 formula funds. Furthermore, the recent trend at the federal level is to make available higher levels of funding for public transportation services.

Key Funding Aspect #5: No Expansionary Growth in the Size of Federal Formula Programs

While a number of uncertainties remain, the following risks and uncertainty section further detail that additional sources of funds, not assumed in the baseline Capital Plan, are likely to provide sufficient additional funding to support cost increases or funding shortfalls on the order of 10 percent. These assumptions all contribute to the robustness of the City's plan at this point in the planning process, and the Financial Plan will continue to evolve and be flexible to changing conditions, both at the Project and local level as well as nationally and globally across the financial markets, as the Project moves along the development process and key drivers of costs and revenues are refined.

Key Funding Aspect #6: Flexible Financial Plan Continually Being Updated and Adjusted

CHAPTER 5 : CASH FLOW RISKS AND UNCERTAINTIES

The foregoing analysis presented the Financial Plan with baseline assumptions for revenues and costs. This chapter discusses the risks and uncertainties around many of the key assumptions.

CAPITAL PLAN

CAPITAL COST

Inflation

Inflation is applied to both costs and revenues. 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, as well as the overall local economic environment.

In general, commodity prices tend to be more sensitive to global economic pressures. This has been evidenced in the past few months, as some construction cost components have been more volatile than others. In particular, steel has fallen quickly in the last two quarters resulting in lower escalation rates in the earlier years of the forecast period.

The recent stimulus bill is anticipated to fuel construction and therefore domestic steel demand over FY2012 and 2013. If the impacts are greater than anticipated and lead to increases in escalation in years where project CapEx steel spending is highest, project costs would be higher than anticipated. On the other hand the economic recovery could be slower than expected, leading to reduced steel prices for a longer period of time.

Similarly, commodity components (concrete and other materials) may be subject to similar fluctuations in prices and could have similar impact on project cost.

Right of Way costs are closely related to property values, which have recently experienced a downturn. This downturn, is expected to continue through FY2011; however, the degree of the recovery is uncertain and could result in higher-than-expected 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 or the level of construction activity. Furthermore, the escalation rates for labor may be somewhat different if a project labor agreement is signed for the project which would lock in labor contracts throughout the project.

Rail Project Schedule

Scheduling delays, the availability of skilled labor, vehicle delivery, and unforeseen construction challenges can all lead to cost increases that may challenge the Financial Plan for a project. Schedule changes might result from project changes, local decision-making processes, equipment malfunctions, and construction delays. As a project becomes more complex, tasks become larger and they often have more dependencies. Every task's duration is dependent on factors that can be out of a project manager's control.

The cost of the rail cars needed for opening of the Project is currently assumed to be incurred over 5 years between 2011 and 2015. A modification in the delivery schedule could delay certain costs and reduce the maintenance and storage costs for the years in which railcars are not operated.

The choice between different procurement mechanisms may have an impact on the phasing of the Project as well as the timing of capital outlays. Some efficiencies may be gained from using an innovative procurement approach such as design build or design build operate maintain. Depending on the general approach that the city decides to pursue, this procurement method could change at various milestones throughout the project

Rail Project Scope

Most projects, especially large infrastructure projects such as this one, have uncertainties associated with the definition of the Project. At this stage of project planning, there can be numerous decisions and project refinements that will be made later in project development. While certain fixed guideway transit technologies and station locations have been assumed, these assumptions will be revisited and confirmed or modified during PE and Final Design. Scope changes may also result from the following:

- Physical barriers, such as unexpected utility locations or field conditions
- Environmental impacts and mitigation measures
- Community involvement
- Changes in political leadership
- Budget constraints that lead to scope reductions

Interest Rates, Municipal Market Uncertainties

As in any capital project requiring the issuance of debt, the project is subject to uncertainty around fluctuations in interest rates. Variations in interest rates could affect the interest earnings rate 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 also by external factors that are not

directly under the control of the City, such as market risks. On the general market side, the global financial crisis has severely impacted the municipal finance markets most notably by greatly restricting the availability of credit enhancements such as bond insurance, and by pushing borrowing costs higher for nearly all issuers of municipal debt. As a result of a new era of financial and regulatory regimes in response to the financial crisis and current economic conditions, tax-exempt status and regulations, along with market liquidity and access to credit enhancement mechanisms, may be structurally different in the future

Credit Rating

This Financial Plan assumes that the credit quality of the City and County of Honolulu will remain at its current Standard & Poor's AA rating. Adverse economic conditions or shifts in the City's debt policies could impact its credit rating and increase the cost of borrowing accordingly. Most importantly, the credit quality of the City is likely to be influenced by the size of the City's capital program and its ability to remain below the current affordability guidelines set by the City Council.

Market Uncertainty

Like interest rates, the assumed yield curves on debt assumed in this Financial Plan are subject to global market conditions. The recent turmoil in the credit markets is a case in point and has prompted the Federal Reserve to react with a series of interest rate cuts that influence the market in general and the finance cost for the Project in particular. This uncertainty is further enhanced by the fact that, given baseline assumptions, the first debt issuance is not expected to occur before about 2012. Because it is assumed that the City will continue to be able to issue bonds in the tax-exempt municipal marketplace, uncertainties about market factors should not be overlooked.

Based on the assumptions and analysis presented in this Financial Plan, a 1.0 percent increase in interest rates is estimated to correspond to an increase in interest costs of approximately $103 million over the forecast period.

CAPITAL REVENUES

GET – Scenario based on Council on Revenues Growth Rates

In the short term, net GET revenues are subject to uncertainties related to the magnitude and timing of the economic recovery on Oahu. In the longer term, GET tax revenues on O'ahu depend on a variety of underlying economic factors outside of the City's control, that may result in a higher or lower projection than the one used in this Financial Plan. For example, the March 2009 Council on Revenues projects that State GET revenues will grow by 4% in nominal terms between FY2014 and FY2015. Assuming a general inflation of 2.5% in FY2015, this would imply a real growth rate of 0.65%. If this growth rate was kept constant through FY2023, the total GET revenues would be reduced by $474 million corresponding to a gap of approximately $490 million.

Nonetheless, several mitigating factors are important to consider for the outlook in GET surcharge revenues:

- Inflation plays an important role in forecasting GET revenues, as this source of funds is very much dependent on local prices. Higher general inflation in the post-construction years would increase GET revenues without affecting project capital costs.
- Unlike most sales taxes, GET 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.
- As mentioned earlier, the Financial Plan does not assume that the State would recover the uncollected amounts from the first quarter of calendar year 2007. The State indicated that about 15 percent of tax returns received through March 2007 left blank the section where taxpayers report their county surcharge.

FTA funding: New Starts, 5307, 5309 FGM

The Project assumes Federal funding participation through the Section 5307 urbanized area program, Section 5309 New Starts, FGM, and bus discretionary program. Federal legislation that authorizes these programs (SAFETEA-LU) is scheduled to expire at the end of September 2009. 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. They could increase or decrease the amount of funds available, impose new rules on project eligibility, or revise the criteria that are used to evaluate potential projects. The timing of new authorization legislation is also uncertain, as it depends on congressional action and FTA may not have available funding authority to commit to a project in Honolulu.

New Starts funding is also subject to appropriation uncertainties. The amount of the FTA contribution would be spelled out in a Full Funding Grant Agreement (FFGA) between FTA and the City. The FFGA will also identify the amount to be made available each year, subject to annual appropriations legislation. Although history has shown that Congress ultimately honors and appropriates the full amount spelled out in an FFGA. Congress could delay funding for the Project by reducing or stretching out the annual appropriations. Any delay

could necessitate additional borrowing or schedule delays, potentially increasing the Project's capital cost.

OTHER OPPORTUNITIES FOR THE CAPITAL PLAN

While the Capital Plan is balanced based upon the assumptions stated in Chapter 2, a variety of additional sources could be tapped if necessary, should the actual Project costs turn out to exceed current estimates, for example a 10% increase in project costs will result in a funding shortfall of approximately $660 million. Alternatively, the current forecast of revenues may turn out to be high, such as the lower GET scenario described in the capital revenues section above. The funding opportunities described below create robustness to the Capital Plan in the sense that added financial capacity can be brought to bear if necessary. This section describes some of the potential opportunities.

Other federal funding opportunities

A number of proposals for increased funding for transit are under consideration, either as part of the reauthorization of SAFETEA-LU or other legislation. For example:

- The National Surface Transportation Policy and Revenue Study Commission recommended a significant increase in funding and a restructuring of the FTA and FHWA programs. Their recommendations included creation of a new Metropolitan Mobility Program, which would give increased emphasis on public transportation.
- The ARRA of 2009 created new funding opportunities for transit, including $100 million in funding for Transit Investments for Greenhouse Gas and Energy Reduction Grants, as well as a new $1.5 billion multimodal discretionary program. These new programs may be precursors to the next reauthorization of the surface transportation programs. Grants under the multimodal discretionary program will go to projects with a significant impact on the nation, a metropolitan area, or a region, and may range up to $300 million. Priority will be given to projects that can be completed within 3 years, and funds must be obligated by September 30, 2011.
- Congress is considering comprehensive climate and energy legislation that would fund the expansion of environmentally friendly modes of transportation, including transit. Funding could be provided through new cap and trade legislation designed to reduce greenhouse gas emissions.
- Beyond the FTA funding programs, other opportunities for transit funding may come from reauthorization of the Federal Aviation Administration's funding programs. Section 113 of the House bill proposes the creation of an Intermodal Ground Access Pilot Program to fund up to five projects funded with Passenger Facility Charges (PFC). Were this bill to become law, and if Honolulu is chosen as a pilot project, the Project could potentially seek over $250 million in new funding.

Lower Amount of GET Surcharge Revenues Retained by the State

As stated earlier in the Financial Plan, the enabling legislation on GET specifies that 10 percent of GET surcharge revenues be retained by the State for administrative and collection purposes. A decrease of this percentage from ten to five percent would result in an increase in GET revenues of $187 million from FY2009 to FY2023.

Airport (pay for the Airport station and Guideway construction)

Even without new FAA authorizing legislation, several sources of federal airport funding are potentially available and have been used for transit projects serving airports. These include Passenger Facility Charges (PFCs), Airport Improvement Program (AIP) Funds, and Other Airport Revenues. Examples of rail transit systems supported by such funds include the Bay Area Rapid Transit extension to San Francisco International Airport, the Hiawatha light rail project in Minneapolis, an extension of Portland's MAX LRT to the Portland International Airport, and the extension of WMATA's Metrorail system to Dulles International Airport.

Private Participation

The rail project will improve access to and spur development at many key areas within the City. The development of these sites and nearby areas will be significant, both in advance of the rail system opening and after opening as well. There are many ways that the City can benefit from this expected development, including through the use of Benefit Assessment Districts, Tax Incremental Financing, or Value Capture mechanisms. These options would allow the City to levy a surcharge on property within a defined district, usually immediately surrounding a given transit station, which could be used to offset any increase in capital costs or decrease in available GET Revenues, or on the operating budget to reduce the City's contribution. Similarly, the City could enter into an agreement directly with a private developer where the private company would compensate the City for transit development costs that generate economic activity. For other similar rail transit projects across the US, revenues associated with these types of mechanisms have generated in on the order of 10 percent of total project costs.

Military

Given that Honolulu has such a strong and large military presence, and considering that the rail project will benefit many military users, consideration should be given to seeking financial support for the project both in

the form of capital and operating assistance. Military activities will always be a large component of Honolulu's business and development across O'ahu, and long-term the Military will certainly benefit from the implementation of rail transit service. Preliminary discussions could be initiated with Honolulu and Hawai'i politicians in order to lobby local, state, and federal officials to consider financial support for the rail transit project. Any Military support in the form of capital funds received by the project could be used to offset any decrease in available GET Revenues or to cover additional cost increases of the project, and financial support could also be used to offset the difference between operating revenues and costs, which would reduce the subsidy required by the City.

SENSITIVITY ANALYSIS

Sensitivity analyses were run to assess the City's capacity to cover unexpected cost increases or revenue reductions. This section presents the results of a potential 10% reduction in net GET revenues which would result in a $370 million shortfall (everything else equal) and a 10% increase in capital cost resulting in a $657 million funding shortfall. Table 5-1 presents how these funding gaps could be bridged based on some of the most likely mitigating strategies described above.

Scenarios 1, 2, and 3 presented in Table 5-1 address lower GET revenues, while Scenario 4 offsets higher capital costs, as described further below:

Scenario 1

The first scenario uses a combination of three mitigating strategies. Firstly, extending the period during which 5307 formula funds are directed towards the Project. It should be noted that this strategy would only be feasible if interest costs were considered as an eligible expense for using 5307 monies, which is usually evaluated on a case by case basis. As shown in Table 4-1 this strategy would reduce the funding gap from $370 million to $257 million. The second strategy consists of reducing the amount of GET surcharge revenues retained by the State from 10% to 5%. This would further reduce the gap to $64 million. Funding shortfalls are finally completely covered by assuming a higher New Starts share of 33% ($1.70 billion), compared to 30% ($1.55 billion) mentioned in the Capital Plan.

Scenario 2

This scenario still assumes 5307 formula funds would be used for the Project through FY2023, but also assumes that private developers would contribute to funding three stations, roughly corresponding to reducing capital cost by about 1%. Since these two strategies are not sufficient to fully bridge the gap, this scenario uses the reduction in GET surcharge revenues retained by the State as in Scenario 1.

Scenario 3

This scenario mirrors scenario 2, except that it assumes that about $150 million would be received from the Airport. This would roughly correspond to about 3% of total capital cost.

Scenario 4

This scenario combines the mitigating strategies mentioned above and shows that a 10% increase in capital cost can be fully covered with those sources.

