FINAL ENVIRONMENTAL IMPACT STATEMENT

INTERNATIONAL MARKET PLACE REVITALIZATION PROJECT

Appendix 12

Redevelopment of International Market Place: Economic Impacts

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REDEVELOPMENT OF INTERNATIONAL MARKET PLACE: ECONOMIC IMPACTS

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SUMMARY

Nature of Project and Purpose of Study

This report has been prepared as part of an Environmental Impact Statement (EIS) for the proposed redevelopment of Waikīkī's International Market Place (IMP) and several adjacent parcels, including the Waikīkī Town Center retail area and the Miramar at Waikīkī hotel – all owned by the Queen Emma Land Company.

The new IMP would be one of Waikīkī's largest shopping, dining, and entertainment centers, with 355,000 square feet of gross leasable area. It would be developed and operated by TRG IMP, LLC , which is an affiliate of The Taubman Company, a Michigan-based developer and operator of many successful shopping centers around the country.

The primary purpose of the analysis is to assess the proposal impact on economic activity ("output"), household income ("earnings"), employment, and revenues for local government.

Approach to Analysis

Economic impacts are studied for two phases – (1) construction, and (2) operations. The principal method for studying both phases is the Hawai‘i State Input-Output (I-O) Model, which provides multipliers for estimating various outcomes based on initial expenditures in specific industries.

Economic "impact" is typically defined as the difference between two possible futures: The "With-Project Scenario" assumes development of the project as proposed, along with best estimates of economic activity there for the foreseeable future. The "Alternative-Action Scenario" estimates economic changes if the project does not occur.

The current properties are deteriorating and under-performing in terms of supporting the owner's mission of supporting the Queen's Medical Center. If the current request for government entitlements to redevelop is not successful, Queen Emma would eventually again attempt to redevelop the area. This might actually occur very quickly. However, based on consultations with Queen Emma Land Co. and in order to present a more conservative analysis, the presumed "Alternative-Action Scenario" would involve some limited renovations and repairs, sufficient to address deferred maintenance issues and keep the current operations going for perhaps another decade. If this did occur and its lease were extended, the Miramar would probably also make some additional short-term renovation investments. These, along with continued economic recovery, would likely result in modest gains in sales. However, the combined extent of these investments would be far less than construction expenditures for the proposed redevelopment, and likely additional sales also far less than for the new IMP project.

Results: Construction Phase

Summary Table A below shows study results for both scenarios and the "impact" (difference between them) for the construction period of about two years. ***Direct output (construction expenditures in Hawai'i) would be about $200 million more if the new IMP is developed than if only renovations are carried out. Earnings would be more than $60 million more, and direct jobs 745 more*** (or about 370 per year).

Including the "ripple" effects of money from purchases and wages circulating through the economy (known as indirect/induced multiplier effects), ***total output would be $432 million more; total household income, nearly $130 million; and total jobs created or supported about 2,260 more*** (1,080 per year) under the "With-Project Scenario" as compared to the "Alternative-Action Scenario" of repairs and renovations.

Summary Table A: Construction-Phase Economic Impacts

With-Project Scenario

(All dollar figures are millions of constant 2010 dollars)	Output	Earnings	Jobs (Full- and Part-Time)
Direct Construction Effects ***(Timeframe = 2013-2015, 25 months)***			
-- Direct Effect Results (includes impacts of "soft costs")	$212.5	$65.3	818
-- Indirect/Induced Results	$249.1	$72.8	1,618
Total Effects (including indirect/induced)	**$461.6**	**$138.1**	**2,435**
Average Annual for This Period	***$221.6***	***$66.3***	***1,169***

Alternative-Action Scenario

(All dollar figures are millions of constant 2010 dollars)	Output	Earnings	Jobs (Full- and Part-Time)
Direct Renovation Effects ***(Timeframe = 2013-2015, 24 months)***			
-- Direct Effect Results (includes impacts of "soft costs")	$13.9	$4.2	73
-- Indirect/Induced Results	$15.3	$4.4	101
Total Effects (including indirect/induced)	**$29.2**	**$8.6**	**174**
Average Annual for This Period	***$14.6***	***$4.3***	***87***

Project Impact (Difference Between the Two Scenarios)

(All dollar figures are millions of constant 2010 dollars)	Output	Earnings	Jobs (Full- and Part-Time)
Direct Construction Impacts (Difference of Above)			
-- Direct Effect Results (includes impacts of "soft costs")	$198.7	$61.1	745
-- Indirect/Induced Results	$233.8	$68.4	1,516
Total Construction Impacts (including indirect/induced)	**$432.4**	**$129.5**	**2,261**
Average Annual for This Period	***$207.0***	***$62.0***	***1,082***

Results: Operational Phase – Economic Impacts and Government Revenues

Operational economic impacts reflect differences between anticipated retail/restaurant sales under the "With-Project Scenario" and expected future sales for existing activities. However, the retail nature of the IMP redevelopment requires two different types of analysis. The first is focused just on what would happen on the site itself, and can be determined fairly precisely. The second considers what might occur on a net additional basis in the overall economy, and is less certain.

Direct On-Site Operational Impacts

Summary Table B shows results for the expected first year of stable operations, after an initial ramp-up period, for both scenarios and the difference. ***The expected annual direct impact is about $140 million additional on-site sales, $45 million more in earnings, and 1,580 more on-site jobs.***

Summary Table B: Direct On-Site Operational Economic Impacts

With-Project Scenario

(All figures are for new IMP first full stable calendar year of 2019, and dollar figures are millions of constant 2010 dollars. The Hawai'i Input-Output model assumes some job loss thereafter due to increasing labor productivity.)	Output	Earnings	Jobs (Full- and Part-Time)
Direct On-Site Operations, Proposed New Retail Activities			
-- Direct Effect Results (on-site economic activity, gross sales)	$241.0	$79.1	2,590

Alternative-Action Scenario

(For comparison purposes, direct-effect figures are for 2019, and dollar figures are millions of constant 2010 dollars. The Hawai'i Input-Output model assumes some job loss over time due to increasing labor productivity.)	Output	Earnings	Jobs (Full- and Part-Time)
Direct On-Site Operations, Existing Activities After Renovations			
-- Direct Effect Results (on-site economic activity, gross sales)	$101.6	$33.7	1,011

Project Impact (Difference Between the Scenarios for Peak-Year Results)

(For comparison purposes, all figures are for 2019, and dollar figures are millions of constant 2010 dollars. The Hawai'i Input-Output model assumes some job loss thereafter due to increasing labor productivity.)	Output	Earnings	Jobs (Full- and Part-Time)
Direct On-Site Operational Impacts (New Activities Minus Renovation of Existing Ones)			
-- Direct Effect Results (on-site economic activity, gross sales)	$139.4	$45.5	1,579

Summary Table C on the next page shows just the impact figures for projected government tax revenue (from both operations and construction). Compared to continuation of existing activities under the "Alternative-Action Scenario," ***creation of the new retail center is expected to generate nearly $12 million more for the City and County (primarily from property tax increases flowing from new construction), and in about $67 million more for the State, over the ten-year period*** from 2013 to 2022. With multiplier effects from construction, the ten-year State total reaches $79 million. (Most of the State revenue comes from general excise tax on sales and construction expenditures.) Furthermore, ***discussions with City agencies indicate no or negligible likely additional costs associated with replacing the current economic activities with a new shopping center, as the area is already fully developed.***

Summary Table C: County and State Revenues from Direct On-Site Activities
(Gross Sales and Construction Expenditures in Hawai'i)

Project Impact (Difference Between the Two Scenarios)

(All dollar figures are millions of projected constant 2010 dollars -- from direct on-site economic activity only, except for renovation ripple effects as shown)	existing activities 2010	existing activities 2011	existing activities 2012	const. or renov. starts mid 2013	const. or renova-tion year 2014	1/2 const. or renov., 1/2 oper. 2015	full oper-ations 2016
County Revenues From Project (by Source)	**$0.00**	**$0.00**	**$0.00**	**$0.07**	**$0.14**	**$1.00**	**$1.54**
Property Tax (from Site) *	$0.00	$0.00	$0.00	$0.00	-$0.11	$0.98	$1.78
Waikīkī Business Improvement District Assessment (Site) *	$0.00	$0.00	$0.00	$0.00	$0.00	$0.04	$0.07
GET 0.5% surcharge - Construction, Direct				$0.22	$0.51	$0.25	
GET 0.5% surcharge - Operations, Direct	$0.00	$0.00	$0.00	-$0.03	-$0.06	-$0.06	-$0.07
TAT returned to County - Operations, Direct	$0.00	$0.00	$0.00	-$0.11	-$0.20	-$0.21	-$0.24
Totals including GET "ripple effects" during renovation				***$0.34***	***$0.75***	***$1.30***	
State Revenues From Project (All, from I-O Model)	**$0.00**	**$0.00**	**$0.00**	**-$0.52**	**$1.30**	**$4.49**	**$7.61**
All State Taxes (from I-O multiplier) - Construction, Direct				$3.06	$7.04	$3.46	
All State Taxes (from I-O multiplier) - Operations, Direct	$0.00	$0.00	$0.00	-$3.58	-$5.74	$1.03	$7.61
Totals including "ripple effects" during renovation				***$2.19***	***$7.52***	***$7.54***	

	full oper-ations 2017	full oper-ations 2018	full oper-ations 2019	full oper-ations 2020	full oper-ations 2021	full oper-ations 2022	Total (2013-2022)
County Revenues From Project (by Source)	**$1.47**	**$1.47**	**$1.48**	**$1.49**	**$1.50**	**$1.50**	**$11.67**
Property Tax (from Site) *	$1.71	$1.71	$1.71	$1.71	$1.71	$1.71	**$12.91**
Waikīkī Business Improvement District Assessment (Site) *	$0.07	$0.07	$0.07	$0.07	$0.07	$0.07	**$0.51**
GET 0.5% surcharge - Construction, Direct							**$0.98**
GET 0.5% surcharge - Operations, Direct	-$0.07	-$0.07	-$0.07	-$0.06	-$0.06	-$0.06	**-$0.61**
TAT returned to County - Operations, Direct	-$0.24	-$0.24	-$0.23	-$0.22	-$0.22	-$0.22	**-$2.13**
Totals including GET "ripple effects" during renovation							***$12.85***
State Revenues From Project (All, from I-O Model)	**$8.25**	**$8.86**	**$9.12**	**$9.20**	**$9.28**	**$9.28**	**$66.89**
All State Taxes (from I-O multiplier) - Construction, Direct							**$13.57**
All State Taxes (from I-O multiplier) - Operations, Direct	$8.25	$8.86	$9.12	$9.20	$9.28	$9.28	**$53.32**
Totals including "ripple effects" during renovation							***$78.86***

* Property taxes and WBIDA have one-year lag from assesment to payment; e.g., 2013 tax payments based on values assessed in 2012.

Net New Operational Impacts

Although it is likely an over-simplification, economic analyses of tourism projects in Hawai'i have traditionally assumed that hotels or other lodging types are the principal "attractors" of new visitors and/or new visitor dollars in the overall economy. Retail, restaurant, entertainment, etc. have often been considered economic after-thoughts, even though visitors spend substantial sums for such non-lodging activities. That is because the addition of any one new retail or restaurant or similar attraction has been regarded as competing for a share of visitor dollar that would be spent anyway – somewhere in the state, on something or another.

If this is completely true, the addition or substantial renovation of such facilities always has zero net impact on the economy. The direct on-site impacts previously noted would just be transferred from other locations. However, zero net impact is quite unlikely. At the very least, upgrading non-lodging parts of the tourism infrastructure maintains visitor counts in the face of competition from other destinations – and it is intuitively likely that the cumulative effect of significant new facilities such as the proposed major new IMP retail center, located in the heart of Waikīkī, may actually aid in attracting new markets.

However, no Hawai'i-specific research has been done that would allow a specific estimate of how much any one facility, or type of facility, contributes to attracting new visitors/dollars. Therefore, ***this study conservatively assumes the "net new" operational impact of a redeveloped IMP property would be real but relatively small.*** The rationale is that hotels, airlines, or large attractions that independently and substantially market outside Hawai'i would indeed have relatively more effect on attracting new visitors, but word of mouth about the revitalization of Waikīkī retail and similar facilities would still contribute in some degree to attracting new visitors/dollars.

The new IMP could theoretically have some impact on (a) actually attracting new visitors (who would spend in other sectors of the economy), or (b) coaxing additional dollars out of existing visitors. This study takes the more conservative approach of just assuming some net new dollars at the site, and presents results for an illustrative range of possible effects – i.e., what would be the consequences if 5%, 10%, or 15% of the additional on-site economic activity could be counted as "net new" additions to the economy?

Summary Table D shows the range of results. As one aspect, ***from 79 to 237 of the direct new jobs – and 138 to 414 statewide jobs – would be "net new" additions to the economy*** for the selected example year.

Summary Tables E and F show the range of results for County and State tax revenues, respectively. These calculations appropriately count all construction phase impacts as 100% "net new" impacts, but very conservatively include property tax revenues among the operational phase revenues to be allocated to ranges. ***Even with this highly conservative approach, the analysis suggests a ten-year total net addition of from $2.57 million to $3.40 million tax revenue for the City and County and from $30 million to $40 million for the State government.***

Summary Table D: Net New Operational Economic Impacts

(All figures are for new IMP first full stable calendar year of 2019, and dollar figures are millions of constant 2010 dollars. Net output and earnings impacts increase slightly the next few years, while net job impacts decrease very slightly due to assumed changes in labor productivity.)		Output	Earnings	Jobs (Full- and Part-Time)
Direct On-Site Operations, Net New Impacts (for range of assumptions on percentage of $s new to economy)				
-- Assumed % of Net Additional Sales $s As New to Economy:	5%	$7.0	$2.3	79
-- Assumed % of Net Additional Sales $s As New to Economy:	10%	$13.9	$4.5	158
-- Assumed % of Net Additional Sales $s As New to Economy:	15%	$20.9	$6.8	237

Total Statewide, Net New Impacts (for range of assumptions on percentage of $s new to economy)				
-- Assumed % of Net Additional Sales $s As New to Economy:	5%	$13.6	$4.0	138
-- Assumed % of Net Additional Sales $s As New to Economy:	10%	$27.3	$8.1	276
-- Assumed % of Net Additional Sales $s As New to Economy:	15%	$40.9	$12.1	414

Summary Table E: Net New County Revenues
(from Gross Sales and Construction Expenditures in Hawai'i)

(All dollar figures are millions of projected constant 2010 dollars -- from both direct on-site economic activity and countywide total including "ripple effects")	2010	2011	2012	2013	2014	2015	2016
Net Direct County Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.00	$0.00	$0.00	$0.21	$0.49	$0.29	$0.08
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.00	$0.00	$0.00	$0.20	$0.47	$0.32	$0.15
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.00	$0.00	$0.00	$0.20	$0.46	$0.36	$0.23
Net Total County* Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.00	$0.00	$0.00	$0.46	$1.09	$0.56	$0.06
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.00	$0.00	$0.00	$0.44	$1.05	$0.57	$0.12
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.00	$0.00	$0.00	$0.42	$1.01	$0.58	$0.17

	2017	2018	2019	2020	2021	2022	Total (2013-2022)
Net Direct County Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.07	$0.07	$0.07	$0.07	$0.07	$0.07	**$1.51**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.15	$0.15	$0.15	$0.15	$0.15	$0.15	**$2.05**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.22	$0.22	$0.22	$0.22	$0.22	$0.22	**$2.58**
Net Total County* Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.06	$0.07	$0.07	$0.07	$0.07	$0.07	**$2.57**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.12	$0.13	$0.14	$0.14	$0.14	$0.14	**$2.99**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.19	$0.20	$0.20	$0.21	$0.21	$0.21	**$3.40**

* Calculations for Total technically reflect statewide outcomes, but these are assumed to occur overwhelmingly in the City & County of Honolulu.

Summary Table F: Net New State Revenues
(from Gross Sales and Construction Expenditures in Hawai'i)

(All dollar figures are millions of projected constant 2010 dollars -- from both direct on-site economic activity and statewide total including "ripple effects")	2010	2011	2012	2013	2014	2015	2016
Net Direct State Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.00	$0.00	$0.00	$2.89	$6.76	$3.51	$0.38
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.00	$0.00	$0.00	$2.71	$6.47	$3.56	$0.76
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.00	$0.00	$0.00	$2.53	$6.18	$3.62	$1.14
Net Total State Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.00	$0.00	$0.00	$5.47	$12.78	$6.61	$0.67
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.00	$0.00	$0.00	$5.17	$12.31	$6.72	$1.34
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.00	$0.00	$0.00	$4.87	$11.83	$6.82	$2.00

	2017	2018	2019	2020	2021	2022	Total (2013-2022)
Net Direct State Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.41	$0.44	$0.46	$0.46	$0.46	$0.46	**$16.23**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.82	$0.89	$0.91	$0.92	$0.93	$0.93	**$18.90**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$1.24	$1.33	$1.37	$1.38	$1.39	$1.39	**$21.57**
Net Total State Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.72	$0.77	$0.80	$0.80	$0.81	$0.81	**$30.25**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$1.44	$1.55	$1.59	$1.60	$1.62	$1.62	**$34.96**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$2.17	$2.32	$2.39	$2.41	$2.43	$2.43	**$39.66**

Other Impacts and Comments

- It should be acknowledged that the redevelopment involves the loss or at least displacement of two economic activities on the site – (a) a currently unique collection of carts and kiosks operated by entrepreneurial vendors, and (b) yet another Waikīkī hotel, the Miramar at Waikīkī, in a recent string of hotel closures or conversions to other uses such as timeshare.

  Although the long-term decline in hotel inventory suggests a permanent change in the nature of Hawai‘i tourism, at least for the short term the remaining supply of hotels in the Miramar's price class should be able to absorb the displaced demand. Assistance for displaced vendors is a social issue outside the scope of this study.

- On the positive side, not included in the foregoing property tax revenue estimates is the potential but difficult to measure positive spillover effect on both values and taxes from the planned redevelopment.

  One of the prime beneficiaries would be the nonprofit Queen’s Medical Center, whose mission is to provide quality healthcare and services to Native Hawaiians and the people of Hawai‘i. That is because revenues from Queen Emma Land Co. properties support the hospital, and Queen Emma Land owns about 12.5 acres of additional developed Waikīkī land (and in some cases also the structures on the land) near the project site.

- Related to this is the unquantifiable but critical long-term socio-economic benefit associated with revitalizing tired properties at the very heart and core of Waikīkī. This is consistent with both public- and private-sector efforts in recent decades to keep the area competitive and thus maintain the 30,000 private-sector jobs located in the area and the estimated 58,000 direct civilian jobs statewide generated by spending of Waikīkī visitors. Although difficult to measure, this contribution could well be the project's most important long-term economic impact.

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1. INTRODUCTION

This introductory chapter explains or describes:

- The purpose and subsequent contents of the report;
- Existing uses and conditions on the site proposed for redevelopment; and
- Geographical "study areas" considered in various aspects of the analysis.

1.1 Purpose and Contents

This report has been prepared by John M. Knox & Associates, Inc. ("JMK Associates") as a supplement to an Environmental Impact Statement (EIS) being prepared by Kusao & Kurahashi, Inc. The EIS is associated with an application by TRG IMP, LLC for government permits to redevelop the current International Market Place – along with several contiguous parcels in Waikīkī – into what would be one of Waikīkī's largest retail, dining, and entertainment centers, with 355,000 square feet of gross leasable area. This study is to be appended to, and summarized in, the overall EIS.

TRG IMP, LLC is an affiliate of The Taubman Company, a Michigan-based developer and operator of many successful shopping centers around the country. Taubman has entered into an agreement with the property's landowner, the Queen Emma Land Co., to develop and operate the new facility if government approval is obtained. While JMK Associates' contract is with TRG IMP in particular, we have also worked with Queen Emma Land Co. on the study and sometimes refer collectively to TRG, Taubman, and Queen Emma as "the client."

The primary purpose of the analysis is to assess the proposal impact on economic activity ("output"), household income ("earnings"), employment, and revenues for local government.

Following this chapter, remaining chapters reflect the scope of the engagement:

- Chapter 2 provides background about the project site and economic importance of Waikīkī for the county and state.

- Chapter 3 sets forth the framework for quantitative analysis;

- Chapter 4 explores construction phase impacts;

- Chapter 5 focuses on operational phase impacts; and

- Chapter 6 analyzes government revenues and costs ("fiscal impacts").

1.2 Proposed Action

The redevelopment of the International Market Place will involve the demolition of the current International Market Place (IMP), the Waikīkī Town Center (WTC), and the Miramar at Waikīkī Hotel, as well as two buildings fronting Kalākaua (whose tenants include the ABC Store and Crazy Shirts in one building and Quicksilver and Maui Divers in the other). These properties currently sit on land owned by the Queen Emma Land Company, and serve (along with other properties), to support the Queen's Medical Center. The Queen's Medical Center, which has a reputation for excellence,[1] is a private non-profit hospital, whose mission is to provide quality healthcare and services to Native Hawaiians and the people of Hawai'i. It has served Hawai'i for over six generations and "has become a major provider of health care to the people of our State and a part of the cultural fabric of Hawai'i".[2]

The new center would be generally three levels of retail and restaurants – but the mauka end would have a seven-story structure consisting of two levels of retail on the 'Ewa side and three levels of retail on the Diamond Head side below five levels of parking. According to the Environmental Impact Assessment Preparation Notice (EISPN), the project will include:

- Landscape and building elements that convey a Hawaiian sense of place incorporating historical, cultural, and educational features and opportunities.
- Improved streetscape along Kalākaua and Kūhiō Avenues to enhance the pedestrian experience for visitors and local residents alike.
- Significant open space throughout the Project to maintain and enhance an inviting, park-like setting.
- Landscaped courtyards, water features, canopy trees and gathering places to accommodate cultural programming and education.
- Retention and enhancement of the "exceptional" Banyan Tree near Kalākaua Avenue.
- Revitalized and redeveloped retail, dining, and entertainment space to better serve the community – both visitors and local residents.
- Associated utility, parking, and infrastructure improvements.

The Project will involve the removal of approximately 213,000 square feet (gross floor area) of existing commercial space at IMP and the WTC sites and approximately 286,000 square feet (gross floor area) of existing space at the Miramar Hotel site. The re-development will consist of 390,000 square feet of gross floor area (355,000 square feet of gross leasable area) of new commercial space across the entire Project Site. A new anchor store of approximately 80,000 square feet is proposed for the area fronting

[1] Chiem, Linda. Hawai'i Medical Center will close two O'ahu hospitals. Pacific Business News. http://www.bizjournals.com/pacific/news/2011/12/16/hawaii-medical-center-will-close-two.html?ed=2011-12-16&s=article_du&ana=e_du_pub&page=all
Dec 16, 2011.
[2] The Queen's Medical Center website. Dec. 2011. http://www.queensmedicalcenter.net/about-us/about-the-medical-center

Kūhiō Avenue. The proposed project will result in an actual reduction of approximately 109,000 square feet of gross floor area. Construction is anticipated to begin in 2013, and is estimated to take approximately 25 months. More detail as well as a preliminary concept plan showing the proposed improvements can be found in the EISPN.[3]

1.3 Existing Site Uses and Conditions

Figure 1.1 on the following page shows the site location in Waikīkī. The project includes parcels 2-6-022-036-39 and 43 (parcels 36-39, and 43). The IMP (parcels 36, 37 and 38) and WTC (parcel 43) are on 4.827 acres. The two sites consist of 168,800 square feet of gross leasable floor area in four primary structures: the WTC built in 1979, the Crazy Shirts Building built in 1956, Quiksilver Building built in 1956, and the IMP buildings built between 1956 and 1978. The IMP and WTC contain approximately 170 stores, carts and kiosks selling a variety of products and services to visitor and local shoppers. The IMP and WTC offer 25 mostly fast food and food court dining facilities with a variety of local and international cuisine. There are also 220 parking stalls in a six-story mechanical parking structure.

The Miramar Hotel (parcel 39) is a 225-foot tall hotel development with 358 hotel rooms on 1.155 acres. Room rates at the Miramar hotel range from $119.99 per night for a standard city view room to $146.99 per night for a deluxe oceanview room at peak times. The mid-range Miramar hotel was built in 1961. The hotel has 17 guest room floors, three parking floors (with 209 parking stalls), and a lobby floor. The Miramar provides four different on-site dining options, including Chinese, Korean, and American cuisine. The hotel also has an outdoor swimming pool, on-site tour desk services, and some retail services. Queen Emma owns the land under the hotel, though the structures are owned by Miramar itself.

1.4 Study Areas for Impact Assessment

Key geographical areas used in this study are:

1. **The "site"** (or "on-site") – the TMK locations with the current uses described immediately above.

2. **Waikīkī** – Hawai‘i's premiere urban resort area is typically defined in terms of ten adjacent U.S. Census tracts – 18.01, 18.03, 18.04, 19.01, 19.03, 19.04, 20.03, 20.04, 20.05, and 20.06.[4] This also forms the boundaries for the City and County's Neighborhood Board Area 9. However, some economic data apply to ZIP Code Area 96815, which also includes Kapi‘olani/Diamond Head (which has some limited

[3] The EISPN for The International Market Place Revitalization Project can be accessed and downloaded at the Hawai‘i Office of Environmental Quality Control website at: http://oeqc.doh.hawaii.gov/default.aspx

[4] It should be noted that while Census data about Waikīkī consisted of six tracts in 2000 (18.01, 18.02, 19.01, 19.02, 20.01, and 20.02). Changes were made in 2010. U.S. 2010 Census data now report 10 census tracks in the Waikīkī area.

additional resort uses) and the more purely residential Kapahulu community. Figure 1.2 shows boundaries for both areas.

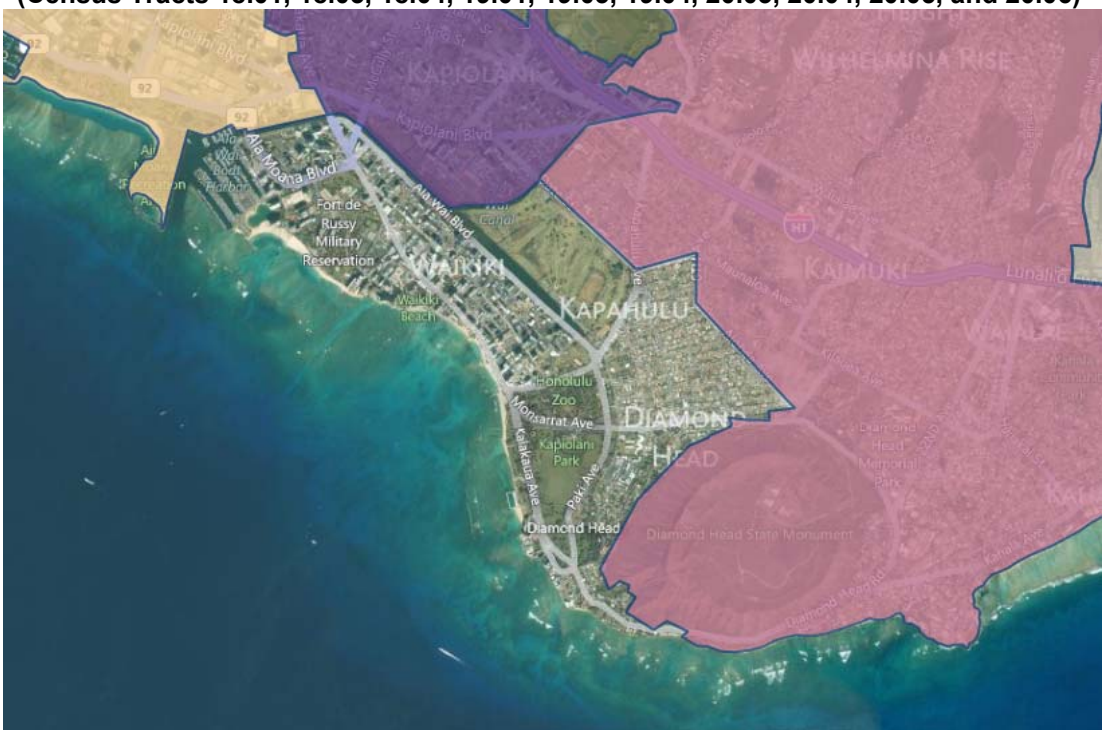
3. **Statewide** – The core methodology for this analysis is the Hawai‘i State Input-Output (I-O) Model, which provides multipliers for "Total" (statewide) economic impacts. Past I-O versions have included county-specific multipliers, but the most recent version does not yet include these. However, the vast majority of the statewide impacts are expected to occur within the City and County of Honolulu, so "statewide" for all practical purposes means O‘ahu.

