



SUMMARY OF FINDINGS BROADWAY CIRCULATOR ECONOMIC BENEFITS ANALYSIS

October 2014

Introduction

This report summarizes the findings from an analysis of the potential economic benefits of the Broadway Circulator project, including both streetcar and enhanced bus alternatives. The study is intended to help City of Oakland staff, project partners, elected officials, the business community, residents and other stakeholders understand the range of economic benefits that might be achieved from the Broadway Circulator project and to compare the potential benefits of the streetcar and enhanced bus alternatives. The detailed methodology and full results are available in a separate technical report.

Following this introduction, this report includes:

- A summary of the types of benefits that a transit circulator might be expected to generate in Oakland;
- A description of the economic benefits evaluated as a part of the study;
- A description of the transit scenarios studied; and
- Summary results of the analysis.

Overview of the Economic Benefits of Transit Circulator Projects

Urban circulators, particularly streetcar projects, are attracting increased interest in the United States because they are viewed as offering the potential to contribute to neighborhood economic development as well as mobility. Circulators typically serve a limited area with multiple activity centers, providing a convenient way for tourists, employees, residents and other visitors to travel between multiple destinations along the line. In contrast with light rail and heavy rail transit systems, which are designed for longer trips, the smaller size and greater maneuverability of urban circulators allows for closer integration with the surrounding urban environment.

Streetcar vs. Bus Impacts

Although modern streetcars are a relatively new phenomenon in U.S. cities, recent studies of Portland, Seattle and Tampa provide strong evidence that streetcars can generate new development, increased property values, increased retail sales and increased visitation. Although most studies of transit impacts are focused on rail projects, some research has also concluded that bus rapid transit (BRT) and other bus lines can also promote similar types of economic activity. While the perceived permanence of streetcar systems are often credited with helping to attract private development, there is also evidence that bus circulators can offer similar types of benefits.¹

¹ Walter Hook, Stephanie Lotshaw, and Annie Weinstock, More Development for Your Transit Dollar: An Analysis of 21 North American Transit Corridors (Institute for Transportation & Development Policy, September 2013), http://www.itdp.org/documents/ITDP_MORE_DEVELOPMENT_924.pdf.

Previous studies do not offer clear conclusions about the specific difference in the level of benefits that might be achieved via a streetcar versus an enhanced bus investment. Transit projects vary considerably in terms of their design features, quality of service, integration with other transit modes, and other factors, making it challenging to isolate the relative impacts of different transit modes. Furthermore, no comparative studies have been conducted to show the relative benefit of different technologies in the same location. In general, studies suggest that investments in fixed infrastructure such as rail or a dedicated bus lane are more likely to impact development.

Expected Economic Benefits of the Broadway Circulator

Because the impact of a new circulator is dependent upon the local market, development and economic context, there are no “rules of thumb” about the economic impacts of new circulator projects. However, the experience of recent streetcar projects in a few U.S. cities, as well as anecdotal evidence from the existing Broadway Shuttle (or B Shuttle) in Oakland, suggests that a transit circulator has the potential to offer the following types of benefits for Oakland:

- Act as a “walk extender,” **expanding the customer base for local retail, restaurants and attractions**. People who live or work near the streetcar will gain improved access to nearby shops and restaurants that were previously too far to access by walking alone. For example, workers in Downtown will be able to take the streetcar to entertainment and dining options in Jack London Square or Uptown.
- Result in **positive impacts on property values**, especially for multifamily residential and commercial properties. For example, infill development in Jack London Square or in the Broadway/Valdez District will benefit from greater connectivity to the jobs and regional transit that are located in Downtown.
- Can **enable development at higher densities**. The streetcar will assist in catalyzing development at opportunity sites, and may help make certain types of projects more feasible for developers.
- **Appeal to tourists and convention visitors**. A streetcar system provides an amenity for conventioners, business travelers and other visitors to Oakland. For example, visitors staying at Downtown hotels near the Oakland Convention Center would be able to easily visit Jack London Square.
- **Enable more efficient use of parking facilities and encourage drivers to “park once.”** The streetcar will allow visitors to park one time even if they are visiting multiple destinations. For example, a visitor could park and have dinner in Old Oakland before taking the streetcar to Uptown to see a show at the Fox or the Paramount.

Benefits Evaluated

Based on the types of benefits outlined above, the analysis estimated the following impacts:

- Impacts on existing property values;
- Value of new development (residential, retail, office, hotel);
- Retail sales impacts;
- Impacts on hotel revenues;

- City tax revenues, including:
 - Property tax,
 - Property transfer tax,
 - Sales tax,
 - Transient occupancy tax (TOT),
 - Business license tax; and
- Jobs.

These economic benefits generally accrue to three groups:

- **Property owners** benefit from increased property values and improved development potential resulting from improved access and connectivity. Existing properties are expected to experience a rise in value a year before the new transit begins service, while new development will accrue gradually over time as more projects are built.
- **Business owners** benefit from additional revenue for both retail businesses and hotels along the transit alignment. The benefits are expected to begin upon the transit's opening, as it facilitates access to businesses by workers, residents, shoppers, conventioners and other visitors.
- **Local government** benefits from the additional property tax, property transfer tax, sales tax, TOT, and business license tax revenues that result from the increases to property values, retail sales, hotel revenues, and other business activity in the area.