Table 5-1, Mitigating Scenarios to Cover Potential Funding Shortfalls and Cost Increases, YOE $millions

Mitigating Scenario	Line Item Decrease in Funding Gap	Cumulative Decrease in Funding Gap	New Funding Gap	Ending Project Cash Balance
10% Decrease in GET: Funding Gap = $370 million				
Mitigating Scenario. 1:				
5307 through FY2023 (instead of FY2019)	$113	$113	$257	$0
State GET retainage @5% (instead of 10%)	$193	$306	$64	$0
Total New Starts at 33% ($1.70 billion) instead of 30% ($1.55 billion)	$159	$370	$0	$95
Mitigating Scenario. 2:				
5307 through FY2023 (instead of FY2019)	$113	$113	$257	$0
Private Investment in 3 stations	$66	$179	$191	$0
State GET retainage @5% (instead of 10%)	$198	$370	$0	$7
Mitigating Scenario. 3:				
5307 through FY2023 (instead of FY2019)	$113	$113	$257	$0
$150M in Airport Funding	$193	$307	$64	$0
State GET retainage @5% (instead of 10%)	$195	$370	$0	$132
10% Increase in CapEx: Funding Gap = $657 million				
Mitigating Scenario. 4:				
5307 through FY2023 (instead of FY2019)	$131	$131	$527	$0
$150M in Airport Funding	$197	$327	$330	$0
State GET retainage @5% (instead of 10%)	$214	$541	$116	$0
Private Investment in 3 stations	$71	$612	$45	$0
Total New Starts at 33% ($1.70 billion) instead of 30% ($1.55 billion)	$160	$657	$0	$115

OPERATING PLAN

OPERATING COSTS

Cost escalation: labor cost, energy prices

The Financial Plan assumes that operating expenditures would increase following general inflation. However, certain operating cost components may increase at a higher or slower rate depending on local conditions. Increases in labor costs are subject to local union bargaining agreements. This also includes transit employee healthcare costs, fringes and other benefits. Energy costs in Honolulu are highly driven by oil prices and therefore subject to the same volatility. The operating cost estimate assumed in the Financial Plan already assumes a 3% upward adjustment to electricity prices as compared to WMATA, but this may prove to be a conservative assumption if oil prices remain at their current relatively low levels.

System operations

The O&M cost methodology used the WMATA as a base for forecasting operating costs per station since this agency had the most relevant data set. However, once the system is built and operational there may be a number of uncertainties in station operations could have impacts on operating costs, both negative and positive

A change in the bus vehicle fleet allocation may also reduce operating costs as well as affect bus replacements costs. The City currently has a policy to move towards a fleet in which all articulated buses are hybrids. Changes to that policy may have a significant impact on system operating costs as well as ongoing capital costs. A hybrid bus costs approximately $1 million to replace while a diesel bus costs approximately $650 thousand. However hybrid buses are less expensive to operate and have operating cost savings of approximately $5,000 per peak vehicle over similar diesel buses.

OPERATING REVENUES

Fare revenues-Ridership

Fare revenues are based upon 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 socio-economic variables 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 on each of these variables, there are uncertainties surrounding the timing and extent of each one of them.

OTHER OPPORTUNITIES FOR THE OPERATING PLAN

Other Operating Revenues - net parking revenues, advertising revenues, TOD (joint development)

Additional and/or expanded sources of operating revenues could be considered for the rail project. The following lists selected options that could significantly reduce the City's contribution to offset operating costs.

Advertising and other non-fare operating revenues

Expanding the advertising program could generate significantly more than the approximately $400,000 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 2007 NTD data, Honolulu receives approximately $0.006 per boarding, while some of the larger systems in the US receive 10 to 40 times that amount per boarding. Other miscellaneous operating revenue opportunities include the lease of right-of-way for telecommunications or naming of stations.

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, as parking surcharges could be bonded 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.

Reduced service redundancies between bus and rail operations

The addition of the Project to the existing service, 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 the existing bus service as rail ridership grows. This would have an impact on ongoing bus fleet replacement cycles, since fewer buses may need to be replaced as more a removed form service thus affecting O&M costs for the bus fleet.

Adjust City Highway Fund Revenues

The Financial Plan only assumes revenues from the City's general and highway funds will grow at historical real growth rates plus general inflation. As a general purpose local government, the City, may have the opportunity to raise other local tax revenues over and beyond the baseline growth rate assumed for the general and highway fund revenues in this Financial

Plan. Both funds consist of a variety of tax revenues, including property taxes but also City and County fuel tax and County Motor vehicle Weight tax, which are the two largest sources of revenues for the highway fund.

5307 becoming available following reauthorization or being taken from capital if GET revenues are higher than expected.

While 5307 funds are used for capital purposes in priority, any remaining amount is diverted to operations for preventive maintenance purposes. Uncertainties in the Capital Plan discussed above could therefore also impact the amount of Federal 5307 funds used for preventative maintenance and alleviate pressures on the local amount of operating subsidy required.

Appendix A: Summary Cash Flows

Appendix A includes:

1) Summary Cash Flows for the Project
2) Summary Cash Flows for System-wide Ongoing Capital Costs
3) Summary Cash Flows for System-wide Operating Costs

HONOLULU HIGH-CAPACITY TRANSIT CORRIDOR PROJECT
FINANCIAL PLAN FOR ENTRY INTO PRELIMINARY ENGINEERING
AUGUST 2009

Table A-1, Cash Flows for The Project, FY2009 – 2030, YOE $millions

City Fiscal Year		Total	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
CAPITAL PLAN	Unit	Total																						
Project Funding Sources																								
Net GET Surcharge Revenues	YOE $M	3,524	164	164	174	186	202	214	225	236	248	262	276	291	307	323	253	-	-	-	-	-	-	-
New Starts Revenues for the Project	YOE $M	1,550	-	35	80	200	250	250	200	200	200	135	-	-	-	-	-	-	-	-	-	-	-	-
5307 Formula Funds Used for the Project	YOE $M	301	-	5	30	30	31	31	32	33	36	36	37	-	-	-	-	-	-	-	-	-	-	-
ARRA Funds Used for the Project	YOE $M	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross Proceeds from Long-term Debt	YOE $M	1,854	-	-	-	-	347	531	369	101	443	17	46	-	-	-	-	-	-	-	-	-	-	-
Gross Proceeds from Short-term Construction Financing (rolled over)	YOE $M	2,214	-	-	-	214	500	500	500	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Income on Cash Balance	YOE $M	11	2	3	3	1	-	-	-	-	-	-	-	-	0	0	1	0	0	0	0	0	0	0
Total Project Sources of Funds	**YOE $M**	**9,458**	**166**	**211**	**287**	**631**	**1,330**	**1,527**	**1,325**	**1,069**	**926**	**450**	**359**	**291**	**307**	**323**	**253**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Project Capital Expenses																								
Total CapEx	YOE $M	5,120	63	180	485	720	1,111	973	701	392	231	179	85	-	-	-	-	-	-	-	-	-	-	-
Debt Service																								
Total Principal Payment on Long-term Debt	YOE $M	1,854	-	-	-	-	-	28	79	123	141	214	226	246	256	265	276	-	-	-	-	-	-	-
Total Interest Payment on Long-term Debt	YOE $M	354	-	-	-	-	-	16	37	48	47	56	48	40	31	21	11	-	-	-	-	-	-	-
Short-term Financing Due	YOE $M	2,214	-	-	-	-	214	500	500	500	500	-	-	-	-	-	-	-	-	-	-	-	-	-
Finance Charges on Short-term Debt	YOE $M	20	-	-	-	1	3	5	5	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Finance Charges	YOE $M	19	-	-	-	-	3	5	4	1	4	0	0	-	-	-	-	-	-	-	-	-	-	-
Total Project Uses of Funds	**YOE $M**	**9,581**	**63**	**180**	**485**	**720**	**1,330**	**1,527**	**1,325**	**1,069**	**926**	**450**	**359**	**286**	**286**	**286**	**286**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Finance Charges	**YOE $M**	**393**	**-**	**-**	**-**	**1**	**6**	**26**	**45**	**54**	**55**	**56**	**48**	**40**	**31**	**21**	**11**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Project Cash Balance																								
Beginning Cash Balance	**YOE $M**		**154**	**257**	**287**	**89**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**25**	**62**	**29**	**29**	**30**	**30**	**30**	**30**	**31**
Additions (deletions) to Cash	YOE $M		103	30	(198)	(89)	-	-	-	-	-	-	-	5	20	37	(33)	0	0	0	0	0	0	0
Ending Cash Balance	**YOE $M**		**257**	**287**	**89**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**25**	**62**	**29**	**29**	**30**	**30**	**30**	**30**	**31**	**31**

Table A-2, Cash Flows for Ongoing System-wide Capital Costs, FY2009 – 2030, YOE $millions

City Fiscal Year		Total	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Funding Sources for Ongoing System-wide Capital cost																								
Federal Assistance for Ongoing CapEx																								
FTA 5309 FG Mod. Revenues	YOE $M	102	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	5	5	10	11	11	11	12
5309 Bus Discretionary	YOE $M	419	6	6	17	15	30	27	28	22	13	1	11	13	11	9	9	22	43	42	40	31	21	2
5307 Used for Ongoing CapEx	YOE $M	305	8	3	-	-	-	-	-	-	-	-	-	14	11	7	7	46	48	45	46	38	30	1
ARRA Funds Used for Ongoing CapEx	YOE $M	20	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfers to the State's Vanpool program	YOE $M	(35)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Total Federal Assistance for Ongoing CapEx	**YOE $M**	**810**	**14**	**29**	**18**	**16**	**31**	**27**	**29**	**22**	**13**	**2**	**12**	**28**	**23**	**19**	**19**	**72**	**95**	**96**	**95**	**78**	**60**	**13**
City GO Bond Proceeds	YOE $M	571	27	24	31	28	55	49	52	39	23	2	20	9	8	7	7	25	71	26	26	22	17	6
Total Funding Sources for Ongoing Capital Cost	**YOE $M**	**1,382**	**41**	**53**	**48**	**44**	**85**	**76**	**81**	**61**	**36**	**4**	**32**	**37**	**30**	**25**	**26**	**97**	**166**	**122**	**121**	**100**	**77**	**19**
OnGoing Capital Expenditures																								
Additional Railcar Acquisition	YOE $M	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	42	-	-	-	-	-
Rail Rehab, Replacement	YOE $M	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	11	18	13
Airport Alt. Bus Acquisition Costs	YOE $M	1,044	15	13	13	38	82	73	77	56	33	-	17	33	24	21	22	59	119	105	110	83	53	-
Total Ongoing Bus CapEx	YOE $M	124	23	37	32	3	0	0	-	2	-	-	11	-	3	-	-	-	-	11	-	-	-	-
Handi-Van Acquisitions	YOE $M	90	3	3	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	5	6	6
Total Ongoing CapEx	**YOE $M**	**1,382**	**41**	**53**	**48**	**44**	**85**	**76**	**81**	**61**	**36**	**4**	**32**	**37**	**30**	**25**	**26**	**97**	**166**	**122**	**121**	**100**	**77**	**19**

Table A-3, Cash Flows for System-wide Operating Costs, FY2009 – 2030, YOE $millions (except for Level of Service and Fares)

City Fiscal Year		Total	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
LEVEL OF SERVICE																								
Annual Linked Trip (Bus and Rail)	trips		54,360,811	55,284,290	56,207,769	57,131,248	58,054,727	58,978,205	65,318,268	66,241,747	67,165,226	68,088,705	81,890,774	82,814,252	83,737,731	84,661,210	85,584,689	86,508,168	87,431,647	88,355,125	89,278,604	90,202,083	91,125,562	92,049,041
TheBus																								
Total Revenue Vehicle Miles - TheBus	miles		19,463,875	19,609,789	19,755,702	19,901,616	20,047,529	20,193,443	20,339,356	20,485,270	20,631,183	20,777,097	20,923,010	20,980,141	21,037,272	21,094,402	21,151,533	21,208,664	21,265,795	21,322,926	21,380,057	21,437,187	21,494,318	21,551,449
Total Annual Bus Revenue Vehicle Hours	hours		1,307,190	1,335,237	1,363,284	1,391,331	1,419,379	1,447,426	1,475,473	1,503,520	1,531,567	1,559,614	1,587,661	1,595,140	1,602,619	1,610,099	1,617,578	1,625,057	1,632,536	1,640,015	1,647,494	1,654,974	1,662,453	1,669,932
Annual Bus Unlinked Passenger Trips	trips		76,548,309	78,947,775	81,347,242	83,746,708	86,146,175	88,545,641	90,945,107	93,344,574	95,744,040	98,143,507	100,542,973	101,637,740	102,732,507	103,827,274	104,922,041	106,016,808	107,111,576	108,206,343	109,301,110	110,395,877	111,490,644	112,585,411
TheHandi-Van																								
Annual Handi-Van Revenue Vehicle Miles	miles		4,461,000	4,508,000	4,556,000	4,604,000	4,653,000	4,702,000	4,752,000	4,802,000	4,853,000	4,904,000	4,956,000	5,009,000	5,062,000	5,115,000	5,169,000	5,224,000	5,279,000	5,335,000	5,392,000	5,449,000	5,506,000	5,565,000
Total Bus and Handi-Van Revenue Vehicle Miles	miles		23,924,875	24,117,789	24,311,702	24,505,616	24,700,529	24,895,443	25,091,356	25,287,270	25,484,183	25,681,097	25,879,010	25,989,141	26,099,272	26,209,402	26,320,533	26,432,664	26,544,795	26,657,926	26,772,057	26,886,187	27,000,318	27,116,449
Fixed Guideway																								
Revenue Vehicle Miles	miles		-	-	-	-	651,426	651,426	2,279,990	2,279,990	2,279,990	2,279,990	6,839,970	6,839,970	6,839,970	7,434,643	7,434,643	7,434,643	7,434,643	8,029,316	8,029,316	8,029,316	8,029,316	8,623,989
FARE LEVEL																								
Average Fare	YOE $		0.80	0.95	0.95	0.95	0.95	0.95	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61
OPERATING PLAN																								
Operating Revenues																								
Total Fare Revenues (Bus and Rail)	YOE $M	2,228	43	53	53	54	55	56	84	85	86	87	105	106	107	109	138	139	141	142	144	145	147	148
Total Fare Revenues (Handi-Van)	YOE $M	47	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3
Total System Operating Revenue	**YOE $M**	**2,275**	**45**	**54**	**55**	**56**	**57**	**58**	**86**	**87**	**88**	**89**	**107**	**108**	**110**	**111**	**140**	**141**	**143**	**145**	**146**	**148**	**149**	**151**
Federal Operating Assistance																								
5307 Formula Funds Used for Preventive Maintenance	YOE $M	270	21	21	-	-	-	-	-	-	-	-	-	23	33	38	39	-	-	4	5	13	22	52
Total Revenues for Operations	**YOE $M**	**2,545**	**66**	**75**	**55**	**56**	**57**	**58**	**86**	**87**	**88**	**89**	**107**	**132**	**142**	**149**	**178**	**141**	**143**	**149**	**151**	**161**	**171**	**202**
Local Operating Assistance																								
City's Operating Subsidy	YOE $M	4,698	118	114	140	146	161	168	168	176	184	193	240	225	225	231	213	261	271	279	296	299	302	287
Operations and Maintenance (O&M) Costs																								
Total O&M Costs - TheBus	YOE $M	5,209	163	168	173	179	186	193	201	208	216	224	234	240	247	255	262	270	277	285	294	302	311	320
Total O&M Costs - Fixed Guideway	YOE $M	1,355	-	-	-	-	8	8	27	28	29	30	84	86	88	93	95	97	100	105	114	117	120	126
Total O&M Costs - TheHandi-Van	YOE $M	679	21	22	22	23	24	25	26	27	28	29	30	31	32	33	34	35	37	38	39	41	42	44
Total O&M Costs	**YOE $M**	**7,242**	**184**	**190**	**195**	**202**	**218**	**226**	**254**	**263**	**273**	**283**	**347**	**357**	**367**	**380**	**391**	**402**	**414**	**428**	**447**	**460**	**473**	**489**
Farebox Recovery Ratio (Bus and Rail)			**26.6%**	**31.3%**	**30.9%**	**30.3%**	**28.5%**	**27.9%**	**36.8%**	**36.0%**	**35.2%**	**34.4%**	**33.1%**	**32.6%**	**32.0%**	**31.3%**	**38.6%**	**37.9%**	**37.3%**	**36.4%**	**35.2%**	**34.6%**	**34.0%**	**33.2%**