Figure 1.1: Project Site

Source: City and County of Honolulu Public GIS website. http://gis.hicentral.com/pubwebsite/ Dec. 2011.

Figure 1.2: Census Tract and ZIP Code Definitions of "Waikīkī"

City and County Neighborhood Board Area 9
(Census Tracts 18.01, 18.03, 18.04, 19.01, 19.03, 19.04, 20.03, 20.04, 20.05, and 20.06)



ZIP Code Area 96815 (includes Kapahulu and parts of Diamond Head)

Source: Office of Planning, Department of Business, Economic Development & Tourism, Hawai'i State Geographic Information System, 2011. http://hawaii.gov/dbedt/gis/

2. BACKGROUND

This background chapter includes:

- A brief history of the current International Market Place, the Miramar Hotel, The Waikīkī Town Center, and Kalākaua fronting parcels.
- Discussion of Waikīkī's economic importance and ongoing renovation; and
- Overview of Waikīkī's residential characteristics.

2.1 History of Existing Properties

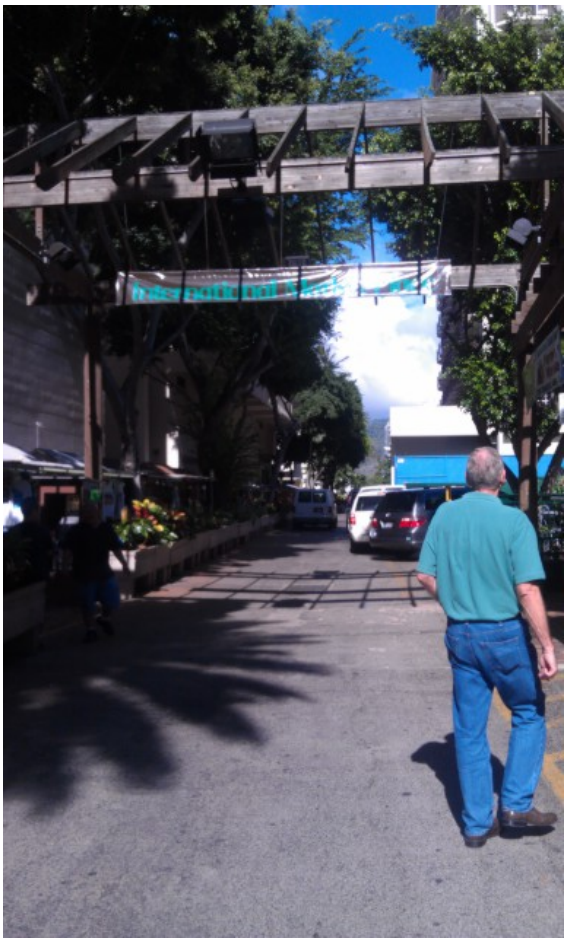
2.1.1 Current International Market Place

The International Market Place began as a new "Waikīkī Village" in 1955, when it was established by entrepreneur Ernest Raymond Beaumont Gantt (aka Donn Beach, or Don the Beachcomber).[5] The original plan called for villages of various ethnic groups including Hawaiian, South Sea Islander, Japanese, Chinese, Indian, and Filipino, as well as a small hotel with a tropical design on the land presently occupied by Kūhiō Mall. It opened as the International Market Place in 1957.

[5] Fisher, J. International Market Place Renovation Planned. About.com Guide. http://gohawaii.about.com/cs/oahuactivities/a/market_place.htm. Dec. 2011

Today, the International Market Place (IMP) remains iconic to some residents and visitors. With its central location at the heart of Waikīkī, the International Market Place outdoor bazaar has always been popular among Hawai'i visitors looking for inexpensive Hawaiiana souvenirs and merchandise. However, over the years, the International Market Place has increasingly become physically run-down. Twenty percent (20%) of IMP's gross leasable area is currently vacant. The place looks dark, empty, and the Market Place is in need of change. The International Food Court (as shown in pictures below) no longer seems to attract many patrons.

Figure 2.1: Current International Market Place, View from Duke's Lane



2.1.2 Waikīkī Town Center

The Waikīkī Town Center is an open-air shopping complex that features more than 40 specialty shops and restaurants. However, many of the Center's spaces are currently vacant (23% of current gross leasable area). The Waikīkī Town Center Building was built in 1978. The facilities at the WTC are run-down and in need of revitalization. As noted later (Section 5.3), sales figures are low and the property is underperforming in terms of supporting the Queen's Medical Center.

Figure 2.2: Waikīkī Town Center Structures

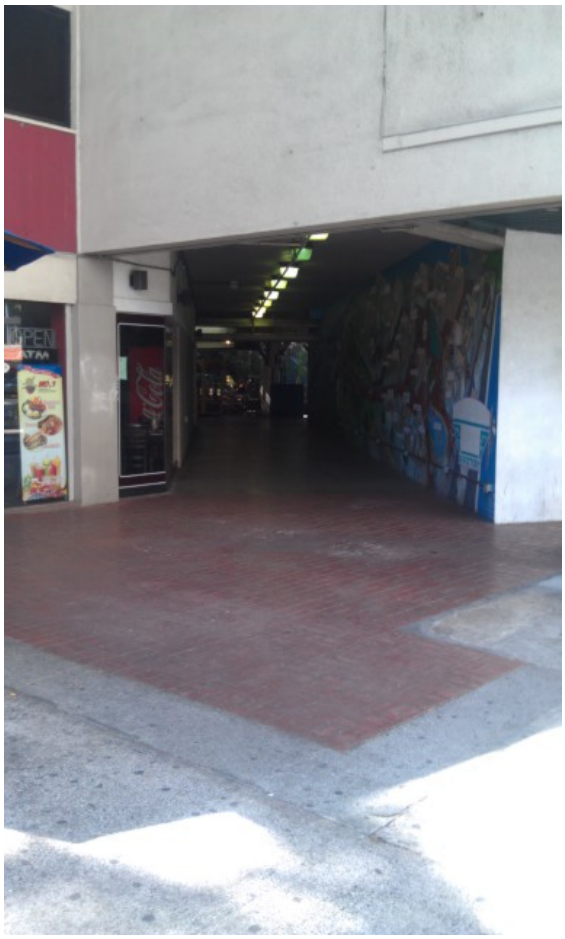


Figure 2.3: Waikīkī Town Center, Second Floor Shops

2.1.3 Miramar Hotel

The Miramar Hotel opened in 1970. The 22-floor hotel is directly adjacent to the current International Market Place. Some improvements to the Miramar Hotel have included the

construction of a Waikīkī International Terminal (parking garage and transportation center) in 1961, and ground floor lobby renovations in 1988. The Miramar Hotel lease of Emma Land Company land is due to expire in 2016, although both parties have agreed to an earlier termination for redevelopment.

Figure 2.4: Miramar Hotel and Buildings Fronting Kūhiō Avenue

2.1.4 Parcels Fronting Kalākaua Avenue

Tenants on these two parcels include an ABC Store and Crazy Shirts in one building and Quiksilver and Maui Divers in the other. Drawings dating back to 1956 show the Dagger Bar (now occupied by Quicksilver) and Bazaar (now occupied by Crazy Shirts) buildings. Kalākaua Avenue frontage makes these buildings high revenue generators.

2.2 Waikīkī – Economic Importance and Trends

This section documents both the area's economic role in quantitative terms and also some of its history, particularly ongoing redevelopment/renovation, in more qualitative terms.

2.2.1 Data on Economic Activity in Waikīkī

Three principal sources provide core information about the importance of Waikīkī to the island's and state's economy: (1) The Hawai‘i Tourism Authority (HTA) annual count of visitor lodging properties and units; (2) Periodic analyses by the Hawai‘i State Dept. of Business, Economic Development, and Tourism (DBEDT); and (3) The U.S. Census Bureau's annual *County Business Patterns* reports, which include estimates for ZIP Code Areas.

The HTA data are simply about hotel and other lodging counts. DBEDT analyses focus on the total economic impacts flowing from visitors staying in Waikīkī, including their expenditures outside the area, while the Census Bureau numbers (ultimately deriving from the twice-a-decade Economic Census) focus on private-sector economic activity located strictly inside the Waikīkī ZIP Code Area (including adjacent Kapahulu and parts of Diamond Head).

HTA Lodging Counts: Tourism is the state's number one economic activity, and hotels or other lodging units (short-term condominium rentals, timeshares, etc.) form the anchor and in many ways the engine for the visitor industry. The following Table 2.1 shows that:

- As of 2010, Waikīkī hosted 83% of O‘ahu's visitor units and 38% of the total statewide visitor units. Both percentages were down slightly from 2000 due to decreasing inventory in Waikīkī and increases elsewhere (especially off O‘ahu), but still representing the overwhelming majority on O‘ahu and the single largest concentration of units statewide.

- Waikīkī in 2010 still hosted the majority of the state's hotel units in particular. The hotel inventory dwindled over the past decade, both in Waikīkī and statewide – though they were partially replaced in Waikīkī and more than replaced elsewhere by increases in timeshares, condo rentals, vacation rentals, etc. The latter types of units

still result in visitor spending, but hotels tend to have more on-site jobs and often attract higher-spending visitors.

Table 2.1: Percentage of Visitor Units (Hotel and Non-Hotel) – Waikīkī, Oʻahu, and Statewide – 2000 and 2010

	Waikīkī			Oʻahu			Statewide		
	All Visitor Units	Hotel Units	Non-Hotel Units	All Visitor Units	Hotel Units	Non-Hotel Units	All Visitor Units	Hotel Units	Non-Hotel Units
Number of Units									
2000	31,557	27,127	4,430	36,303	31,025	5,278	71,506	50,218	21,288
2010	28,385	22,720	5,665	34,040	25,527	8,513	75,048	42,619	32,429
% Change	*-10.1%*	*-16.2%*	*27.9%*	*-6.2%*	*-17.7%*	*61.3%*	*5.0%*	*-15.1%*	*52.3%*
Waikīkī as % of Oʻahu or State:									
2000				86.9%	87.4%	83.9%	44.1%	54.0%	20.8%
2010				83.4%	89.0%	66.5%	37.8%	53.3%	17.5%

Sources: Hawaiʻi Tourism Authority, Tourism Research Division. *2010 Visitor Plant Inventory.*
Hawaiʻi State Dept. of Business, Economic Development & Tourism. *2000 Visitor Plant Inventory.*

DBEDT Analysis of Statewide Effects: According to a 2003 DBEDT report[6] about the *Economic Contribution of Waikīkī* to the state's economy, Waikīkī tourism-related activities account for an estimated 8% of Hawaiʻi's Gross State Product (GSP, later called Gross Domestic Product or GDP) as of 2002. DBEDT's input-output model generated an estimate that roughly 56,000 direct jobs statewide derived from visitors staying in Waikīkī.[7] With the addition of indirect jobs, Waikīkī visitors created an estimated 73,000 jobs around the state in 2002.

DBEDT has published updated figures for these and other statistics from several recent years in the *State Data Book*, as shown below in Table 2.2. Some of these figures show a downward trend – reflecting tourism growth outside Waikīkī and effects of the economic downturn in the latter part of the decade – but, as with visitor unit counts, the economic importance of Waikīkī remains obvious and substantial.

[6] Hawaiʻi State Department of Business, Economic Development & Tourism. (2003).*The Economic Contribution of Waikīkī.* DBEDT e-report. http://Hawaiʻi.gov/dbedt/info/economic/data_reports/e-reports/econ_Waikīkī.pdf. Note: DBEDT is currently updating this report, but the update was not available at the time of writing.

[7] Civilian jobs, inclusive of wage and salary jobs, plus self employed, but exclusive of non-civilian military jobs. Jobs measured by this approach are both inside and outside of Waikīkī.

Table 2.2: Waikīkī Contribution to State Economy

	2002	2008	2010
Direct and Indirect Impacts			
Civilian Jobs from Waikīkī Expenditures	73,158	62,348	58,359
-- % of All Civilian Jobs in State	*10.2%*	*7.7%*	*7.7%*
State Taxes (Millions of current dollars)	N/C	$443	$413
-- % of All State Taxes	*N/C*	*8.8%*	*7.5%*
Gross Domestic Product (Millions, current $s)	$3,628	$4,437	$4,151
-- % of GDP	*7.9%*	*6.9%*	*6.2%*
Measures of Visitor Activity (Other Than Units)			
Average Daily Visitor Census	71,756	70,836	73,334
-- % of Statewide Visitor Census	*44.8%*	*41.1%*	*40.8%*
Total Visitor Expenditures (Millions, current $s)	$5,016	$5,395	$5,425
-- % of Statewide Visitor Expenditures	*45.5%*	*41.2%*	*42.1%*

Source: Hawai'i State Department of Business, Economic Development & Tourism, Records. The *State of Hawai'i Data Book*, 2002, 2008, 2010.

Note: Civilian jobs include wage and salary jobs plus self-employed but exclude non-civilian military jobs. They may be located inside or outside of Waikīkī.

U.S. Census Bureau Data on Economic Activity Within Waikīkī: Figure 2.5 to Figure 2.9 provide time-series data on numbers and types of private business establishments and on private-sector jobs and payroll for the Waikīkī-Kapahulu ZIP Code Area, in some cases with comparisons to O'ahu-wide numbers.

These charts show the impact of recent economic downturns on numbers for businesses, but particularly for jobs and payroll. Given the visitor counts shown in Table 2.2, this indicates Waikīkī employers are finding ways to serve more visitors with fewer workers. Additionally, Figure 2.6 and Figure 2.9 in particular show the predominance of Retail and Eating/Drinking businesses (the key activities in the proposed project) in Waikīkī, even though Accommodations (hotels, etc.) generate more jobs per establishment.

As of 2009, the Census *County Business Patterns* data indicates the most common retail establishment types in the Waikīkī-Kapahulu ZIP Code Area were:

Type of Establishment	Number
Clothing stores (all types)	133
Jewelry stores	86
Gift, novelty, and souvenir stores	72
Convenience stores	53

Figure 2.5: Private Business Establishments, Waikīkī Vs. Rest of Oahu

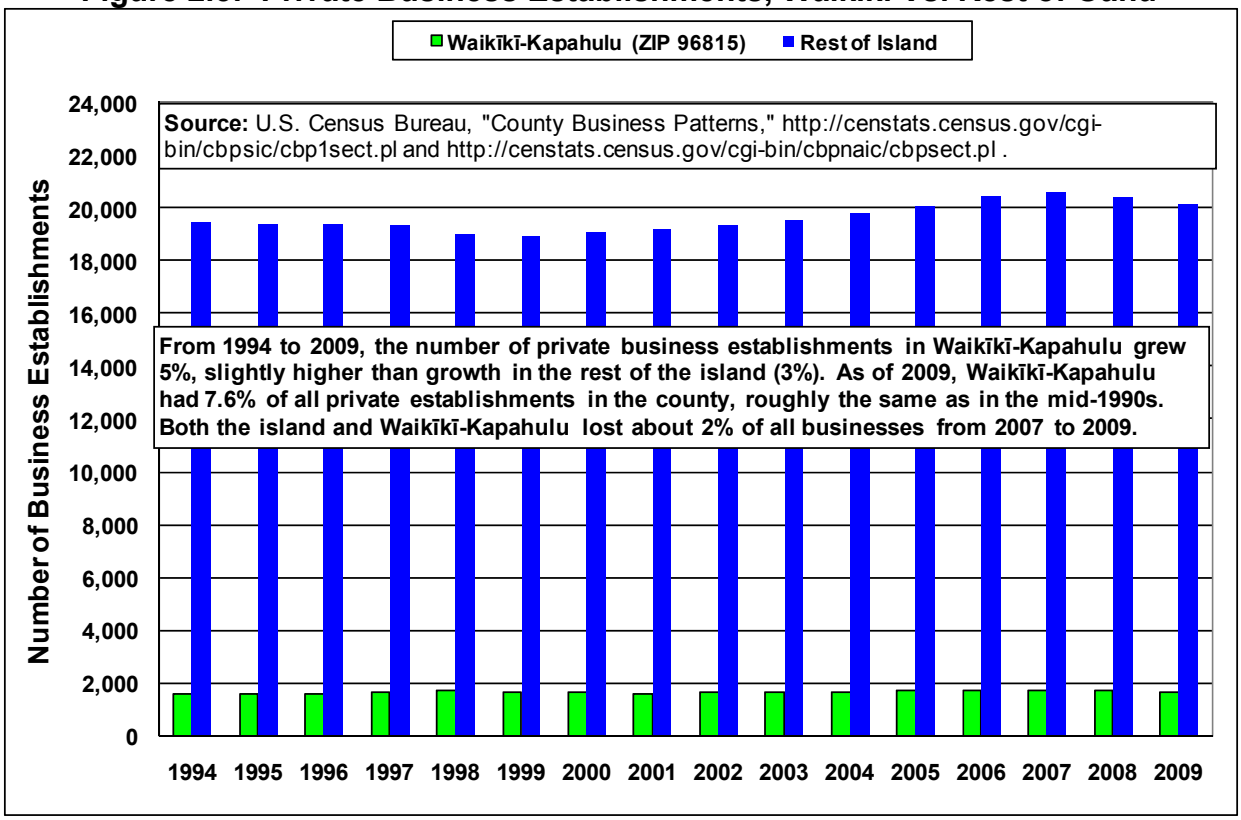


Figure 2.6: Breakdown of Waikīkī Business Establishments by Type, 1994-2009

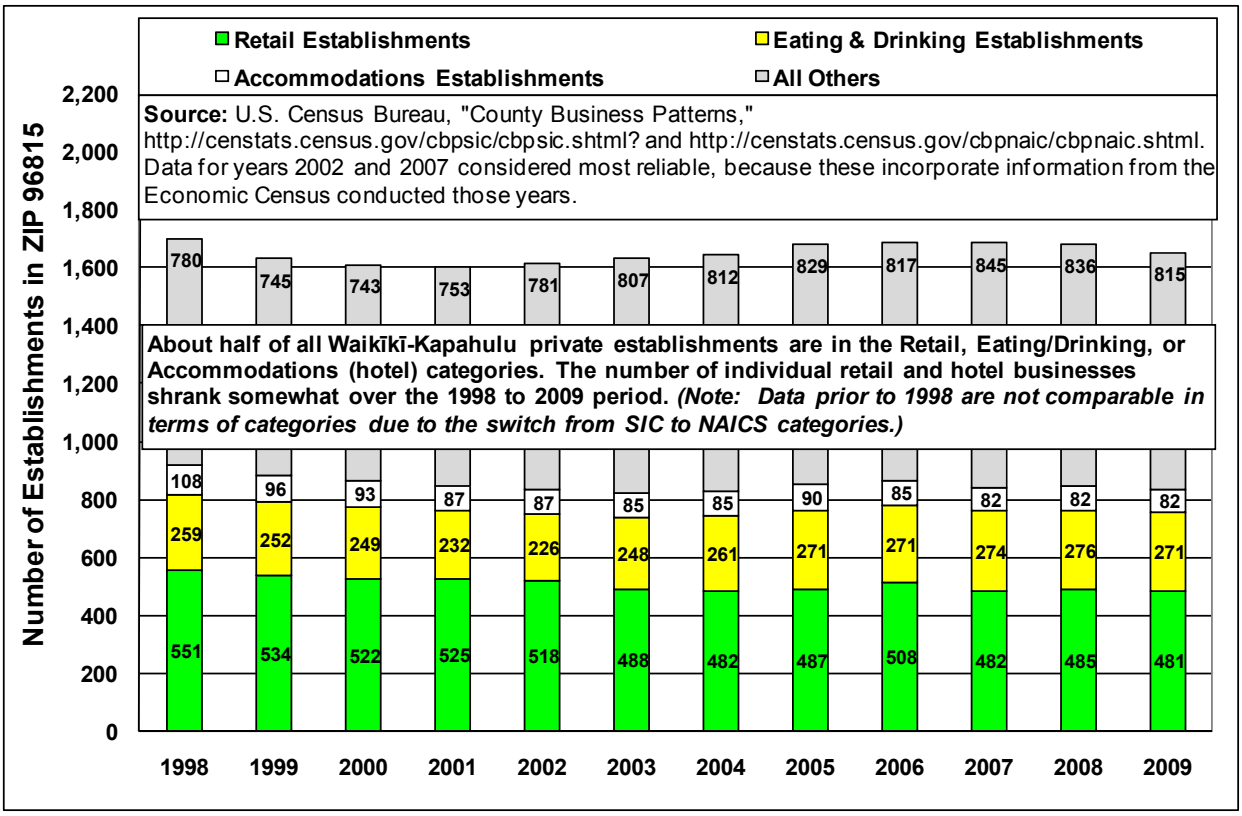


Figure 2.7: Private Employees and Payroll, Waikīkī Vs. Rest of O'ahu

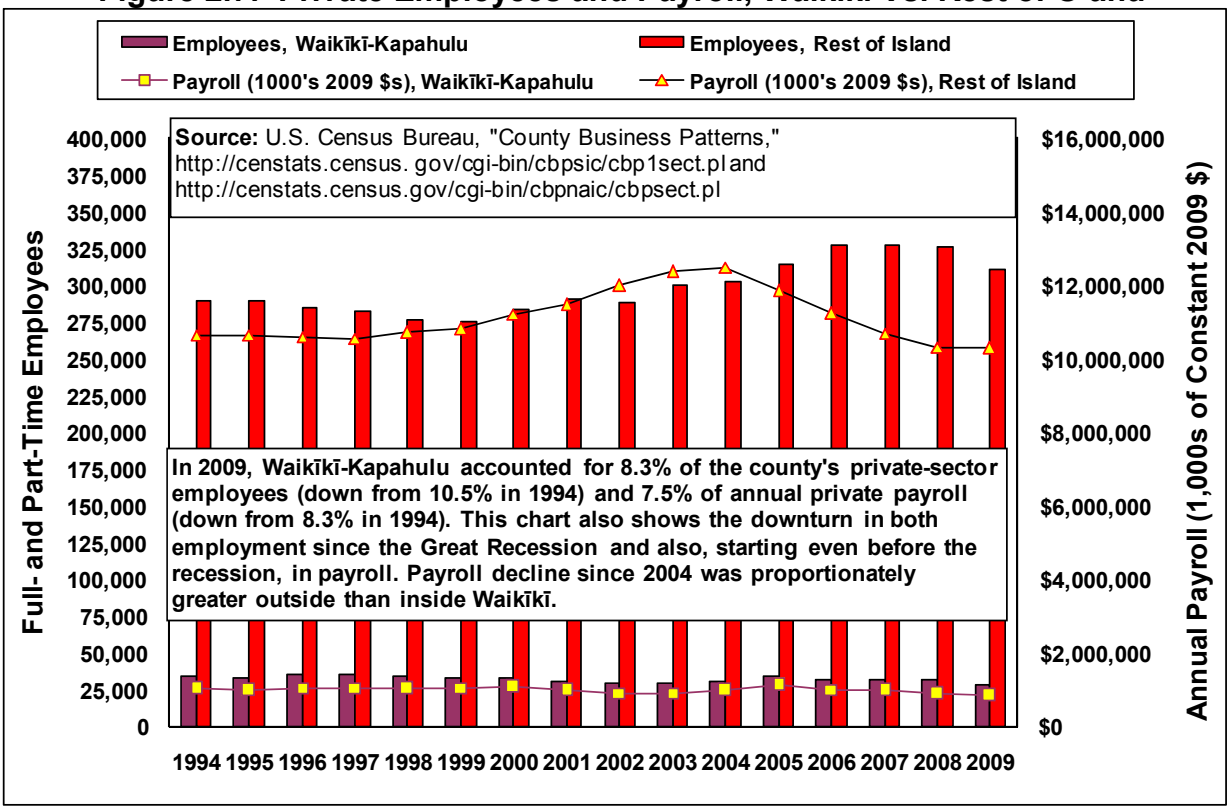


Figure 2.8: Private Employees and Payroll, Waikīkī Breakout

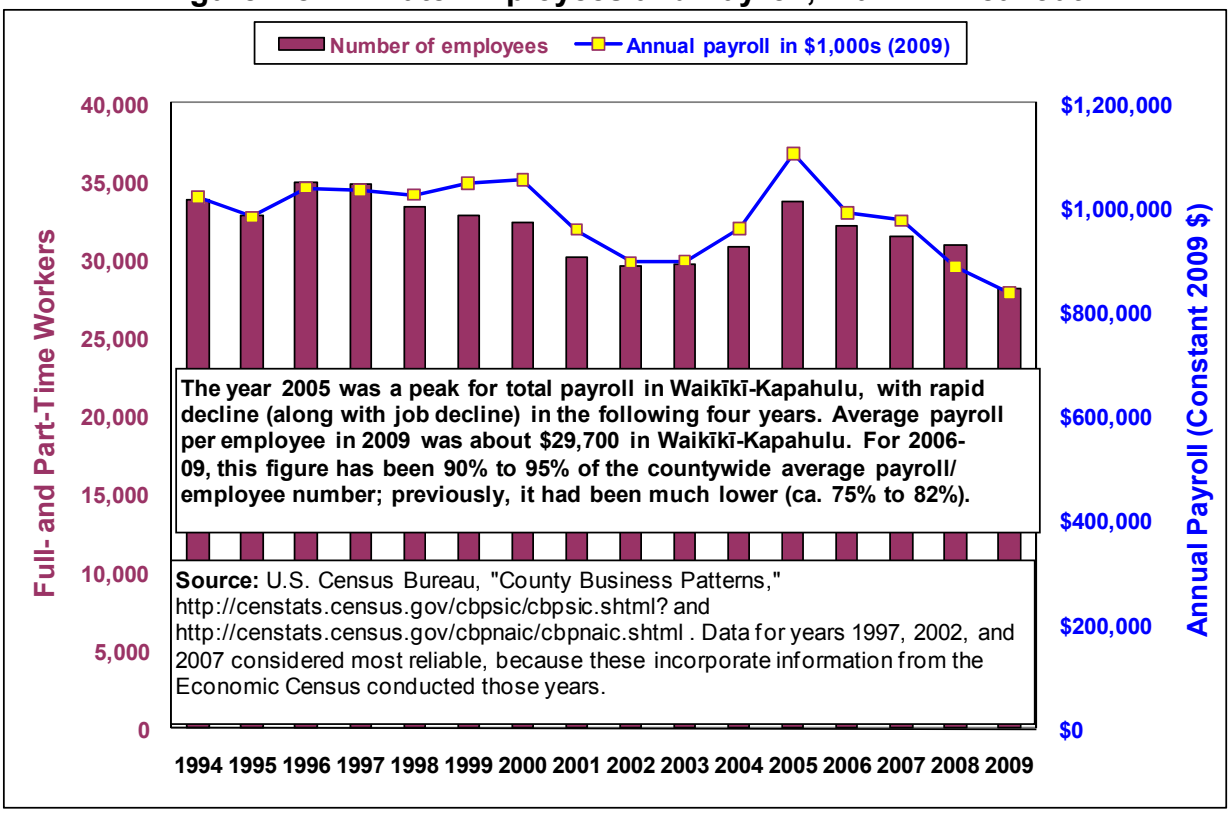
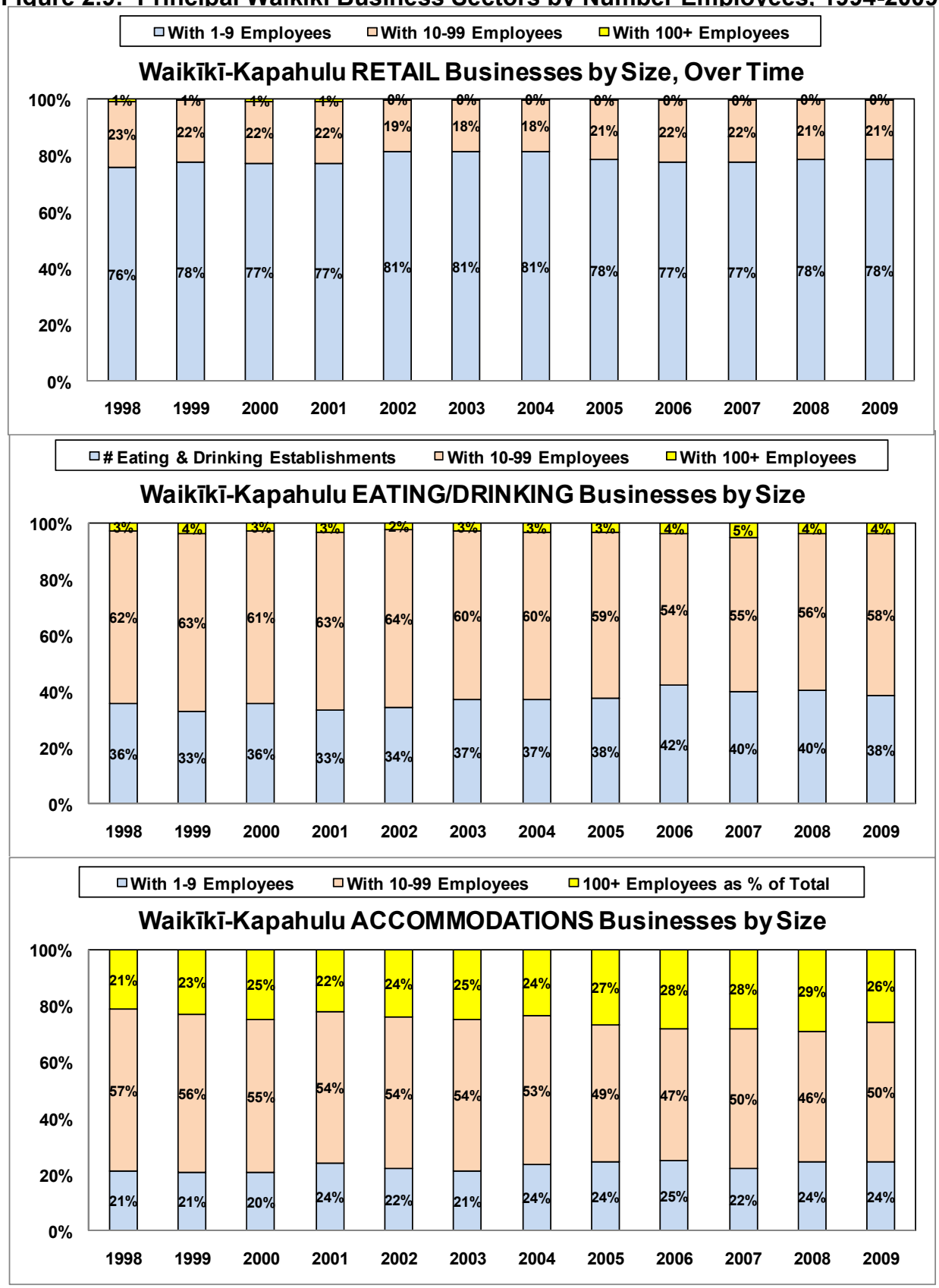