For a range of transit alternatives, Strategic Economics modeled future development, property values, retail sales, hotel revenue, and associated tax revenue and jobs between 2014 and 2040. The assumptions used in the analysis were developed based on a) the results of previous studies of streetcar and bus impacts in other places; and b) detailed analysis of local conditions, including existing land uses, planned development, retail sales trends, transient occupancy tax, and development opportunity sites. The analysis focuses on properties and businesses within three blocks, or about a quarter-mile, of the proposed alignment, corresponding to an area that is considered to be within easy walking distance of the streetcar. For each transit scenario, economic benefits are measured in relation to a “baseline” future where there is no circulator or B shuttle.² This allows the benefits to be expressed as an incremental impact separate from expected general economic growth.

Transit Scenarios Studied

The following alignments and transit scenarios were studied as part of the economic benefits analysis:

- Jack London Square to 27th Street alignment – baseline, enhanced bus, and streetcar scenarios;
- Jack London Square to MacArthur BART alignment – baseline, enhanced bus, and streetcar scenarios; and
- Jack London Square to Rockridge BART alignment – baseline and enhanced bus scenarios.

² The analysis assumes that the B Shuttle is discontinued because there is no guaranteed funding source to ensure that the current service continues.

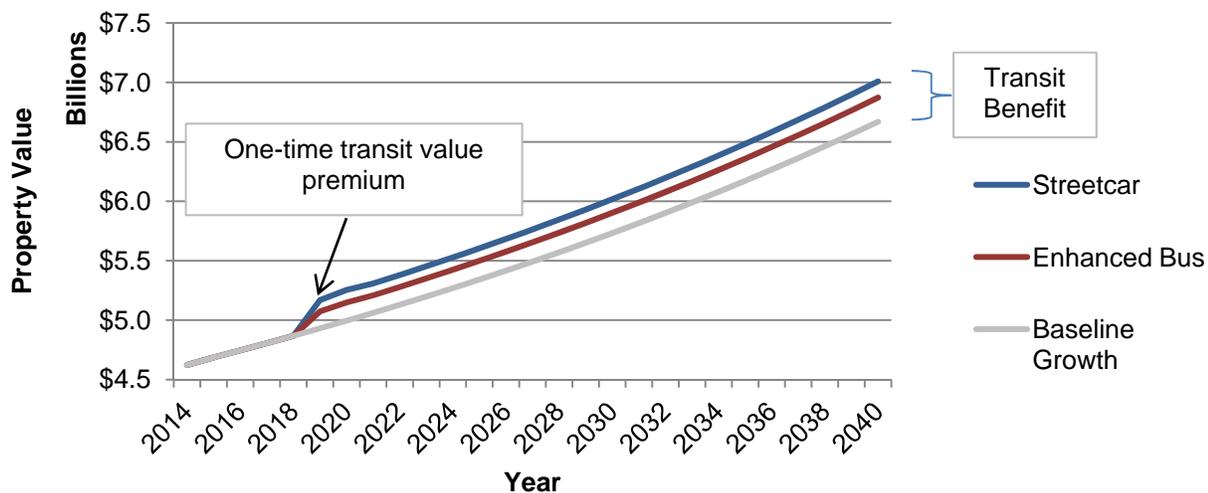
In all scenarios the analysis assumes that the new circulator would open in 2020.

Summary of Findings

This section summarizes the results of the Broadway Circulator economic benefits analysis. The findings are presented as total impacts in 2040, and as a comparison of growth in economic activity between 2014 and 2040. As described earlier, the impact of each circulator alignment is compared against a baseline growth scenario that represents expected conditions in the absence of a new transit investment. The baseline scenario varies with each alignment, since each alignment incorporates different geographies with unique characteristics.

New transit is assumed to result in a one-time “value premium” generated by increased accessibility and desirability of locations within a quarter-mile of the circulator alignment. After the new transit opens, the quarter-mile area captures a higher share of regional housing and office growth, job growth, retail sales, and hotel room nights. The quarter-mile area also achieves higher revenues and, therefore, higher property values in comparison to the baseline scenario. Figure 1 illustrates this estimated shift in terms of property values.

Figure 1: Total Property Value, Jack London Square to 27th Street (2014 dollars)



Source: Strategic Economics, 2014.

Figure 2 summarizes the economic benefits generated under each transit scenario. Benefits are shown separately for each alignment. Total benefits are shown for the baseline, streetcar, and enhanced bus scenarios, as well as the specific benefit estimated to be attributable to transit (the amount in addition to expected baseline growth).