Totals may not add due to rounding

Appendix B: Fixed Guideway Legislation

Appendix B includes:

1) Bill for an Ordinance for Honolulu's Locally Preferred Alternative

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 07 - 001

BILL **79 (2006), CD2, FD2**
(Final #2)

A BILL FOR AN ORDINANCE

RELATING TO TRANSIT.

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

SECTION 1. The purpose of this ordinance is to select the city's locally preferred alternative to comply with the process that will be followed in implementing Honolulu's mass transit project. The council has received the Alternatives Analysis Report for the Honolulu High-Capacity Transit Corridor Project ("AA"), dated November 1, 2006. The council believes that, in its role as policymakers for the city, a fixed guideway system is the best selection for the long-term needs and demands of our growing island population. Therefore, the council approves a fixed guideway system as the locally preferred alternative, which will allow the city administration to move forward on the locally preferred alternative.

PART I. Selection of the Locally Preferred Alternative

SECTION 2. **Selection of the locally preferred alternative.**

The locally preferred alternative for the Honolulu High-Capacity Transit Corridor Project shall be a fixed guideway system between Kapolei and the University of Hawaii at Manoa, starting at or near the intersection of Kapolei Parkway and Kalaeloa Boulevard, with an alignment as follows:

(1) Section I – Saratoga Avenue/North-South Road and Kamokila Boulevard, as determined by the city administration before or during preliminary engineering, to Farrington Highway;

(2) Section II – Farrington Highway/Kamehameha Highway;

(3) Section III – Salt Lake Boulevard and Aolele Street as determined by the city administration before or during preliminary engineering;

(4) Section IV – Dillingham Boulevard; and

(5) Section V – Nimitz Highway/Halekauwila Street/Kapiolani Boulevard to the University of Hawaii at Manoa, with the Waikiki branch.

The "sections" refer to the sections in figures 2-3 through 2-7 of the Alternatives Analysis Report.

A BILL FOR AN ORDINANCE

SECTION 3. The city administration is authorized to proceed with preparation of an environmental impact statement for the locally preferred alternative (LPA), and with planning and preliminary engineering for that portion of the LPA (including any portion of any section of the LPA listed in section 2 above) that may be constructed within financial constraints (capital cost and any interest to finance that capital cost shall be paid entirely from general excise and use tax surcharge revenues, interest earned on the revenues, and any federal, state, or private revenues); provided that this portion shall constitute a minimum operable segment (MOS) for purposes of Federal New Starts funding eligibility; and provided further that the proposed MOS shall be subject to Council approval by resolution.

SECTION 4. Section 6-60.1, ROH, is amended to read as follows:

"**Sec. 6-60.1 Establishment of surcharge—Conditions.**

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

(1) The council has approved by [resolution] <u>ordinance</u> a locally preferred alternative following an Alternatives Analysis [and Draft EIS]; and

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

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

PART II. Alignment, Stations, and Base Yard
of the Locally Preferred Alternative

SECTION 5. Section 4-8.3, Revised Ordinances of Honolulu 1990, is amended to read as follows:

A BILL FOR AN ORDINANCE

"Sec. 4-8.3 Types of public infrastructure to be shown on public infrastructure map.

(a) Symbols for the following types of public improvement projects shall be shown on the public infrastructure maps, provided they meet the applicability criteria specified in Section 4-8.4:

(1) Corporation yard;

(2) Desalination plant;

(3) Drainageway (open channel);

(4) Energy generation facility;

(5) Fire station;

(6) Government building;

(7) Golf course (municipal);

(8) Electrical transmission line and substation (above 46kV but less than 138kV);

(9) Park;

(10) Police station;

(11) Parking facility;

(12) Water reservoir;

(13) Sewage treatment plant;

(14) Solid waste facility;

(15) [Transit corridor;] Fixed guideway system alignment, stations, and base yard of the locally preferred alternative;

(16) Major collector or arterial roadway;

(17) Sewage pump station; and

(18) Potable water well.

(b) The alignment of linear facilities, and the location of project boundaries, shall be considered approximate and conceptual."

PART III. Technology of the Locally Preferred Alternative

SECTION 6. **Reservation of right to select technology.**

The council reserves the right to select the technology of the fixed guideway system for the locally preferred alternative. If the council exercises the right, the council shall select the technology through subsequent ordinance passed on third reading by the council before the city administration issues a public notice soliciting proposals or inviting bids for work that includes design of the system.

The city administration shall give the council at least 90 days' notice before issuing the first public notice soliciting proposals or inviting bids for work that includes design of the fixed guideway system.

PART IV. Specifications of Request for Proposals
Or Invitation for Bids

SECTION 7. **Approval of specifications of requests for proposals or invitation for bids.**

The city administration shall submit to the council the specifications in each proposed request for proposals or invitation for bids for work that includes the planning, design, or construction of any portion of the locally preferred alternative before issuing the request or invitation. The city administration shall not issue the request for proposals or invitation for bids until after the specifications are approved by the council.

PART V. General

SECTION 8. Ordinance material to be repealed is bracketed; new material is underscored. When revising, compiling or printing this ordinance for inclusion in the Revised Ordinances of Honolulu, the revisor of ordinances need not include the brackets, bracketed material, or the underscoring.

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 07-001

BILL 79 (2006), CD2, FD2

A BILL FOR AN ORDINANCE

SECTION 9. This ordinance shall take effect upon its approval.

INTRODUCED BY:

Donovan Dela Cruz

Ann Kobayashi

Romy M. Cachola

Charles Djou

Barbara Marshall

Todd Apo

DATE OF INTRODUCTION:

October 19, 2006
Honolulu, Hawaii

Councilmembers

APPROVED AS TO FORM AND LEGALITY:

Deputy Corporation Counsel

APPROVED this 6th day of JANUARY, 2007

MUFI HANNEMANN, Mayor
City and County of Honolulu

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII
CERTIFICATE

ORDINANCE 07-001 **BILL 79 (2006)**

Introduced: 10/19/06 By: DONOVAN DELA CRUZ Committee: TRANSPORTATION & PLANNING

Title: A BILL FOR AN ORDINANCE RELATING TO TRANSIT.

Links: BILL 79 (2006)
BILL 79 (2006), CD1
BILL 79 (2006), CD2
BILL 79 (1006), CD2, FD2 (FINAL #2)
CR-469
CR-508

COUNCIL	10/25/06	BILL PASSED FIRST READING AND REFERRED TO COMMITTEE ON TRANSPORTATION AND PLANNING. APO Y CACHOLA Y DELA CRUZ Y DJOU Y GARCIA Y KOBAYASHI Y MARSHALL Y OKINO Y TAM Y
TRANSPORTATION AND PLANNING	11/02/06	CR-469 - BILL REPORTED OUT OF COMMITTEE FOR PASSAGE ON SECOND READING AND SCHEDULING OF A PUBLIC HEARING AS AMENDED IN CD1 FORM.
		COMMUNITY OUTREACH MEETINGS TO REVIEW THE ALTERNATIVE ANALYSIS (AA) REPORT ON THE HONOLULU HIGH CAPACITY TRANSIT PROJECT (VARIOUS LOCATIONS): 11/13/06; 11/16/06; 11/17/06; 11/20/06; 11/21/06; 11/22/06; 11/27/06.
PUBLISH	11/27/06	PUBLIC HEARING NOTICE PUBLISHED IN THE HONOLULU STAR-BULLETIN.
COUNCIL/PUBLIC HEARING	12/7/06	BILL PASSED SECOND READING, AS AMENDED (CD1), CR-469 ADOPTED, PUBLIC HEARING CLOSED AND REFERRED TO TRANSPORTATION AND PLANNING COMMITTEE. (BILL 79, CD1) (NOTE: MOTION TO AMEND FOLLOWING BILLS FAILED: (1) BILL 79, PROPOSED CD1, FD1 (VERSION A); AND (2) BILL 79, PROPOSED CD1, FD1 (VERSION B). APO Y CACHOLA Y DELA CRUZ Y DJOU N GARCIA Y KOBAYASHI Y MARSHALL N OKINO Y TAM Y
TASK FORCE	12/8/06	BRIEFING BY THE TRANSIT ADVISORY TASK FORCE ON THE COUNCIL'S 12/7/06 PUBLIC HEARING RE BILL 79, CD1.
PUBLISH	12/13/06	SECOND READING NOTICE PUBLISHED IN THE HONOLULU STAR-BULLETIN.
TRANSPORTATION AND PLANNING	12/14/06	CR-508 – BILL REPORTED OUT OF COMMITTEE FOR PASSAGE ON THIRD READING AS AMENDED IN CD2 FORM.
COUNCIL	12/22/06	CR-508 ADOPTED. BILL 79, CD2, FURTHER AMENDED ON THE COUNCIL FLOOR TO CD2, FD1, HOWEVER, BILL 79, CD2, FD1, FURTHER AMENDED TO BILL 79, CD2, FD2 (FINAL #2), AND SUBSEQUENTLY PASSED THIRD READING, AS AMENDED (BILL 79, CD2, FD2 (FINAL #2) (NOTE: BILL 79 (2006), PROPOSED CD2, FD1 (NORTH-SOUTH BRANCH, NON-LPA COMMITMENT) WAS ALSO CONSIDERED AND SUBSEQUENTLY WITHDRAWN) APO Y CACHOLA Y DELA CRUZ Y DJOU N GARCIA Y KOBAYASHI Y MARSHALL N OKINO Y TAM Y

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

DENISE C. DE COSTA, CITY CLERK

DONOVAN M. DELA CRUZ, CHAIR AND PRESIDING OFFICER

07-001

Appendix C: GET Legislation

Appendix C includes:

1) State of Hawai'i Bill Authorizing Counties to Establish Surcharge
2) Bill for an Ordinance by the City of Honolulu to establish the GET Surcharge
3) Bill for an Ordinance by the City and County of Honolulu to Create a Transit Fund

Report Title:

Public Transit; County Surcharge on State Tax

Description:

Authorizes counties to levy a county surcharge on State tax to fund public transit in the counties.

HOUSE OF REPRESENTATIVES

TWENTY-THIRD LEGISLATURE, 2005

STATE OF HAWAII

H.B. NO. 1309

A BILL FOR AN ACT

relating to TAXATION.

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

SECTION 1. Chapter 46, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

"**§46- County surcharge on state tax.** (a) Each county is authorized to establish a surcharge on state tax at the rates enumerated in sections 237- and 238- . A county electing to establish this surcharge shall do so by ordinance; provided that no ordinance shall be adopted until the county has conducted a public hearing on the proposed ordinance. Notice of the public hearing shall be published in a newspaper of general circulation within the county at least twice within a period of thirty days immediately preceding the date of the hearing.

(b) A county electing to exercise the authority granted under this section shall notify the director of taxation

within ten days after the county has adopted a surcharge on state tax ordinance, and the director of taxation shall levy, assess, collect, and otherwise administer the county surcharge on state tax for the taxable year beginning after the adoption of the ordinance.

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

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

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

The county surcharge on state tax shall not be used to build or repair public roads or highways.

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

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

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

(e) As used in this section, "capital costs" means nonrecurring costs required to construct a transit facility or system, including debt service, costs of land acquisition and development, acquiring of rights-of-way,

planning, design, and construction, including equipping and furnishing the facility or system."