Figure 2.9: Principal Waikīkī Business Sectors by Number Employees, 1994-2009



2.2.2 Economic History of Waikīkī and Ongoing Changes

The proposed IMP redevelopment fits into a context of substantial public and private renovation and new investment in Waikīkī in recent years. New landscaping and sidewalk improvements along Kalākaua and Kūhiō avenues were initiated by then-Mayor Jeremy Harris in the late 1990s. The media reports that "Billions in redevelopment is transforming Waikīkī, a once-tired concrete jungle, into what many are hoping will become the showcase of the visitor district and an attractive place for *kama'āina* to live and play."[8] The City government has spent $100 million upgrading Waikīkī infrastructure.[9] The Waikīkī Improvement Association, which has been a principal steward of economic development in Waikīkī for more than 40 years, also notes that "The private sector in turn has reinvested over $3.4 billion improving hotel rooms, retail, restaurants and showrooms, making Waikīkī more competitive in the world market."[10]

Various investment and improvement projects have emerged in Waikīkī in recent years, including –

- 2004: $20 million Kūhiō Beach beautification project providing 250 additional trees, benches, wider sidewalks and the creation of a median strip running through Waikīkī.
- 2004-2005: Hyatt Regency Waikīkī refurbishing of all guestrooms.
- 2005: Waikīkī Beach Marriott refurbishing of public spaces and guestroom tower.
- 2004-ongoing: Hilton Hawaiian Village has been consistently improving (from breaking ground for the Grand Waikīkīan Time-share Tower and Duke Kahanamoku Lagoon rejuvenation in 2006, to more recent planned $760 million improvements scheduled through 2015) .
- 2004-2008: Royal Hawaiian Shopping Center undergoes a $115 million renovation.
- 2005-2007: The Outrigger Waikīkī Beach Walk, a $535 million project. The Beach Walk is a premier hotel, retail, and entertainment project, the largest improvement project in recent Waikīkī history.
- 2007: The Moana Surfrider gets a $40 million overhaul.
- 2008: The Sheraton Waikīkī carries out a $55 million room renovation.
- 2008: The Royal Hawaiian Hotel gets a $110 million remodel.
- 2009: The Trump Tower, the first luxury Hotel to open in Waikīkī for decades, opens.
- 2010: The Waikīkī Edition, a boutique hotel, opens.

Future improvements include the new tower, tear-down of two other hotel buildings and revamping an existing hotel tower at the Sheraton Princess Ka'iulani Hotel, which is part

[8] Honolulu Star Bulletin. "Boomtown. Remaking Mecca." 2007. http://specials.starbulletin.com/oahu_neighborhoods/Waikīkī/. Dec. 19, 2011.
[9] Parker, Seth. Revival of the Royal Hawaiian Center. "Restoring flagship status at Royal Hawaiian Center." Aug. 2010. http://www.royalhawaiiancenter.com/revival-royal-hawaiian-center
[10] Ibid.

of a "Revitalization of Waikīkī" plan by owner Kyo-Ya Hotels and Resorts.[11] The more than $700 million final phase of revitalization is scheduled to begin in 2013, though this may be delayed or affected by legal challenges. Work on a beach (sand) replenishment project to widen the Waikīkī beach by 37 feet between the Duke Kahanamoku Statue and the Royal Hawaiian Hotel is pending.[12] The $2.5 million State Department of Land and Natural Resources project is expected to start at the beginning of 2012, and wrap up before the summer swells make their way to Waikīkī shores in April.

2.2.3 Potential Impacts from Recent Changes to Waikīkī Special District Rules

On Wednesday December 7, 2011 the Honolulu City Council passed two bills to amend the 1990 Revised Ordinances of Honolulu, Chapter 21 relating to the Waikīkī Special District. First, Bill 52 amended the Land Use Ordinances by:

- Merging the Resort Commercial Precinct with the Resort Mixed Use Precinct, eliminating the 50% open space requirement set forth in 1976, when the original Land Use Ordinances were drafted.
- Allowing greater flexibility for building height;
- Providing incentives for improving properties in the Apartment Precinct;
- Eliminating off-street parking requirements for small commercial properties; and
- Making minor adjustments for vending carts and outdoor dining in front yards.

Second, Bill 53 expanded the Apartment Mixed Use Sub-Precinct and rezoned all Resort Commercial properties (including the IMP and Waikīkī Town Center) to the Resort Mixed Use Precinct. In addition to their effects on the project site, these recent changes have the potential to change the overall landscape of Waikīkī such that revitalization is encouraged. Although Waikīkī landowners were not obliged to make their properties conform with the new rules enacted back in 1976, any activity such as potential improvements or redevelopment would initiate adherence to the rules. This had been particularly restrictive for owners of smaller lots (less than 10,000 square feet). The changes will now make it more economically feasible for small landowners to make improvements to their property, and encourage more re-investment in residential areas which had been, until recently, almost "frozen in time."

2.3 Residential Population of Waikīkī

Waikīkī is both a residential and resort community where visitors and residents interact as they carry on their respective activities. From the resident perspective, Waikīkī serves a number of social and/or socio-economic functions, including:

[11] Nelson, Shane. Kyo-Ya Hotels has $700M plan to refresh Waikīkī inventory. Dec. 20, 2011 http://www.travelweekly.com/Travel-News/Hotel-News/Kyo-Ya-Hotels-has-$700M-plan-to-refresh-Waikīkī-inventory/

[12] Baehr, Brooks. Waikīkī Beach widening project on hold. Hawai'i News Now. Apr. 18, 2011. http://www.hawaiinewsnow.com/story/14470810/Waikīkī-beach-widening-project-on-hold

- Job center (and a primary economic engine for the island);
- Residential area for people valuing an urban, largely apartment-based lifestyle;
- Ocean recreation sites and indoor restaurant/entertainment facilities; and
- Venues for local wedding parties, conferences, and other large events. (The Hilton Hawaiian Village is particularly known for this function.)

2.3.1 Population Trends

Census data reveal similar patterns of growth for the populations of Waikīkī and Oʻahu since the 1960s, with sharp growth rate increases in the 1960s through the 1980s, then slowing down or leveling off in the 1990s (Table 2.3). Waikīkī's residential population grew faster than the overall Oʻahu population from 1970 to 1990, leveled off for at least a decade thereafter, then again outpaced Oʻahu growth from 2000 to 2010.

Table 2.3: Population Trends, 1960-2010

Total Population	1960	1970	1980	1990	2000	2010
Waikīkī	11,075	13,124	17,384	19,768	19,723	23,073
Percent Growth	*N/A*	*18.50%*	*32.45%*	*13.71%*	*-0.23%*	*16.99%*
Oʻahu	500,409	629,176	762,565	836,231	875,670	953,207
Percent Growth	*N/A*	*25.73%*	*21.20%*	*9.66%*	*4.72%*	*8.85%*

Source: U.S. Census Bureau. 2010 Decennial Census. (SF1 100 Percent Data)

2.3.2 Population, Housing, and Demographic Characteristics as of 2010

The U.S. Bureau Census reported the population of Oʻahu at 953,207 in 2010 (from 875,670 in 2000). Waikīkī had a resident population of 23,073 in 2010, which amounted to about 2.4% of the total Oʻahu population. Waikīkī's resident population of more than 20,000 compares with an average daily visitor population of about 73,000 and 56,000 Waikīkī visitor industry jobs (see Section 2.2.1)

Table 2.4 compares Waikīkī to Oʻahu (the City and County of Honolulu) as a whole. In 2010, Waikīkī's population was generally older; has a racial mix with proportionately more Caucasians and fewer Asians and Native Hawaiian or Pacific Islanders. Proportionately, homeownership rates were lower, and vacancy rates greater (with many of the vacant units "held for occasional use" – e.g., timeshares or second homes). Waikīkī residents are almost all apartment-dwellers; half are single occupants; and few children live there.

It should be noted that Table 2.4 pertains to the *full-time* Waikīkī residential population. Waikīkī also has a substantial *part-time* residential population, about which less can be authoritatively stated because of lack of Census statistics. However, they are believed to be significantly older and more affluent than the full-time population. Waikīkī residents certainly represent a potential portion of the market for this new project, to the extent that the project provides restaurants and selected retail services attractive to residents and not just visitors.

Table 2.4: Waikīkī Vs. O'ahu Population and Demographics, 2010

	Waikīkī	O'ahu
Total Population	**23,073**	**953,207**
Age		
Under 18 Years (% of total population)	8.4%	22.1%
18-24 Years	10.9%	10.3%
25-44 Years	33.8%	27.2%
45-64 Years	31.5%	25.8%
65 Years and Over	23.5%	14.5%
Median Age	**30.38%**	**37.80%**
Race		
White alone (% of total population)	46.5%	20.8%
Asian alone	34.4%	43.9%
Native Hawaiian and other Pacific Islander alone	4.5%	9.5%
Other race alone	1.4%	1.1%
Two or more races	10.4%	22.3%
Housing Occupancy and Tenure		
Total Housing Units	**18,821**	**336,899**
Occupied Units	69.0%	92.0%
By Owner (% of all occupied units)	34.0%	56.0%
By Renter	66.0%	44.0%
Single Occupancy (% of all occupied units)	50.9%	22.8%
Multi-Person Occupancy	49.1%	77.2%
Vacant Units	31.0%	8.0%
For rent (% of all vacant units)	33.8%	33.4%
For sale only	3.4%	7.5%
For seasonal, recreational, or occasional use	54.9%	34.0%
Other Vacant	7.9%	25.1%
Household Type		
Total Occupied Households	**13,002**	**311,047**
Family households	35.0%	70.0%
Married-couple family (% of all family households)	26.8%	51.8%
Female householder, no husband present	5.7%	12.7%
With own children under 18	9.3%	28.0%
Nonfamily households	65.0%	30.0%
65 years and over household	13.7%	8.0%
Average Population per family	**2.5%**	**3.5%**
Average Persons per Households	**1.71**	**2.95**

Source: US Census Bureau. 2010 Decennial Census. (SF1 100 Percent Data for most; SF3 sample data for units in structure)

3. FRAMEWORK FOR ANALYSIS

This chapter provides critical conceptual information about:

- Key principles of economic impact analysis and the logic/methods used in this study;
- Overview of assumptions about what would happen if the project is not approved.

3.1 Principles and Approach

Six key principles underlie the approach used in, and/or proper interpretation of, this study:

- **Economic Impact Analyses Are Approximations:** Because inputs and outputs of the analysis appear precise, it is always useful to recall that economic impact analysis for specific projects are in fact approximate estimates. These estimates are a product of assumptions that are intended to reflect best available knowledge at the time of writing – but local and global economic conditions are constantly changing; government tax policies shift over time; other economic activities may affect whether sales projections and multiplier effects operate as assumed; etc.

- **"Impacts" Are Differences Between Two Probable Future Scenarios:** The "With-Project" Scenario first asks: What are the likely economic conditions if the proposed project is developed? What is usually called the "No-Action Scenario" then asks: What are the likely economic conditions if the proposed project is not developed? Economic impacts are the differences between these two scenarios.

  In an urban redevelopment case such as this, where already-developed but aging economic activities are now in place, the "No-Action Scenario" is perhaps better called the "Alternative-Action Scenario," at least for economic analysis. That is because it is highly unlikely that economic conditions as of late 2011 will simply continue indefinitely, frozen in time. This is further explained in following Section 3.2, where the general assumptions about the Alternative-Action Scenario for this particular analysis are set forth.

- **Economic Impact Analysis Normally Attempts to Be Conservative:** It is better to err on the side of understating economic benefits than overstating them. However, because impacts are the differences between the With-Project and the Alternative-Action Scenarios, that means it is better to be optimistic (albeit still realistic) about the Alternative-Action Scenario, as those conditions get subtracted in order to calculate final impacts.

- **Economic Impacts Occur in Two Different Phases – Construction and Operations:** "Construction" in this case includes the demolition of existing

structures as well as the creation of new ones, at least for the With-Project Scenario. "Operations" refers to shopping center sales and related economic activities once construction is complete (for the With-Project Scenario), or to ongoing sales in the current hotel and shopping areas (for the Alternative-Action Scenario).

- **The Basis for the Great Majority[13] of This Analysis Is the Hawai'i Input-Output Model:** The Input-Output (I-O) Model is a computerized model of the Hawai'i economy created and regularly updated by the Research and Economic Analysis Division (READ) of the Hawai'i State Dept. of Business, Economic Development, & Tourism (DBEDT). It is based in large part on information from the U.S. Economic Census conducted twice a decade (in years ending in "2" and "7"). However, it takes several years after the Economic Census is completed for the U.S. government to publish the data and then more time for DBEDT to use it to update the I-O model.

  The creation of a new I-O Model in July 2011, using the 2007 Economic Census numbers, provided an opportunity for close consultations with READ economists about the proper application of the I-O model for a project such as the International Market Place Redevelopment. JMK Associates follow READ's recommended procedures closely in this study, although a few instances will be noted in which choices could be made and/or slight variations seemed appropriate.

  The I-O Model generates multipliers for various industries that can be used to estimate ***(1) output*** (sales, in dollars); ***(2) earnings*** (household income, in dollars); and ***(3) jobs*** (total jobcount, full- and part-time), all of these at two separate levels:

  (a) Direct – stemming from initial round of expenditures, which in this case would mean construction expenditures and/or on-site operational sales; and

  (b) Total – statewide impacts including the multiplier or "ripple" effects of spending (which economists call "indirect and induced effects"). These occur as dollars circulate or "ripple" through the economy in two different ways – from businesses buying from other businesses ("indirect") and from employees spending their wages/salaries ("induced") in the local economy.

  Certain aspects of the I-O Model and its multipliers are critical for an understanding of this study or any other that relies on the local I-O Model:

  - The Model is based on historical data (in this case, year 2007) about the overall average interactions of output/earnings/jobs among various industrial sectors in the Hawai'i economy. Individual situations and projects can always deviate from these average conditions, but averages provide the best possible basis for estimating impacts in the absence of complete and perfect knowledge about how dollars flow through the economy for a specific project.

[13] Aspects of the analysis independent of the I-O Model are (1) City tax revenues (the I-O has State tax multipliers but not county ones); and (2) government cost considerations, which are not part of the Model. All other parts of this study are based on the I-O Model and its implicit or explicit multipliers.

- I-O multipliers for output, earnings, and State taxes are constant over time, but job multipliers vary by year because of assumed changes in labor productivity – that is, employers learn to use technology or other efficiencies to get the same work done with fewer employees. An example would be the evidence shown in Section 2.2.1 that Waikīkī employers are using fewer workers to serve equal or slightly larger numbers of visitors in recent years.

- Because the I-O Model was primarily created to reflect the workings of the overall economy, its application to specific projects calls for certain cautions. The most important of these for the current study is discussed in Point #6 immediately below. But it may also be noted that I-O Model results for specific projects may not be perfectly valid under conditions when available labor is highly limited (i.e., very low unemployment rates and worker disinterest in multiple job-holding) and when barriers to in-migration such as lack of affordable housing restrict growth in the labor force. Those conditions do not currently exist in Hawai‘i, but when they do the immediate results of new economic activity may be as much or more about bidding up of wages as the outcomes currently predicted by the I-O Model.

- **I-O Multiplier Results Do Not Always Mean "Growth," and That Is Particularly True for This Project Because of Its Retail Nature:** Whenever a new economic activity is introduced, a critical question is ***whether totally new dollars are attracted to the economy or whether the new activity is simply taking market share from (or otherwise substituting for) existing activities.***

  - A general principle is that I-O results, particularly at the Total but sometimes also at the Direct level, should always be interpreted as "new or maintained." Examples:

    - A proposed new hotel or similar visitor attraction catering to a new market, perhaps China, would bring in visitors above and beyond those already coming to Hawai‘i. At the time of the proposal, the Hawai‘i economy appears to be stable or growing, and so the hotel jobs and output are counted "new."

    - However, when the hotel is actually built, visitor counts from some existing market – or perhaps economic activity in some other sector, such as defense or agriculture – turn out to be dropping. In that case, the "new" project is actually maintaining existing economic benefits, on a net basis.

    Because of the difficulties in predicting what else will be occurring in the economy in the future, it is generally best to say a new project will result in "new or maintained benefits."

  - The retail nature of this particular project raises further issues: With limited exceptions, few visitors are believed to come to Hawai‘i <u>primarily</u> for purposes of shopping. However, retail activities are part of the overall Waikīkī resort

experience, and the creation or renovation of major retail centers have been an important part of the ongoing Waikīkī re-invigoration described previously in Section 2.2.2. This will be further discussed in Section 5.2, but the point for now is that analysis of operational impacts needs to be done from two different perspectives:

- ***Impacts from Direct On-Site Activity*** (only) are the simplest and most definite results that can be quantified – certain current economic activities would be replaced by other ones. Therefore, these results will be calculated and presented as the first step.

- ***Net New Impacts*** at both the Direct and Total levels are less certain, though likely to be smaller. No definitive studies have been done that would justify a specific assumption about what percentage of increased sales at the site will be dollars that would not have been spent elsewhere in the economy. Therefore, a range of possible net impacts will be presented rather than a single set of figures.

Note that these two different perspectives apply only to operational impacts (and by extension to government revenue analysis). Construction activities for the new International Market Place more clearly involve dollars that would not otherwise be spent in the economy anyway. Therefore, the following Chapter 4 on Construction Phase Impacts follows the more traditional path of a single-perspective analysis of both Direct and Total Impacts. In other words, for Construction, the impacts are all "net new impacts."

3.2 Alternative-Action Scenario

For physical environmental impacts, it usually makes sense to assume that conditions for the Alternative-Action (or "No-Action") Scenario simply involve a continuation of current conditions. But for socio-economic assessment, the Alternative-Action future requires consideration of potential changes from (1) external economic factors; and (2) internal factors such as alternative economic activities on the site by the landowner.

Figure 3.1: Conceptual Graph, Alternative-Action Scenario and "Impact"

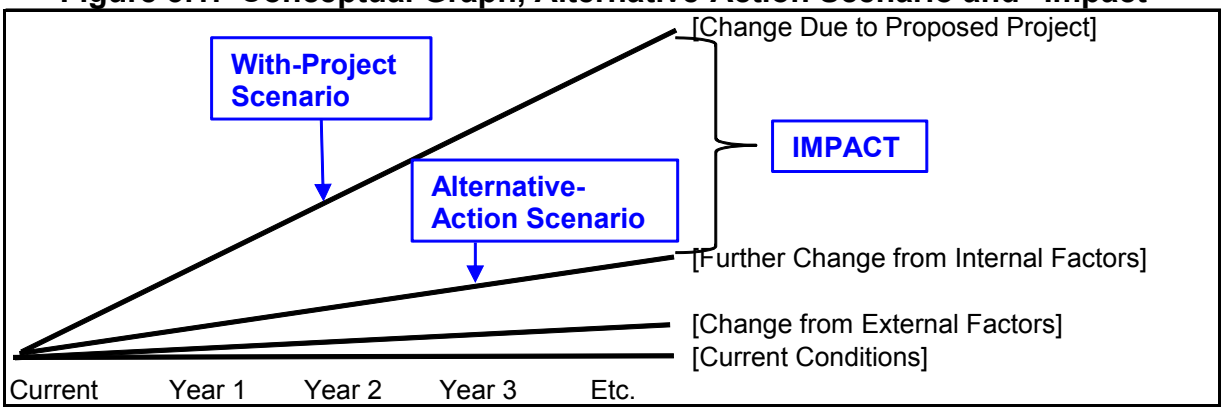


Figure 3.1 shows that defining the Alternative-Action Scenario to include these two types of change results in a more conservative (smaller) estimation of "impact" than if the Alternative-Action Scenario were equated with continuation of current conditions. The figure also helps to understand why more optimistic assumptions about the Alternative-Action Scenario are in fact "conservative" in terms of impact – the more the line for the Alternative-Action Scenario is raised, the closer it is to the With-Project Scenario line and the smaller the Impact difference.

3.2.1 Change from External Factors (Economic Recovery)

As of late 2011, the Great Recession has been officially over for several years. However, the national economy remains weak; international conditions, especially in Europe, include the threat of renewed global economic shocks; and by many measures Hawai‘i tourism – the primary engine of the economy and the principal source of sales for present or proposed economic activities on the subject parcels – has not yet regained its full vitality.

For purposes of this study, ***the Alternative-Action Scenario assumes ongoing slow economic recovery in tourism through the year 2016*** (the first full calendar year of operations for the new International Market Place under the With-Project Scenario). Thereafter, economic conditions are assumed stable – a conservative assumption, because in reality tourism is likely to have future downturns, but assuming ongoing high expenditures narrows the difference between the With-Project and Alternative-Action scenarios.

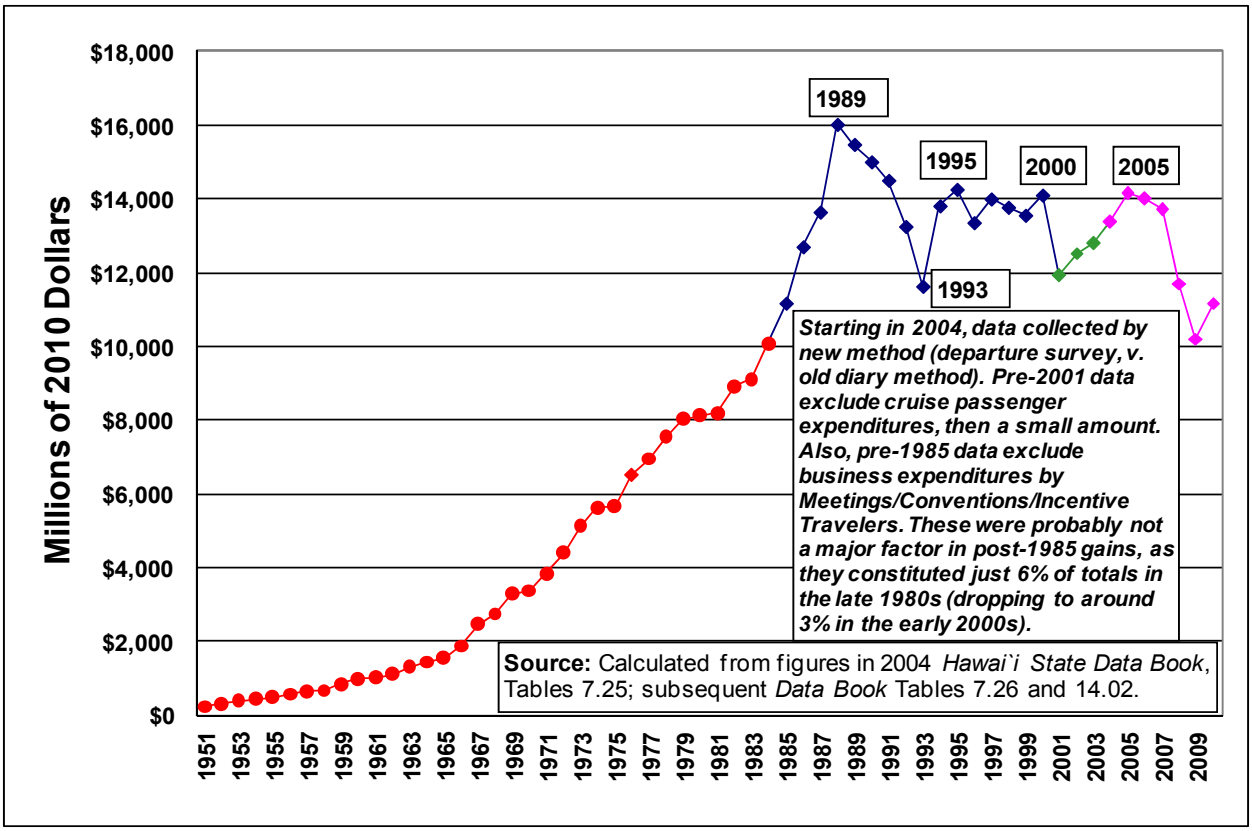
"Economic recovery" will be defined as the average level of visitor expenditures in real dollars for the 1994 – 2000 timeframe. Figure 3.2 shows this was the last period of fairly stable and high visitor expenditures following an usually high 1989 peak that is unlikely to be repeated. The average level of visitor expenditures during this period was $13.841 billion (2010 dollars) – a figure very close to the more recent 2005 single peak, $14.019 billion. The actual 2010 figure was $11.166 billion. To go from $11.166 billion in 2010 to $13.841 billion in 2016 would require an average annual real growth rate of 3.643%. Therefore, ***both the Alternative-Action Scenario and the With-Project Scenario assume that sales would be growing at 3.643% per year through 2016 simply because of economic recovery***, and this component of sales growth would become zero thereafter.[14]

3.2.2 Change from Internal Factors (Landowner/Lessee Improvements)

Representatives of Queen Emma Land Co. emphasized to JMK Associates that the company is committed to seeking entitlements in order to achieve a higher rate of return

[14] Although Figure 3.2 tends to suggest tourism is a mature industry in Hawai‘i, it is of course possible that overall tourism expenditures could keep growing after 2016. However, any such additional growth would likely occur primarily outside Waikīkī and/or spawn more retail centers, such that further statewide growth would be less likely to equate to further growth in sales at the project site itself.

Figure 3.2: Statewide Tourism Expenditures, 1951 - 2010



and more financial support for the Queen's Medical Center. That means (1) it would not be realistic for the Alternative-Action Scenario to assume a future in which the present properties are sharply upgraded (e.g., the current International Market Place is improved to be revenue-competitive with other properties for a 30-year timeframe, or the Miramar becomes a four-star hotel property); (2) it could be realistic simply to assume a delay of a few years, after which entitlements for some slightly different configuration are again pursued.

This study employs an Alternative-Action Scenario that conceptually falls in between these two possibilities – ***Queen Emma would hold off on seeking further entitlements for another 10 or 12 years, and in the meantime would invest in limited renovations and repairs***.

That means there would be some limited "construction" activity (renovations/repairs) under the Alternative-Action scenario. This scenario is quite approximate, because Queen Emma has not carefully planned nor budgeted for this eventuality. However, some reasonable elements of the scenario[15] would include:

[15] Based on input from Les Goya, Vice President, Queen Emma Land Co. – personal communications, several dates in late November 2011.

- Investment of approximately $10 million to address immediate repair/renovation issues. Examples for the current International Market Place would include fixing termite damage, upgrades in electrical wiring, repainting, and upgrading furniture in the food court. The Waikīkī Town Center also needs repainting, repair of the mechanical parking garage, and general facility renovations.