Figure 2: Cumulative Baseline, Streetcar, and Enhanced Bus Benefits, 2014-2040, by Alignment and Transit Type (2014 dollars)

	Baseline without Transit Total	Streetcar Total	Enhanced Bus Total	Benefit Over Baseline Total	
				Streetcar	Enhanced Bus
Jack London Square to 27th Street					
Property Value Growth over Existing	\$2,044,881,000	\$2,384,218,000	\$2,248,006,000	\$339,337,000	\$203,125,000
Cumulative Retail Sales	\$13,379,198,000	\$13,800,128,000	\$13,595,969,000	\$420,930,000	\$216,771,000
Cumulative Hotel Revenue	\$1,279,422,000	\$1,403,776,000	\$1,353,620,000	\$124,354,000	\$74,198,000
Cumulative Oakland Revenue	\$905,138,000	\$981,069,000	\$949,846,000	\$75,931,000	\$44,708,000
<i>Cumulative Property Tax Revenue</i>	<i>\$246,139,000</i>	<i>\$264,086,000</i>	<i>\$256,769,000</i>	<i>\$17,947,000</i>	<i>\$10,630,000</i>
<i>Cumulative City Sales Tax Revenue</i>	<i>\$121,482,000</i>	<i>\$125,214,000</i>	<i>\$123,413,000</i>	<i>\$3,732,000</i>	<i>\$1,931,000</i>
<i>Cumulative Hotel Tax Revenue (TOT)</i>	<i>\$179,119,000</i>	<i>\$196,529,000</i>	<i>\$189,507,000</i>	<i>\$17,410,000</i>	<i>\$10,388,000</i>
<i>Cumulative Business License Tax Revenue</i>	<i>\$2,891,000</i>	<i>\$3,589,000</i>	<i>\$3,268,000</i>	<i>\$698,000</i>	<i>\$377,000</i>
<i>Cumulative Property Transfer Tax Revenue</i>	<i>\$355,507,000</i>	<i>\$391,652,000</i>	<i>\$376,889,000</i>	<i>\$36,145,000</i>	<i>\$21,382,000</i>
Job Growth over Existing	8,160	9,310	8,840	1,150	680
Jack London Square to MacArthur BART					
Property Value Growth over Existing	\$2,875,593,000	\$3,317,148,000	\$3,139,976,000	\$441,555,000	\$264,383,000
Cumulative Retail Sales	\$19,060,927,000	\$19,651,426,000	\$19,360,610,000	\$590,499,000	\$299,683,000
Cumulative Hotel Revenue	\$1,279,422,000	\$1,408,523,000	\$1,356,365,000	\$129,101,000	\$76,943,000
Cumulative Oakland Revenue	\$1,105,717,000	\$1,194,638,000	\$1,157,918,000	\$88,921,000	\$52,201,000
<i>Cumulative Property Tax Revenue</i>	<i>\$306,018,000</i>	<i>\$327,718,000</i>	<i>\$318,864,000</i>	<i>\$21,700,000</i>	<i>\$12,846,000</i>
<i>Cumulative City Sales Tax Revenue</i>	<i>\$176,135,000</i>	<i>\$181,321,000</i>	<i>\$178,777,000</i>	<i>\$5,186,000</i>	<i>\$2,642,000</i>
<i>Cumulative Hotel Tax Revenue (TOT)</i>	<i>\$179,119,000</i>	<i>\$197,193,000</i>	<i>\$189,891,000</i>	<i>\$18,074,000</i>	<i>\$10,772,000</i>
<i>Cumulative Business License Tax Revenue</i>	<i>\$4,061,000</i>	<i>\$4,969,000</i>	<i>\$4,542,000</i>	<i>\$908,000</i>	<i>\$481,000</i>
<i>Cumulative Property Transfer Tax Revenue</i>	<i>\$440,384,000</i>	<i>\$483,438,000</i>	<i>\$465,844,000</i>	<i>\$43,054,000</i>	<i>\$25,460,000</i>
Job Growth over Existing	9,110	10,410	9,880	1,300	770
Jack London Square to Rockridge BART					
Property Value Growth over Existing	\$3,521,331,000	n/a	\$3,813,643,000	n/a	\$292,312,000
Cumulative Retail Sales	\$22,692,174,000	n/a	\$23,185,197,000	n/a	\$493,023,000
Cumulative Hotel Revenue	\$1,279,422,000	n/a	\$1,359,109,000	n/a	\$79,687,000
Cumulative Oakland Revenue	\$1,280,162,000	n/a	\$1,340,963,000	n/a	\$60,801,000
<i>Cumulative Property Tax Revenue</i>	<i>\$421,627,000</i>	<i>n/a</i>	<i>\$439,492,000</i>	<i>n/a</i>	<i>\$17,865,000</i>
<i>Cumulative City Sales Tax Revenue</i>	<i>\$201,808,000</i>	<i>n/a</i>	<i>\$206,179,000</i>	<i>n/a</i>	<i>\$4,371,000</i>
<i>Cumulative Hotel Tax Revenue (TOT)</i>	<i>\$179,119,000</i>	<i>n/a</i>	<i>\$190,275,000</i>	<i>n/a</i>	<i>\$11,156,000</i>
<i>Cumulative Business License Tax Revenue</i>	<i>\$4,750,000</i>	<i>n/a</i>	<i>\$5,440,000</i>	<i>n/a</i>	<i>\$690,000</i>
<i>Cumulative Property Transfer Tax Revenue</i>	<i>\$472,857,000</i>	<i>n/a</i>	<i>\$499,576,000</i>	<i>n/a</i>	<i>\$26,719,000</i>
Job Growth over Existing	9,410	n/a	10,240	n/a	830

Source: Strategic Economics, 2014.