SECTION 2. Chapter 237, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

"**§237- County surcharge on state tax; administration.** (a) The county surcharge on state tax, upon the adoption of county ordinances under section 46- , shall be levied, assessed, and collected as provided in this section on all gross proceeds and gross income taxable under this chapter. No county shall set the surcharge on state tax at a rate greater than one per cent of all gross proceeds and gross income taxable under this chapter. All provisions of this chapter shall apply to the county surcharge on state tax; and with respect to the surcharge, the director shall have all the rights and powers provided under this chapter. In addition, the director of taxation shall have the exclusive rights and power to determine the county or counties in which a person is engaged in business and, in the case of a person engaged in business in more than one county, the director shall determine through apportionment or other means, that portion of the surcharge attributable to business conducted in each county.

(b) Each county surcharge on state tax that may be adopted pursuant to section 46- (a) shall be levied beginning in the taxable year after the adoption of the relevant county ordinance.

(c) The county surcharge on state tax, if adopted, shall be imposed on the gross proceeds or gross income of all written contracts that require the passing on of the taxes imposed under this chapter; provided that if the gross proceeds or gross income are received as payments beginning in the taxable year in which the taxes become effective, on contracts entered into before June 30 of the year prior to the taxable year in which the taxes become effective, and the written contracts do not provide for the passing on of increased rates of taxes, the county surcharge on state tax shall not be imposed on the gross proceeds or gross income covered under the written contracts. The county surcharge on state tax shall be imposed on the gross proceeds or gross income from all contracts entered into on or after June 30 of the year prior to the taxable year in which the

taxes become effective, regardless of whether the contract allows for the passing on of any tax or any tax increases.

(d) No county surcharge on state tax shall be established on any:

(1) Gross income or gross proceeds taxable under this chapter at the one-half per cent tax rate;

(2) Gross income or gross proceeds taxable under this chapter at the 0.15 per cent tax rate; or

(3) Transactions, amounts, persons, gross income, or gross proceeds exempt from tax under this chapter.

(e) The director of taxation shall revise the general excise and use tax forms to provide for the clear and separate designation of the imposition and payment of the county surcharge on state tax.

(f) The taxpayer shall designate the taxation district to which the county surcharge on state tax is assigned in accordance with rules adopted by the director of taxation under chapter 91. The taxpayer shall file a schedule with the taxpayer's periodic and annual general excise and use tax returns summarizing the amount of taxes assigned to each taxation district.

(g) The penalties provided by section 231-39 for failure to file a tax return shall be imposed on the amount of surcharge due on the return being filed for the failure to file the schedule required to accompany the return. In addition, there shall be added to the tax an amount equal to ten per cent of the amount of the surcharge and tax due on the return being filed for the failure to file the schedule or the failure to correctly report the assignment of the general excise tax by taxation district on the schedule required under this subsection.

(h) All taxpayers who file on a fiscal year basis whose fiscal year ends after December 31 of the year prior to the taxable year in which the taxes become effective, shall file a short period annual return for the period preceding January 1 of the taxable year in which the taxes become

effective. Each fiscal year taxpayer shall also file a short period annual return for the period starting on January 1 of the taxable year in which the taxes become effective, and ending before January 1 of the following year."

SECTION 3. Chapter 238, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

"**§238- County surcharge on state tax; administration.** (a) The county surcharge on state tax, upon the adoption of a county ordinance under section 46- , shall be levied, assessed, and collected as provided in this section on the value of property taxable under this chapter. No county shall set the surcharge on state tax at a rate greater than one per cent of all gross proceeds and gross income taxable under this chapter. All provisions of this chapter shall apply to the county surcharge on state tax. With respect to the surcharge, the director shall have all the rights and powers provided under this chapter. In addition, the director of taxation shall have the exclusive rights and power to determine the county or counties in which a person imports or purchases tangible personal property and, in the case of a person importing or purchasing tangible property in more than one county, the director shall determine, through apportionment or other means, that portion of the surcharge on state tax attributable to the importation or purchase in each county.

(b) Each county surcharge on state tax that may be adopted shall be levied beginning in the taxable year after the adoption of the relevant county ordinance.

(c) No county surcharge on state tax shall be established upon any use taxable under this chapter at the one-half per cent tax rate or upon any use that is not subject to taxation or that is exempt from taxation under this chapter.

(d) The director of taxation shall revise the general excise and use tax forms to provide for the clear and separate designation of the imposition and payment of the county surcharge on state tax.

(e) The taxpayer shall designate the taxation district to which the county surcharge on state tax is assigned in

accordance with rules adopted by the director of taxation under chapter 91. The taxpayer shall file a schedule with the taxpayer's periodic and annual general excise and use tax returns summarizing the amount of taxes assigned to each taxation district.

(f) The penalties provided by section 231-39 for failure to file a tax return shall be imposed on the amount of surcharge due on the return being filed for the failure to file the schedule required to accompany the return. In addition, there shall be added to the tax an amount equal to ten per cent of the amount of the surcharge and tax due on the return being filed for the failure to file the schedule or the failure to correctly report the assignment of the use tax by taxation district on the schedule required under this subsection.

(g) All taxpayers who file on a fiscal year basis whose fiscal year ends after December 31 of the year prior to the taxable year in which the taxes become effective, shall file a short period annual return for the period preceding January 1 of the taxable year in which the taxes become effective. Each fiscal year taxpayer shall also file a short period annual return for the period starting on January 1 of the taxable year in which the taxes become effective, and ending before January 1 of the following year."

SECTION 4. Chapter 248, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

"**§248- County surcharge on state tax; disposition of proceeds.** (a) If adopted by county ordinance, all county surcharges on state tax collected by the director of taxation shall be paid into the state treasury each month, within ten working days after collection, and shall be kept by the director of finance in special accounts. Out of the county surcharges on state tax paid into the state treasury special accounts, the director of finance shall retain, from time to time, sufficient amounts to reimburse the State for the costs of assessment, collection, and disposition of the county surcharge on state tax incurred by the State. Amounts retained shall be general fund realizations of the State.

(b) The costs of assessment, collection, and disposition of county surcharges on state tax shall be withheld from payment to the several counties by the State out of the county surcharges on state tax collected for the current calendar year.

(c) The costs of assessment, collection, and disposition of the county surcharges on state tax shall be borne by each of the several counties in an amount proportional to the total amount of surcharges allocated to that county divided by the total amount of surcharges collected for the entire State for the preceding calendar year.

(d) For the purpose of this section, the costs of assessment, collection, and disposition of the county surcharges on state tax shall include any and all costs, direct or indirect, that are deemed necessary and proper to effectively administer this section and sections 237- and 238- . Costs include refunds or reductions of income taxes under section 235-110.7 attributable to the county surcharge on state tax.

(e) After the deduction of the costs under subsection (b), the director of finance shall pay the remaining balance on a monthly or quarterly basis to the director of finance for each county that has adopted a county surcharge on state tax under section 46- . The payments shall be made as soon as possible after the county surcharges on state tax have been paid into the state treasury special accounts or after the disposition of any tax appeal, as the case may be. All county surcharges on state tax collected shall be distributed by the director of finance to the county in which the county surcharge on state tax is generated and shall be a general fund realization of the county, to be used for the purposes specified in section 46- by each of the several counties."

SECTION 5. Chapter 51D, Hawaii Revised Statutes, is repealed.

SECTION 6. New statutory material is underscored.

SECTION 7. This Act shall take effect on July 1, 2005.

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 05-027

BILL **40 (2005), FD1, CD2**

A BILL FOR AN ORDINANCE

ESTABLISHING A GENERAL EXCISE AND USE TAX SURCHARGE FOR THE CITY AND COUNTY OF HONOLULU.

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

SECTION 1. Purpose and Findings. Currently, traffic congestion on Oahu is a major drain on the quality of life for all island residents. Past efforts to implement more comprehensive mass transit solutions have not come to fruition. Future plans to implement transit solutions that might mitigate congestion are tentative at best. There is not yet a consensus on what transportation and transportation system management modes, methods, or combinations thereof, would best serve the island. However, one thing is incontrovertible: any successful transportation solution or system of solutions to Oahu's traffic problems will be expensive, and will require a reliable and significant commitment of local resources to create.

The council finds that the most effective way to proceed to address Oahu's traffic problems is to begin with a firm financial commitment. To this end, the Hawaii State legislature has authorized the counties to enact a surcharge of up to one-half percent on the general excise taxes currently imposed by the state. The council finds that it is vital to the future of Oahu's residents and visitors that it enact the authorized surcharge. Therefore, the purpose of this ordinance is to establish a general excise and use tax surcharge and provide for receipt and expenditure of these monies.

SECTION 2. Chapter 6, Revised Ordinances of Honolulu 1990, is amended by adding a new article to be appropriately designated by the revisor of ordinances and to read as follows:

"Article __. Transportation Surcharge—Use of Funds

Sec. 6-__.1 Establishment of surcharge—Conditions.

Pursuant to Section 2 of Act 247, Session Laws of Hawaii, Regular Session of 2005, codified as Section 46-__ of the Hawaii Revised Statutes, there is hereby established a one-half percent general excise and use tax surcharge to be used for purposes of funding the operating and capital costs of public transportation within the City and County of Honolulu as specified herein. The excise and use tax surcharge shall be levied beginning January 1, 2007. Prior to the tax surcharge monies being expended as the local match for federal funds, the following shall occur:

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

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

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

Sec. 6-__.2 Use of funds.

(a) All moneys received from the state derived from the imposition of the surcharge established under this article shall be deposited into the general fund and expended for the following purposes authorized by state law:

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

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

(b) No moneys received from the surcharge shall be used to build or repair public roads or highways or bicycle paths, or to support public transportation systems already in existence prior to the effective date of Act 247, Session Laws of Hawaii, Regular Session of 2005.

Sec. 6-__.3 Repeal of surcharge.

Pursuant to Section 9 of Act 247, Session Laws of Hawaii, Regular Session of 2005, Section 6-__.1 shall be repealed on December 31, 2022."

A BILL FOR AN ORDINANCE

SECTION 3. This ordinance shall take effect upon its approval. The clerk shall transmit a copy of this ordinance to the state director of taxation within ten days of its approval.

INTRODUCED BY:

Nestor Garcia

Romy M. Cachola

Ann Kobayashi

Gary Okino

Donovan Dela Cruz

Rod Tam

Todd Apo

DATE OF INTRODUCTION:

May 4, 2005
Honolulu, Hawaii

Councilmembers

APPROVED AS TO FORM AND LEGALITY:

Deputy Corporation Counsel

APPROVED this 23rd day of August, 2005.

MUFI HANNEMANN, Mayor
City and County of Honolulu

(OCS/080205/ct)

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII
CERTIFICATE

ORDINANCE **05 - 027** BILL **40 (2005)**

Introduced: 5/4/05 By: NESTOR GARCIA Committee: BUDGET/TRANSP. (JOINT REFERRAL)

Title: A BILL FOR AN ORDINANCE ESTABLISHING A GENERAL EXCISE AND USE TAX SURCHARGE FOR THE CITY AND COUNTY OF HONOLULU

Links: Bill 40 (2005)
Bill 40 (2005), CD1
Bill 40 (2005), CD1, FD1
Bill 40 (2005), FD1, CD2
CR-236

Council	5/11/05	Bill passed first reading and referred to Committee on Budget. Apo Y Cachola Y Dela Cruz Y Djou N Garcia Y Kobayashi Y Marshall N Okino Y Tam Y
		Bill re-referred to Budget/Planning and Transportation Committee as a joint committee referral (previously Budget Committee). (CC-81)
Joint Budget/PT	5/17/05	CR-236 – Bill reported out of committee for passage on second reading and scheduling of a public hearing as amended in CD1 form.
Publish	5/27/05 and 6/1/05	Public hearing notices published in the Honolulu Star-Bulletin on 5/27/05 and 6/1/05.
Council/ Public Hearing	6/6/05	Public hearing closed. Action deferred until the July 6, 2005 Council meeting on Bill 40; Bill 40, proposed CD1; Bill 40, proposed CD1, FD1; and CR-236.
Council	7/6/05	CR-236 adopted. Bill 40, CD1, further amended to CD1, FD1, and subsequently passed second reading, as amended (Bill 40, CD1, FD1). Apo Y Cachola Y Dela Cruz Y Djou N Garcia Y Kobayashi Y Marshall N Okino Y Tam Y
Publish	7/15/05	Second reading notice published in the Honolulu Star-Bulletin.
		Re-referred to Budget/Transportation Committee as a joint referral pursuant to CC-123. (Previously Budget/Planning and Transportation Committee).
Joint Budget/Transp.	8/2/05	CR-374 – Bill reported out of committee for passage on third reading, as amended in FD1, CD2 form.
Council	8/10/05	Bill passed third reading, as amended (FD1, CD2), and CR-374 adopted. (Bill 40, FD1, CD2) Apo Y Cachola Y Dela Cruz Y Djou N Garcia Y Kobayashi Y Marshall N Okino Y Tam Y

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

DENISE C. DE COSTA, CITY CLERK

DONOVAN M. DELA CRUZ, CHAIR AND PRESIDING OFFICER

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 06-37

BILL 33 (2006), CD1

A BILL FOR AN ORDINANCE

TO AMEND CHAPTER 6, REVISED ORDINANCES OF HONOLULU 1990, AS AMENDED, RELATING TO THE TRANSIT FUND.

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

SECTION 1. The purpose of this ordinance is to create a fund to receive and expend monies for the operating or capital costs of a locally preferred alternative for a mass transit project described by Chapter 6, Article 60, Revised Ordinances of Honolulu, and any amendments thereto.

SECTION 2. Chapter 6, Revised Ordinances of Honolulu 1990, as amended, is amended by adding a new article to be appropriately designated by the revisor of ordinances and to read as follows:

"**Article __. Transit Fund**

Sec. 6-__.1 Establishment.

There is hereby created a special fund to be known as the "transit fund."

Sec. 6-__.2 Purpose.

The purpose of the transit fund is to receive transfers of all monies collected from the county surcharge on state excise and use tax by the general fund and to provide budgetary control and accountability of moneys collected pursuant to Sec. 6-60.1.