- With a 10- to 12-year delay, Queen Emma believes some tenants would also invest in their own repairs/renovations. We assume a 1:10 tenant matching effort, such that the total "construction" expenditure under the Alternative-Action Scenario would be $11 million.

- Queen Emma's major renovations would likely require some rolling slowdowns or shutdowns of tenant sales activities. Queen Emma assumes the losses in sales would be the equivalent of a total shutdown for six months. Because such an actual total shutdown is unlikely, we instead assume (a) a 25% loss of sales over a two-year period; (b) this two-year period would extend from mid-2013 to mid-2015, the same construction timeframe for the With-Project Scenario in which current facilities are demolished and replaced by a new retail center.

- Following these renovations, there would be some temporary increases in sales as a result of improved conditions. However, these increased sales would not necessarily be enough to recoup Queen Emma's investment, which are being made to address pressing "deferred maintenance" issues.

The Alternative-Action Scenario further assumes similar renovation investments, temporary income losses, and subsequent temporary gains at the Miramar at Waikīkī hotel property. Based mostly on discussions with the hotel management:[16]

- Assuming prompt awareness of the extended timeframe and high probability of lease renewal in 2016, the hotel might invest something like $3 million to $5 million total, which in reality would likely extend over 10 years. However, to simplify the comparison with the With-Project Scenario, JMK Associates assumes a $4 million investment concentrated in the same mid-2013 to mid-2015 timeframe.

- JMK Associates assumes a similar 1:10 matching effort by Miramar's sub-lessees (e.g., Denny's Restaurant on Kūhiō Ave.), for a total $4.4 million expenditure.

- The less disruptive Miramar renovations would likely have only a very small negative impact on sales, and would be made with the expectation of a positive return on investment. JMK Associates made specific assumptions about these factors sufficient to assure a return on investment of approximately 20%.

See subsequent Table 5.6 (Chapter 5) for specific assumed figures about temporary lost sales and subsequent increases associated with renovation.

[16] Personal communications, Ted Sakai, General Manager, Miramar at Waikīkī, several dates in October and November 2011.

4. CONSTRUCTION PHASE IMPACTS

This chapter focuses on construction phase output, earnings, and jobs. It presents:

- Some brief economic context about the construction industry in Hawai‘i;
- Specific assumptions/inputs for analysis of construction phase impacts;
- Results for Direct On-Site Impacts; and
- Results for Total Impacts (including multiplier "ripple" effects).

4.1 Context: Construction Industry Current Situation

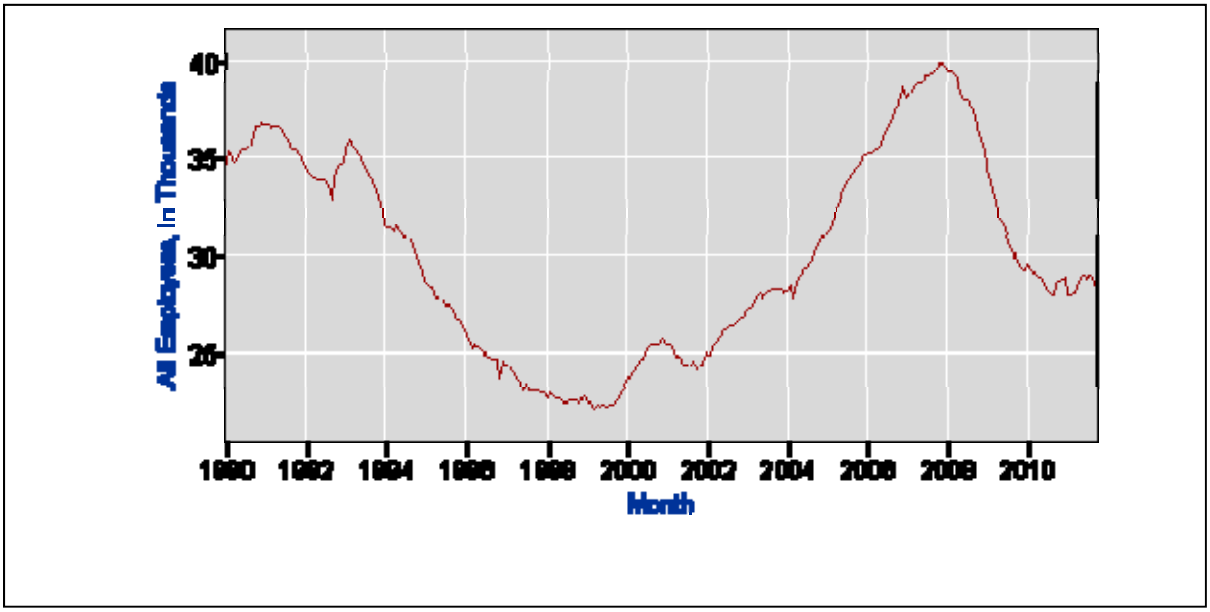
Overall, and despite lingering Great Recession issues, Hawai‘i's unemployment rates have been among the lowest in the nation. However, the construction industry has suffered far more than service industries (Table 4.1). And while construction employment has not fallen to the levels of the late 1990s, the plunge from the 2008 peak was rapid and painful, and there has been no recent improvement (Figure 4.1).

Table 4.1: Hawai‘i 2010 Unemployment Rates, Statewide and Selected Industries

	State Total	Construction Industry	Wholesale & Retail Trade	Leisure % Hospitality
Unemployment Rate	6.2%	14.9%	5.8%	5.4%
Rank of U.S. States, D.C.	45	33	43	50

Source: U.S. Bureau of Labor Statistics."Table 19. States: employment status of the experienced civilian labor force, by industry, 2010 annual averages." http://www.bls.gov/opub/gp/pdf/gp10_19.pdf

Figure 4.1: Hawai‘i Construction Employment Levels, 1990 to October 2011



Source: Courtesy of Kenneth D. Simonson, Chief Economist, Associated General Contractors of America. Personal email communication, Dec. 16, 2011.

For the past several years, Hawai‘i's construction industry has been partially buffered by large military housing privatization projects that are now winding down. The proposed Honolulu rapid transit project would give the industry a major injection if and when it begins – but that project is the focus of significant controversy and lawsuits. Thus, the industry's short-term future is highly uncertain and could decline further before it improves.

In Waikīkī, Kyo-Ya Hotel and Resorts has proposed redevelopment of both the Princess Ka‘iulani Hotel (adjacent to the current International Market Place on the mauka side of Kalākaua Ave.) and the Diamond Head Tower of the Moana Surfrider (across the street on the makai side of Kalākaua). The Moana Surfrider proposal is also currently stalled by legal action, but Kyo-Ya is studying whether it is feasible for the Princess Ka'iulani project to begin independently as originally scheduled, which could be about the same time as the proposed IMP in mid-2013 (personal communication, Michael Takayama, Kyo-Ya, Nov. 22, 2011).

If the two side-by-side construction projects do in fact proceed at the same time, disruptive aspects could be magnified and there may be temporary negative impacts on economic performance of other nearby properties. However, the post-construction synergetic effects of redevelopment should make this part of Waikīkī much more attractive and thus more profitable than at present.

4.2 Assumptions – Output, Earnings, and Jobs (Construction)

On the following pages, Table 4.3 to Table 4.6 summarize the inputs to the analysis of both Direct and also Total construction-phase economic impacts in subsequent pages. The assumptions include both general conceptual points and also specific quantitative assumptions ranging from projected expenditures to labor productivity changes. (The expenditure inputs are key to the analysis, but the labor productivity assumptions are more important for the operational analysis – see later comments in Section 5.4.3.)

These tables also include the multipliers from the Hawai‘i State Input-Output (I-O) Model that determine final results. Such multipliers are specific to particular industries, and the final results in later pages combine the results. Here is a simple example of how the calculations are carried out, for Direct Earnings in year 2013, "With-Project Scenario":

Table 4.2: Example of Calculating Result for Direct Earnings from Multipliers

	Direct Output	Found in	Direct Earnings Multiplier	Found in	Direct Earnings Result	Adjusted to 2010 Dollars*	**Result Found in**
Construction	$51,400,000	Table 4.3	0.304	Table 4.3	$15,618,708	$14,422,824	
Soft Costs	$985,995	Table 4.3	0.568	Table 4.3	$559,918	$517,047	
Combined	$52,385,995				$16,178,627	**$14,939,871**	**Table 4.8**

* Adjustment to 2010 dollars uses assumed inflation rate shown in Table 4.3.

Table 4.3: Inputs for Calculating Construction Phase Output and Earnings (With-Project Scenario)

Derived from Client Inputs (for Output and Earnings-- Project Construction)

Construction Start Date: June 1, 2013
Construction End Date: June 30, 2015

	2013	2014	2015	Total
Construction Hard-Cost Expenditures in Hawai'i by Year in Current Dollars	$51,400,000	$121,500,000	$60,700,000	**$233,600,000**
Months with Construction Activity	7	12	6	**25**

Total "Soft Costs" in Hawai'i $1,870,000

Source for Above Assumptions: Mark T. Bedell, AIA, Vice President Engineering and Construction, The Taubman Co., Nov. 4, 2011

Soft Costs are primarily for Architect-Engineering and related services. In reality, these are or will be expended mostly in 2011 and 2012. Because these costs are relatively small, we will simplify the analysis by moving them to the 2013-14 timeframe, half in each year. This requires converting them to current dollars for 2013 and 2014. To do this, we assume average annual future inflation based on history:

Assumed Average Inflation: 2.691% (Equal to average Honolulu CPI increase, 1990 - 2010)
Note: *All aspects of analysis are conducted in current dollars -- requiring an assumed inflation rate -- to fit with the Hawai'i I-O Model. However, final results are expressed in constant 2010 dollars.*

	2013	2014	Total
Soft Cost Expenditures, 2013 - 2014 Dollars	$985,995	$985,995	**$1,971,990**

Derived from Hawai'i Input-Output Model (for Output and Earnings-- Project Construction)

Expenditures for Construction Hard Costs fall under the I-O Model's Industry Sector 14 (S14), "Constructic of Other Buildings." (Sector 13 is "Single-Family Residential" construction, so S14 multipliers apply to larger structures such as hotels, office buildings, high-rises, and retail malls.) Soft Cost Expenditures fall under Sector 46 (S46), "Architectural and Engineering Services."

I-O Model - Construction Hard Costs

Total Output, $Ms (S14)	4,373.033	*(Not multipliers themselves, but used to*
Total Earnings, $Ms (S14)	1,328.816	*calculate Direct multiplier below.)*
Calculated: Total Earnings/Total Output (S14	*0.304*	*Multiplier for Direct Earnings*
Final Demand Output Type II Multiplier (S14)	2.172	*(Type II multipliers are used to calculate*
Final Demand Earnings Type II Multiplier (S14	0.647	*"Total" effects -- Direct, Indirect, Induced)*

I-O Model - Soft Costs (Architect & Engineering)

Total Output, $Ms (S46)	1,096.305	*(Not multipliers themselves, but used to*
Total Earnings, $Ms (S46)	622.559	*calculate Direct multiplier below.)*
Calculated: Total Earnings/Total Output (S46	*0.568*	*Multiplier for Direct Earnings*
Final Demand Output Type II Multiplier (S46)	2.149	*(Type II multipliers are used to calculate*
Final Demand Earnings Type II Multiplier (S46	0.888	*"Total" effects -- Direct, Indirect, Induced)*

Table 4.4: Inputs for Calculating Construction Phase Output and Earnings (Alternative-Action Scenario)

Derived from Client Inputs and Consultant Estimates (for Output, Earnings, State Taxes -- Renovations)

The Alternative-Action Scenario is more uncertain and hypothetical. After discussions with Queen Emma Land Company and Miramar at Waikīkī hotel management, this scenario was developed:

- Queen Emma delays application for total redevelopment some 10-12 years.
- This requires significant expenditures for repairs and deferred maintenance at current Intl. Market Place and Waikīkī Town Center, prompting more limited renovations by some tenants.
- A decision is made in 2012 or 2013 to extend the hotel lease (expiring in 2016), prompting similar renovations at the Miramar.

The following assumptions have been made after these consultations but reflect consultant estimates rather than firm numbers from Queen Emma or the Miramar. The assumption that they would occur in the same timeframe as the "With-Project" redevelopment is partly done to simplify the overall analysis, but it seems realistic that these expenditures would be made sooner rather than later.

Renovation Start Date: July 1, 2013
Renovation End Date: June 30, 2015

	2013	2014	2015	**Total**
Renovation Hard Cost Expenditures in Hawai'i (Current Dollars)*				
-- Intl. Market Place/Waikīkī Town Center	$2,750,000	$5,500,000	$2,750,000	**$11,000,000**
-- Miramar at Waikīkī Hotel	$1,100,000	$2,200,000	$1,100,000	**$4,400,000**
-- *Total (Calculated)*	$3,850,000	$7,700,000	$3,850,000	**$15,400,000**
Months with Renovation Activity	6	12	6	**24**

* Soft costs are unknown but would be relatively small, so are disregarded for this analysis.

Source for Above Assumptions: John M. Knox & Associates, Inc., following discussions with Les Y. Goya (Vice President, Queen Emma Land Co.) and Ted Sakai (General Manager, Miramar at Waikīkī), various dates in October and November 2011. IMP and WTC tenants are assumed to match Queen Emma renovation investments on a 1:10 ratio.

Derived from Hawai'i Input-Output Model (for Output and Earnings -- Renovations)

Expenditures for Renovations fall under the I-O Model's Industry Sector 16 (S16), "Maintenance & Repairs."

I-O Model - Renovations

Total Output, $Ms (S16)	1,328.075	*(Not multipliers themselves, but used to*
Total Earnings, $Ms (S16)	403.557	*calculate Direct multiplier below.)*
Calculated: Total Earnings/Total Output (S16)	*0.304*	*Multiplier for Direct Earnings*
Final Demand Output Type II Multiplier (S16)	2.108	*(Type II multipliers are used to calculate*
Final Demand Earnings Type II Multiplier (S16)	0.619	*"Total" effects -- Direct, Indirect, Induced)*

Table 4.5: Inputs for Calculating Construction Phase Jobs (With-Project Scenario)

Derived from Client Inputs (for Jobs -- Project Construction)

	2013	2014	2015	Total
Man-Hours of Construction Labor	200,000	480,000	240,000	**920,000**

Source for Above Assumptions: Mark T. Bedell, AIA, Vice President Engineering and Construction, The Taubman Co., Nov. 4, 2011

Derived from Hawai'i Input-Output Model (for Jobs -- Project Construction)

Hawai'i I-O job multipliers differ from output or earnings multipliers because they require adjustment for assumed continuation of historical trends for increasing labor productivity, meaning gradual reduction in number of jobs from the same output over time. The productivity factor is applied each year beginning with the 2007 numbers in the model. For Jobs/$1M Output, used to estimate Direct Jobs, the productivity adjustment could be either a "Productivity Factor" supplied by the model or the percentage change of the Type II Jobs Multiplier. We have elected the latter, because this approach results in a more logical unchanging Direct-to-Total Jobs ratio over time.

	2007	2013	2014	2015	
I-O Model - Construction					
Productivity Factor (S14)*	94.737%				
Total Output, $Ms (S14)	4,373.033				*(Used to calculate Direct*
Total Jobs (S14)	20,281.008				*Jobs Multiplier below)*
Type II Total Jobs Multiplier for Year (S14)	**13.863**	**10.728**	**10.284**	**9.859**	
Type II Jobs Multiplier as % of Preceding Year:		*95.85%*	*95.86%*	*95.87%*	
Calculated: Total Jobs/$1M Total Output (S14)	*4.638*	*3.589*	*3.441*	*3.298*	*Direct Jobs Multiplier)*
I-O Model - Soft Costs (Architect & Engineering)					
Productivity Factor (S46)*	95.729%				
Total Output, $Ms (S46)	1,096.305				*(Used to calculate Direct*
Total Jobs (S46)	7,330.611				*Jobs Multiplier below)*
Type II Total Jobs Multiplier for Year (S46)	**15.993**	**12.662**	**12.182**	**11.721**	
Type II Jobs Multiplier as % of Preceding Year:		*96.20%*	*96.21%*	*96.22%*	
Calculated: Total Jobs/$1M Total Output (S46)	*6.687*	*5.294*	*5.093*	*4.901*	*Direct Jobs Multiplier)*

* (Not used for this analysis, but shown for comparison purposes)

Table 4.6: Inputs for Calculating Construction Phase Jobs (Alternative-Action Scenario)

Derived from Client Inputs (for Jobs -- Construction/Renovation)

(No further assumptions related to construction/renovation were needed for jobs, which are calculated purely from I-O multipliers shown below.)

Derived from Hawai'i Input-Output Model (for Jobs -- Construction/Renovation)

Hawai'i I-O job multipliers differ from output or earnings multipliers because they require adjustment for assumed continuation of historical trends for increasing labor productivity, meaning gradual reduction in number of jobs from the same output over time. The productivity factor is applied each year beginning with the 2007 numbers in the model. For Jobs/$1M Output, used to estimate Direct Jobs, the productivity adjustment could be either a "Productivity Factor" supplied by the model or the percentage change of the Type II Jobs Multiplier. We have elected the latter, because this approach results in a more logical unchanging Direct-to-Total Jobs ratio over time.

	2007	2013	2014	2015	
I-O Model - Renovations					
Productivity Factor (S16)*	94.737%				
Total Output, $Ms (S16)	1,328.075				*(Used to calculate Direct*
Total Jobs (S16)	8,566.650				*Jobs Multiplier below)*
Type II Total Jobs Multiplier for Year (S16)	**15.391**	**11.828**	**11.325**	**10.845**	
Type II Jobs Multiplier as % of Preceding Year:		*95.73%*	*95.75%*	*95.76%*	
Calculated: Total Jobs/$1M Total Output (S16)	*6.450*	*4.957*	*4.746*	*4.545*	*Direct Jobs Multiplier)*

* (Not used for this analysis, but shown for comparison purposes)

4.3 Results – Direct Impacts (Construction)

The first set of results focus on immediate or "Direct" effects from expenditures in Hawai‘i. These primarily reflect economic activity at the site itself, but also include a relatively small amount of "soft costs" (including expenditures for planning and entitlement studies such as this report) and some off-site direct employment such as management and administration from contractors' headquarters.

4.3.1 Output (Construction, Direct)

Table 4.7 shows budgeted construction expenditures in Hawai‘i for the "With-Project Scenario," estimated renovation expenditures under the "Alternative-Action Scenario," and the difference, or impact. ***The proposed redevelopment would result in nearly $200 million more in construction expenditures than if only renovations occur.***

4.3.2 Earnings (Construction, Direct)

Table 4.8 presents the same set of calculations – "With-Project Scenario," "Alternative-Action Scenario," and difference/impact – for household income (earnings). The table shows that the ***proposed construction will generate in excess of $60 million more than the alternative of renovations alone*** over the two-year construction period.

4.3.3 Jobs (Construction, Direct)

The same procedure of calculating results for two scenarios and then subtracting to determine impact is followed in Table 4.9. This shows a ***two-year impact of 745 job-years (annual average of about 372 jobs)*** for the proposed redevelopment over the alternative or renovations.

- The proposed project alone (without subtracting the alternative possibility of renovation jobs) would provide an average of about 400 full- and part-time construction jobs per year.[17] (See upper portion of Table 4.9.)

- Construction projects require particularly high proportions of part-time – or at least short-term – jobs, as many specialty trades are required only for a portion of the total construction project. For example, painters are needed largely in the final weeks.

  Thus, client estimates of on-site construction man-hours (excluding off-site office personnel) allow calculation of full-time equivalent (FTE) employment per year – or "person-years" for the entire construction period. The upper part of Table 4.9 indicates the project would generate 442 person-years of construction employment over the roughly two-year construction timeframe.

[17] The I-O Model generates only total job numbers, both full- and part-time jobs, rather than specific numbers of each.

Table 4.7: Direct Construction Output (Expenditures in Hawai'i)

With-Project Scenario -- Construction

(All dollar figures are millions of constant 2010 dollars, and show output related to direct on-site economic activity.)	Constr. starts 6/1 2013	Construc-tion Year 2014	Constr. ends 6/30 2015	TOTALS for Construction Period
Direct Output (Expenditures in Hawai'i)				
-- Construction (Hard Costs)	$47.5	$109.3	$53.2	$209.9
-- Permitting/A&E (Soft Cost)	$0.9	$0.9	$0.9	$2.7
Combined Results (Direct Effects)	**$48.4**	**$110.1**	**$54.0**	**$212.5**

Alternative-Action Scenario -- Renovations/Repairs

(All dollar figures are millions of constant 2010 dollars, and show output related to direct on-site economic activity.)	Renov. starts 7/1 2013	Renova-tion Year 2014	Renov. ends 6/30 2015	TOTALS for Construction Period
Direct Output (Expenditures in Hawai'i)				
-- IMP/WTC Renovations	$2.5	$4.9	$2.4	$9.9
-- Hotel Renovations	$1.0	$2.0	$1.0	$4.0
Combined Results (Direct Effects)	**$3.6**	**$6.9**	**$3.4**	**$13.9**

Project Impact (Difference Between the Two Scenarios) -- Construction

(All dollar figures are millions of constant 2010 dollars, and show output related to direct on-site economic activity.)	Const. or Renov. starts mid 2013	Const. or Renova-tion Year 2014	1/2 Const. or Renov., ends 6/30 2015	TOTALS for Construction Period
Direct Output (Expenditures in Hawai'i)				
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
Combined Results (Direct Effects)	**$44.8**	**$103.2**	**$50.6**	**$198.7**

Table 4.8: Direct Construction Earnings

With-Project Scenario -- Construction

(All dollar figures are millions of constant 2010 dollars, and show earnings related to direct on-site economic activity.)	Constr. starts 6/1 2013	Construc-tion Year 2014	Constr. ends 6/30 2015	TOTALS for Construction Period
Direct Earnings (Household Income)				
-- Construction (Hard Costs)	$14.4	$33.2	$16.2	$63.8
-- Permitting/A&E (Soft Cost)	$0.6	$0.6	$0.6	$1.7
Combined Results (Direct Effects)	**$14.9**	**$33.7**	**$16.6**	**$65.3**

Alternative-Action Scenario -- Renovations/Repairs

(All dollar figures are millions of constant 2010 dollars, and show earnings related to direct on-site economic activity.)	Renov. starts 7/1 2013	Renova-tion Year 2014	Renov. ends 6/30 2015	TOTALS for Construction Period
Direct Earnings (Household Income)				
-- IMP/WTC Renovations	$0.8	$1.5	$0.7	$3.0
-- Hotel Renovations	$0.3	$0.7	$0.3	$1.3
Combined Results (Direct Effects)	**$1.1**	**$2.1**	**$1.0**	**$4.2**

Project Impact (Difference Between the Two Scenarios) -- Construction

(All dollar figures are millions of constant 2010 dollars, and show earnings related to direct on-site economic activity.)	Const. or Renov. starts mid 2013	Const. or Renova-tion Year 2014	1/2 Const. or Renov., ends 6/30 2015	TOTALS for Construction Period
Direct Earnings (Household Income)				
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
Combined Results (Direct Effects)	**$13.9**	**$31.6**	**$15.6**	**$61.1**

Table 4.9: Direct Construction Employment

With-Project Scenario -- Construction

(Total jobcount, both full- and part-time, related to direct on-site economic activity. With-project construction FTE also shown.)	Constr. starts 6/1 2013	Construc-tion Year 2014	Constr. ends 6/30 2015	TOTALS for Construction Period
Direct Jobs (Full- and Part-Time)				
-- Construction (Hard Costs)	184	418	200	803
-- *On-site full-time equivalent**	*96*	*231*	*115*	*442*
-- Permitting/A&E (Soft Cost)	5	5	5	15
Combined Results (Direct Effects)	**190**	**423**	**205**	**818**

* FTE jobs, or "person-years," based on total annual construction labor force work-hours, exclusive of off-site administrative support, divided by 40 hours per week and 50 weeks per year.

Alternative-Action Scenario -- Construction

(Total jobcount, both full- and part-time, related to direct on-site economic activity.)	Renov. starts 7/1 2013	Renova-tion Year 2014	Renov. ends 6/30 2015	TOTALS for Construction Period
Direct Jobs (Full- and Part-Time)				
-- IMP/WTC Renovations	14	26	12	52
-- Hotel Renovations	5	10	5	21
Combined Results (Direct Effects)	**19**	**37**	**17**	**73**

Project Impact (Difference Between the Two Scenarios) -- Construction

(Total jobcount, both full- and part-time, related to direct on-site economic activity.)	Const. or Renov. starts mid 2013	Const. or Renova-tion Year 2014	1/2 Const. or Renov., ends 6/30 2015	TOTALS for Construction Period
Direct Jobs (Full- and Part-Time)				
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
Combined Results (Direct Effects)	**171**	**386**	**188**	**745**

Note: Totals should be interpreted as "job-years," not jobcounts.

4.4 Results – Total Impacts (Construction)

The second set of results include the "ripple" or indirect and induced multiplier effects of business purchases and worker expenditures making their way through the economy and creating or supporting additional sales, earnings, and jobs. (Note: While the direct job impact is likely to be "created," the indirect/induced jobs may or may not already exist. They may simply be maintained or "supported" by this project coming on-line at the time that some other project ends.)

4.4.1 Output (Construction, Total)

Table 4.10 shows Total statewide output – although almost all of it is likely to occur in the City and County of Honolulu – for the "With-Project Scenario," "Alternative-Action Scenario," and difference (impact). ***On a statewide basis, the proposed construction activities would create or support in excess of $430 million more than would the likely alternative of fairly modest renovations and repairs.***

4.4.2 Earnings (Construction, Total)

Table 4.11 also shows individual results for both scenarios, as well as the difference/ impact. Including the multiplier effects, ***the project impact would be nearly $130 millions in total household income.*** Without regard to subtracting the effect of renovations, the result is closer to $140 million.

4.4.3 Jobs (Construction, Total)

Finally, Table 4.12 follows the same procedure for full- and part-time jobs. Construction has a particularly high total job multiplier, and so ***the project impact would be in excess of 2,250 job-years, or around 1,130 full- and part-time jobs per year.***

While the direct portion of this employment impact includes many part-time or short-term workers (Section 4.3.3), the indirect/induced jobs would be in the general economy (grocery store clerks, mechanics, teachers, lawyers, etc.), where most jobs are full-time.