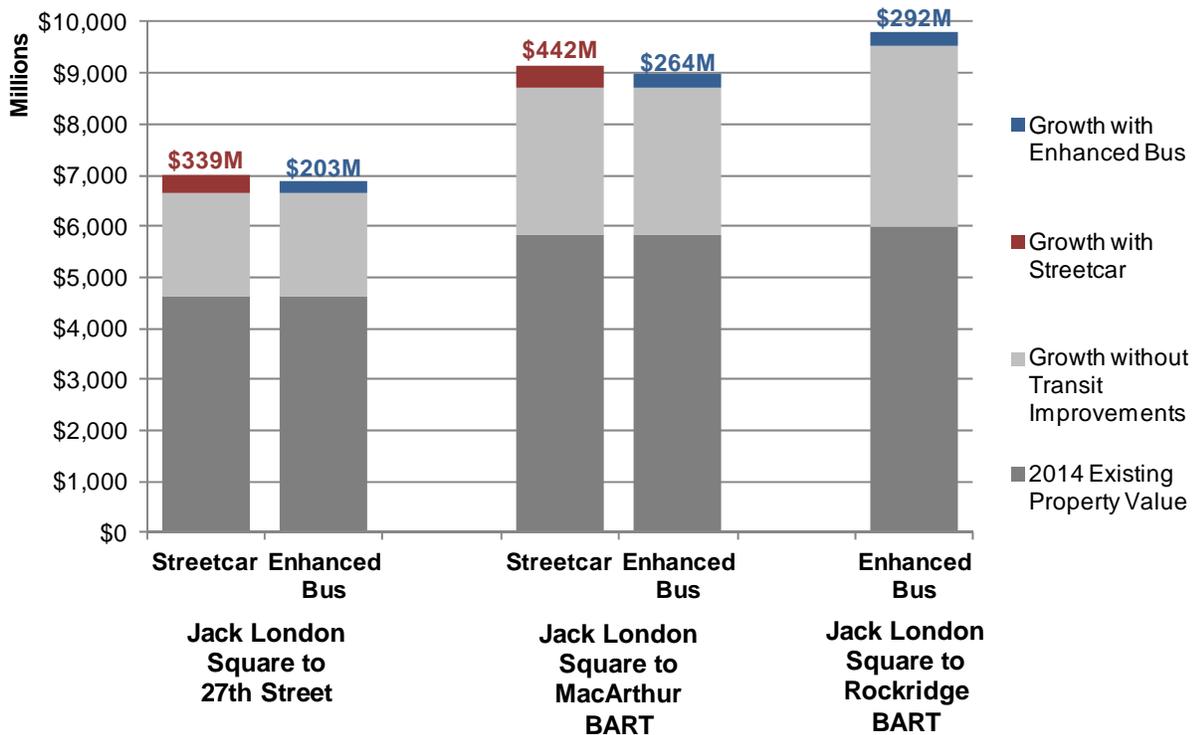
Property Owner Benefits

Property owners will benefit from enhanced property values adjacent to the circulator, as well as enhanced development potential. The estimated benefits are detailed below.

Property Values

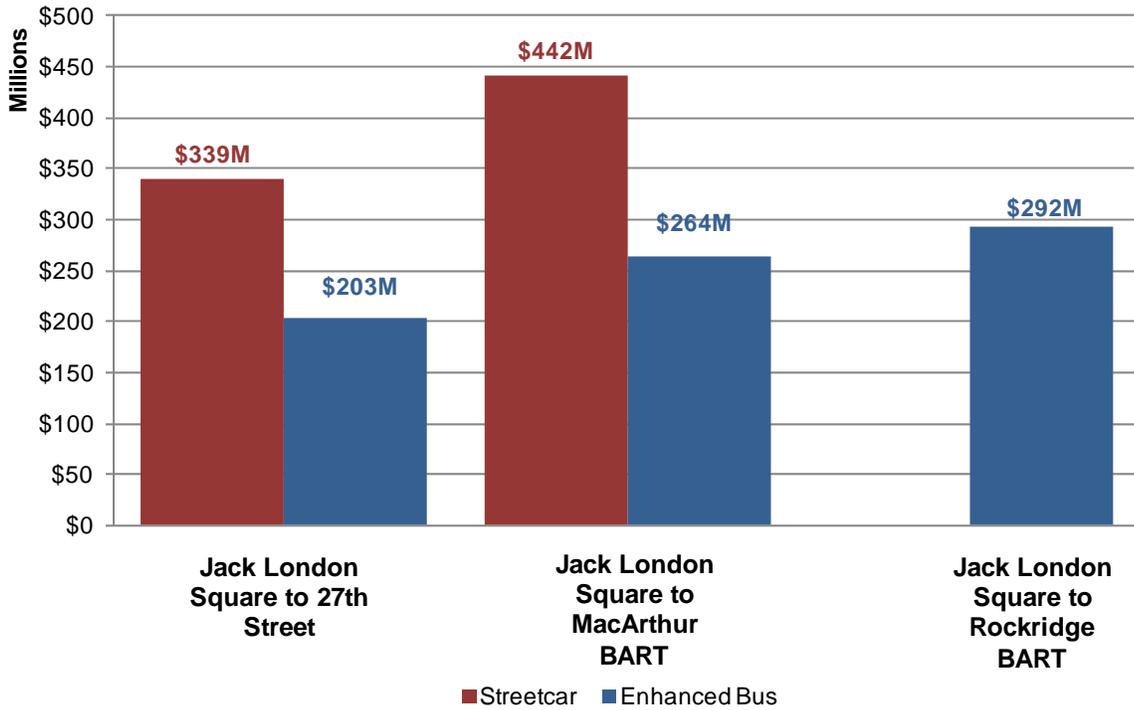
The estimated property value impacts are shown in Figures 3 and 4. As of 2040, the streetcar is projected to generate a total increase in property value of \$339 million in the Jack London Square to 27th Street alignment, and an enhanced bus is projected to generate \$203 million. These impacts result from additional residential, office, retail, and hotel development throughout the study area, plus the one-time value premium generated immediately prior to the streetcar’s opening. The increase for the Jack London Square to MacArthur BART alignment is estimated at \$442 million with a streetcar, and \$264 million with an enhanced bus. The enhanced bus is projected to generate \$292 million in increased property value in the route to Rockridge BART (note: a streetcar was deemed to be infeasible for this alignment). The relatively high property value impact for the enhanced bus to Rockridge BART reflects the relatively high existing base of property values along this route.