Sec. 6-__.3 Deposits.

There shall be deposited into the transit fund:

(1) All county surcharge on state general excise and use tax moneys collected pursuant to Sec. 6-60.1 and deposited into the general fund; and

(2) All revenues generated by the locally preferred alternative, including any interest earned on the deposits of this fund and all other receipts dedicated for the mass transit project.

A BILL FOR AN ORDINANCE

Sec. 6-__.4 Expenditures.

All expenditures from this fund shall be used for:

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

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

Sec. 6-__.5 Administration.

The director of budget and fiscal services shall administer the fund."

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 06-37

BILL 33 (2006), CD1

A BILL FOR AN ORDINANCE

SECTION 3. This ordinance shall take effect upon its approval.

INTRODUCED BY:

Donovan Dela Cruz (BR)

DATE OF INTRODUCTION:

March 2, 2006
Honolulu, Hawaii

Councilmembers

APPROVED AS TO FORM AND LEGALITY:

Deputy Corporation Counsel

APPROVED this 23rd day of June, 2006.

MUFI HANNEMANN, Mayor
City and County of Honolulu

(OCS/040506/ct)

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII
CERTIFICATE

ORDINANCE 06-37 **BILL 33 (2006)**

Introduced: 3/2/06 By: DONOVAN DELA CRUZ (BY REQUEST) Committee: BUDGET

Title: A BILL FOR AN ORDINANCE TO AMEND CHAPTER 6, REVISED ORDINANCES OF HONOLULU 1990, AS AMENDED, RELATING TO THE TRANSIT FUND.

Links: BILL 33 (2006)
BILL 33 (2006), CD1
MM-34
MM-34 A
MM-34 B
CR-211

COUNCIL	3/15/06	BILL PASSED FIRST READING AND REFERRED TO COMMITTEE ON BUDGET.									
	APO	Y	CACHOLA	Y	DELA CRUZ	Y	DJOU	E	GARCIA	Y	
	KOBAYASHI	Y	MARSHALL	Y	OKINO	Y	TAM	Y			
PUBLISH	3/25/06	PUBLIC HEARING NOTICE PUBLISHED IN THE HONOLULU STAR-BULLETIN.									
PUBLISH	4/8/06	PUBLIC HEARING NOTICE PUBLISHED IN THE HONOLULU STAR-BULLETIN.									
BUDGET	4/10/06	BILL WAS ON THE AGENDA FOR DISCUSSION ONLY.									
BUDGET	4/11/06	CR-211 – BILL REPORTED OUT OF COMMITTEE FOR PASSAGE ON SECOND READING AND SCHEDULING OF A PUBLIC HEARING AS AMENDED IN CD1 FORM.									
COUNCIL	4/20/06	BILL PASSED SECOND READING, AS AMENDED (CD1), CR-211 ADOPTED, PUBLIC HEARING CLOSED AND REFERRED TO BUDGET COMMITTEE.									
	APO	Y	CACHOLA	Y	DELA CRUZ	Y	DJOU	Y	GARCIA	Y	
	KOBAYASHI	Y	MARSHALL	N	OKINO	E	TAM	Y			
PUBLISH	4/29/06	SECOND READING NOTICE PUBLISHED IN THE HONOLULU STAR-BULLETIN.									
BUDGET	5/18/06	INFORMATIONAL MEETING ON THE ANNUAL BUDGET AT WINDWARD COMM. COLLEGE.									
BUDGET	5/25/06	CR-314 – BILL 33, CD1, REPORTED OUT OF COMMITTEE FOR PASSAGE ON THIRD READING.									
COUNCIL	6/7/06	BILL 33, CD1, PASSED THIRD READING AND CR-314 ADOPTED. (BILL 33, CD1)									
	APO	Y	CACHOLA	Y	DELA CRUZ	Y	DJOU	Y	GARCIA	Y	
	KOBAYASHI	Y	MARSHALL	Y	OKINO	Y	TAM	Y			

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

DENISE C. DE COSTA, CITY CLERK

DONOVAN M. DELA CRUZ, CHAIR AND PRESIDING OFFICER

Appendix D: GET Tax Base Forecast

Appendix D includes:

1) GET Tax Base Forecast Report and Results, PB

City and County of Honolulu

General Excise and Use Tax (GET) Tax Base Forecast FY 2009-2023

Prepared by:
Parsons Brinckerhoff

March 2009

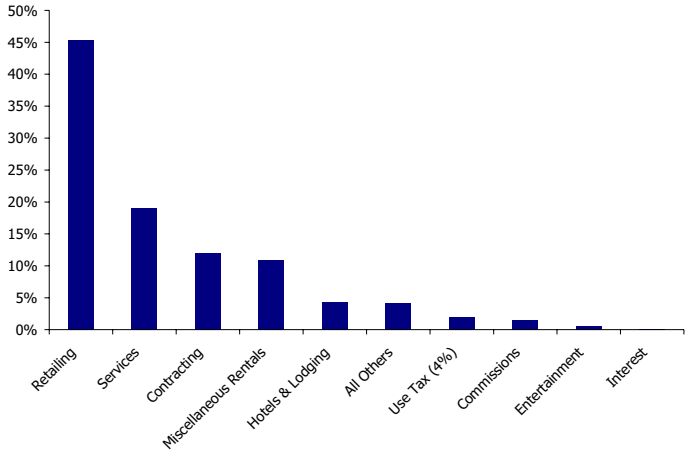
NOTE: the forecast model was developed in November 2008. The model was updated with the most recent available data in March 2009.

Introduction

This report provides a 15-year quarterly forecast of the GET tax base to which the 0.5% rail surcharge is applied. The PB forecast model uses a series of regression models, which use historical data to estimate coefficients and forecasts from Global Insight, Moody's Economy.com, the IMF, the United Nations Statistical Handbook, and the PB team to develop the tax base forecasts.

As shown in the Exhibit below, over 90% of the 2007 calendar year retail tax base can be attributed to five categories: retail spending (45%), personal and professional services (18%), contracting for residential and non-residential construction (12%), miscellaneous rentals (10%), and hotels and lodging (4%). Therefore, the PB forecasting analysis centered primarily on forecasting these five major components. A simple trend extrapolation methodology was used to forecast the other categories (which include entertainment, commission, interest, use taxes, and other items).

Exhibit 1: Breakdown of the General Excise Tax Base by Sub-Component, 2007[1]



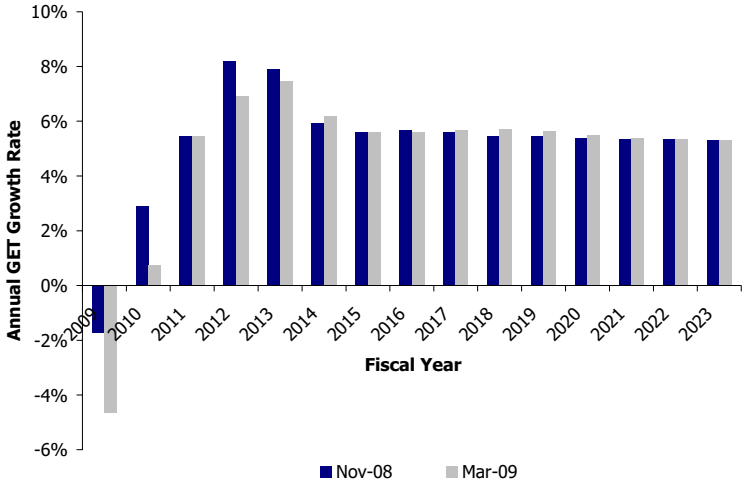
Source: Hawaii Department of Taxation

Revision to November 2008 Forecast

Since the last release of PB's GET tax base forecast in November 2008, the US economy has continued to deteriorate at a rising pace. From November 2008 to March 2009, the nation has shed over 2.6 million jobs, consumer confidence has fallen to its lowest level since 1980, and US real GDP contracted 6.3 percent in the fourth quarter. These nationwide economic statistics are matched at the local level in Hawaii, as the state unemployment rate has risen from 4.4 percent in October to 6.5 percent in February. Foreign economies have also contracted sharply since the last forecast, including Japan, an important source of tourism revenue for Hawaii, where GDP fell 12.1 percent in Q4 2008.

The revised GET tax base forecast is based on a series of updated econometric regressions, which have incorporated the latest historical State tax revenue data for 2008Q3, as well as updated historical data and forecasts for exogenous variables such as personal income, foreign exchange rates, and GDP growth from Global Insight, the IMF, and PB. These updated forecasts reflect the latest expectations regarding the extent of the current economic downturn and the pace of recovery over the medium term. In addition, ex-post adjustments accounting for the near-term economic recession have been revised downward to reflect the latest data and expectations regarding the economic contraction in CY 2009.

Exhibit 2: Forecasted GET Tax Base Growth Rate Comparison from November 2008 and March 2009



Source: PB Analysis

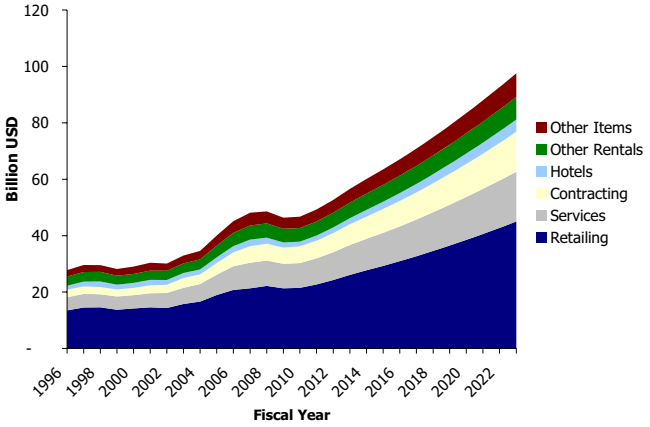
Exhibit 2 above shows a comparison of the growth rates for Oahu GET revenues between the previous forecast in November 2008 and the revised March 2009 projections. Since the November 2008 forecast, tax revenue growth projections over the short and medium term have worsened both in terms of depth and duration. That is, GET revenues in FY 2009 and FY 2010 are expected to contract to a greater extent than previously forecast, the recovery is expected to be weaker than previously forecast, and the pace of recovery in tax revenues is expected to be slower than previously assumed.

The major drivers behind the change in the forecast from November 2008 include lower projections of tourism over the next several years, and slower growth projections in services, contracting, and rentals. Growth in these sectors in Hawaii, as well as throughout the United States, will continue to remain weak until the global financial system is restored to health and credit markets resume normal activity, which is expected to take a longer amount of time than previously expected.

Revised GET Tax Base Forecast – March 2009

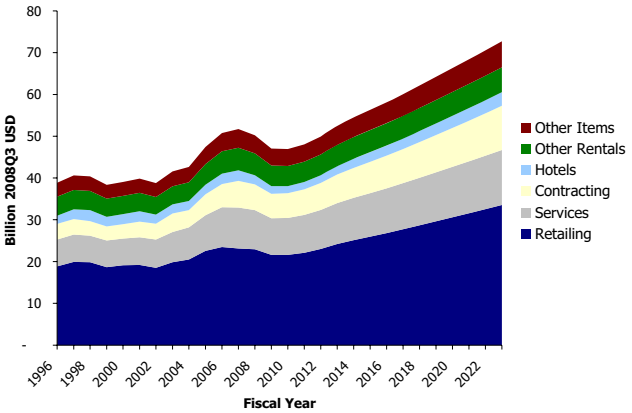
The revised GET tax base forecast in both real and nominal terms is shown below. In nominal dollars, the Oahu GET base is projected to increase from $48.6 billion in FY 2008 to $97.6 billion in FY 2023, at a compound annual growth rate (CAGR) of 4.8%. In 2008Q3 dollars, the tax base is projected to increase at a CAGR of 2.5% to $72.7 billion in FY 2023.

Exhibit 3: Nominal GET Tax Base Forecast, FY 2009 to FY 2023



Source: PB Analysis

Exhibit 4: Real GET Tax Base Forecast (2008Q3 $), FY 2009 to FY 2023



Source: PB Analysis

Over the short term, the US economic downturn and the financial crisis are expected to lead to a -4.7% contraction in the nominal tax base in FY 2009, and a -6.4% decrease in the real tax base. All tax categories are expected to decline in nominal terms in FY 2009, as the credit crunch, reduction in employment and real personal income, and weak consumer spending causes firms operating in Hawaii to cut production. In addition, tourism spending in Oahu is expected to fall over 19 percent in nominal terms in CY 2009, led by steep declines in US and Japanese tourist arrivals. This will negatively affect hotels & lodging-related receipts, which are projected to contract over 14 percent in FY 2009.

Beginning in FY 2010, the local economy is expected to stabilize, with modest gains in tax revenues coming in the latter half of the fiscal year after continued contraction in the first half. The nominal tax base is projected to increase 0.7% and the real tax base is projected to decline 0.2%. The largest expansion during this fiscal year will likely occur in the contracting tax base, as investment in private residential and nonresidential structures resumes after housing prices stabilize in late CY 2009. It is also expected that the infrastructure spending provisions of the Federal economic stimulus bill will take effect in FY 2012 and increase demand for construction-related labor, which should boost contracting tax receipts.

The economy is expected to experience a more pronounced recovery from FY 2011 through FY 2014. The strongest expansion in the tax-base is expected to occur in FY 2013, where the effects of the

Honolulu economic recovery are compounded with increased visitors to the island (i.e. increased tourist-sector based taxes such as Retailing, Services, and Hotels and Lodging). The lagged growth in the tourist-sector is because household discretionary spending items such as vacations to Honolulu will be put on hold until there is sustained economic recovery (which includes lower unemployment rates, which is also a lagged indicator) and higher consumer confidence. These assumptions on the pace and magnitude of recovery is supported by the Congressional Budget Office and the Federal Reserve. Beginning in FY 2015, economic growth is expected to moderate to long-term growth levels, which will continue through FY 2023. Over this period, increases in the tax base are projected to occur at a CAGR of 5.5% in nominal terms and 3.3% in real terms. These growth rates are close to the 5.2% and 2.7% growth rates seen over the 1995 to 2007 historical period.