Table 4.10: Total Construction Output

With-Project Scenario -- Construction

(All dollar figures are millions of constant 2010 dollars, and show output related to total statewide economic activity including "ripple effects.")	Constr. starts 6/1 2013	Construc-tion Year 2014	Constr. ends 6/30 2015	TOTALS for Construction Period
Total Output (Expenditures in Hawai'i)				
-- Construction (Hard Costs)	$103.1	$237.3	$115.5	$455.9
-- Permitting/A&E (Soft Cost)	$2.0	$1.9	$1.9	$5.7
Combined Results (Total Effects)	**$105.1**	**$239.3**	**$117.3**	**$461.6**

Alternative-Action Scenario -- Renovations/Repairs

(All dollar figures are millions of constant 2010 dollars, and show output related to total statewide economic activity including "ripple effects.")	Renov. starts 7/1 2013	Renova-tion Year 2014	Renov. ends 6/30 2015	TOTALS for Construction Period
Total Output (Expenditures in Hawai'i)				
-- IMP/WTC Renovations	$5.4	$10.4	$5.1	$20.9
-- Hotel Renovations	$2.1	$4.2	$2.0	$8.3
Combined Results (Total Effects)	**$7.5**	**$14.6**	**$7.1**	**$29.2**

Project Impact (Difference Between the Two Scenarios) -- Construction

(All dollar figures are millions of constant 2010 dollars, and show output related to total statewide economic activity including "ripple effects.")	Const. or Renov. starts mid 2013	Const. or Renova-tion Year 2014	1/2 Const. or Renov., ends 6/30 2015	TOTALS for Construction Period
Total Output (Expenditures in Hawai'i)				
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
Combined Results (Total Effects)	**$97.6**	**$224.7**	**$110.2**	**$432.4**

Table 4.11: Total Construction Earnings

With-Project Scenario -- Construction

(All dollar figures are millions of constant 2010 dollars, and show earnings related to total statewide economic activity including "ripple effects.")	Constr. starts 6/1 2013	Construc-tion Year 2014	Constr. ends 6/30 2015	TOTALS for Construction Period
Total Earnings (Household Income)				
-- Construction (Hard Costs)	$30.7	$70.7	$34.4	$135.7
-- Permitting/A&E (Soft Cost)	$0.8	$0.8	$0.8	$2.4
Combined Results (Total Effects)	**$31.5**	**$71.4**	**$35.1**	**$138.1**

Alternative-Action Scenario -- Construction

(All dollar figures are millions of constant 2010 dollars, and show earnings related to total statewide economic activity including "ripple effects.")	Renov. starts 7/1 2013	Renova-tion Year 2014	Renov. ends 6/30 2015	TOTALS for Construction Period
Total Earnings (Household Income)				
-- IMP/WTC Renovations	$1.6	$3.1	$1.5	$6.1
-- Hotel Renovations	$0.6	$1.2	$0.6	$2.5
Combined Results (Total Effects)	**$2.2**	**$4.3**	**$2.1**	**$8.6**

Project Impact (Difference Between the Two Scenarios) -- Construction

(All dollar figures are millions of constant 2010 dollars, and show earnings related to total statewide economic activity including "ripple effects.")	Const. or Renov. starts mid 2013	Const. or Renova-tion Year 2014	1/2 Const. or Renov., ends 6/30 2015	TOTALS for Construction Period
Total Earnings (Household Income)				
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
Combined Results (Total Effects)	**$29.3**	**$67.2**	**$33.1**	**$129.5**

Table 4.12: Total Construction Employment

With-Project Scenario -- Construction

(Total jobcount, both full- and part-time, related to total statewide economic activity including "ripple effects.")	Constr. starts 6/1 2013	Construc-tion Year 2014	Constr. ends 6/30 2015	TOTALS for Construction Period
Total Jobs (Full- and Part-Time)				
-- Construction (Hard Costs)	551	1,249	598	2,399
-- Permitting/A&E (Soft Cost)	12	12	12	36
Combined Results (Total Effects)	**564**	**1,262**	**610**	**2,435**

Alternative-Action Scenario -- Construction

(Total jobcount, both full- and part-time, related to total statewide economic activity including "ripple effects.")	Renov. starts 7/1 2013	Renova-tion Year 2014	Renov. ends 6/30 2015	TOTALS for Construction Period
Total Jobs (Full- and Part-Time)				
-- IMP/WTC Renovations	33	62	30	125
-- Hotel Renovations	13	25	12	50
Combined Results (Total Effects)	**46**	**87**	**42**	**174**

Project Impact (Difference Between the Two Scenarios) -- Construction

(Total jobcount, both full- and part-time, related to total statewide economic activity including "ripple effects.")	Const. or Renov. starts mid 2013	Const. or Renova-tion Year 2014	1/2 Const. or Renov., ends 6/30 2015	TOTALS for Construction Period
Total Jobs (Full- and Part-Time)				
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
-- [Individual Components Not Comparable]	N/C	N/C	N/C	N/C
Combined Results (Total Effects)	**518**	**1,174**	**568**	**2,261**

Note: Totals should be interpreted as "job-years," not jobcounts.

5. OPERATIONAL PHASE IMPACTS

This chapter focuses on operational phase output, earnings, and jobs. It presents:

- Economic context – Hawai‘i shopping centers and Waikīkī hotels;
- A review of the types of analysis to be done;
- Specific assumptions/inputs for analysis of operational phase impacts;
- Specific results for Direct On-Site Impacts; and
- Results for Net New Impacts (including multiplier "ripple" effects).

5.1 Context: Economic Activities Relevant to Proposed Action

Key relevant activities are shopping centers (as information about Waikīkī retail in general was already discussed in Section 2.2.1) and hotels (as the proposed action involves demolition of a hotel, the Miramar at Waikīkī).

5.1.1 Shopping Centers

Archival figures provided by the International Council of Shopping Centers (ICSC) indicated that, as of 2007, 84% of Hawai‘i retail space was located in shopping centers, compared to 69% nationally. On the following page, Table 5.1 and Table 5.2 present additional ICSC data about Hawai‘i shopping centers. Table 5.1 also includes a comparison of 2010 Hawai‘i data with national figures.

- Hawai‘i shopping centers tend to be larger than retail malls nationwide and thus provide more jobs per center. However, the 2010 annual sales per square foot in Hawai‘i shopping centers ($316) almost exactly equaled the national average ($314).

- The number of shopping center jobs per square foot in Hawai‘i (2.0) was slightly larger than the national average (1.7), though this conceivably could reflect a greater proportion of part-time jobs in Hawai‘i centers.

- Hawai‘i centers clearly underwent a period of expansion in the early to mid 2000s – in terms of numbers, total square footage, and sales – but sales in both nominal and real terms fell back in the economic downturn of the late 2000s.

- While the last comprehensive inventory of Hawai‘i shopping centers was done in 2002 and there was growth thereafter in numbers and square footage, few if any very large centers have been created since 2002. The figures in Table 5.2 indicate the redeveloped International Market Place with a gross leasable area of 355,000 sq. ft. would exceed the Royal Hawaiian Shopping Center in size by approximately 60,000 sq ft.[18] However, it would still be far smaller than many resident-oriented centers, and would be dwarfed by O‘ahu's behemoths at Ala Moana and Pearlridge.

[18] The new Outrigger Beach Walk project opened in 2007 has less than 100,000 sq. ft. of retail, so is also far smaller than would be the new development.

Table 5.1: Characteristics of Hawai'i Shopping Centers

Characteristic	2003	2004	2005	2006	2007
Number of shopping centers	192	206	211	N/A	252
Shopping center space (million square feet)	21.0	21.0	21.0	23.1	24.1
Average space per shopping center (thousand sq.ft.)	109.4	101.9	99.5	N/A	95.6
Number of jobs (in thousands)	43.4	44.1	44.7	43.0	47.8
Shopping center jobs per center	N/A	N/A	N/A	N/A	189.6
Number of center jobs per 1,000 sq ft	2.1	2.1	2.1	1.9	2.0
Shopping center retail sales (millions of dollars)	$7,000	$7,100	$7,500	$9,300	$9,300
Sales in constant 2010 dollars (millions)	$5,374	$5,577	$6,086	$7,832	$8,692
Retail sales (billion dollars)	$7.0	$7.1	$7.5	$9.3	$9.3
Sales/sq. ft. in constant 2010 dollars	$228	$252	$281	$339	$361

Characteristic	2008	2009	2010	US 2010	HI % of US
Number of shopping centers	258	264	265	106,746	0.2%
Shopping center space (million square feet)	26.5	28.1	28.2	7,300.0	0.4%
Average space per shopping center (thousand sq.ft.)	102.7	106.4	106.4	68.4	155.6%
Number of jobs (in thousands)	58.6	55.5	55.9	12,100	0.5%
Shopping center jobs per center	227.0	210.0	211.0	113.0	186.7%
Number of center jobs per 1,000 sq ft	2.2	2.0	2.0	1.7	117.6%
Shopping center retail sales (millions of dollars)	$9,000	$9,100	$8,900	$2,290,000	0.4%
Sales in constant 2010 dollars (millions)	$8,770	$8,913	$8,900	$2,290,000	0.4%
Retail sales per square feet (dollars)	$340	$324	$316	$314	100.6%
Sales/sq. ft. in constant 2010 dollars	$331	$317	$316	$314	100.6%

Note: Red font indicates calculations by JMK Associates, Inc. from sources below.
Sources: International Council of Shopping Centers (ICSC). The 2009 and 2010 data were online as of December 2011: http://www.icsc.org/government/state_stats/Hawaii.pdf. Earlier archival data provided by ICSC via email, Dec. 16, 2011. Conversion to standard 2010 dollars used Honolulu CPI data in *Hawai'i State Data Book 2010.*

Table 5.2: Selected Major Hawai'i Shopping Centers, 2002

Island and name of center	Location	Gross leaseable area (1,000 sq. ft.)	Year opened	Site area (acres)	Parking spaces	Number of stores
O'ahu						
Ala Moana Center	Honolulu	1,800	1959	50	9,000	230
Pearlridge Center	'Aiea	1,400	1972	56	6,580	170
Victoria Ward Center	Honolulu	650	1980	65	1,200	165
Kāhala Mall	Honolulu	455	1970	20	2100+	100
Pearl Highlands Center	Pearl City	410	1993	13.5	2,000	24
Royal Hawaiian S.C.	Honolulu	293	1980	6.5	614	150
Hawai'i Island						
Prince Kūhiō Plaza	Hilo	504	1985	46.3	2,831	75
Waiākea Center	Hilo	229	1997	17.5	1,157	16
Keauhou Shopping Center	Kailua	170	1984	21.2	893	48
Maui						
Queen Ka'ahumanu Center	Kahului	573	1972	32	2,864	102
Maui Marketplace	Kahului	315	1997	20	1,400	25
Lahaina Market Place	Lahaina	208	1969	1.5	16	17
Kaua'i						
Kukui Grove Center	Lihue	315	1982	35	1,568	60

Note: Highlighted shopping centers are located in predominantly resort areas.
Source: DBEDT, *Hawai'i State Data Book 2011* , Table 23.09. Original source cited there:
- International Council of Shopping Centers, Hawai'i Council of Shopping Centers, 2002 *Hawai'i Council of Shopping Centers Directory.*

5.1.2 Hotels

The proposed action includes demolition of the 358-unit Miramar at Waikīkī hotel. As noted earlier (Table 2.1 in Chapter 2), there has been a decline in the total number of hotel units both in Waikīkī and elsewhere over the past decade, in good part due to conversion to other forms of accommodations such as timeshare and condominium rentals, which spread ownership risks and rewards to multiple owners. Table 5.3 further illustrates this trend in terms of hotel properties in Waikīkī. While other lodging types still generate economic benefits, hotels are often valued as attractive to certain market segments (including first-time visitors) and as a source of more on-site jobs which may provide higher wages, especially in unionized hotels, than do other types of lodging.

Table 5.3: Waikīkī Hotel Properties, 2000 and 2010

	2000	2010	Difference
Total Properties in Waikīkī (Hotel and Non-Hotel)	117	99	18
Total Hotel Properties in Waikīkī	68	50	18
Total Properties Consisting Entirely of Hotel Units	67	48	19

Sources: *2000 Visitor Plant Inventory.* Hawai'i State Dept. of Business, Economic Development, and Tourism (DBEDT); *2010 Visitor Plant Inventory.* Hawai'i Tourism Authority (HTA).
Figures here differ slightly from summary tables in these sources due to errors or adjustments, as per discussions with HTA Tourism Research statisticians in November 2011.

The loss of an additional hotel property and its 358 units may be counted among the project's economic impacts. However, that loss can be viewed with these perspectives:

- The Miramar is a non-unionized hotel, suggesting lower average wages.
- Market impacts from loss of hotel units must be assessed in terms of room-rate categories. Table 5.4 on the following page shows that nearly 90% of the Miramar's units were categorized as "S" (originally "Standard" price category) in the HTA's *2010 Visitor Plant Inventory*. The Miramar accounted for less than 6% of all Waikīkī units in that category, and less than 7% of all units in predominantly "S" hotels.
- At least for the present, occupancy rates for lower-priced lodging are lower than for higher-priced lodging,[19] suggesting that ***demand for Miramar "S" category units can readily be absorbed by other mid- to low-priced Waikīkī hotel units***.[20] In a sense, it is therefore conservative for the following quantitative analysis to include hotel expenditures in the Alternative-Action Scenario and not the With-Project Scenario as well, but that is the approach taken here.

[19] For the first ten months of 2011, the statewide occupancy rate for "Midprice" hotels such as the Miramar was 69% (and lower-priced categories were 74% for "Budget" and 69% for "Economy"), vs. 74% for "Upscale" and 77% for "Luxury." (Smith Travel Research data supplied courtesy of HTA Research Division, various dates in November and December 2011.)

[20] Some additional pressure on supply may be caused by the planned mid-2013 closure of the adjacent Princess Ka'iulani Hotel for redevelopment (with some new units starting back on- line the following year), but this hotel now falls in the higher "D" category in Table 5.4. However, it should also be noted that this may mean additional difficulty finding new work for unemployed Miramar workers, especially given the relatively low unemployment for hospitality industry workers in Hawai'i (see foregoing Table 4.1).

Table 5.4: Waikīkī Hotel Properties with 70% or More Units in "S" Category

	Available Units	B "Budget"	S "Standard"	D "DeLuxe"	L "Luxury"	S as % of Total
Aston Waikīkī Circle Hotel	104	0	104	0	0	100.0%
Aston Waikīkī Joy Hotel	91	0	83	8	0	91.2%
Castle Hokele Suites Waikīkī	104	0	104	0	0	100.0%
Doubletree Alana Waikīkī Hotel	317	0	308	6	3	97.2%
'Ewa Hotel Waikīkī	92	47	44	1	0	47.8%
Hale Koa Hotel	817	57	727	33	0	89.0%
Hilton Waikīkī Prince Kūhiō	601	0	125	464	12	20.8%
Holiday Surf Hotel	30	16	14	0	0	46.7%
Hotel Renew	72	0	72	0	0	100.0%
'Ilima Hotel	98	0	72	25	1	73.5%
Kūhiō Village Resort Hotel	153	0	153	0	0	100.0%
Miramar at Waikīkī	358	0	318	40	0	88.8%
Ocean Resort Hotel Waikīkī	450	0	446	4	0	99.1%
'Ohana Islander Waikīkī	264	0	207	57	0	78.4%
'Ohana Waikīkī East Hotel	441	0	169	271	1	38.3%
'Ohana Waikīkī Malia	327	0	280	47	0	85.6%
'Ohana Waikīkī West	661	0	517	144	0	78.2%
Park Shore Waikīkī	226	84	140	2	0	61.9%
Queen Kapi'olani Hotel	312	0	305	7	0	97.8%
The Breakers Hotel	63	0	63	0	0	100.0%
The New Otani Kaimana Beach Hotel	125	0	90	30	5	72.0%
The Ramada Plaza Waikīkī	198	0	198	0	0	100.0%
Waikīkī Gateway Hotel	176	0	176	0	0	100.0%
Waikīkī Resort Hotel	275	0	275	0	0	100.0%
Waikīkī Sand Villa Hotel	214	0	214	0	0	100.0%
A. Total S Category Units, All 50 Hotel Properties	**22,700**		**5,578**	**(includes other properties not shown above -- generally higher-priced)**		
- Total Above Units Other than Miramar (49 properties)	**22,342**		**5,260**			
- Miramar as % Loss of Total Units (Total S Category)	**1.6%**		**5.7%**			
B. Total Units in 20 Hotel Properties 70%+ S Category	**5,179**		**4,712**	**(includes only properties shown above)**		
- Total Above Units Other than Miramar (19 properties)	**4,821**		**4,394**			
- Miramar as % Loss of Total Units (70% S Category)	**6.9%**		**6.7%**			

Source: 2010 Visitor Plant Inventory.Hawai'i Tourism Authority (HTA)

5.1.3 Note on Vendors

The current International Market Place (IMP) and Waikīkī Town Center (WTC) now host about 70 kiosks and carts operated by independent vendors, comprising the largest concentration of such activity in Waikīkī. Taubman presently assumes only a small number of such operations in the new development.

Assistance for displaced vendors is a social issue outside the scope of this study. However, it should be briefly acknowledged here that this particular form of economic activity, at least in such concentrated form, would (like the Miramar) be displaced by the proposed action.

5.1.4 Overall Vitality of Waikīkī

While the focus of this study is on quantitative impacts, it should also be acknowledged that the proposed project – located in the very heart of Waikīkī – will likely have a significant qualitative impact on the area's physical, social, and ultimately economic ambience. It is in some ways a matter of subjective personal interpretation whether the change is a "loss" due to the closure of a low-density, open-air market place that many people remember fondly for its historic past. However, in informal discussions with a number of Waikīkī business people during this study, a consistent sentiment was that the property has deteriorated and that redevelopment will be a strong "plus" in the ongoing revitalization described earlier in Chapter 2. Although difficult to measure, this contribution could well be the project's most important long-term economic impact.

5.2 Types of Analysis

As explained at the end of Section 3.1, the current economic study requires a different type of analysis from that done for hotels or other attractions that are believed to attract new visitors and/or visitor dollars to the state. Traditionally, increased visitor counts have been attributed to proposed new hotels or other lodging, while retail and restaurant activities have been regarded as secondary activities struggling for a share of the visitor expenditures that would not have happened without lodging development.

This is likely an over-simplification of reality. A mix of factors affect visitor counts, e.g.:

- Effects of marketing (vis à vis the marketing efforts of competitive destinations);
- Economic and social factors affecting propensity to travel in originating areas;
- Airlift availability; and
- The totality of the experience to be had in the resort destination – natural attractions, lodging, shopping, cultural and recreational activities, resident friendliness, etc.

At the same time, availability of transportation and lodging are intuitively more basic to the "hierarchy of needs" for attracting visitors than are specific retail, restaurant, recreational, or similar activities. But without Hawaiʻi-specific research, it is impossible to assign any definite quantitative value (even a small one) to a major shopping center redevelopment in attracting new visitors/dollars, nor to refute definitively the hypothesis that a new center would just attract dollars that would have been spent on other things. Therefore, this chapter includes two types of complementary quantitative analysis –

Impacts from Direct On-Site Activity: This compares the output, earnings, and jobs expected to emanate from the site without the proposed project (under the "Alternative-Action Scenario") to the economic activity projected under the "With-Project Scenario." These results can be specifically estimated, but Total impacts (including multiplier/ripple effects) are not appropriate for this analysis and results are not to be interpreted as "net new impacts" on an islandwide or statewide basis.

Potential Net New Impacts (Direct and Total): This analysis considers a range of possible net new impacts, based on this logic –

1. Assuming an effect exists, it could occur through (a) attracting more visitors; and/or (b) inducing current visitors to spend more dollars. The more conservative approach is to look only at the second (more dollars only), which is what will be done here.

2. The introduction of new Waikīkī retail activities at Beach Walk and the renovated Royal Hawaiian Shopping Center ca. 2007 resulted in successful operations without apparent harm to other economic activities, and the project is strategically located in Waikīkī. So while the net IMP redevelopment impact could theoretically be zero, it is more likely to be real but comparatively small. ***Therefore, the analysis considers the range of impacts if the proportion of new dollars spent at the redeveloped site were 5%, 10%, or 15% "net new" expenditures*** (i.e., if these percentages represent the dollars that would not have been otherwise spent in the economy).

5.3 Assumptions – Output, Earnings, and Jobs (Operations)

On the following pages, Table 5.5 to Table 5.8 summarize the inputs to both types of analysis of operational economic impacts. They include both conceptual points and specific quantitative assumptions ranging from projected sales to inflation levels.[21]

Critical Assumptions: Other than State DBEDT Input-Output (I-O) Model multipliers, a sensitivity analysis would indicate the single most critical assumption would be the projected sales levels for the new IMP project (top of Table 5.5). These numbers are particularly important because:

- Sales activity (equivalent to "direct output") is the basic initial input for the entire I-O Model – multipliers are applied to this base.
- The projected figures supplied by Taubman are much larger than the 2010 estimated sales figures provided by Queen Emma or those estimated by JMK Associates for the Miramar hotel property (middle of Table 5.6).

The 2010 sales figures for the current IMP and WTC are equivalent to annual gross sales of $538/sq. ft. for the current IMP and just $163 for the WTC (which has a less desirable location) – or $359 on an averaged or "blended" basis. This $359 is only slightly more than the statewide average of $316 for 2010 (Table 5.1). By comparison, the projected blended sales figures for the new IMP are equivalent to about $700/sq. ft. upon opening and nearly $850 upon stabilization.

Because JMK Associates did not itself generate the projected new IMP sales figures, we believed we should check their feasibility. We spoke with current or former affiliates of the three largest shopping centers near the IMP – Royal Hawaiian, Beach Walk, and Ala Moana. This was done on assurances of confidentiality; as shopping centers are reluctant to share proprietary information. However, all three said their sales per square foot were significantly higher than the Taubman projections, leading us to believe the projected sales figures are conservative or at least realistic, given the location.

Other Notes on Assumptions: The assumed inputs for the Alternative-Action Scenario (Table 5.6 and Table 5.8) are somewhat more complex, due to the logic for that scenario set forth earlier in Section 3.2.2. Worth noting is that the Miramar and its sub-lessees, while willing to provide current job numbers, were under no obligation to provide proprietary sales figures, requiring us to make estimates. The estimate for the hotel sales was based on 2010 "Revenue Per Available Room" (REVPAR) data from Smith Travel Research, courtesy of Hawai‘i Tourism Authority travel researchers. Estimates for sub-lessee restaurant and retail sales were made by using I-O multipliers to work backwards from jobs to estimate the sales levels that would be expected to generate those jobcounts.

[21] Final results are later presented in inflation-adjusted constant 2010 dollars, but the mechanics of the analysis require year-specific calculations due to the labor productivity issue, and so inflation rates are among the inputs. However, the exact inflation rate actually impacts final results in only a few small ways.

Table 5.5: Inputs for Calculating Operational Phase Output and Earnings (With-Project Scenario)

Derived from Client Inputs (for Output and Earnings -- Project Operations)

Project Opening Date: July 1, 2015

Anticipated Year 1 Sales (Current Dollars)	$250,000,000	
Years after Opening till Stabilization	3.00	
Avg. Annual Sales at Stabilization	$300,000,000	(difference includes both increasing sales
Approx. % Sales from Retail	75%	and also inflation effects for period)
Approx. % Sales from Restaurants	25%	
Post-Stabilization Annual Sales Increase (Inflation only)	2.691%	(Equal to average Honolulu CPI increase, 1990 - 2010)

Source for Above Assumptions: David Boxer, VP Market Research; Terence Fitzgerald, VP Development, The Taubman Co., Oct. 28 and Nov. 21 - 22, 2011

Notes:

1. Due to assumed mid-year points in time for opening and for stablization, sales figures are straight-lined through the ramp-up period until stabilization, and 2019 would be the first full calendar year with stable sales.

2. Prior to construction commencement on June 1, 2013, operations are assumed to continue at the current Intl. Market Place, Waikīkī Town Center, Kalākaua retail areas, and Miramar at Waikīkī Hotel for several years. Assumptions for this period are identical to those for the same timeframe under the "Alternative-Action Scenario," which are listed subsequently.

Derived from Hawai'i Input-Output Model (for Output and Earnings -- Operations)

Expenditures generated by retail activities fall under the I-O Model's Industry Sector 38 (S38), "Retail." Expenditures generated by restaurant activities fall under the I-O Model's Industry Sector 62 (S62), "Eating and Drinking."

I-O Model - Retail Sales

Total Output, $Ms (S38)	7,085.846	*(Not multipliers themselves, but used to*
Total Earnings, $Ms (S38)	2,273.461	*calculate Direct multiplier below.)*
Calculated: Total Earnings/Total Output (S38)	*0.321*	*Multiplier for Direct Earnings*
Final Demand Output Type II Multiplier (S38)	1.900	*(Type II multipliers are used to calculate*
Final Demand Earnings Type II Multiplier (S38)	0.558	*"Total" effects -- Direct, Indirect, Induced)*

I-O Model - Restaurant Sales

Total Output, $Ms (S62)	3,754.631	*(Not multipliers themselves, but used to*
Total Earnings, $Ms (S62)	1,319.089	*calculate Direct multiplier below.)*
Calculated: Total Earnings/Total Output (S62)	*0.351*	*Multiplier for Direct Earnings*
Final Demand Output Type II Multiplier (S62)	2.169	*(Type II multipliers are used to calculate*
Final Demand Earnings Type II Multiplier (S62)	0.670	*"Total" effects -- Direct, Indirect, Induced)*

Table 5.6: Inputs for Calculating Operational Phase Output and Earnings (Alternative-Action Scenario)

Derived from Client Inputs and Consultant Estimates (for Output and Earnings -- Operations)

This is a continuation of the previously-described (under Construction) Alternative-Action Scenario in which Queen Emma Land Co. defers further redevelopment planning/permit requests for 10-12 years and makes critical repairs to aging infrastructure to keep current retail and restaurant activities open. Also, it is assumed the Miramar at Waikīkī receives an extended lease, providing an incentive to renovate there.

Operational aspects and/or implications of this scenario would include:

- Continuation of all retail, restaurant, and hotel activities at essentially current (2010) levels through mid-2013, subject to a small inflation rate and some rise in sales/jobs reflecting a slowly recovering economy.
- During the renovation period, some loss in sales due to disruptions -- though only minimal at the hotel.
- Following renovations, some increase in sales for perhaps a five-year period due to improved competitive image, as well as continued economic recovery for a few more years (reaching a stable level ca 2016). This effect would be much more pronounced at the hotel, where investment in renovation is expected to produce a profit. (By contrast, repairs at current current Intl. Market Place and Waikīkī Town Center are primarily just to correct deficiencies.)
- For the Kalākaua retail area, where no renovations are assumed, effects after 2015 are limited to inflation and some economic recovery.

Assumptions for Current (2010) Baseline and Period Through Mid-2013 Start of Renovations

(Gradual economic recovery effect extends beyond 2013 to 2016 stabilization level.)

	Current IMP (incl. Kalākaua retail)	Current WTC	Miramar Hotel and Sub-lessees
Retail Sales, 2010*	$41,657,146	$8,965,712	$2,550,832
Restaurant Sales, 2010*	$5,196,984	$4,087,515	$6,929,800
Accommodations Sales, 2010*	$0	$0	$11,000,000
Assumed Annual Rise in All Sales 2010-16**	3.643%	3.643%	3.643%

* IMP and WTC 2010 sales are historical data provided by Queen Emma Land Co., Nov. 23, 2011. Hotel sales estimated by authors based on 2010 Smith Travel Research figures on Revenue Per Available Room (REVPAR) for Mid-Scale properties. Miramar Retail and Restaurant sub-lessee sales estimated by authors using Input-Output sales-to-employment ratios and estimated jobcounts after observations and interviews.

** Rise above inflation, due to slow economic recovery in this period. This is assumed to bring all sales anc jobs back to an average stable figure by 2016 if no renovations were to occur.

Assumptions for Operations During Renovation Period (Mid-2013 to Mid-2015)

	Current IMP	Current WTC	Hotel Property
Assumed % Decline in Sales During Period (each year)	25.0%	25.0%	2.0%

Assumptions for Operations Following Renovation Period (Mid-2015 on)

Increase in Sales Over Expected Stable Sales Figures Due to Renovation Impacts			
Year 1 Following Renovations	4.00%	3.00%	12.00%
Year 2 Following Renovations	3.33%	2.50%	10.00%
Year 3 Following Renovations	2.50%	1.88%	7.50%
Year 4 Following Renovations	1.33%	1.00%	4.00%
Year 5 Following Renovations	0.67%	0.50%	2.00%
Year 6 and On	0.00%	0.00%	0.00%

Assumption Applying to All Periods

Assumed Average Inflation: 2.691% (Equal to average Honolulu CPI increase, 1990 - 2010)

(Continued:) Inputs for Calculating Operational Phase Output and Earnings (Alternative-Action Scenario)

Derived from Hawai'i Input-Output Model (for Output and Earnings -- Operations)

Expenditures generated by retail activities fall under the I-O Model's Industry Sector 38 (S38), "Retail." Expenditures generated by restaurant activities fall under the I-O Model's Industry Sector 62 (S62), "Eating and Drinking." Expenditures for Accommodations fall under the I-O Model's Industry Sector 61 (S61), "Accommodations."

I-O Model - Retail Sales

Total Output, $Ms (S38)	7,085.846	*(Not multipliers themselves, but used to calculate Direct multiplier below.)*
Total Earnings, $Ms (S38)	2,273.461	
Calculated: Total Earnings/Total Output (S38)	*0.321*	*Multiplier for Direct Earnings*
Final Demand Output Type II Multiplier (S38)	1.900	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, and Induced)*
Final Demand Earnings Type II Multiplier (S38)	0.558	

I-O Model - Restaurant Sales

Total Output, $Ms (S62)	3,754.631	*(Not multipliers themselves, but used to calculate Direct multiplier below.)*
Total Earnings, $Ms (S62)	1,319.089	
Calculated: Total Earnings/Total Output (S62)	*0.351*	*Multiplier for Direct Earnings*
Final Demand Output Type II Multiplier (S62)	2.169	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, and Induced)*
Final Demand Earnings Type II Multiplier (S62)	0.670	

I-O Model - Accommodations Sales

Total Output, $Ms (S61)	5,678.218	*(Not multipliers themselves, but used to calculate Direct multiplier below.)*
Total Earnings, $Ms (S61)	1,980.724	
Calculated: Total Earnings/Total Output (S61)	*0.349*	*Multiplier for Direct Earnings*
Final Demand Output Type II Multiplier (S61)	2.060	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, and Induced)*
Final Demand Earnings Type II Multiplier (S61)	0.659	

Table 5.7: Inputs for Calculating Operational Phase Jobs (With-Project Scenario)

Derived from Hawai'i Input-Output Model (for Jobs -- Project Operations)

Hawai'i I-O job multipliers differ from output or earnings multipliers because they require adjustment for assumed continuation of historical trends for increasing labor productivity, meaning gradual reduction in number of jobs from the same output over time. The productivity factor is applied each year beginning with the 2007 numbers in the model. For Jobs/$1M Output, used to estimate Direct Jobs, the productivity adjustment could be either a "Productivity Factor" supplied by the model or the percentage change of the Type II Jobs Multiplier. We have elected the latter, because this approach results in a more logical unchanging Direct-to-Total Jobs ratio over time. The current Hawai'i I-O model provides Type II Jobs Multipliers only through year 2017. Past that, multipliers are here estimated based on preserving the productivity factor of 2017 (i.e., Type II Jobs Multiplier as % of Preceding Year) into the future.