Figure 3: Total Property Value, 2014 and 2040 Baseline and Transit Benefit (2014 dollars)



Source: Strategic Economics, 2014.

Figure 4: Transit-Driven Property Value Increase above Baseline Growth, 2040 (2014 dollars)



Source: Strategic Economics, 2014.

Development Potential

Figure 5 shows the estimated increase in new development for all alignments and circulator options between 2014 and 2040. Key assumptions are described below:

- The baseline growth was based on the historic capture of development within a quarter-mile of the circulator alignments, and informed by the locations and amount of planned or proposed development in the area.
- The streetcar and enhanced bus development increases (relative to the baseline) assume an increased capture of regional growth upon opening of the circulator. The impact of the enhanced bus is lower compared to the streetcar due to its lower projected ridership, lower visibility, and reduced perception of permanence among developers, residents, and business owners.

Figure 5: Growth in Development, 2014 to 2040

	Baseline Growth	Streetcar Growth	Enhanced Bus Growth	Streetcar Benefit over Baseline	Enhanced Bus Benefit over Baseline
Jack London Square to 27th Street					
Residential Units	6,970	7,720	7,420	750	450
Office Square Feet	1,808,000	2,060,000	1,959,000	252,000	151,000
Retail Square Feet	396,000	463,000	431,000	67,000	35,000
Hotel Rooms	730	780	760	50	30
Jack London Square to MacArthur BART					
Residential Units	8,130	9,000	8,650	870	520
Office Square Feet	1,997,000	2,272,000	2,162,000	275,000	165,000
Retail Square Feet	560,000	654,000	609,000	94,000	49,000
Hotel Rooms	730	800	770	70	40
Jack London Square to Rockridge BART					
Residential Units	8,240	n/a	8,770	n/a	530
Office Square Feet	2,035,000	n/a	2,203,000	n/a	168,000
Retail Square Feet	671,000	n/a	750,000	n/a	79,000
Hotel Rooms	730	n/a	780	n/a	50

Source: Strategic Economics, 2014.

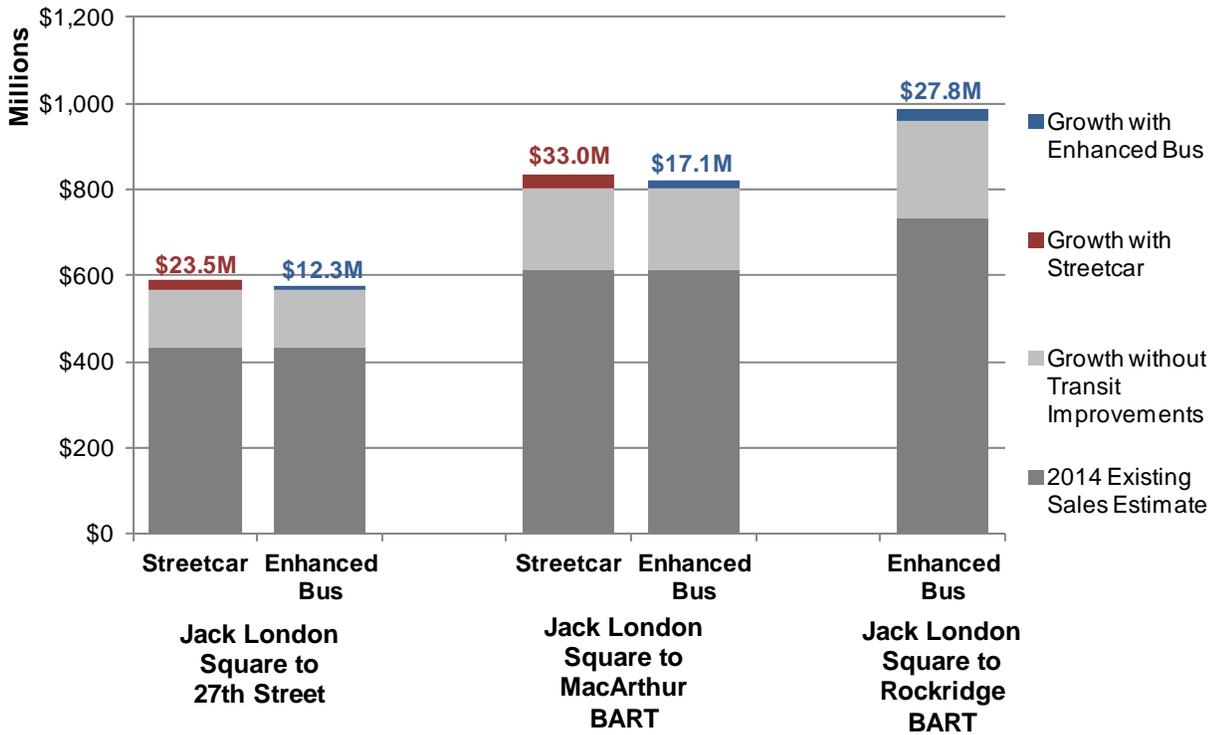
Business Owner Benefits

Local business owners will benefit from a circulator through increased retail sales and hotel revenues. The estimated impacts are described below.