The next sections will describe individual forecast methodologies and the respective data sources used in the analysis. Unless otherwise noted, all years presented herein are specified as calendar years.

Retail Tax Base

The Oahu retail tax base represents nearly 50% of the General Excise Tax (GET) base in Hawaii, making it by far the single largest component of the tax base. This component was broken into two sub-categories to create a forecast:

(1) Retail tax base =
Retail spending by Oahu residents + Retail spending by US mainland or foreign visitors

In 2007, the share of retail spending attributed to Hawaii residents comprised roughly 82% of the total retail tax base in 2007, while the other 18% consisted of tourist spending.

Retail Spending by Oahu Residents

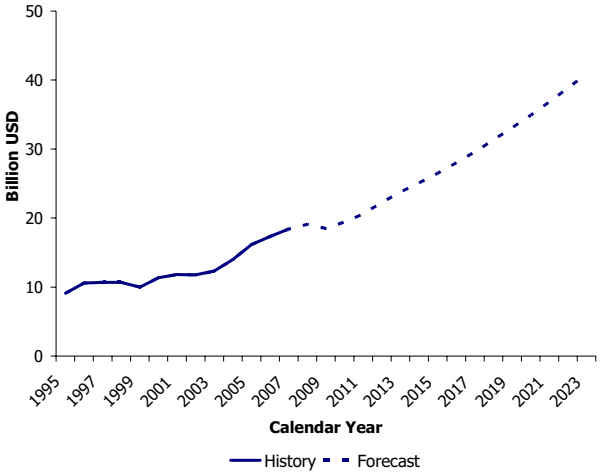
In Hawaii, similar to other economies, retail spending is largely a function of the level of personal income:

(2) Nominal Retail spending by Hawaii residents[2] = f (Nominal Personal incomes in Hawaii[3])

To obtain a measure of the Oahu share of total Hawaii retail spending, the projected Oahu share of the state retail tax base was used. The Oahu share of the state tax base has been relatively stable at roughly 84% over the last 10 years, and is expected to remain stable over the forecast period.

The forecast of Oahu non-tourism retail spending in nominal dollars is presented below. Retail expenditures are expected to grow at a sluggish 0.1% per year from 2007 to 2009, due to the current US economic downturn. From 2009 to 2023, Oahu retail spending is forecast to rise at a CAGR of 5.8%, slightly below the 6.1% annual rate seen over the 1995-2007 period. In nominal dollars, Oahu retail expenditures are projected to grow from $18.4 billion in 2007 to $40.9 billion in 2023.

Exhibit 5: Forecast of Retail Spending by Oahu Residents, 2008 to 2023

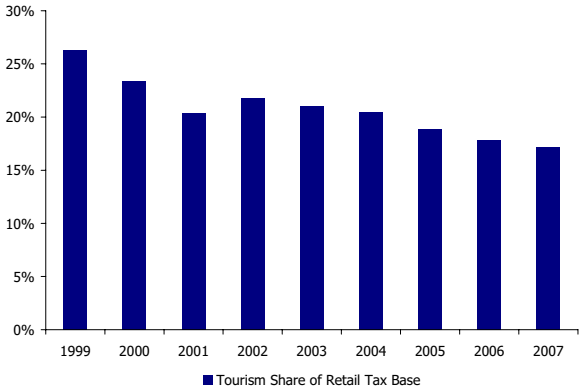


Source: PB Analysis

Retail Spending by US Mainland and Foreign Visitors

As shown in Exhibit 6, the tourism share of the retail tax base has been declining in importance over the last decade, mainly due to the steady decline in Japanese tourist arrivals.

Exhibit 6: Tourism Share of the Hawaii Retail Base, 1999 to 2007



Source: Hawaii Department of Business, Economic Development and Tourism (DBEDT)

PB employed the following equation to produce a forecast of tourist-driven retail spending:

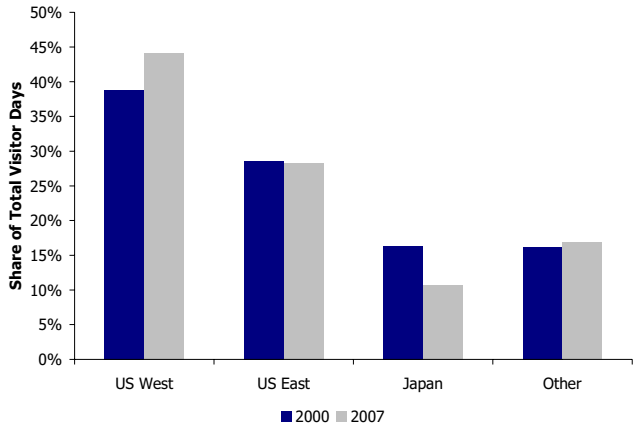
(3) Retail spending by US mainland or foreign visitors =
Retail spending by US visitors + Retail spending by Japanese visitors + Retail spending by other visitors

Each of the three components of tourist retail spending (in equation 3) was separately estimated using a unique set of drivers for each tourist group.

In 2007, 72% of total Hawaii visitor days were attributed to US mainland tourists (combined US West and US East), with 28% split between Japanese tourists and other foreign tourists. Exhibit 7 also captures the decline in Japanese tourist visitor days seen over the last ten years, which is likely a function of the declining and aging Japanese population. The "other" category, comprised of Canadians, Europeans,

Other Asians, Latin Americans, Oceanians, and tourists from other regions, has remained relatively stable over the last eight years.

Exhibit 7: Breakdown of Tourist Visitor Days in Hawaii by Region of Origin, 2000 and 2007



Source: Hawaii Department of Business, Economic Development and Tourism (DBEDT)

In the sections that follow, Oahu retail spending forecasts for each tourist group will be discussed.

Retail Spending by US Tourists

Retail spending by US tourists is mainly a function of the cost of travel, both in terms of the overall trip cost and the relative cost of visiting Hawaii versus another destination, and the number of US households with suitable disposable incomes for travel, such as households with annual incomes over $60,000.

The specification utilized to predict Hawaii expenditures by US tourists is as follows:

(4) Hawaii Retail expenditures by US tourists[4] =
f (US disposable income in US West[5], US trade weighted exchange rate[6], External shocks[7])

Model regression results are shown in Exhibit 8. The results were adjusted post-regression based on PB projections of the Oahu share of total visitor days, for which data are available annually from 1999-2007, and the retail share of total US tourist expenditures, which is also available annually from 1999-2007[8].

Exhibit 8: US Tourist Expenditures in State of Hawaii Regression Results

Dependent Variable: Log(Nominal State of Hawaii Expenditures by US Tourists) Annual data, 1985-2007	
Variable	OLS
Constant	11.9535** (1.4281)
Log(Nominal US West Personal Income)	0.8707** (0.1412)
Log(US Trade-Weighted Ex. Rate)	-0.4238* (0.2181)
External Shocks	-0.1555** (0.03475)
Observations	23
Adjusted R-Squared	0.9396
F Test (p value)	0.0000
Akaike Information Criterion	2.5626
Durbin-Watson Statistic	1.5069

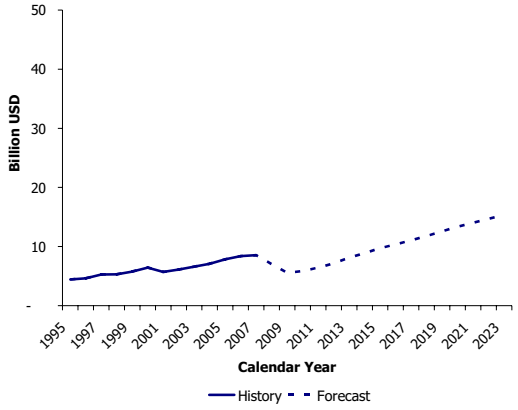
Numbers in parenthesis below the coefficient estimates are standard errors.

** (**) Implies that the variable is significant at the 10 (5) percent level.*

Source: PB Analysis

The forecast of nominal statewide expenditures by US visitors is shown in Exhibit 9. Total US tourist spending is expected to sharply decline at a 19.3% CAGR between 2007 and 2009 due to the US economic downturn, and then grow at a 7.5% CAGR from 2009 to 2023. Once the economic settles into a long-term growth pattern in 2015, nominal growth is projected to be 5.9% per year from 2015 to 2023, slightly higher than the 5.6% historical growth rate in overall US tourist expenditures from 1995 to 2007.

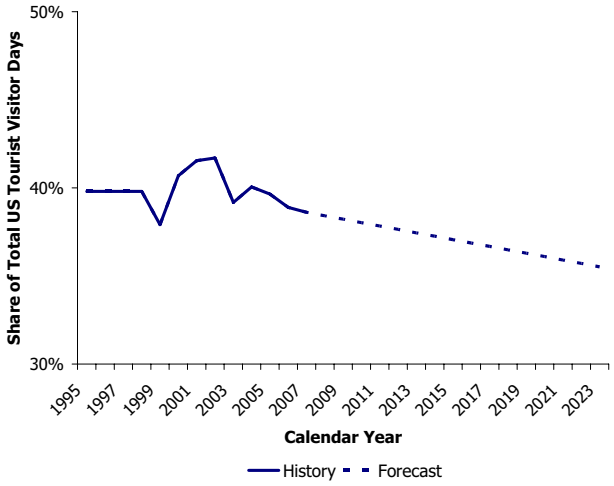
Exhibit 9: Forecast of State of Hawaii Expenditures by US Tourists, 2008 to 2023



Source: PB Analysis

The forecast in Exhibit 9 was multiplied by the Oahu share of total US visitor days to arrive at Oahu expenditures by US tourists. As illustrated in Exhibit 10, the Oahu share of total US visitor days are expected to decline over the forecast horizon.

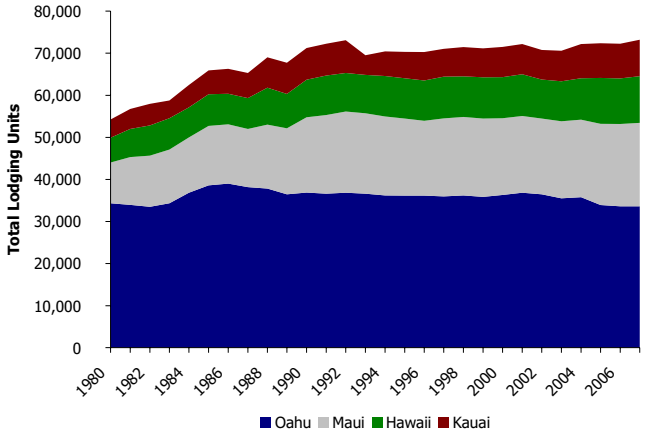
Exhibit 10: Forecast of Oahu Share of US Tourist Visitor Days



Source: PB Analysis

The decline shown in Exhibit 10 is supported by the fact that the number of lodging units available in Oahu has been declining in recent years (see Exhibit 11). Although new construction for additional Oahu hotel and timeshare units is planned over the next several years, the overall outlook over the medium to long term is that the removal of units from the market will nearly offset the additional housing units constructed, and the lodging unit stock in Oahu will be somewhat fixed. Alternatively, the stock of lodging units in other Hawaii counties has been increasing, and is expected to continue to increase as a share of total statewide lodging units[9].

Exhibit 11: Stock of Lodging Units by Hawaii County, 1980 to 2007



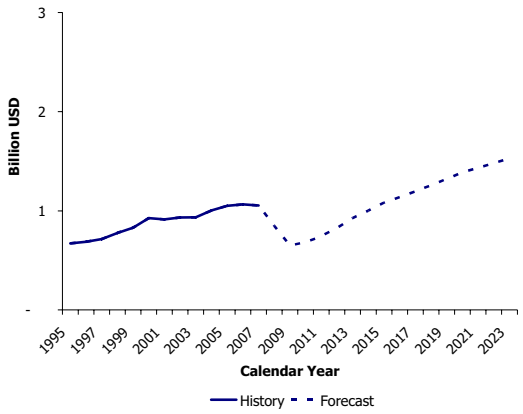
Source: Hawaii Department of Business, Economic Development and Tourism (DBEDT)

The forecast matches the trend seen in recent history, as the Oahu share of total US visitor days was 38.6% in 2007, down from 41.7% in 2002. By 2023, the Oahu share of statewide visitor days by US tourists is projected to fall to 35.5%.

This phenomenon also will negatively affect the retail share of total spending by Oahu visitors, as the fixed hotel stock is expected to continue to drive up increases in hotel, condo, and timeshare rates. As hotels and lodging occupy a greater share of tourists' daily expenditures, retail spending will naturally occupy a smaller share of total US visitor expenditures. Thus, the retail share of Oahu expenditures by US tourists is projected to continue to decline over the forecast period, from 32.0% in 2007 to 28.0% in 2023.

In nominal terms, Oahu retail expenditures are expected to increase from $1.1 billion in 2007 to $1.5 billion in 2023, at a CAGR of 2.3%. Over the 2007 to 2009 period, retail spending in nominal terms is expected to steeply decline at a CAGR of 21.5%, as fewer US tourists are expected to arrive as a result of the US economic downturn. From 2009 to 2023, retail spending by US tourists is projected to grow at a CAGR of 6.3% due to a strong economic recovery in 2012 and 2013. From 2015 to 2023, annual growth rates are expected to be 4.4%, slightly higher than the 3.8% compound annual growth rate seen from 1995 to 2007.