	2007	2015	2016	2017	2018	2019	(etc.)
I-O Model - Retail Sales							
Productivity Factor (S38)*	95.259%				*(Calculated from 2018 on, based*		
Total Output, $Ms (S38)	7,085.846				*on constant adjustment numbers*		
Total Jobs (S38)	89,090.000				*from 2017.)*		
Type II Total Jobs Multiplier for Year (S38)	**19.644**	**13.936**	**13.354**	**12.798**	**12.265**	**11.754**	
Type II Jobs Multiplier as % of Preceding Year:		*95.82%*	*95.83%*	*95.83%*	*95.83%*	*95.83%*	*95.83%*
Calculated: Total Jobs/$1M Total Output (S38)	*12.573*	*8.920*	*8.548*	*8.191*	*7.850*	*7.523*	
(This is Direct Jobs Multiplier)							
I-O Model - Restaurant Sales							
Productivity Factor (S62)*	97.010%				*(Calculated from 2018 on, based*		
Total Output, $Ms (S62)	3,754.631				*on constant adjustment numbers*		
Total Jobs (S62)	62,093.000				*from 2017.)*		
Type II Total Jobs Multiplier for Year (S62)	**25.847**	**20.098**	**19.482**	**18.887**	**18.309**	**17.749**	
Type II Jobs Multiplier as % of Preceding Year:		*96.93%*	*96.94%*	*96.94%*	*96.94%*	*96.94%*	*96.94%*
Calculated: Total Jobs/$1M Total Output (S62)	*16.538*	*12.859*	*12.465*	*12.084*	*11.715*	*11.356*	
(This is Direct Jobs Multiplier)							

* (Not used for this analysis, but shown for comparison purposes)

Table 5.8: Inputs for Calculating Operational Phase Jobs (Alternative-Action Scenario)

Derived from Client Inputs and Consultant Estimates (for Jobs -- Operations)

Assumptions for Current (2010) Baseline and Period Through Mid-2013 Start of Renovations
(Gradual economic recovery effect extends beyond 2013 to 2016 stabilization level.)

	Current IMP (incl. Kalākaua retail)	WTC	Hotel, Sub-lessees
Retail Jobs, est. 2010*	341	82	28
Restaurant Jobs, est. 2010*	54	38	104
Accommodations Jobs, 2010 (number provided by Miramar)	0	0	88

* Most 2010 numbers reported/estimated by Queen Emma Land Co. or the Miramar at Waikīkī Hotel. For the Miramar sub-lessees, JMK Associ canvassed the four restaurants and seven other establishments to obtain 2011 jobcounts, used as a basis for estimating 2010 jobs.

Notes:

1. Total 2011 Jobcount for IMP and WTC includes 50 "indirect" contract jobs providing janitorial, maintenance, and security to both operations, allocated on sq. foot percentage basis.
2. 2010 jobcounts estimated as higher than 2011 based on productivity factors from Hawai'i I-O Model Direct Job multipliers (see following page).
3. Jobs above include full- and part-time. These are not necessarily used in calculations but are used to reality-check Direct Job calculations from I-O Model.

Assumed Average Inflation: 2.691% (Equal to average Honolulu CPI increase, 1990 - 2010)

(Continued:) Inputs for Calculating Operational Phase Jobs (Alternative-Action Scenario)

Derived from Hawai'i Input-Output Model (for Jobs -- Operations)

Hawai'i I-O job multipliers differ from output or earnings multipliers because they require adjustment for assumed continuation of historical trends for increasing labor productivity, meaning gradual reduction in number of jobs from the same output over time. The productivity factor is applied each year beginning with the 2007 numbers in the model. For Jobs/$1M Output, used to estimate Direct Jobs, the productivity adjustment could be either a "Productivity Factor" supplied by the model or the percentage change of the Type II Jobs Multiplier. We have elected the latter, because this approach results in a more logical unchanging Direct-to-Total Jobs ratio over time. The current Hawai'i I-O model provides Type II Jobs Multipliers only through year 2017. Past that, multipliers are here estimated based on preserving the productivity factor of 2017 (i.e., Type II Jobs Multiplier as % of Preceding Year) into the future.

	2007	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	(etc.)
I-O Model - Retail Sales												
Productivity Factor (S38)*	95.3%								*(Calculated from 2018, based*			
Total Output, $Ms (S38)	7,085.85								*on constant adjustment numbers*			
Total Jobs (S38)	89,090.00								*from 2017.)*			
Type II Total Jobs Multiplier for Year (S38)	**19.64**	**17.26**	**16.54**	**15.84**	**15.18**	**14.54**	**13.94**	**13.35**	**12.80**	**12.26**	**11.75**	
Type II Jobs Multiplier as % of Preceding Year:		*95.8%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*
Calculated: Total Jobs/$1M Total Output (S38)	*12.57*	*11.05*	*10.58*	*10.14*	*9.72*	*9.31*	*8.92*	*8.55*	*8.19*	*7.85*	*7.52*	
(This is Direct Jobs Multiplier)												
I-O Model - Restaurant Sales												
Productivity Factor (S62)*	97.0%								*(Calculated from 2018, based*			
Total Output, $Ms (S62)	3,754.63								*on constant adjustment numbers*			
Total Jobs (S62)	62,093.00								*from 2017.)*			
Type II Total Jobs Multiplier for Year (S62)	**25.85**	**23.51**	**22.78**	**22.07**	**21.39**	**20.74**	**20.10**	**19.48**	**18.89**	**18.31**	**17.75**	
Type II Jobs Multiplier as % of Preceding Year:		*96.9%*	*96.9%*	*96.9%*	*96.9%*	*96.9%*	*96.9%*	*96.9%*	*96.9%*	*96.9%*	*96.9%*	*96.9%*
Calculated: Total Jobs/$1M Total Output (S62)	*16.54*	*15.04*	*14.57*	*14.12*	*13.69*	*13.27*	*12.86*	*12.47*	*12.08*	*11.71*	*11.36*	
(This is Direct Jobs Multiplier)												
I-O Model - Accommodations												
Productivity Factor (S61)*	94.7%								*(Calculated from 2018, based*			
Total Output, $Ms (S61)	5,678.22								*on constant adjustment numbers*			
Total Jobs (S61)	40,304.00								*from 2017.)*			
Type II Total Jobs Multiplier for Year (S61)	**16.15**	**14.15**	**13.54**	**12.96**	**12.41**	**11.88**	**11.37**	**10.89**	**10.43**	**9.99**	**9.57**	
Type II Jobs Multiplier as % of Preceding Year:		*95.7%*	*95.7%*	*95.7%*	*95.7%*	*95.7%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*	*95.8%*
Calculated: Total Jobs/$1M Total Output (S61)	*7.10*	*6.22*	*5.95*	*5.70*	*5.45*	*5.22*	*5.00*	*4.79*	*4.59*	*4.39*	*4.21*	
(This is Direct Jobs Multiplier)												

* (Not used for this analysis, but shown for comparison purposes)

5.4 Results – Impacts from On-Site Activity (Direct Operations Only)

The first analysis focuses only on results for the actual project site.

5.4.1 Output (Operations, Direct On-Site)

Table 5.9 and Table 5.10 show results for the "With-Project" and "Alternative-Action" Scenarios, while Table 5.11 shows the difference, or impact, by year through 2022. Even with the negative results in constructions years 2013-14 and the conservative negative line reflecting loss of hotel sales, ***the ten-year total projected output (2013 to 2022) for the redeveloped IMP is $844 million) greater than if the current activities persist*** with the assumed level of renovations. By the time that both scenarios reach at least temporary stability in the early 2020s, the annual difference in on-site sales is projected to reach about $140 million. (Table 5.11).

This difference in on-site sales activity drives most of the analysis of subsequent operational and government tax revenue impact.

5.4.2 Earnings (Operations, Direct On-Site)

Conceptually parallel results for household income (earnings) are presented for the two scenarios in Table 5.12 and Table 5.13, with impact results in Table 5.14. The latter table indicates a ***ten-year total increase of about $274 million due to replacement of current activities with the redeveloped IMP***. By 2019 or the early 2020s, the annual difference is about $45 million.

5.4.3 Jobs (Operations, Direct On-Site)

Finally, Table 5.15 and Table 5.16 give employment results for both scenarios, and Table 5.17 shows the difference, or impact. Note that all three tables show declining annual jobcounts from the mid to late 2010s on. That is due to the State I-O Model's built-in assumption of greater labor productivity and hence fewer jobs generated by the same level of sales activity.[22]

While Table 5.17 includes a 2013-2002 "job-year" summary, it probably makes more sense to focus on individual year results: ***By the time of expected stabilized new-IMP sales in 2019, the proposed project would be generating about 1,580 more jobs each year than the current activities.*** For the overall Hawai‘i workforce in recent years, the full-time equivalent (FTE) multiplier for all jobs has been about 91%,[23] so the impact of 1,580 full- and part-time jobs would likely translate to about 1,435 FTE jobs.

[22] We – and in fact DBEDT economists themselves – are somewhat skeptical that the productivity increases will continue at the indicated rate indefinitely into the future. However, we include these declines as yet another conservative step in the analysis. (As indicated in Table 5.7 and Table 5.8, the Model actually extends only to 2017, but we continue the downward trend in employment thereafter.)

[23] U.S. Bureau of Labor Statistics, http://www.bls.gov/opub/gp/pdf/gp10_16.pdf and similar pages for previous few years.

Table 5.9: Direct Operational Output (On-Site Sales) – With-Project Scenario

(All dollar figures are millions of constant 2010 dollars, and show output related to direct on-site economic activity.)	Existing Opera-tions 2010	Existing Opera-tions 2011	Existing Opera-tions 2012	Exist. Ops. End 5/31 2013	No Opera-tions 2014	New Ops. Start 7/1 2015	Full Oper-ations 2016
Direct Output (On-Site Sales)					[initial sales at lower level]		
-- Retail*	$53.17	$55.11	$57.12	$21.72	$0.00	$82.09	$167.88
-- Eating & Drinking*	$16.21	$16.81	$17.42	$6.95	$0.00	$27.36	$55.96
-- Accommodations*	$11.00	$11.40	$11.82	$5.05			
Combined Results (Direct Effects)	**$80.39**	**$83.32**	**$86.35**	**$33.72**	**$0.00**	**$109.46**	**$223.84**

*For 2010 to mid 2013, these consist of sales from existing International Market Place, Waikīkī Town Center, Miramar Hotel and its sub-lessees

	Full Oper-ations 2017	Full Oper-ations 2018	Full Oper-ations 2019	Full Oper-ations 2020	Full Oper-ations 2021	Full Oper-ations 2022	Total (2013-2022)
Direct Output (On-Site Sales)		[Sales assumed to stabilize in mid-2018]					
-- Retail	$173.86	$179.41	$181.94	$181.94	$181.94	$181.94	**$1,352.73**
-- Eating & Drinking	$57.95	$59.80	$59.06	$59.06	$59.06	$59.06	**$444.27**
-- Accommodations							**$5.05**
Combined Results (Direct Effects)	**$231.82**	**$239.22**	**$241.00**	**$241.00**	**$241.00**	**$241.00**	**$1,802.05**

Table 5.10: Direct Operational Output (On-Site Sales) – Alternative-Action Scenario

(All dollar figures are millions of constant 2010 dollars, and show output related to direct on-site economic activity.)	Existing Opera-tions 2010	Existing Opera-tions 2011	Existing Opera-tions 2012	Renov. Starts 7/1 2013	Renova-tion Year 2014	Renov. Ends 6/30 2015	Full Oper-ations 2016
Direct Output (On-Site Sales)	[Slow economic recovery thru 2015			[Depressed sales period]			
-- Retail	$53.17	$55.11	$57.12	$52.13	$46.69	$55.99	$68.69
-- Eating & Drinking	$16.21	$16.81	$17.42	$16.68	$15.87	$17.92	$21.54
-- Accommodations	$11.00	$11.40	$11.82	$12.12	$12.44	$13.02	$15.27
Combined Results (Direct Effects)	**$80.39**	**$83.32**	**$86.35**	**$80.93**	**$75.01**	**$86.94**	**$105.50**

	Full Oper-ations 2017	Full Oper-ations 2018	Full Oper-ations 2019	Full Oper-ations 2020	Full Oper-ations 2021	Full Oper-ations 2022	Total (2013-2022)
Direct Output (On-Site Sales)	[From 2016 to 2020, some sales benefit from renovation]						
-- Retail	$68.22	$67.65	$66.84	$66.37	$65.91	$65.91	**$624.40**
-- Eating & Drinking	$21.30	$21.00	$20.58	$20.34	$20.10	$20.10	**$195.42**
-- Accommodations	$15.00	$14.66	$14.18	$13.91	$13.63	$13.63	**$137.87**
Combined Results (Direct Effects)	**$104.52**	**$103.30**	**$101.59**	**$100.62**	**$99.64**	**$99.64**	**$957.69**

Table 5.11: Direct Operational Output (On-Site Sales) – Project Impact (Difference)

(All dollar figures are millions of constant 2010 dollars, and show output related to direct on-site economic activity.)	Existing Opera-tions 2010	Existing Opera-tions 2011	Existing Opera-tions 2012	Const. or Renov. Starts Mid 2013	Const. or Renova-tion Year 2014	1/2 Const. or Renov., 1/2 Oper. 2015	Full Oper-ations 2016
Direct Output (On-Site Sales)							
-- Retail	$0.00	$0.00	$0.00	-$30.41	-$46.69	$26.10	$99.19
-- Eating & Drinking	$0.00	$0.00	$0.00	-$9.73	-$15.87	$9.44	$34.42
-- Accommodations	$0.00	$0.00	$0.00	-$7.07	-$12.44	-$13.02	-$15.27
Combined Results (Direct Effects)	**$0.00**	**$0.00**	**$0.00**	**-$47.21**	**-$75.01**	**$22.52**	**$118.34**

	Full Oper-ations 2017	Full Oper-ations 2018	Full Oper-ations 2019	Full Oper-ations 2020	Full Oper-ations 2021	Full Oper-ations 2022	Total (2013-2022)
Direct Output (On-Site Sales)							
-- Retail	$105.64	$111.77	$115.10	$115.57	$116.03	$116.03	**$728.33**
-- Eating & Drinking	$36.66	$38.81	$38.48	$38.72	$38.96	$38.96	**$248.84**
-- Accommodations	-$15.00	-$14.66	-$14.18	-$13.91	-$13.63	-$13.63	**-$132.82**
Combined Results (Direct Effects)	**$127.29**	**$135.92**	**$139.40**	**$140.38**	**$141.36**	**$141.36**	**$844.36**

Table 5.12: Direct Operational Earnings – With-Project Scenario

(All dollar figures are millions of constant 2010 dollars, and show earnings related to direct on-site economic activity.)	Existing Opera-tions 2010	Existing Opera-tions 2011	Existing Opera-tions 2012	Exist. Ops. End 5/31 2013	No Opera-tions 2014	New Ops. Start 7/1 2015	Full Oper-ations 2016
Direct Earnings (Household Income)							
-- Retail*	$17.06	$17.68	$18.33	$6.97	$0.00	$26.34	$53.86
-- Eating & Drinking*	$5.70	$5.90	$6.12	$2.44	$0.00	$9.61	$19.66
-- Accommodations*	$3.86	$4.01	$4.15	$1.77			
Combined Results (Direct Effects)	**$26.62**	**$27.59**	**$28.60**	**$11.19**	**$0.00**	**$35.95**	**$73.52**

*For 2010 to mid 2013, these come from sales from existing International Market Place, Waikīkī Town Center, Miramar Hotel and its sub-lessee

	Full Oper-ations 2017	Full Oper-ations 2018	Full Oper-ations 2019	Full Oper-ations 2020	Full Oper-ations 2021	Full Oper-ations 2022	Total (2013-2022)
Direct Earnings (Household Income)							
-- Retail	$55.78	$57.56	$58.37	$58.37	$58.37	$58.37	**$434.02**
-- Eating & Drinking	$20.36	$21.01	$20.75	$20.75	$20.75	$20.75	**$156.08**
-- Accommodations							**$1.77**
Combined Results (Direct Effects)	**$76.14**	**$78.57**	**$79.12**	**$79.12**	**$79.12**	**$79.12**	**$591.87**

Table 5.13: Direct Operational Earnings – Alternative-Action Scenario

(All dollar figures are millions of constant 2010 dollars, and show earnings related to direct on-site economic activity.)	Existing Opera-tions 2010	Existing Opera-tions 2011	Existing Opera-tions 2012	Renov. Starts 7/1 2013	Renova-tion Year 2014	Renov. Ends 6/30 2015	Full Oper-ations 2016
Direct Earnings (Household Income)							
-- Retail	$17.06	$17.68	$18.33	$16.72	$14.98	$17.97	$22.04
-- Eating & Drinking	$5.70	$5.90	$6.12	$5.86	$5.58	$6.30	$7.57
-- Accommodations	$3.86	$4.01	$4.15	$4.26	$4.37	$4.58	$5.36
Combined Results (Direct Effects)	**$26.62**	**$27.59**	**$28.60**	**$26.85**	**$24.93**	**$28.84**	**$34.97**

	Full Oper-ations 2017	Full Oper-ations 2018	Full Oper-ations 2019	Full Oper-ations 2020	Full Oper-ations 2021	Full Oper-ations 2022	Total (2013-2022)
Direct Earnings (Household Income)							
-- Retail	$21.89	$21.70	$21.44	$21.30	$21.15	$21.15	**$200.34**
-- Eating & Drinking	$7.48	$7.38	$7.23	$7.15	$7.06	$7.06	**$68.66**
-- Accommodations	$5.27	$5.15	$4.98	$4.89	$4.79	$4.79	**$48.44**
Combined Results (Direct Effects)	**$34.64**	**$34.23**	**$33.66**	**$33.33**	**$33.00**	**$33.00**	**$317.43**

Table 5.14: Direct Operational Earnings – Project Impact (Difference)

(All dollar figures are millions of constant 2010 dollars, and show earnings related to direct on-site economic activity.)	Existing Opera-tions 2010	Existing Opera-tions 2011	Existing Opera-tions 2012	Const. or Renov. Starts Mid 2013	Const. or Renova-tion Year 2014	1/2 Const. or Renov., 1/2 Oper. 2015	Full Oper-ations 2016
Direct Earnings (Household Income)							
-- Retail	$0.00	$0.00	$0.00	-$9.76	-$14.98	$8.37	$31.83
-- Eating & Drinking	$0.00	$0.00	$0.00	-$3.42	-$5.58	$3.32	$12.09
-- Accommodations	$0.00	$0.00	$0.00	-$2.48	-$4.37	-$4.58	-$5.36
Combined Results (Direct Effects)	**$0.00**	**$0.00**	**$0.00**	**-$15.66**	**-$24.93**	**$7.12**	**$38.55**

	Full Oper-ations 2017	Full Oper-ations 2018	Full Oper-ations 2019	Full Oper-ations 2020	Full Oper-ations 2021	Full Oper-ations 2022	Total (2013-2022)
Direct Earnings (Household Income)							
-- Retail	$33.89	$35.86	$36.93	$37.08	$37.23	$37.23	**$233.68**
-- Eating & Drinking	$12.88	$13.63	$13.52	$13.60	$13.69	$13.69	**$87.42**
-- Accommodations	-$5.27	-$5.15	-$4.98	-$4.89	-$4.79	-$4.79	**-$46.66**
Combined Results (Direct Effects)	**$41.50**	**$44.34**	**$45.47**	**$45.80**	**$46.13**	**$46.13**	**$274.44**

Table 5.15: Direct Operational Employment – With-Project Scenario

(All full- and part-time jobs related to direct on-site economic activity.)	Existing Opera-tions 2010	Existing Opera-tions 2011	Existing Opera-tions 2012	Exist. Ops. End 5/31 2013	No Opera-tions 2014	New Ops. Start 7/1 2015	Full Oper-ations 2016
Direct Jobs (Full- and Part-Time)							
-- Retail*	588	599	611	229	0	836	1,683
-- Eating & Drinking*	244	252	259	103	0	402	818
-- Accommodations*	68	70	71	30			
Combined Results (Direct Effects)	**900**	**920**	**941**	**361**	**0**	**1,238**	**2,501**

*For 2010 to mid 2013, these come from sales from existing International Market Place, Waikīkī Town Center, Miramar Hotel and its sub-lessee

	Full Oper-ations 2017	Full Oper-ations 2018	Full Oper-ations 2019	Full Oper-ations 2020	Full Oper-ations 2021	Full Oper-ations 2022	Total (2013-2022)
Direct Jobs (Full- and Part-Time)							
-- Retail	1,715	1,742	1,738	1,711	1,683	1,657	**12,993**
-- Eating & Drinking	843	866	852	848	844	840	**6,417**
-- Accommodations							**30**
Combined Results (Direct Effects)	**2,558**	**2,608**	**2,590**	**2,559**	**2,528**	**2,497**	**19,440**

Note: Ten-year totals should be interpreted as "job-years," not jobcounts.

Table 5.16: Direct Operational Employment – Alternative-Action Scenario

(All full- and part-time jobs related to direct on-site economic activity.)	Existing Opera-tions 2010	Existing Opera-tions 2011	Existing Opera-tions 2012	Renov. Starts 7/1 2013	Renova-tion Year 2014	Renov. Ends 6/30 2015	Full Oper-ations 2016
Direct Jobs (Full- and Part-Time)							
-- Retail	588	599	611	548	483	570	689
-- Eating & Drinking	244	252	259	247	234	263	315
-- Accommodations	68	70	71	72	72	74	86
Combined Results (Direct Effects)	**900**	**920**	**941**	**867**	**790**	**908**	**1,089**

	Full Oper-ations 2017	Full Oper-ations 2018	Full Oper-ations 2019	Full Oper-ations 2020	Full Oper-ations 2021	Full Oper-ations 2022	Total (2013-2022)
Direct Jobs (Full- and Part-Time)							
-- Retail	673	657	639	624	610	600	**6,093**
-- Eating & Drinking	310	304	297	292	287	286	**2,836**
-- Accommodations	83	80	76	73	70	69	**755**
Combined Results (Direct Effects)	**1,066**	**1,041**	**1,011**	**989**	**968**	**955**	**9,684**

Note: Ten-year totals should be interpreted as "job-years," not jobcounts.

Table 5.17: Direct Operational Employment – Project Impact (Difference)

(All full- and part-time jobs related to direct on-site economic activity.)	Existing Opera-tions 2010	Existing Opera-tions 2011	Existing Opera-tions 2012	Const. or Renov. Starts Mid 2013	Const. or Renova-tion Year 2014	1/2 Const. or Renov., 1/2 Oper. 2015	Full Oper-ations 2016
Direct Jobs (Full- and Part-Time)							
-- Retail	0	0	0	-320	-483	266	994
-- Eating & Drinking	0	0	0	-144	-234	139	503
-- Accommodations	0	0	0	-42	-72	-74	-86
Combined Results (Direct Effects)	**0**	**0**	**0**	**-506**	**-790**	**330**	**1,412**

	Full Oper-ations 2017	Full Oper-ations 2018	Full Oper-ations 2019	Full Oper-ations 2020	Full Oper-ations 2021	Full Oper-ations 2022	Total (2013-2022)
Direct Jobs (Full- and Part-Time)							
-- Retail	1,042	1,085	1,100	1,087	1,074	1,057	**6,900**
-- Eating & Drinking	533	562	555	556	557	554	**3,581**
-- Accommodations	-83	-80	-76	-73	-70	-69	**-725**
Combined Results (Direct Effects)	**1,493**	**1,568**	**1,579**	**1,569**	**1,560**	**1,542**	**9,756**

Note: Ten-year totals should be interpreted as "job-years," not jobcounts.

5.5 Results – Potential Net New Impacts (Operations, Direct and Total)

The second analytic perspective provides an illustrative range of results about what might be the "net new impacts,"[24] acknowledging that (a) a substantial proportion of the previously measured direct on-site impacts might be due to diversion of dollars that visitors would have spent anyway on something else during their stays; and (b) while it is likely that there is a real but relatively small net new impact on the economy, no studies exist that provide a basis for any precise estimate – and thus the 5% to 15% illustrative range suggested previously (Section 5.2).

It should be noted that new retail centers can fill untapped demand for certain types of stores without harming other nearby centers. For example, the new Beach Walk retail and the fully renovated Royal Hawaiian Shopping Center came on-line at roughly the same time in the late 2000s without harming one another, and both have done well. However, it is also possible that the more visitors spend on shopping of any kind, the less they spend on, say, ground transportation or entertainment. The idea of "net new impact" considers visitor expenditures in the total economy, not just retail/restaurant.

5.5.1 Output (Operations, Direct On-Site)

Table 5.18 provides a necessary initial calculation that poses the temporary hypothesis that 100% of the sales (for both scenarios) consists of new expenditures in the Hawai‘i economy (i.e., that would not have been made anyway). This allows calculation of interim indirect/induced multiplier effects. Table 5.19 then applies the 5% to 15% range, leading to the finding that ***$47 million to $142 million of direct output, and $92 million to $277 million of total output, is a reasonable likely range of net impact*** for the summary 2016-2022 timeframe.

5.5.2 Earnings (Operations, Direct On-Site)

Following a similar initial step shown in Table 5.20, Table 5.21 estimates ***net new earnings are likely in the range of $15 million to $46 million for direct household income, and $27 million to $82 million for total earnings*** including ripple effects.

5.5.3 Jobs (Operations, Direct On-Site)

Table 5.22 shows the needed initial calculations, while Table 5.23 suggest that, of all jobs created or supported by the new project, ***the likely range of net new jobs would be from about 78 to 235 a year on site, and from 139 to 415 a year in the total economy***, once stabilization is achieved in the late 2010s and early 2020s.

[24] The phrase "net new impacts" in some ways always deserve quotation marks, because it implies it is possible to know what is a net addition to a total economy that is in fact constantly changing. The analysis still has value as a reminder that on-site impacts are just a part of the economic impact story, even though it is the part that can be most reliably measured. Also, the "net new impact" approach can appropriately consider total impacts including multiplier effects, which the direct on-site approach cannot. Finally, this approach can serve as a stand-in for the project's otherwise non-measurable contribution to the ongoing revitalization of Waikīkī that is needed to preserve and possibly expand the visitor market.

Table 5.18: Initial Calculation – Net Direct and Total Operational Output Under 100% Hypothesis for Both Scenarios

(All dollar figures are millions of constant 2010 dollars, and show output related to direct on-site economic activity.)	2010	2011	2012	2013	2014	2015	2016
Direct Output (On-Site Sales, Combined Sectors)							
-- With-Project Scenario (redevelopment with new IMP mall)	$80.39	$83.32	$86.35	$33.72	$0.00	$109.46	$223.84
-- Alternative-Action Scenario (renovations with limited economic bene	$80.39	$83.32	$86.35	$80.93	$75.01	$86.94	$105.50
Total Output (with Indirect/Induced, Combined Sectors)							
-- With-Project Scenario	$158.88	$164.66	$170.66	$66.76	$0.00	$215.36	$440.41
-- Alternative-Action Scenario	$158.88	$164.66	$170.66	$160.22	$148.78	$172.11	$208.70

	2017	2018	2019	2020	2021	2022	Total (2016-2022)
Direct Output (On-Site Sales, Combined Sectors)							
-- With-Project Scenario (redevelopment with new IMP mall)	$231.82	$239.22	$241.00	$241.00	$241.00	$241.00	**$1,658.87**
-- Alternative-Action Scenario (renovations with limited economic bene	$104.52	$103.30	$101.59	$100.62	$99.64	$99.64	**$714.82**
Total Output (with Indirect/Induced, Combined Sectors)							
-- With-Project Scenario	$456.10	$470.67	$473.85	$473.85	$473.85	$473.85	**$3,262.58**
-- Alternative-Action Scenario	$206.74	$204.29	$200.85	$198.89	$196.93	$196.93	**$1,413.33**

Summary for these analyses starts at 2016 because negative figures in 2013 and 2014 do not consider off-setting construction impacts.