Retail Sales

The circulator will increase retail sales by improving customer circulation throughout each alignment’s quarter-mile area, thereby increasing access to spending opportunities for residents, workers, visitors, and other local and regional shoppers. Figure 6 summarizes the retail sales projections for the study area, showing current annual retail sales for 2014 and projected new annual retail sales in 2040. The overall retail benefit is higher in the longer alignments due to the inclusion of additional sales generators and the added value created by linking additional destinations.

Figure 6: Projected Annual Retail Sales (2014 dollars)

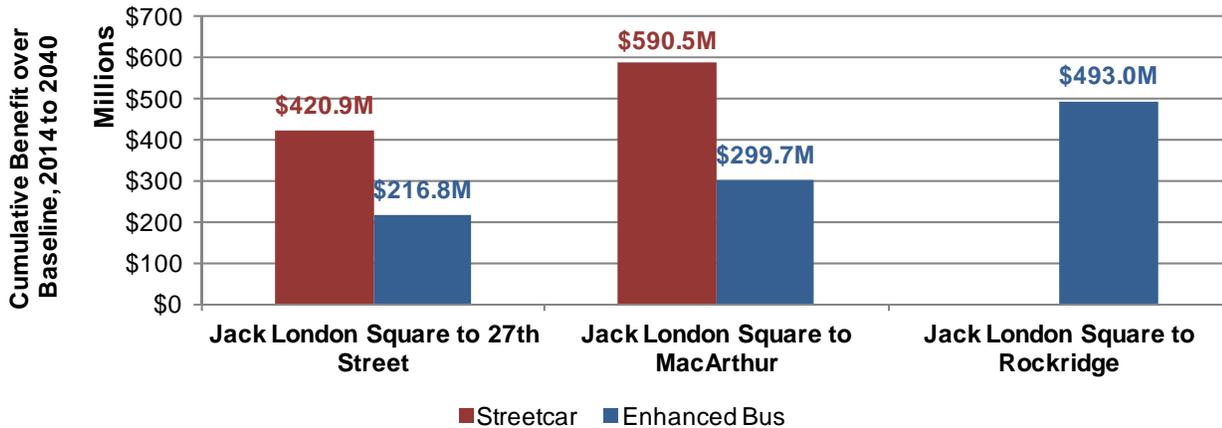


Source: Strategic Economics, 2014.

Figure 7 presents the streetcar and enhanced bus benefits in cumulative terms, adding up the transit-related components of annual retail sales in each year between 2014 and 2040. Between 2014 and 2040, a streetcar is projected to generate an additional \$421 million in retail sales along the alignment terminating at 27th Street, or \$591 million along the alignment terminating at MacArthur BART.

The estimated impact of an enhanced bus on retail sales is significantly lower. The enhanced bus is projected to drive an additional \$217 million in sales along the alignment between Jack London Square and 27th Street, \$300 million in sales along the alignment terminating at MacArthur BART, and \$493 million in sales along the alignment terminating at Rockridge BART. The more limited impact of the enhanced bus alternative is a function of both lower estimated ridership and the cumulative effect of the alignment attracting less development over time compared to the streetcar alternatives (resulting in less spending by residents and workers along the route).

Figure 7: Increase in Retail Sales beyond Baseline Growth, Cumulative Total, 2014-2040 (2014 dollars)



Source: Strategic Economics, 2014.