Exhibit 12: Forecast of Oahu Retail Expenditures by US Tourists, 2008 to 2023



Source: PB Analysis

Japanese Tourists

In 1995, Japanese tourists provided 45% of the state's tourism-related retail revenue; however, today that share has fallen to 16%. The likely reasons for this decline are twofold: the Japanese economic entered into a period of stagnation in the second half of the 1990s, and an increasing share of the population began to reach retirement. Accordingly, the drivers utilized for the Japanese forecast are:

(5) Hawaii expenditures by Japanese tourists[10] =
f (Median Japanese international traveler age[11], US/Yen exchange rate[12], Japanese GDP[13])

The regression results are shown Exhibit 13.

Exhibit 13: Japanese Tourist Expenditures in State of Hawaii Regression Results

Dependent Variable: Log(Nominal State of Hawaii Expenditures by Japanese Tourists) Annual data, 1985-2007	
Variable	OLS
Constant	-18.2919** (8.5441)
Log(Nominal Japanese GDP)	2.1065** (0.2682)
Log(US/Yen Ex. Rate)	-1.0124** (0.1624)
Log(Median Age of Japanese Travelers)	-7.2107** (0.5900)
Observations	23
Adjusted R-Squared	0.9402
F Test (p value)	0.0000
Akaike Information Criterion	1.9772
Durbin-Watson Statistic	1.5595

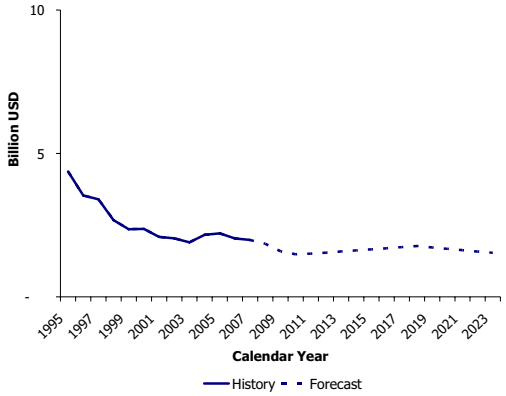
Numbers in parenthesis below the coefficient estimates are standard errors.

** (**) Implies that the variable is significant at the 10 (5) percent level.*

Source: PB Analysis

The forecast of total statewide expenditures by Japanese tourists is shown in Exhibit 14. Over the forecast period, nominal Japanese expenditures are projected to decline at a CAGR of 1.6%. This decrease in future Japanese expenditure in Hawaii is attributed to the expected depreciation of the Yen and weak GDP growth over the next five years, in addition to losses in tourist arrivals due to the aging Japanese population.

Exhibit 14: Forecast of Statewide Expenditures by Japanese Tourists, 2008 to 2023

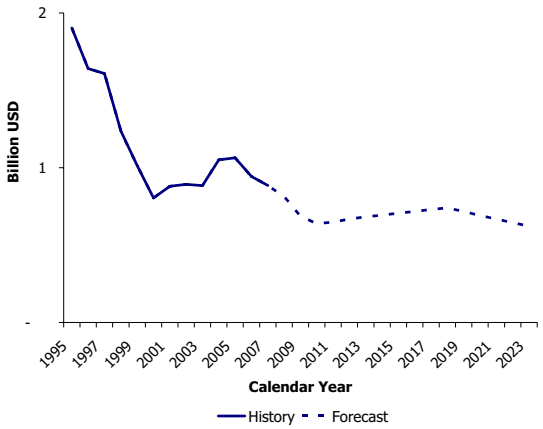


Source: PB Analysis

The projected Oahu shares of Japanese visitor days, and the retail share of total Japanese expenditures in Oahu, were applied to the forecast of total statewide expenditures by Japanese tourists. Similar to the US tourist regression, the expected flat growth in the Oahu stock of lodging units is expected to both decrease Oahu's share of tourist days in future years and decrease the percentage of daily spending in Oahu on retail goods and services due to higher lodging rates. The Oahu share of total Japanese visitor days is projected to decrease slightly from 87.3% in 2007 to 85.9% in 2023, and the retail share of total expenditures is projected to fall from 51.2% in 2007 to 47.2% in 2023.

The forecast of Oahu retail expenditures by Japanese tourists is shown in Exhibit 15. Over the 2008 to 2023 forecast period, nominal Oahu retail expenditures are forecast to decrease at a rate of 2.2% per year. Over the 2007 to 2009 period, the global downturn is expected to decrease Japanese arrivals and expenditures in Oahu, with a CAGR of -11.9% over the period. In nominal terms, Japanese retail spending in Oahu is expected to fall from $886 million in 2007 to $622 million in 2023, falling from 4% of the total retail tax base in 2007 to 2% over the same period.

Exhibit 15: Forecast of Oahu Retail Expenditures by Japanese Tourists, 2008 to 2023

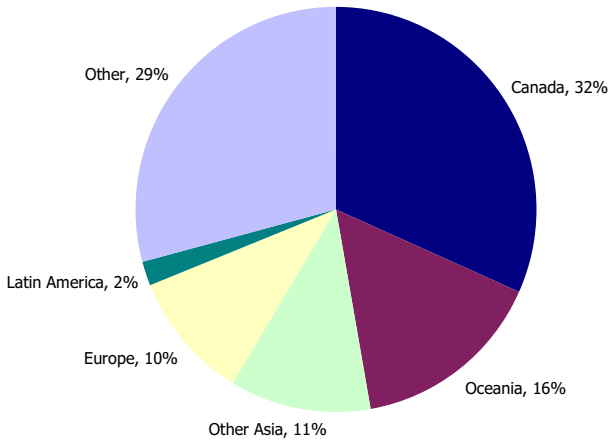


Source: PB Analysis

Other Foreign Tourists

As shown in Exhibit 16, other tourists arriving in Oahu come from many different locations.

Exhibit 16: Breakdown of Other Hawaii Tourists by Region of Origin, 2007



Source: Hawaii Department of Business, Economic Development and Tourism (DBEDT)

The functional form for predicting retail expenditures by other regions is:

(6) Hawaii nominal expenditures by tourists from rest of world (ROW)[14] = f (Rest of World GDP[15], Median age of population[16], External shocks[17])

The model results are shown in Exhibit 17.

Exhibit 17: ROW Tourist Expenditures in State of Hawaii Regression Results

Dependent Variable: Log(Nominal State of Hawaii Expenditures by Rest of World Tourists) Annual data, 1985-2007	
Variable	OLS
Constant	35.1609** (8.5885)
Log(Nominal ROW GDP)	3.3203** (1.1187)
Log(Median Age of ROW Population)	-13.8844** (5.7817)
External Shocks	-0.1979** (0.0546)
Observations	23
Adjusted R-Squared	0.9117
F Test (p value)	0.0000
Akaike Information Criterion	1.8713
Durbin-Watson Statistic	1.6706

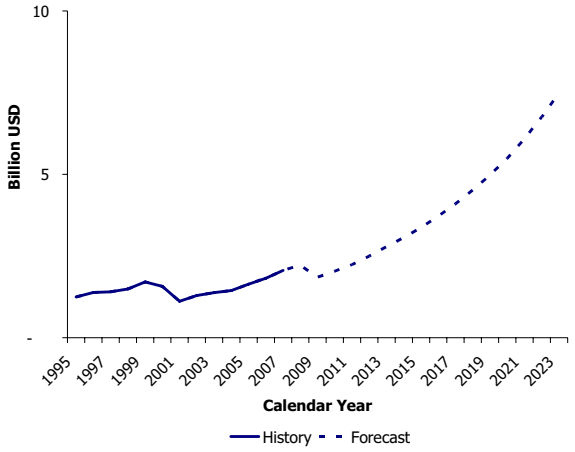
Numbers in parenthesis below the coefficient estimates are standard errors.

** (**) Implies that the variable is significant at the 10 (5) percent level.*

Source: PB Analysis

As illustrated by Exhibit 18, nominal ROW expenditures are projected to grow at a CAGR of 8.4%, contrasted with the 4.3% CAGR seen over the 1995 to 2007 period.

Exhibit 18: Forecast of Statewide Expenditures by ROW Tourists, 2008 to 2023



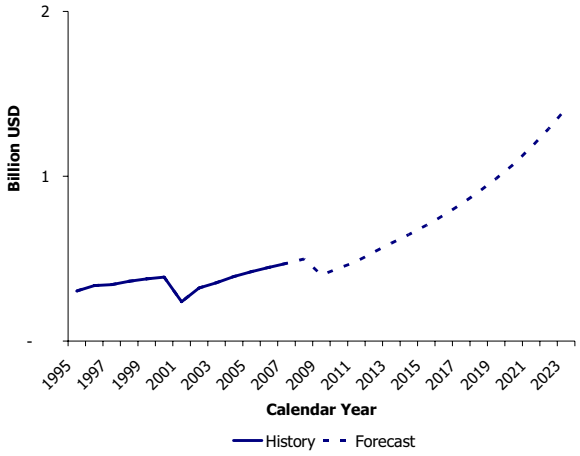
Source: PB Analysis

The projected Oahu shares of ROW visitor days, and the retail share of total ROW expenditures in Oahu, were applied to the forecast of total statewide expenditures by ROW tourists. Similar to the US and Japanese tourist regressions, the expected flat growth in the Oahu stock of lodging units is expected to cause a small annual decline in both shares. The Oahu share of total ROW visitor days is projected to

decrease slightly from 60.5% in 2007 to 55.7% in 2023, and the retail share of total expenditures is projected to fall from 37.8% in 2007 to 33.8% in 2023.

The forecast of Oahu retail expenditures by ROW tourists is shown in Exhibit 19. Over the 2008 to 2023 forecast period, nominal Oahu retail expenditures are forecast to increase at the fastest rate of any tourist group, growing at a CAGR of 7.1%. Over the 2007 to 2009 period, Hawaii expenditures are expected to fall at a CAGR of 7.7% as global growth slows due to the negative effects of the US financial crisis. In nominal terms, ROW retail spending in Oahu is expected to grow from $471 million in 2007 to $1.4 billion in 2023, surpassing Japan as the second most important tourist category for the Oahu tax base, and falling only slightly behind US retail expenditures.

Exhibit 19: Forecast of Oahu Retail Expenditures by ROW Tourists, 2008 to 2023

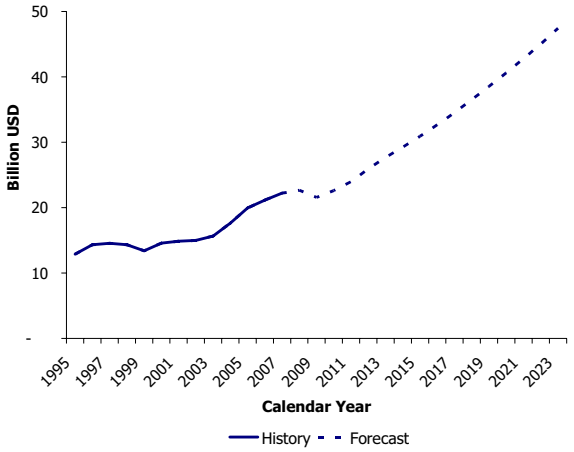


Source: PB Analysis

Total Retail Tax Base Forecast

As shown in Exhibit 20, the nominal Oahu retail tax base is projected to increase from $22.2 billion in 2007 to $47.4 billion in 2023. Over the 2007 to 2009 period, the nominal tax base is expected to decrease at a CAGR of 1.5% as the global economic downturn negatively impacts tourist arrivals and expenditures, and as domestic retail spending slows. From 2009 to 2023, the nominal tax base is forecast to increase at a CAGR of 5.8%, higher than the 4.7% seen over the 1995 to 2007 period due to the above average growth expected during the economic recovery.

Exhibit 20: Forecast of Oahu Retail Tax Base, 2008 to 2023



Source: PB Analysis

Services Tax Base

It is expected that most service industries in Oahu are driven mainly by the overall health of the economy, which can be proxied with the measure of Hawaii personal income.

(7) Hawaii Services Tax Base[18]: f (Hawaii personal income[19])

The model regression results are shown in Exhibit 21.

Exhibit 21: State of Hawaii Services Tax Base Regression Results

Dependent Variable: Log(Nominal State of Hawaii Services Tax Base) Quarterly Data, 1980Q1-2008Q3	
Variable	OLS
Constant	7.9015** (0.3852)
Log(Nominal Hawaii Personal Income)	1.2698** (0.0375)
Observations	113
Adjusted R-Squared	0.9953
F Test (p value)	0.0000
Akaike Information Criterion	3.7275
Durbin-Watson Statistic	2.1936

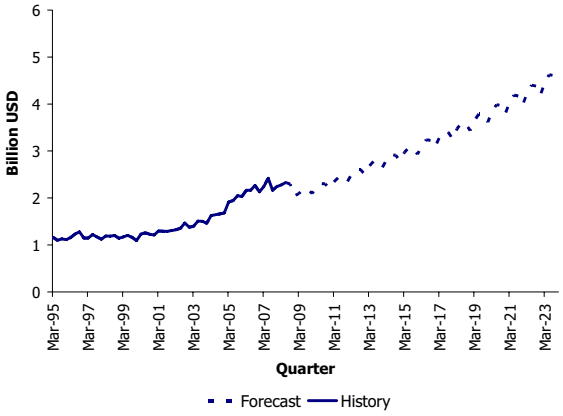
Numbers in parenthesis below the coefficient estimates are standard errors.

** (**) Implies that the variable is significant at the 10 (5) percent level.*

Source: PB Analysis

The forecast of the nominal Oahu services tax base is shown in Exhibit 22. Due to the economic downturn, the 2007 to 2009 forecast projects a 2.8% contraction in the county's services tax base. In nominal dollar terms, the nominal Oahu services tax base is expected to increase from $9.1 billion in 2007 to $18.1 billion in 2023, at a CAGR of 5.5%, lower than the 6.0% CAGR occurring during the 1995 to 2007 period.