Table 5.19: Likely Range of Net New Operational Impacts – Direct and Total Output

(All dollar figures are millions of constant 2010 dollars, and show output related to direct on-site economic activity.)	2010	2011	2012	2013	2014	2015	2016
Net Direct Output (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	$0.00	$0.00	$0.00	-$2.36	-$3.75	$1.13	$5.92
-- % of Difference Assumed as New $s in Economy: 10%	$0.00	$0.00	$0.00	-$4.72	-$7.50	$2.25	$11.83
-- % of Difference Assumed as New $s in Economy: 15%	$0.00	$0.00	$0.00	-$7.08	-$11.25	$3.38	$17.75
Net Total Output (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	$0.00	$0.00	$0.00	-$4.67	-$7.44	$2.16	$11.59
-- % of Difference Assumed as New $s in Economy: 10%	$0.00	$0.00	$0.00	-$9.35	-$14.88	$4.33	$23.17
-- % of Difference Assumed as New $s in Economy: 15%	$0.00	$0.00	$0.00	-$14.02	-$22.32	$6.49	$34.76

	2017	2018	2019	2020	2021	2022	Total (2016-2022)
Net Direct Output (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	$6.36	$6.80	$6.97	$7.02	$7.07	$7.07	**$47.20**
-- % of Difference Assumed as New $s in Economy: 10%	$12.73	$13.59	$13.94	$14.04	$14.14	$14.14	**$94.41**
-- % of Difference Assumed as New $s in Economy: 15%	$19.09	$20.39	$20.91	$21.06	$21.20	$21.20	**$141.61**
Net Total Output (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	$12.47	$13.32	$13.65	$13.75	$13.85	$13.85	**$92.46**
-- % of Difference Assumed as New $s in Economy: 10%	$24.94	$26.64	$27.30	$27.50	$27.69	$27.69	**$184.93**
-- % of Difference Assumed as New $s in Economy: 15%	$37.40	$39.96	$40.95	$41.24	$41.54	$41.54	**$277.39**

Summary for these analyses starts at 2016 because negative figures in 2013 and 2014 do not consider off-setting construction impacts.

Table 5.20: Initial Calculations – Net New Direct and Total Operational Earnings Under 100% Hypothesis for Both Scenarios

(All dollar figures are millions of constant 2010 dollars, and show earnings related to direct on-site economic activity.)	2010	2011	2012	2013	2014	2015	2016
Direct Earnings (Household Income, Combined Sectors)							
-- With-Project Scenario (redevelopment w ith new IMP mall)	$26.62	$27.59	$28.60	$11.19	$0.00	$35.95	$73.52
-- Alternative-Action Scenario (renovations w ith limited economic bene	$26.62	$27.59	$28.60	$26.85	$24.93	$28.84	$34.97
Total Earnings (with Indirect/Induced, Combined Sectors)							
-- With-Project Scenario	$47.80	$49.54	$51.34	$20.11	$0.00	$64.15	$131.19
-- Alternative-Action Scenario	$47.80	$49.54	$51.34	$48.27	$44.90	$51.85	$62.84

	2017	2018	2019	2020	2021	2022	Total (2016-2022)
Direct Earnings (Household Income, Combined Sectors)							
-- With-Project Scenario (redevelopment w ith new IMP mall)	$76.14	$78.57	$79.12	$79.12	$79.12	$79.12	**$544.73**
-- Alternative-Action Scenario (renovations w ith limited economic bene	$34.64	$34.23	$33.66	$33.33	$33.00	$33.00	**$236.82**
Total Earnings (with Indirect/Induced, Combined Sectors)							
-- With-Project Scenario	$135.87	$140.21	$141.12	$141.12	$141.12	$141.12	**$971.74**
-- Alternative-Action Scenario	$62.24	$61.49	$60.44	$59.84	$59.24	$59.24	**$425.34**

Summary for these analyses starts at 2016 because negative figures in 2013 and 2014 do not consider off-setting construction impacts.

Table 5.21: Likely Range of Net New Operational Impacts – Direct and Total Earnings

(All dollar figures are millions of constant 2010 dollars, and show earnings related to direct on-site economic activity.)	2010	2011	2012	2013	2014	2015	2016
Net Direct Earnings (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	$0.00	$0.00	$0.00	-$0.78	-$1.25	$0.36	$1.93
-- % of Difference Assumed as New $s in Economy: 10%	$0.00	$0.00	$0.00	-$1.57	-$2.49	$0.71	$3.86
-- % of Difference Assumed as New $s in Economy: 15%	$0.00	$0.00	$0.00	-$2.35	-$3.74	$1.07	$5.78
Net Total Earnings (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	$0.00	$0.00	$0.00	-$1.41	-$2.24	$0.62	$3.42
-- % of Difference Assumed as New $s in Economy: 10%	$0.00	$0.00	$0.00	-$2.82	-$4.49	$1.23	$6.84
-- % of Difference Assumed as New $s in Economy: 15%	$0.00	$0.00	$0.00	-$4.22	-$6.73	$1.85	$10.25

	2017	2018	2019	2020	2021	2022	Total (2016-2022)
Net Direct Earnings (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	$2.08	$2.22	$2.27	$2.29	$2.31	$2.31	**$15.40**
-- % of Difference Assumed as New $s in Economy: 10%	$4.15	$4.43	$4.55	$4.58	$4.61	$4.61	**$30.79**
-- % of Difference Assumed as New $s in Economy: 15%	$6.23	$6.65	$6.82	$6.87	$6.92	$6.92	**$46.19**
Net Total Earnings (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	$3.68	$3.94	$4.03	$4.06	$4.09	$4.09	**$27.32**
-- % of Difference Assumed as New $s in Economy: 10%	$7.36	$7.87	$8.07	$8.13	$8.19	$8.19	**$54.64**
-- % of Difference Assumed as New $s in Economy: 15%	$11.04	$11.81	$12.10	$12.19	$12.28	$12.28	**$81.96**

Summary for these analyses starts at 2016 because negative figures in 2013 and 2014 do not consider off-setting construction impacts.

Table 5.22: Initial Calculation – Net Direct and Total Operational Employment Under 100% Hypothesis for Both Scenarios

(All full- and part-time jobs related to direct on-site economic activity.)	2010	2011	2012	2013	2014	2015	2016
Direct Jobs (Full- and Part-Time, Combined Sectors)							
-- With-Project Scenario (redevelopment with new IMP mall)	900	920	941	361	0	1,238	2,501
-- Alternative-Action Scenario (renovations with limited economic bene	900	920	941	867	790	908	1,089
Total Jobs (with Indirect/Induced, Combined Sectors)							
-- With-Project Scenario	1,455	1,488	1,521	586	0	1,935	3,908
-- Alternative-Action Scenario	1,455	1,449	1,443	1,299	1,156	1,289	1,503

	2017	2018	2019	2020	2021	2022	Total (2016-2022)
Direct Jobs (Full- and Part-Time, Combined Sectors)							
-- With-Project Scenario (redevelopment with new IMP mall)	2,558	2,608	2,590	2,559	2,528	2,497	**17,840**
-- Alternative-Action Scenario (renovations with limited economic bene	1,066	1,041	1,011	989	968	955	**7,119**
Total Jobs (with Indirect/Induced, Combined Sectors)							
-- With-Project Scenario	3,998	4,075	4,047	3,998	3,949	3,902	**27,877**
-- Alternative-Action Scenario	1,432	1,361	1,287	1,225	1,166	1,121	**9,095**

Summary for these analyses starts at 2016 because negative figures in 2013 and 2014 do not consider off-setting construction impacts.

Table 5.23: Likely Range of Net New Operational Impacts – Direct and Total Employment

(All full- and part-time jobs related to direct on-site economic activity.)	2010	2011	2012	2013	2014	2015	2016
Net Direct Jobs (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	0	0	0	-25	-39	17	71
-- % of Difference Assumed as New $s in Economy: 10%	0	0	0	-51	-79	33	141
-- % of Difference Assumed as New $s in Economy: 15%	0	0	0	-76	-118	50	212
Net Total Jobs (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	0	2	4	-36	-58	32	120
-- % of Difference Assumed as New $s in Economy: 10%	0	4	8	-71	-116	65	240
-- % of Difference Assumed as New $s in Economy: 15%	0	6	12	-107	-173	97	361

	2017	2018	2019	2020	2021	2022	Total (2016-2022)
Net Direct Jobs (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	75	78	79	78	78	77	**536**
-- % of Difference Assumed as New $s in Economy: 10%	149	157	158	157	156	154	**1,072**
-- % of Difference Assumed as New $s in Economy: 15%	224	235	237	235	234	231	**1,608**
Net Total Jobs (Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
-- % of Difference Assumed as New $s in Economy: 5%	128	136	138	139	139	139	**939**
-- % of Difference Assumed as New $s in Economy: 10%	257	271	276	277	278	278	**1,878**
-- % of Difference Assumed as New $s in Economy: 15%	385	407	414	416	417	417	**2,817**

Summary for these analyses starts at 2016 because negative figures in 2013 and 2014 do not consider off-setting construction impacts.

6. FISCAL IMPACTS

This chapter focuses on government tax revenues and costs. It includes:

- Context about trends in government revenues and taxation policies;
- Discussion of types of analysis, including cost issues;
- Review of input assumptions;
- Results flowing from direct on-site impacts; and
- Results for illustrative analysis of potential net new impacts.

6.1 Context: Government Revenue Condition and Taxation Policies

In recent years, taxes have comprised about two-thirds of total State revenues and 60% of all City revenues (with much of the remainder for both levels of government coming from "inter-governmental transfers" such as federal grants, along with various miscellaneous other revenue sources such as user fees).

Among State taxes, the most important sources have been (a) General Excise Taxes (GET, coming from visitors as well as residents), comprising about 50% of all tax revenues, and (b) individual income taxes, roughly another 30%. For the City, over the past decade property taxes have comprised from 80% to 87% of all tax revenue – with most of that actually coming from residential property taxes, even though Honolulu has one of the lowest property tax rates in the nation (as property taxes elsewhere typically support public schools, which in Hawai‘i are the responsibility of the State).

In normal times, total tax revenues grow each year along with population and expanded economic activity. However, Figure 6.1 on the following page shows the economic downturn of the late 2000s resulted in actual declines for the State and a leveling off of tax revenue for the City and County, in "real" or inflation-adjusted dollars.

However, to reach the recent tax revenue levels shown in Figure 6.1, both levels of government have had to adjust tax policies. The City, for example, has been shifting property tax burdens from Residential to Commercial, Hotel/Resort, and Industrial property tax categories[25] (Table 6.1). The State has cut expenditures the last several years to match falling revenues, but has also "temporarily" increased taxes such as the Transient Accommodation Tax (TAT) and pyramided subcontractor GET rates. This means the State's Input-Output (I-O) Model's State Tax multipliers, based on historical conditions in 2007, probably now somewhat underestimate actual total taxes under current laws, but these 2007 State Tax multipliers are still used as a conservative measure, since they apply to both scenarios and using larger multipliers would increase the difference between the two scenarios (i.e., the "impact").

[25] This was done partly in response to previous rapid increases in residential property taxes during the better economy of the mid-2000s, but along with increased valuations from that period helped result in a 44.5% increase in real dollars from overall property tax sources from 2005 to 2010.

Figure 6.1: Tax Revenues, State of Hawai'i and City and County of Honolulu, Fiscal Years 2002 - 2010

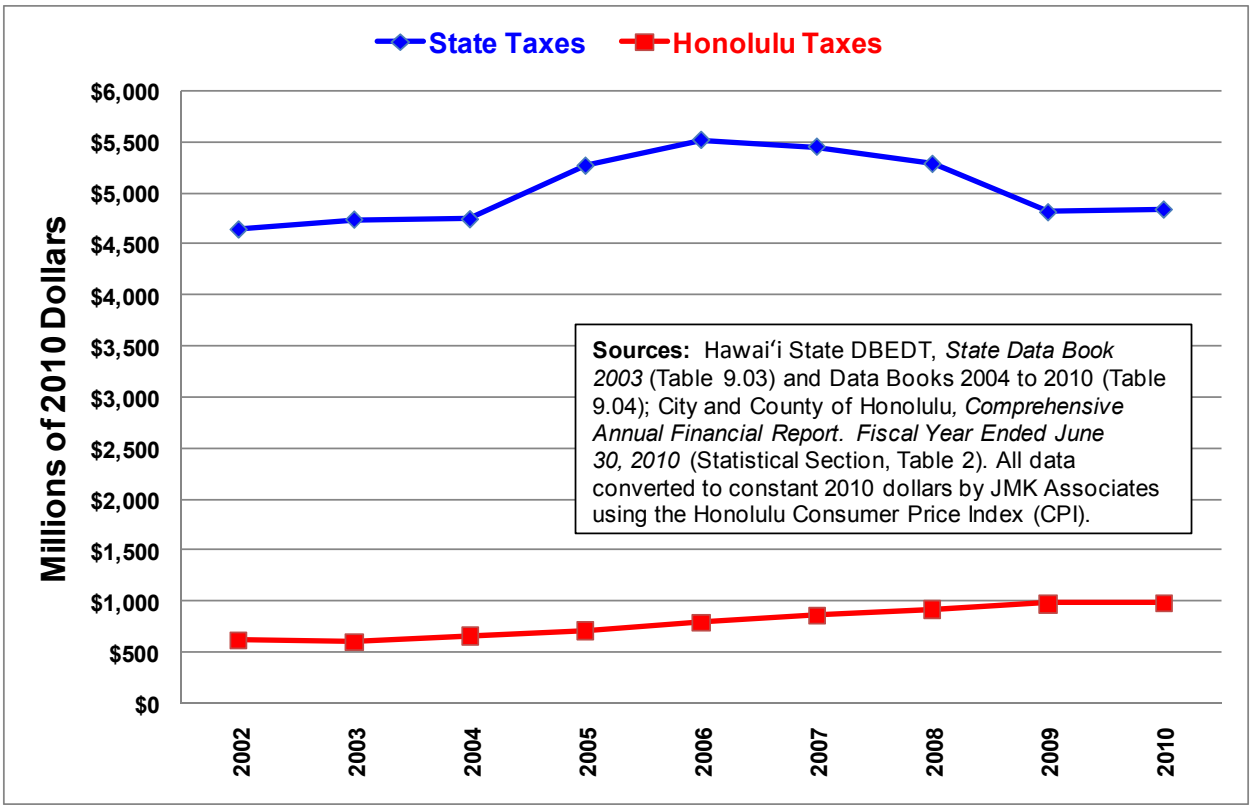


Table 6.1: City and County of Honolulu Property Tax Rates by Category, 2005 - 2011

Older Categories	2005	2006	2007	2008	2009	2010	2011	More Recent Categories
Commercial	$11.37	$11.37	$11.97	$12.40	$12.40	$12.40	$12.40	**Commercial**
Hotel & Resort	$11.37	$11.37	$11.97	$12.40	$12.40	$12.40	$12.40	**Hotel & Resort**
Industrial	$11.37	$11.37	$11.97	$12.40	$12.40	$12.40	$12.40	**Industrial**
Public Service	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**Public Service**
Agricultural	$9.57	$8.57	$8.57	$5.70	$5.70	$5.70	$5.70	**Agricultural**
		$8.57	$8.57	$8.50	$8.50	$8.50	$8.50	**Vacant Agricult.**
Preservation	$9.57	$9.57	$9.57	$5.70	$5.70	$5.70	$5.70	**Preservation**
Apartment	$3.75	$3.75	$3.59	$3.29				
Unimproved Residential	$5.72	$5.72	$5.72	$5.70				
Improved Residential	$3.75	$3.75	$3.59	$3.29	$3.29	$3.42	$3.42	**Homeowner**
							$3.58	**Non-homeowner**

Source: Hawai'i State DBEDT, *State Data Book* (annual editions 2004 to 2010).

6.2 Types of Analysis

6.2.1 On-Site Impacts and Net New Impacts

Consistent with the approach used in the previous chapter for operational impacts, the fiscal analysis also looks at (a) Impacts from Direct On-Site Activity and (b) Potential Net New Impacts (Direct and Total) – illustrative range of assumed 5%, 10%, and 15% effects. See foregoing Section 5.2 for explanation.

6.2.2 Cost Considerations

Analysis of government fiscal impacts in theory involves both revenues and costs from proposed developments. The cost analysis is normally conducted in one of two different possible approaches:

- **Average-Cost Approach** – This frequently-used approach is most useful when a project is not expected to generate unique capital costs for government but would generate additional visitors to the state. However, the methods used for the current study do not assume it will draw any new visitors[26] (perhaps just new dollars), and so this approach is not appropriate for the present study.

- **Marginal-Cost Approach** – This approach involves identifying the new or "marginal" costs to government unique to the project. An example might be a large new community on previously undeveloped land, as this could require government expenses for new roads, schools, etc. This was the approach initially selected for the current study.

However, the project is unlikely to require significant new State or City expenditures, and therefore the analysis will be confined to new tax revenues.

Government of course does make substantial expenditures to support Waikīkī tourism (and the Waikīkī residential community) each year, but the authors of this study could find no reason to believe that replacing the existing International Market Place and adjacent activities with a new retail center would add to those expenditures. The main reasons for this are:

(1) The developer will be required to assume capital costs associated with connecting things like on-site sewer lines to the City system; and

(2) The project involves redevelopment in an already urbanized area with existing government services and infrastructure.

[26] It should be noted that the average-cost approach applied to new visitors almost always produces a positive result for government, because it is based on services used and visitors use fewer government services than do residents. Hence, the "Net New Impact" assumption of no new visitors is conservative for fiscal analysis, as it would add to the positive economic impact if utilized.

To confirm the no-additional-cost finding, JMK Associates contacted a number of agencies in the City government (as the City seemed more likely than the State to have immediate and identifiable costs associated with the new project):

- Wastewater Branch, Dept. of Planning and Permitting (DPP)
- Civil Engineering Division, DPP
- Traffic Review Branch, DPP
- Board of Water Supply
- Honolulu Police Dept.

One interviewee (at DPP's Civil Engineering Division) said there was a policy of not providing information about proposed project costs. All others said that – pending additional review or new information – there was no apparent reason to believe the redevelopment would engender new government costs. Thus, it remains possible that government review of the project EIS could result in identifying some new costs, but as of December 2011 none could be identified by JMK Associates.

6.3 Assumptions – Government Revenue (Construction Plus Operations)

The study requires separate calculation of revenue from the Construction and Operation phases, for each scenario. Table 6.2 and Table 6.3 show the Construction Phase input assumptions for the "With-Project" and "Alternative-Action" Scenarios, while Table 6.4 and Table 6.5 show similar assumptions for the Operational Phase. Some inputs remain the same for each phase/scenario, and some differ as appropriate.

It was previously noted that I-O State Tax Multipliers from 2007 would likely underestimate tax revenues for a while under current law but that their existing lower values lead to a conservative impact result. However, we retain the higher current 9.25% TAT rate for the Alternative-Action Scenario, despite some current legal wording indicating a return to a previous 7.25% rate after 2015. This action is also conservative, because it applies just to the Alternative-Action Scenario, meaning that any overestimate gets subtracted and thus narrows the impact (which is defined as the difference between the scenarios).

The TAT is associated with the continuation of the Miramar at Waikīkī Hotel under the Alternative-Action Scenario, and it is to be remembered that counting any TAT at all is a conservative action, because it may well not be "lost" at all – existing hotel supply in Waikīkī being apparently capable of absorbing any displaced demand from the closing of this facility (see Table 5.4 in Section 5.1.2).

Table 6.2: Inputs for Calculating Tax Revenue from Construction Phase (With-Project Scenario)

Assumptions for City Tax Revenues -- Construction Years

City tax revenues are estimated independently of the State's Input-Output Model. They come from:
- The 0.5% GET surcharge on total construction expenditures; this requires no further assumptions.
- Property taxes on land and buildings, assessed on Oct. 1 of each year and paid the following year.
- Waikīkī Business Improvement District Assessment (WBIDA, tied to property tax evaluations)

Assumed rate per $1,000 assessed value (total land and buildings): WBIDA: $0.49 City: $12.40 Current City rate for both Commercial and Hotel uses

(These rates are assumed to increase after 2011 by the inflation factor noted below.)

Assumptions for Pre-Construction Years (payments made in 2012 and 2013, with one-year lag)

We assume no short-term increase in assessed value of land or buildings -- i.e., identical to the 2011 assessed values below. The same assumptions are made for both the "With-Project" and "Alternative-Action" scenarios for 2010 through 2013 payments, resulting in zero impact for those years. However, values are shown here because they provide baseline information. Source for values shown below and in similar subsequent table is: City & County of Honolulu Real Property Assessement Website (http://honolulupropertytax.com/Main/Home.aspx)

Assessed Value of Land for Subject Parcels	2010	2011	
TMK 26022036	$3,625,900	$3,625,900	Kalākaua Retail Frontage #1
TMK 26022037	$3,625,900	$3,625,900	Kalākaua Retail Frontage #2
TMK 26022038	$57,711,700	$57,711,700	International Market Place
TMK 26022039	$16,355,000	$16,355,000	Miramar at Waikīkī Hotel
TMK 26022043	$29,120,000	$29,120,000	Waikīkī Town Center
Calculated: Total Assessed Value, Land:	$110,438,500	$110,438,500	

Assessed Value of Buildings for Parcels			
TMK 26022036	$912,300	$903,600	Kalākaua Retail Frontage #1
TMK 26022037	$385,900	$381,100	Kalākaua Retail Frontage #2
TMK 26022038	$8,245,800	$8,149,800	International Market Place
TMK 26022039	$5,298,500	$3,245,000	Miramar at Waikīkī Hotel
TMK 26022043	$10,639,100	$10,553,000	Waikīkī Town Center
Calculated: Total Assessed Value, Buildings:	$25,481,600	$23,232,500	
Calculated: Total Assessed Property Value:	$135,920,100	$133,671,000	

Assumptions for Construction Years (payments made in 2014 to 2016, with one-year lag)

Land values are assumed to remain constant at the 2011 level, though an annual inflation factor is added starting with the 2013 assessment -- affecting payments in 2014. This is a conservative assumption, as land values may in reality increase with market transactions in a recovering economy; in fact, the cumulative assessed value of these parcels was some $5 million higher in 2006-09 than in 2010-11.

Building values are assumed to reflect value of construction expenditures on completion -- i.e., $233.6M for the 2016 payment. For the intervening construction years, building values are assumed to equal value of construction in place by Oct. 1 of that year, estimated as the percentage of that year's total projected construction expenditures which is equal to the total number of months in the construction period through Oct. 1 divided by total number of months in construction period.

Assumed Average Inflation: 2.691% (Equal to average Honolulu CPI increase, 1990 - 2010)
(applied to land values each year starting with 2013 assessment for 2014 payment)

Assessment Year:	2013	2014	2015
Payment in:	2014	2015	2016
Months with Construction Activity	7	12	6
Months of Construction Prior to Oct. 1	4	9	6
Calculated: % of Value Completed by Oct. 1	57.1%	75.0%	100.0%
Projected Expenditures by Year	$51,400,000	$121,500,000	$60,700,000
Calculated: Cumulative Value of Building by Oct. 1	$29,371,429	$142,525,000	$233,600,000

(Continued:) Inputs for Calculating Tax Revenue from Construction Phase (With-Project Scenario)

Assumptions for Operational Years -- State Revenues (Derived from I-O Model)

Expenditures for Construction Hard Costs fall under the I-O Model's Industry Sector 14 (S14), "Construction of Other Buildings." (Sector 13 is "Single-Family Residential" construction, so S14 multipliers apply to larger structures such as hotels, office buildings, high-rises, and retail malls.) Soft Cost Expenditures fall under Sector 46 (S46), "Architectural and Engineering Services."

I-O Model - Construction Hard Costs

Total Output, $Ms (S14)	4,373.033	*(Not multipliers themselves, but used to*
Total State Taxes, $Ms (S14)	297.974	*calculate Direct multiplier below.)*
Calculated: Total Taxes/Total Output (S14)	*0.068*	*(Direct State tax multiplier)*
Final Demand State Tax Type II Multiplier (S14)	0.128	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, Induced)*

I-O Model - Soft Costs (Architect & Engineering)

Total Output, $Ms (S46)	1,096.305	*(Not multipliers themselves, but used to*
Total State Taxes, $Ms (S46)	87.373	*calculate Direct multiplier below.)*
Calculated: Total Taxes/Total Output (S46)	*0.080*	*(Direct State tax multiplier)*
Final Demand State Tax Type II Multiplier (S46)	0.140	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, Induced)*

Table 6.3: Inputs for Calculating Tax Revenue from Construction Phase (Alternative-Action Scenario)

Assumptions for City Tax Revenues -- Renovation Years

City tax revenues are estimated independently of the State's Input-Output Model. They come from:

- The 0.5% GET surcharge on total renovation expenditures (as well as operational sales continuing under this scenario); this requires no further assumptions.
- Property taxes on land and buildings, assessed on Oct. 1 of each year and paid the following year.
- Waikīkī Business Improvement District Assessment (WBIDA, tied to property tax evaluations)

Assumed rate per $1,000 assessed value (total land and buildings): WBIDA: $0.49 City: $12.40 Current City rate for both Commercial and Hotel uses

(These rates are assumed to increase after 2011 by the inflation factor noted below.)

Assumptions for Pre-Construction Years (payments made in 2012 and 2013, with one-year lag)

Assumed cumulative total for these years is identical to total used for With-Project Scenario, previously calculated:

Total Assessed Property Value $133,671,000 (from foregoing page)

Assumptions for Construction/Renovation Years (payments made 2014 to 2016, with one-year lag)

To make for a conservative analysis, the assumption is that economic recovery speeds in 2013, and that assessed land and building values reach a pre-inflation baseline level equal to the maximum recorded value for each parcel from 2007 to 2011. (No assessed values prior to 2007 exceeded these numbers.)

Maximum 2007-2011 Assessed Value of Land for Subject Parcels

TMK 26022036	$3,798,500	Kalākaua Retail Frontage #1
TMK 26022037	$3,798,500	Kalākaua Retail Frontage #2
TMK 26022038	$60,459,800	International Market Place
TMK 26022039	$17,009,200	Miramar at Waikīkī Hotel
TMK 26022043	$30,506,600	Waikīkī Town Center
Calculated: Total Assessed Value, Land:	$115,572,600	

2011 Assessed Value of Buildings for Subject Parcels

TMK 26022036	$912,300	Kalākaua Retail Frontage #1
TMK 26022037	$385,900	Kalākaua Retail Frontage #2
TMK 26022038	$8,245,800	International Market Place
TMK 26022039	$5,490,800	Miramar at Waikīkī Hotel
TMK 26022043	$10,639,100	Waikīkī Town Center
Calculated: Total Assessed Value, Buildings:	$25,673,900	
Calculated: Total Assessed Property Value	$141,246,500	

To this baseline 2013 value will be added each year:

- An average annual inflation adjustment; and
- Assumed economic recovery factor above inflation; and
- Value of improvements in place by Oct. 1 of each year, estimated by method identical to that previously described for With-Project Scenario.

Assumed Recovery Factor	3.643%	(Avg assumed annual figure for individual activities; see subsequent Alternative-Action assumptions for Operations.)
Assumed Average Inflation	2.691%	(Equal to average Honolulu CPI increase, 1990 - 2010)

(both applied to land values each year starting with 2013 assessment for 2014 payment)

Assessment Year:	2013	2014	2015
Payment in:	2014	2015	2016
Months with Construction/Renovation Activity	6	12	6
Months of Construction/Renovation Prior to Oct. 1	3	9	6
Calculated: % of Value Completed by Oct. 1	50.0%	75.0%	100.0%
Projected Expenditures by Year (Total for All Structures)	$3,850,000	$7,700,000	$3,850,000
Calculated: Cumulative Value of Building by Oct. 1	$1,925,000	$9,625,000	$15,400,000

(Continued:) Inputs for Calculating Tax Revenue from Construction Phase (Alternative-Action Scenario)

Assumptions for Operational Years -- State Revenues (Derived from I-O Model)

Expenditures for Renovations fall under the I-O Model's Industry Sector 16 (S16), "Maintenance & Repairs."