Hotel Revenues

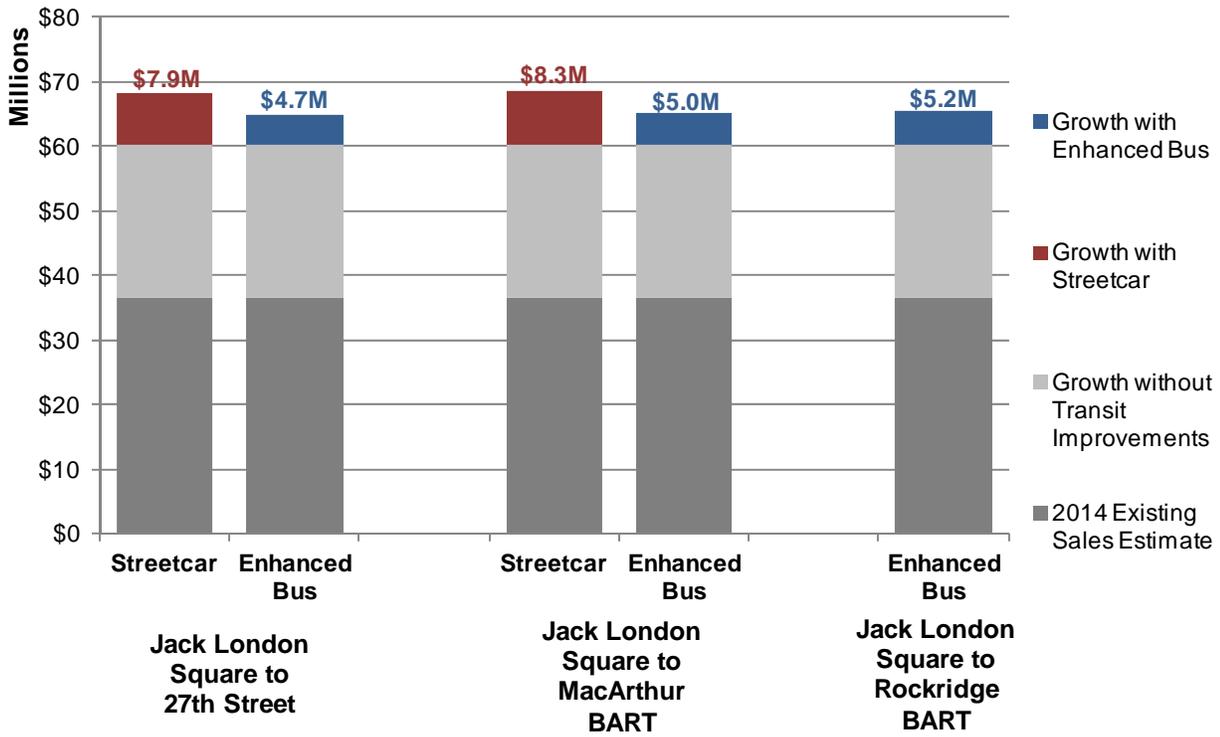
The circulator will create a notable, unique transit experience and make it easier for tourists, business travelers, conventioners, and other visitors to explore Oakland. The more convenient access is expected to encourage visitors to stay an extra night when visiting Oakland, or to stay in Oakland when they might otherwise stay elsewhere. These impacts were assumed to translate into a modest increase in the areas’ ability to attract future hotel demand in the greater Bay Area.

Figure 8 summarizes the hotel revenue projections by alignment and transit scenario, showing estimated annual hotel revenue for 2014 and projected new hotel revenue in 2040. Under the streetcar scenario, additional hotel revenue is projected to range from \$7.9 to \$8.3 million annually in 2040, depending on the alignment. Under the enhanced bus scenario, additional hotel revenue is projected to range from \$4.7 to \$5.2 million annually in 2040, depending on the alignment.

As shown in Figure 9, the streetcar is projected to generate \$124 million of additional hotel revenues between 2014 and 2040 along the line terminating at 27th Street. The enhanced bus is projected to generate \$74 million of additional revenues along the same line.

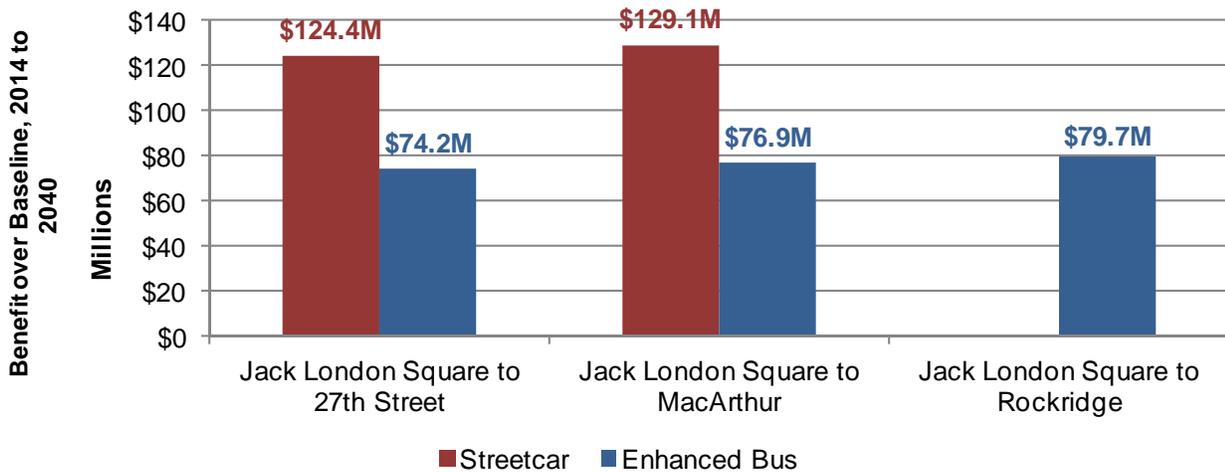
Future hotel sales growth is projected to primarily occur in the Jack London Square and Downtown areas. As a result, hotel sales benefits only increase modestly on longer alignments (as shown in Figures 8 and 9); these additional benefits reflect the value of additional access to residential areas; shopping and dining destinations; and employment.

Figure 8: Projected Annual Hotel Sales (2014 dollars)



Source: Strategic Economics, 2014.

Figure 9: Increase in Hotel Revenue beyond Baseline Growth, Cumulative Total, 2014-2040 (2014 dollars)



Source: Strategic Economics, 2014.