Exhibit 22: Forecast of Nominal Oahu Services Tax Base, 2008Q4 to 2023Q4



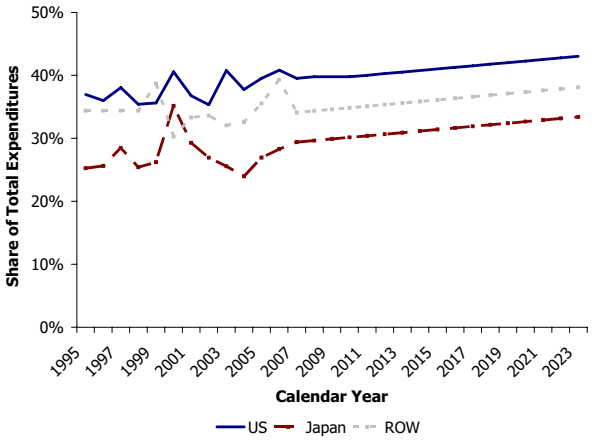
Source: PB Analysis

Hotels & Lodging Tax Base

This tax base component is driven almost exclusively by tourism arrivals and expenditures. Therefore, the same set of tourism expenditure equations and Oahu share projections used to forecast the US, Japanese, and other foreign tourist expenditures in Oahu was used to forecast the hotels and lodging tax base. The only adjustment that is needed to arrive at a forecast of the hotel & lodging tax base in Oahu is a projection of the lodging share of total tourist expenditures.

As shown in Exhibit 23 all three tourist groups are expected to see a larger percentage of their daily Oahu expenditures go towards hotel and lodging fees due to the somewhat fixed future stock of lodging units in Oahu.

Exhibit 23: Forecasted Hotel & Lodging Shares of Total Expenditures by Tourist Group, 2008 to 2023

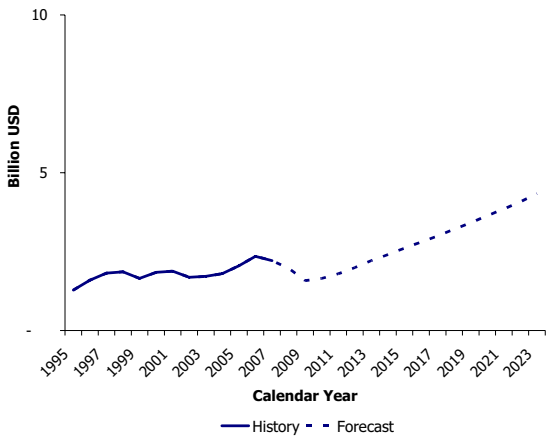


Source: PB Analysis

Driven by expected increases in Oahu hotel & lodging rates, the tax base is expected to grow from $2.2 billion in 2007 to $4.3 billion in 2023, at a CAGR of 4.3%. The economic slowdown is expected to cause a decline in the tax base of 15.6% per year from 2007 to 2009. From 2009 to 2023, the tax base is

forecast to rise at a CAGR of 7.5%, faster than the historical rate of 4.7% from 1995 to 2007, due mainly to the strong recovery expected in 2011 and 2012.

Exhibit 24: Forecast of Nominal Oahu Hotels & Lodging Tax Base, 2008Q4 to 2023Q4



Source: PB Analysis

Contracting Tax Base

Contracting in Oahu is driven by the level of both public and private development occurring throughout the county, which was proxied using personal income.

(8) Hawaii Contracting tax base = f (Personal income[20], External shocks[21])

The results of the final regression specification are shown in Exhibit 25.

Exhibit 25: State of Hawaii Contracting Tax Base Regression Results

Dependent Variable: Log(Nominal State of Hawaii Contracting Tax Base)
Quarterly data, 1980Q1-2008Q3

Variable	OLS
Constant	3.7189
	(4.2785)
Log(Nominal Hawaii Personal Income)	1.6098**
	(0.4031)
External Shocks	-0.1390**
	(0.0329)
Observations	113
Adjusted R-Squared	0.9682
F Test (p value)	0.0000
Akaike Information Criterion	1.9832
Durbin-Watson Statistic	1.9693

Numbers in parenthesis below the coefficient estimates are standard errors.

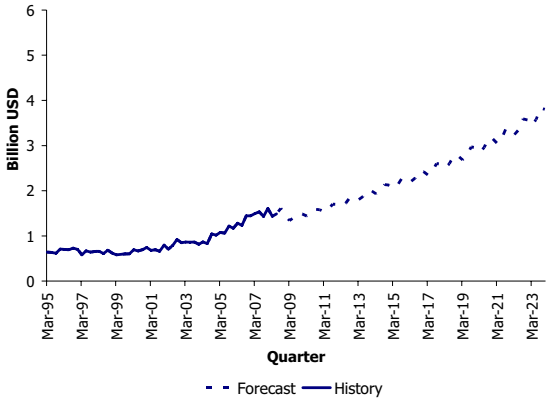
** (**) Implies that the variable is significant at the 10 (5) percent level.*

Source: PB Analysis

The Oahu nominal contracting tax base is expected to decline at a 2.8% pace per year between 2007 and 2009, as the housing slowdown continues to reduce the need for contracting activity in Oahu. Contracting activity is expected to expand 6.5% in 2010 and 7.0% in 2011, as private activity resumes

and public spending on infrastructure and other projects begins to catalyze the economy after the US downturn. From 2015 to 2023, contracting activity is expected to increase 6.7%, lower than the 7.3% rate seen over the 1995-2007 period.

Exhibit 26: Forecast of Nominal Oahu Contracting Tax Base, 2008Q4 to 2023Q4



Source: PB Analysis

Miscellaneous Rentals Tax Base

Miscellaneous rentals are a function of the overall health of the economy, and likely move in concert with both contracting activity and services. Thus, the same regression specification applied to the contracting and services tax base components was used for miscellaneous rentals.

(9) Hawaii Miscellaneous Rentals Tax Base: f (Hawaii personal income)

The model results are illustrated in Exhibit 27.

Exhibit 27: State of Hawaii Misc. Rentals Tax Base Regression Results

Dependent Variable: Log(Nominal Hawaii Miscellaneous Rentals Tax Base)
Quarterly data, 1980Q1-2008Q3

Variable	OLS
Constant	11.0435**
	(0.5762)
Log(Nominal Personal Income)	0.9177**
	(0.0558)
Observations	113
Adjusted R-Squared	0.9879
F Test (p value)	0.0000
Akaike Information Criterion	3.1577
Durbin-Watson Statistic	2.0901

Numbers in parenthesis below the coefficient estimates are standard errors.

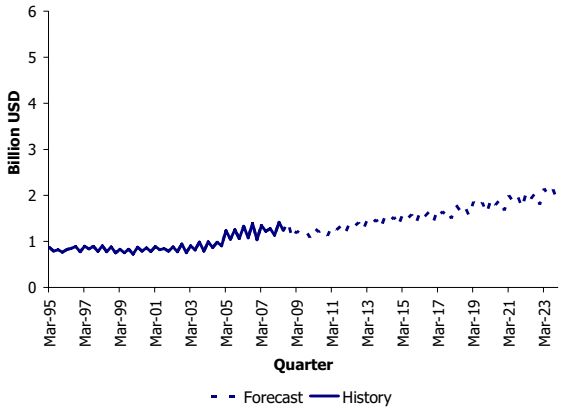
** (**) Implies that the variable is significant at the 10 (5) percent level.*

Source: PB Analysis

The Oahu miscellaneous rentals tax base is forecast to decrease 2.8% per year over the 2007 to 2009 period (see Exhibit 28). In dollar terms, the tax base is projected to contract from $5.0 billion in 2007 to

$4.7 billion in 2009. From 2009 to 2023, the tax base is forecast to grow to $8.1 billion, at a CAGR of 4.0%, slightly faster than the 3.6% rate from 1995 to 2007.

Exhibit 28: Forecast of Nominal Oahu Misc. Rentals Tax Base, 2008Q4 to 2023Q4

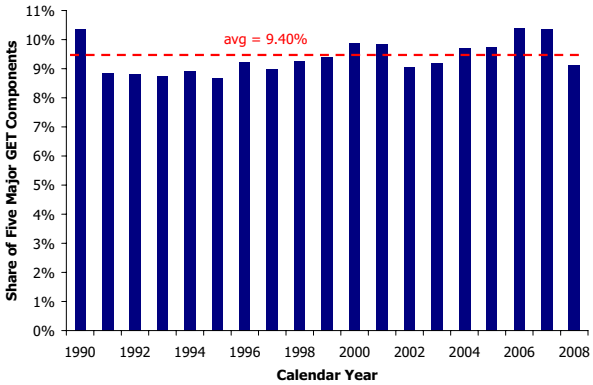


Source: PB Analysis

Other Excise Tax Base Components

The other tax base components, which include entertainment, commission, interest, use taxes, and other items, together comprised roughly 10% of the total tax base in 2007. As shown in Exhibit 29, these other components move in tandem with the five major GET components described above. The reason for this strong correlation is that these smaller items are likely driven by the same factors as the major components above.

Exhibit 29: Other Excise Tax Base Components as a Share of the Retail, Services, Contracting, Misc. Rentals, and Hotels & Lodging Tax Base, 1990 to 2008



Source: Hawaii Department of Taxation

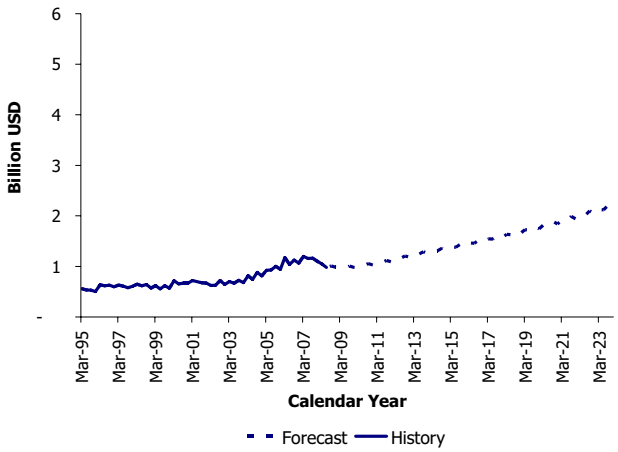
As a result, PB projected forward the other tax components through the following formula:

(10) Other excise tax base components =
(retail tax base + services tax base + contracting tax base + misc. rentals tax base +hotels tax base) * (9.40%)

$$9.40\% = \frac{\sum_{1990}^{2008} \text{(other tax base components)}}{\sum_{1990}^{2008} \text{(retail + services + contracting + misc. rentals + hotels tax base)}}$$

The forecast of the other tax base items is shown Exhibit 30.

Exhibit 30: Nominal Forecast of Other Tax Base Items, 2008Q4 to 2023Q4



Source: PB Analysis

Endnotes

[1] Unless otherwise noted, all years presented in this report are calendar years.
[2] Data from Hawaii's Department of Business, Economic Development and Tourism (DBEDT).
[3] Data from Global Insight.
[4] Total statewide expenditures data was used from DBEDT.
[5] Data from Global Insight.
[6] A proxy for travel cost (i.e., as the dollar appreciates, it becomes cheaper for US consumers to travel to other international destinations and visa versa). Historical exchange rate data was obtained from the Federal Reserve Bank of St. Louis, and forecasts were performed by PB, informed by recent reports from the IMF. According to the latest IMF Article IV report on the US economy (July 2008), it is expected that the US dollar is reaching its medium-term equilibrium price, although at the current moment the dollar is still perceived to be overvalued. Over the long term, it is expected that the US dollar will be forced to depreciate in order to improve the current account deficit, which cannot continue to increase indefinitely. As such, the nominal exchange rate was projected to depreciate 1% per year throughout the forecast. For more information, visit http://www.imf.org/external/np/sec/pn/2008/pn0895.htm.
[7] A dummy variable was also used to capture the effects of several external shocks occurring throughout history, such as the United Airlines strike in 1985 in Hawaii, Hurricane Iniki in 1992-1993, and 9/11.
[8] See Ex-Post Adjustments section for more information. The same approach will also be taken for the Japanese and other foreign retail dependant variables in the regressions described in the following sections.
[9] For more information, see pp. 33-38 of the DBEDT 2007 Visitor Plant Inventory Report at http://hawaii.gov/dbedt/info/visitor-stats/visitor-plant/vpi2007.pdf.
[10] This proxy variable required the same post-regression adjustments as that of equation 4.
[11] An analysis of DBET data show that most Japanese tourists arriving in Hawaii are between the ages 20 and 29, with a sharp decline in the number of arrivals as age increases. This finding suggests that married Japanese tourists with children or retirees are either less interested or less able to visit Hawaii than younger tourists without children. Therefore, as the median age of all Japanese international travelers increases above age 30, the level of Japanese tourist arrivals and total expenditures should decrease. US tourists have somewhat more normal distributions of visitor arrivals by age group, and foreign tourist arrivals decrease sharply after age 50. Data from United Nations.
[12] Similar to equation 4, the US/Yen nominal exchange rate acts as a proxy for the absolute and relative cost of traveling to Hawaii. Data from Federal Reserve, and forecasts were performed by PB, informed by recent IMF research http://www.imf.org/external/pubs/ft/scr/2008/cr08253.pdf.
[13] Japanese GDP was forecasted through 2013 by the IMF and from 2014-2023 by PB based trend extrapolation.
[14] This proxy variable required the same post-regression adjustments as that of equations 4 and 5.
[15] Forecasts through 2013 by the IMF and from 2014-2023 by PB based on trend extrapolation.
[16] Data from the United Nations.
[17] A dummy variable was used to capture the effects of several external shocks, such as the United Airlines strike on 1985, Hurricane Iniki in 1992-1993, and 9/11.
[18] Data from the Department of Taxation.
[19] Data from Global Insight.
[20] Personal income was also used as an explanatory variable to predict the contracting tax base. When personal income is rising at a robust pace, the level of contracting activity should follow, as businesses seek additional office space to hire new workers or produce new goods and services, and as individuals demand more construction services to their homes.
[21] A dummy variable was also used to capture the effects of several external shocks occurring throughout history, such as the United Airlines strike on 1985 in Hawaii, Hurricane Iniki in 1992-1993, and 9/11.