I-O Model - Renovations

Total Output, $Ms (S16)	1,328.075	*(Not multipliers themselves, but used to*
Total State Taxes, $Ms (S16)	90.494	*calculate Direct multiplier below.)*
Calculated: Total Taxes/Total Output (S16)	*0.068*	*(Direct State tax multiplier)*
Final Demand State Tax Type II Multiplier (S16)	0.123	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, Induced)*

Table 6.4: Inputs for Calculating Tax Revenue from Operational Phase (With-Project Scenario)

Assumptions for Project Operational Years -- City Revenues

City tax revenues are estimated independently of the State's Input-Output Model. They come from:

- The 0.5% GET surcharge on total sales; this requires no further assumptions.
- While the Miramar is open, the effective State TAT rate returned to the City and County: 1.8275%
  (Effective rate calculated as 9.25% TAT, times 44.8% to Counties, times 44.1% Honolulu share)
- Property taxes on land and buildings, assessed on Oct. 1 of each year and paid the following year.
- Waikīkī Business Improvement District Assessment (WBIDA, tied to property tax evaluations)

Assumed rate per $1,000 assessed value (total land and buildings): WBIDA: $0.49 City: $12.40 Current City rate for both Commercial and Hotel uses
(These rates are assumed to increase after 2011 by the inflation factor noted below.)

Total assessed property value will be assumed to hold constant value at its final value following construction, except for an annual average inflation rate. Note that this is a highly conservative assumption because it does not anticipate increasing property values despite the likelihood of greater economic recovery and market conditions reflecting ongoing Waikīkī revitalization, including makeover of the adjacent Princess Ka'iulani Hotel.

Assumed Average Inflation: 2.691% (Equal to average Honolulu CPI increase, 1990 - 2010)
(applied to land values each year starting with 2013 assessment for 2014 payment)

Assumptions for Project Operational Years -- State Revenues (Derived from I-O Model)

State taxes generated by retail activities fall under the I-O Model's Industry Sector 38 (S38), "Retail."
State taxes generated by restaurant activities fall under the I-O Model's Industry Sector 62 (S62), "Eating and Drinking."

I-O Model - Retail Sales

Total Output, $Ms (S38)	7,085.846	*(Not multipliers themselves, but used to*
Total State Taxes, $Ms (S38)	491.572	*calculate Direct multiplier below.)*
Calculated: Total Taxes/Total Output (S38)	*0.069*	*(Direct State tax multiplier)*
Final Demand State Tax Type II Multiplier (S38)	0.116	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, Induced)*

I-O Model - Restaurant Sales

Total Output, $Ms (S62)	3,754.631	*(Not multipliers themselves, but used to*
Total State Taxes, $Ms (S62)	264.614	*calculate Direct multiplier below.)*
Calculated: Total Taxes/Total Output (S62)	*0.070*	*(Direct State tax multiplier)*
Final Demand State Tax Type II Multiplier (S62)	0.128	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, Induced)*

Table 6.5: Inputs for Calculating Tax Revenue from Operational Phase (Alternative-Action Scenario)

Assumptions for Operational Years -- City Revenues (starting 2016 assessment / 2017 payment)

City tax revenues are estimated independently of the State's Input-Output Model. They come from:

- The 0.5% GET surcharge on total sales; this requires no further assumptions.
- For the Miramar, the effective State TAT rate returned to the City and County: 1.8275%
  (Effective rate calculated as 9.25% TAT, times 44.8% to Counties, times 44.1% Honolulu share. As a conservative step, it is assumed the rate remains 9.25% rather than reverting to 7.25% in 2015 as scheduled by current law.)
- Property taxes on land and buildings, assessed on Oct. 1 of each year and paid the following year.
- Waikīkī Business Improvement District Assessment (WBIDA, tied to property tax evaluations)

Assumed rate per $1,000 assessed value (total land and buildings): WBIDA: $0.49 City: $12.40 Current City rate for both Commercial and Hotel uses

(These rates are assumed to increase after 2011 by the inflation factor noted below.)

Assumptions for assessed values through 2015 have already been specified previously. Consistent with other aspects of the Alternative-Action Scenario, the assumed gradual economic recovery rate would continue to 2016, and thereafter only the assumed inflation factor will be applied to total assessed property value.

Assumed Recovery Factor	3.643%	(Wtd. Avg. of assumed factors for individual activities)
Assumed Average Inflation	2.691%	(Equal to average Honolulu CPI increase, 1990 - 2010)

Assumptions for Operational Years -- State Revenues (Derived from I-O Model)

State taxes generated by retail activities fall under the I-O Model's Industry Sector 38 (S38), "Retail." State taxes generated by restaurant activities fall under the I-O Model's Industry Sector 62 (S62), "Eating and Drinking." State taxes for Accommodations fall under the I-O Model's Industry Sector 61 (S61), "Accommodations."

I-O Model - Retail Sales

Total Output, $Ms (S38)	7,085.846	*(Not multipliers themselves, but used to*
Total State Taxes, $Ms (S38)	491.572	*calculate Direct multiplier below.)*
Calculated: Total Taxes/Total Output (S38)	*0.069*	*(Direct State tax multiplier)*
Final Demand State Tax Type II Multiplier (S38	0.116	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, Induced)*

I-O Model - Restaurant Sales

Total Output, $Ms (S62)	3,754.631	*(Not multipliers themselves, but used to*
Total State Taxes, $Ms (S62)	264.614	*calculate Direct multiplier below.)*
Calculated: Total Taxes/Total Output (S62)	*0.070*	*(Direct State tax multiplier)*
Final Demand State Tax Type II Multiplier (S62	0.128	*(Type II multipliers are used to calculate "Total" effects -- Direct, Indirect, Induced)*

I-O Model - Accommodations Sales

Total Output, $Ms (S61)	5,678.218	*(Not multipliers themselves, but used to*
Total State Taxes, $Ms (S61)	630.430	*calculate Direct multiplier below.)*
Calculated: Total Taxes/Total Output (S61)	*0.111*	*(Direct State tax multiplier)*
Final Demand State Tax Type II Multiplier (S61	0.167	*(Type II multipliers are used to calculate*

6.4 Results – Revenue from On-Site Activity (Direct Only)

Table 6.6 shows results for the "With-Project Scenario;" Table 6.7, for the "Alternative-Impact Scenario;" and the critical Table 6.8 shows the project impact – the difference between the first two.

As shown in Table 6.8, ***creation of the new retail center is expected to generate almost $12 million more for the City and County (primarily from property tax increases flowing from new construction), and about $67 million more for the State, over the ten-year period*** from 2013 to 2022***.*** With multiplier effects from construction, the ten-year State total reaches $79 million. (Most of the State revenue comes from general excise tax on sales and construction expenditures.)

Note that the City impact total includes the questionable "loss" of TAT and GET surcharge on sales from the Miramar hotel, which well may actually just be displaced to other hotels. Thus, the actual impact could be several million more over ten years.

Table 6.6: County and State Revenue from Direct On-Site Activity – With-Project Scenario
(Combined Revenue from Both Construction and Operations)

(All dollar figures are millions of projected constant 2010 dollars -- from direct on-site economic activity only, except for construction ripple effects as shown)	existing activities 2010	existing activities 2011	existing activities 2012	const. starts 6/1 2013	construc-tion year 2014	1/2 const., 1/2 oper. 2015	full oper-ations 2016
County Revenues From Project (by Source)	**$1.97**	**$1.98**	**$1.92**	**$1.98**	**$2.25**	**$3.27**	**$3.99**
Property Tax (from Site) *	$1.69	$1.69	$1.61	$1.57	$1.63	$2.89	$3.84
Waikīkī Business Improvement District Assessment (Site) *	$0.06	$0.06	$0.06	$0.06	$0.06	$0.11	$0.15
GET 0.5% surcharge - Construction, Direct	$0.00	$0.00	$0.00	$0.24	$0.55	$0.27	$0.00
GET 0.5% surcharge - Operations, Direct	$0.05	$0.05	$0.05	$0.02	$0.00	$0.00	$0.00
TAT returned to County - Operations, Direct	$0.18	$0.18	$0.19	$0.08	$0.00	$0.00	$0.00
Totals including GET "ripple effects" during renovation	***$0.00***	***$0.00***	***$0.00***	***$2.26***	***$2.90***	***$3.59***	
State Revenues From Project (All, from I-O Model)	**$6.05**	**$6.27**	**$6.50**	**$5.86**	**$7.52**	**$11.31**	**$15.59**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$3.31	$7.52	$3.69	$0.00
All State Taxes (from I-O multiplier) - Operations, Direct	$6.05	$6.27	$6.50	$2.56	$0.00	$7.62	$15.59
Totals including "ripple effects" during renovation				***$8.76***	***$14.11***	***$14.55***	

	full oper-ations 2017	full oper-ations 2018	full oper-ations 2019	full oper-ations 2020	full oper-ations 2021	full oper-ations 2022	Total (2013-2022)
County Revenues From Project (by Source)	**$3.99**	**$3.99**	**$3.99**	**$3.99**	**$3.99**	**$3.99**	**$35.40**
Property Tax (from Site) *	$3.84	$3.84	$3.84	$3.84	$3.84	$3.84	**$32.94**
Waikīkī Business Improvement District Assessment (Site) *	$0.15	$0.15	$0.15	$0.15	$0.15	$0.15	**$1.30**
GET 0.5% surcharge - Construction, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$1.05**
GET 0.5% surcharge - Operations, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.02**
TAT returned to County - Operations, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.08**
Totals including GET "ripple effects" during renovation							***$36.65***
State Revenues From Project (All, from I-O Model)	**$16.15**	**$16.66**	**$16.78**	**$16.78**	**$16.78**	**$16.78**	**$140.23**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$14.51**
All State Taxes (from I-O multiplier) - Operations, Direct	$16.15	$16.66	$16.78	$16.78	$16.78	$16.78	**$125.72**
Totals including "ripple effects" during renovation							***$152.96***

* Property taxes and WBIDA have one-year lag from assesment to payment; e.g., 2013 tax payments based on values assessed in 2012.

Table 6.7: County and State Revenue from Direct On-Site Activity – Alternative-Action Scenario
(Combined Revenue from Both Construction and Operations)

(All dollar figures are millions of projected constant 2010 dollars -- from direct on-site economic activity only, except for renovation ripple effects as shown)	existing activities 2010	existing activities 2011	existing activities 2012	renov. starts 7/1 2013	renova-tion year 2014	1/2 renov., 1/2 oper. 2015	full oper-ations 2016
County Revenues From Project (by Source)	**$1.97**	**$1.98**	**$1.92**	**$1.90**	**$2.11**	**$2.27**	**$2.45**
Property Tax (from Site) *	$1.69	$1.69	$1.61	$1.57	$1.74	$1.91	$2.05
Waikīkī Business Improvement District Assessment (Site) *	$0.06	$0.06	$0.06	$0.06	$0.07	$0.08	$0.08
GET 0.5% surcharge - Construction, Direct	$0.00	$0.00	$0.00	$0.02	$0.03	$0.02	$0.00
GET 0.5% surcharge - Operations, Direct	$0.05	$0.05	$0.05	$0.06	$0.06	$0.06	$0.07
TAT returned to County - Operations, Direct	$0.18	$0.18	$0.19	$0.19	$0.20	$0.21	$0.24
Totals including GET "ripple effects" during renovation				***$1.92***	***$2.14***	***$2.29***	
State Revenues From Project (All, from I-O Model)	**$6.05**	**$6.27**	**$6.50**	**$6.38**	**$6.21**	**$6.82**	**$7.98**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$0.24	$0.47	$0.23	$0.00
All State Taxes (from I-O multiplier) - Operations, Direct	$6.05	$6.27	$6.50	$6.14	$5.74	$6.59	$7.98
Totals including "ripple effects" during renovation				***$6.58***	***$6.59***	***$7.01***	

	full oper-ations 2017	full oper-ations 2018	full oper-ations 2019	full oper-ations 2020	full oper-ations 2021	full oper-ations 2022	Total (2013-2022)
County Revenues From Project (by Source)	**$2.52**	**$2.51**	**$2.50**	**$2.50**	**$2.49**	**$2.49**	**$23.73**
Property Tax (from Site) *	$2.13	$2.13	$2.13	$2.13	$2.13	$2.13	**$20.03**
Waikīkī Business Improvement District Assessment (Site) *	$0.08	$0.08	$0.08	$0.08	$0.08	$0.08	**$0.79**
GET 0.5% surcharge - Construction, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.07**
GET 0.5% surcharge - Operations, Direct	$0.07	$0.07	$0.07	$0.06	$0.06	$0.06	**$0.63**
TAT returned to County - Operations, Direct	$0.24	$0.24	$0.23	$0.22	$0.22	$0.22	**$2.21**
Totals including GET "ripple effects" during renovation							***$23.81***
State Revenues From Project (All, from I-O Model)	**$7.90**	**$7.80**	**$7.66**	**$7.58**	**$7.50**	**$7.50**	**$73.34**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.94**
All State Taxes (from I-O multiplier) - Operations, Direct	$7.90	$7.80	$7.66	$7.58	$7.50	$7.50	**$72.40**
Totals including "ripple effects" during renovation							***$74.11***

* Property taxes and WBIDA have one-year lag from assesment to payment; e.g., 2013 tax payments based on values assessed in 2012.

Table 6.8: County and State Revenue from Direct On-Site Activity – Project Impact (Difference)
(Combined Revenue from Both Construction and Operations)

(All dollar figures are millions of projected constant 2010 dollars -- from direct on-site economic activity only, except for renovation ripple effects as shown)	existing activities 2010	existing activities 2011	existing activities 2012	const. or renov. starts mid 2013	const. or renova-tion year 2014	1/2 const. or renov., 1/2 oper. 2015	full oper-ations 2016
County Revenues From Project (by Source)	**$0.00**	**$0.00**	**$0.00**	**$0.07**	**$0.14**	**$1.00**	**$1.54**
Property Tax (from Site) *	$0.00	$0.00	$0.00	$0.00	-$0.11	$0.98	$1.78
Waikīkī Business Improvement District Assessment (Site) *	$0.00	$0.00	$0.00	$0.00	$0.00	$0.04	$0.07
GET 0.5% surcharge - Construction, Direct	$0.00	$0.00	$0.00	$0.22	$0.51	$0.25	$0.00
GET 0.5% surcharge - Operations, Direct	$0.00	$0.00	$0.00	-$0.03	-$0.06	-$0.06	-$0.07
TAT returned to County - Operations, Direct	$0.00	$0.00	$0.00	-$0.11	-$0.20	-$0.21	-$0.24
Totals including GET "ripple effects" during renovation				***$0.34***	***$0.75***	***$1.30***	
State Revenues From Project (All, from I-O Model)	**$0.00**	**$0.00**	**$0.00**	**-$0.52**	**$1.30**	**$4.49**	**$7.61**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$3.06	$7.04	$3.46	$0.00
All State Taxes (from I-O multiplier) - Operations, Direct	$0.00	$0.00	$0.00	-$3.58	-$5.74	$1.03	$7.61
Totals including "ripple effects" during renovation				***$2.19***	***$7.52***	***$7.54***	

	full oper-ations 2017	full oper-ations 2018	full oper-ations 2019	full oper-ations 2020	full oper-ations 2021	full oper-ations 2022	Total (2013-2022)
County Revenues From Project (by Source)	**$1.47**	**$1.47**	**$1.48**	**$1.49**	**$1.50**	**$1.50**	**$11.67**
Property Tax (from Site) *	$1.71	$1.71	$1.71	$1.71	$1.71	$1.71	**$12.91**
Waikīkī Business Improvement District Assessment (Site) *	$0.07	$0.07	$0.07	$0.07	$0.07	$0.07	**$0.51**
GET 0.5% surcharge - Construction, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.98**
GET 0.5% surcharge - Operations, Direct	-$0.07	-$0.07	-$0.07	-$0.06	-$0.06	-$0.06	**-$0.61**
TAT returned to County - Operations, Direct	-$0.24	-$0.24	-$0.23	-$0.22	-$0.22	-$0.22	**-$2.13**
Totals including GET "ripple effects" during renovation							***$12.85***
State Revenues From Project (All, from I-O Model)	**$8.25**	**$8.86**	**$9.12**	**$9.20**	**$9.28**	**$9.28**	**$66.89**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$13.57**
All State Taxes (from I-O multiplier) - Operations, Direct	$8.25	$8.86	$9.12	$9.20	$9.28	$9.28	**$53.32**
Totals including "ripple effects" during renovation							***$78.86***

* Property taxes and WBIDA have one-year lag from assesment to payment; e.g., 2013 tax payments based on values assessed in 2012.

6.5 Results – Revenue from Potential Net New Impacts (Direct and Total)

Table 6.9 and Table 6.10 show initial calculations needed for the analysis, while illustrative County "Net New" revenue impacts are shown in Table 6.11 and State revenue impacts in Table 6.12.

The "Net New Impact" analysis is carried out with exactly the same logic as for the similar analysis of Operational Impacts in the preceding chapter, except that all Construction Phase revenue impacts are properly counted as 100% "new," while the 5% to 15% range is applied to Operations Phase revenue impacts only. These Operational revenue impacts are conservatively defined to include property taxes. The reason that inclusion of property taxes is conservative is that this makes the implicit assumption that the property taxes not included (85% to 95%) are not "Net New Impacts" and thus potentially represent losses in property values/taxes at other properties that may be losing some sort of sales to the redeveloped International Market Place (IMP) property.

In fact, nearby major retail centers do not expect any such loss of value, and the upgrading of the current IMP and other parcels is likely to have a positive effect on surrounding property values/taxes over time – something that is (again conservatively) not included in this analysis, although it would in fact be difficult to quantify and predict accurately.

It may be noted that Queen Emma Land Co. owns approximately 12.5 Waikīkī acres surrounding or in the near vicinity of the six acres comprising the proposed project site. These include both makai properties (such as the land under the Outrigger Waikīkī on Beach, Beachcomber, and ‘Ohana East) and mauka properties (such as land and in some cases structures for the ‘Ohana West Hotel, the Waikīkī Market Place, and a number of apartment buildings, small hotels, and student housing complexes). Thus, both the Queen Emma Medical Clinic and the City over time are likely to benefit from the "spillover" property value impacts not included in the analysis.

Even with this highly conservative approach, Table 6.12 suggests a ten-year total net addition of from $2.57 million to $3.40 million tax revenue for the City and County and from $30 million to $40 million for the State government (State figures in Table 6.12)***.*** Again, these are illustrative figures that are conservative indicators – not true estimated direct measures – of the redeveloped IMP's potential role in generating visitor expenditures that would not otherwise occur and/or long-term non-measurable effects of revitalization of "tired properties" at the heart and core of Waikīkī.

Table 6.9: Initial Calculations – Net New County and State Revenue Under 100% Hypothesis (With-Project Scenario)
(Combined Revenue from Both Construction and Operations)

(All dollar figures are millions of projected constant 2010 dollars -- from both direct on-site economic activity and statewide total including "ripple effects")	2010	2011	2012	2013	2014	2015	2016
Direct County Revenues From Project	**$1.97**	**$1.98**	**$1.92**	**$1.98**	**$2.25**	**$3.27**	**$3.99**
Construction Sources (0.5% GET surcharge on construction)	$0.00	$0.00	$0.00	$0.24	$0.55	$0.27	$0.00
Property Tax and Operational Sources	$1.97	$1.98	$1.92	$1.74	$1.70	$3.00	$3.99
Direct State Revenues From Project	**$6.05**	**$6.27**	**$6.50**	**$5.86**	**$7.52**	**$11.31**	**$15.59**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$3.31	$7.52	$3.69	$0.00
All State Taxes (from I-O multiplier) - Operations, Direct	$6.05	$6.27	$6.50	$2.56	$0.00	$7.62	$15.59
Total County Revenues from Project	**$0.79**	**$0.82**	**$0.85**	**$0.86**	**$1.20**	**$1.66**	**$2.20**
GET 0.5% surcharge on Total Output - Construction	$0.00	$0.00	$0.00	$0.53	$1.20	$0.59	$0.00
GET 0.5% surcharge on Total Output - Operations	$0.79	$0.82	$0.85	$0.33	$0.00	$1.08	$2.20
Total State Revenues from Project	**$10.08**	**$10.44**	**$10.83**	**$10.46**	**$14.11**	**$19.95**	**$26.64**
All State Taxes (from I-O multiplier) - Construction, Total	$0.00	$0.00	$0.00	$6.21	$14.11	$6.93	$0.00
All State Taxes (from I-O multiplier) - Operations, Total	$10.08	$10.44	$10.83	$4.25	$0.00	$13.02	$26.64

	2017	2018	2019	2020	2021	2022	Total (2013-2022)
Direct County Revenues From Project	**$3.99**	**$3.99**	**$3.99**	**$3.99**	**$3.99**	**$3.99**	**$35.40**
Construction Sources (0.5% GET surcharge on construction)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$1.05**
Property Tax and Operational Sources	$3.99	$3.99	$3.99	$3.99	$3.99	$3.99	**$34.35**
Direct State Revenues From Project	**$16.15**	**$16.66**	**$16.78**	**$16.78**	**$16.78**	**$16.78**	**$140.23**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$14.51**
All State Taxes (from I-O multiplier) - Operations, Direct	$16.15	$16.66	$16.78	$16.78	$16.78	$16.78	**$125.72**
Total County Revenues from Project	**$2.28**	**$2.35**	**$2.37**	**$2.37**	**$2.37**	**$2.37**	**$20.03**
GET 0.5% surcharge on Total Output - Construction	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$2.31**
GET 0.5% surcharge on Total Output - Operations	$2.28	$2.35	$2.37	$2.37	$2.37	$2.37	**$17.72**
Total State Revenues from Project	**$27.58**	**$28.47**	**$28.66**	**$28.66**	**$28.66**	**$28.66**	**$241.86**
All State Taxes (from I-O multiplier) - Construction, Total	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$27.25**
All State Taxes (from I-O multiplier) - Operations, Total	$27.58	$28.47	$28.66	$28.66	$28.66	$28.66	**$214.62**

Table 6.10: Initial Calculations – Net New County and State Revenue Under 100% Hypothesis (Alternative-Action Scenario)
(Combined Revenue from Both Construction and Operations)

(All dollar figures are millions of projected constant 2010 dollars -- from both direct on-site economic activity and statewide total including "ripple effects")	2010	2011	2012	2013	2014	2015	2016
Direct County Revenues From Project (All Sources)	**$1.97**	**$1.98**	**$1.92**	**$1.90**	**$2.11**	**$2.27**	**$2.45**
Construction Sources (0.5% GET surcharge on construction)	$0.00	$0.00	$0.00	$0.02	$0.03	$0.02	$0.00
Property Tax and Operational Sources	$1.97	$1.98	$1.92	$1.88	$2.07	$2.25	$2.45
Direct State Revenues From Project (All Sources)	**$6.05**	**$6.27**	**$6.50**	**$6.38**	**$6.21**	**$6.82**	**$7.98**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$0.24	$0.47	$0.23	$0.00
All State Taxes (from I-O multiplier) - Operations, Direct	$6.05	$6.27	$6.50	$6.14	$5.74	$6.59	$7.98
Total County Revenues from Project (by Source)	**$0.79**	**$0.82**	**$0.85**	**$0.84**	**$0.82**	**$0.90**	**$1.04**
GET 0.5% surcharge on Total Output - Construction	$0.00	$0.00	$0.00	$0.04	$0.07	$0.04	$0.00
GET 0.5% surcharge on Total Output - Operations	$0.79	$0.82	$0.85	$0.80	$0.74	$0.86	$1.04
Total State Revenues from Project (All, from I-O Model)	**$10.08**	**$10.44**	**$10.83**	**$10.64**	**$10.38**	**$11.38**	**$13.27**
All State Taxes (from I-O multiplier) - Construction, Total	$0.00	$0.00	$0.00	$0.44	$0.85	$0.42	$0.00
All State Taxes (from I-O multiplier) - Operations, Total	$10.08	$10.44	$10.83	$10.20	$9.52	$10.96	$13.27

	2017	2018	2019	2020	2021	2022	Total (2013-2022)
Direct County Revenues From Project (All Sources)	**$2.52**	**$2.51**	**$2.50**	**$2.50**	**$2.49**	**$2.49**	**$23.73**
Construction Sources (0.5% GET surcharge on construction)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.07**
Property Tax and Operational Sources	$2.52	$2.51	$2.50	$2.50	$2.49	$2.49	**$23.66**
Direct State Revenues From Project (All Sources)	**$7.90**	**$7.80**	**$7.66**	**$7.58**	**$7.50**	**$7.50**	**$73.34**
All State Taxes (from I-O multiplier) - Construction, Direct	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.94**
All State Taxes (from I-O multiplier) - Operations, Direct	$7.90	$7.80	$7.66	$7.58	$7.50	$7.50	**$72.40**
Total County Revenues from Project (by Source)	**$1.03**	**$1.02**	**$1.00**	**$0.99**	**$0.98**	**$0.98**	**$9.62**
GET 0.5% surcharge on Total Output - Construction	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.15**
GET 0.5% surcharge on Total Output - Operations	$1.03	$1.02	$1.00	$0.99	$0.98	$0.98	**$9.47**
Total State Revenues from Project (All, from I-O Model)	**$13.14**	**$12.98**	**$12.75**	**$12.62**	**$12.49**	**$12.49**	**$122.14**
All State Taxes (from I-O multiplier) - Construction, Total	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$1.71**
All State Taxes (from I-O multiplier) - Operations, Total	$13.14	$12.98	$12.75	$12.62	$12.49	$12.49	**$120.43**

Table 6.11: Likely Range of Net New County Revenue Impacts
(Combined Revenue from Both Construction and Operations)

(All dollar figures are millions of projected constant 2010 dollars -- from both direct on-site economic activity and countywide total including "ripple effects")*	2010	2011	2012	2013	2014	2015	2016
Net Direct County Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.00	$0.00	$0.00	$0.21	$0.49	$0.29	$0.08
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.00	$0.00	$0.00	$0.20	$0.47	$0.32	$0.15
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.00	$0.00	$0.00	$0.20	$0.46	$0.36	$0.23
Net Total County* Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.00	$0.00	$0.00	$0.46	$1.09	$0.56	$0.06
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.00	$0.00	$0.00	$0.44	$1.05	$0.57	$0.12
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.00	$0.00	$0.00	$0.42	$1.01	$0.58	$0.17

	2017	2018	2019	2020	2021	2022	Total (2013-2022)
Net Direct County Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.07	$0.07	$0.07	$0.07	$0.07	$0.07	**$1.51**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.15	$0.15	$0.15	$0.15	$0.15	$0.15	**$2.05**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.22	$0.22	$0.22	$0.22	$0.22	$0.22	**$2.58**
Net Total County* Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.06	$0.07	$0.07	$0.07	$0.07	$0.07	**$2.57**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.12	$0.13	$0.14	$0.14	$0.14	$0.14	**$2.99**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.19	$0.20	$0.20	$0.21	$0.21	$0.21	**$3.40**

* Calculations for Total technically reflect statewide outcomes, but these are assumed to occur overwhelmingly in the City & County of Honolulu.

Table 6.12: Likely Range of Net New State Revenue Impacts
(Combined Revenue from Both Construction and Operations)

(All dollar figures are millions of projected constant 2010 dollars -- from both direct on-site economic activity and statewide total including "ripple effects")	2010	2011	2012	2013	2014	2015	2016
Net Direct State Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.00	$0.00	$0.00	$2.89	$6.76	$3.51	$0.38
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.00	$0.00	$0.00	$2.71	$6.47	$3.56	$0.76
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.00	$0.00	$0.00	$2.53	$6.18	$3.62	$1.14
Net Total State Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.00	$0.00	$0.00	$5.47	$12.78	$6.61	$0.67
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.00	$0.00	$0.00	$5.17	$12.31	$6.72	$1.34
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$0.00	$0.00	$0.00	$4.87	$11.83	$6.82	$2.00

	2017	2018	2019	2020	2021	2022	Total (2013-2022)
Net Direct State Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.41	$0.44	$0.46	$0.46	$0.46	$0.46	**$16.23**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$0.82	$0.89	$0.91	$0.92	$0.93	$0.93	**$18.90**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$1.24	$1.33	$1.37	$1.38	$1.39	$1.39	**$21.57**
Net Total State Revenues (Construction Revenue Difference at 100%; Property Tax Difference and Operational Difference for Two Scenarios, times Three Different Assumed Percentages of New Dollars in Economy)							
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 5%	$0.72	$0.77	$0.80	$0.80	$0.81	$0.81	**$30.25**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 10%	$1.44	$1.55	$1.59	$1.60	$1.62	$1.62	**$34.96**
% of Op'l and Prop. Tax Difference Assumed as Net New Impact: 15%	$2.17	$2.32	$2.39	$2.41	$2.43	$2.43	**$39.66**