Tax Benefits for Local Government and Jobs

The economic benefits described above will also result in increased tax revenues for the City of Oakland. Figure 8 shows total cumulative benefits accruing to the city (above the baseline scenarios), between 2014 and 2040. The chart breaks out property tax, property transfer tax, business license tax, transient occupancy tax, and sales tax revenue.

Property Tax

Increased property value in the alignment areas will translate into additional property tax revenue for local governments. The routes terminating at 27th Street and MacArthur BART are almost entirely located within former redevelopment project areas. Since tax revenues from these areas are dedicated for redevelopment bond repayment, the City of Oakland receives a lower share of property tax compared to additional areas along the Rockridge BART alignment. Furthermore, starting in 2015, 25 percent of Oakland's residual share of property tax revenue in former redevelopment project areas will be designated for affordable housing; note that this amount is included in the property tax amounts shown.

Property Transfer Tax

Property transfer tax comprises the highest share of additional revenue in all transit scenarios. Similar to property tax revenue, the increased property value in the alignment areas will translate into additional property transfer tax revenue for the city, although the city only receives the transfer tax upon sale of a property. In Oakland, property transfer taxes are assessed at 1.5 percent of the sales value of properties, which is one of the highest rates in the State of California.

Business License Tax

Business license tax is typically levied on business gross receipts. Due to data limitations, business license tax was only projected for retail sales, grocers, automobile dealers, and hotels. Business tax revenue was calculated based on projected increases in sales and hotel stays. Revenue from this source generates the smallest share of projected growth in city revenue.

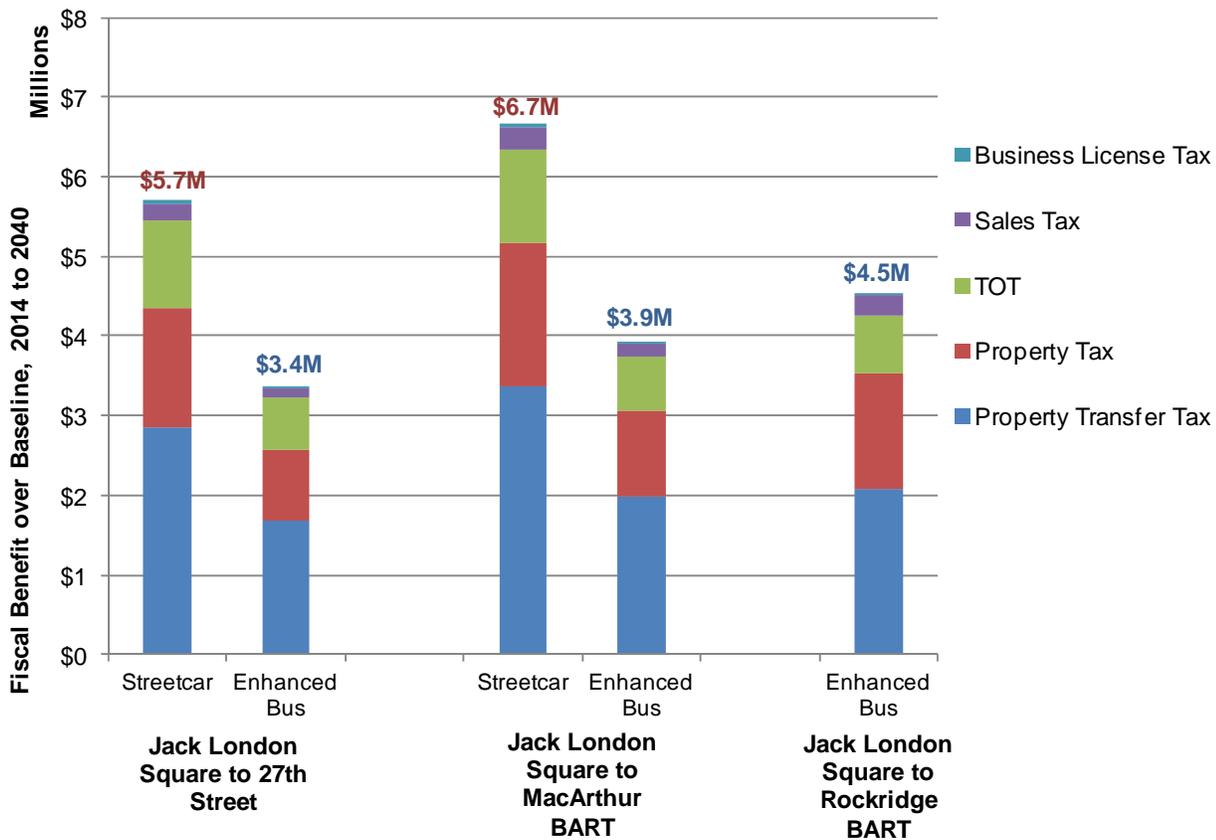
Transient Occupancy Tax

Transient occupancy tax is levied on hotel stays at a 14 percent rate. Given this high rate and assumed increases in room stays and room rates due to the circulator, transient occupancy tax is projected to contribute significant revenue above the baseline scenarios.

Sales Tax

Oakland receives one percent of taxable retail sales. Sales tax generates the second smallest share of projected growth in City revenue.

Figure 10: Total Fiscal Benefit over Baseline, Cumulative 2014-2040 (2014 dollars)

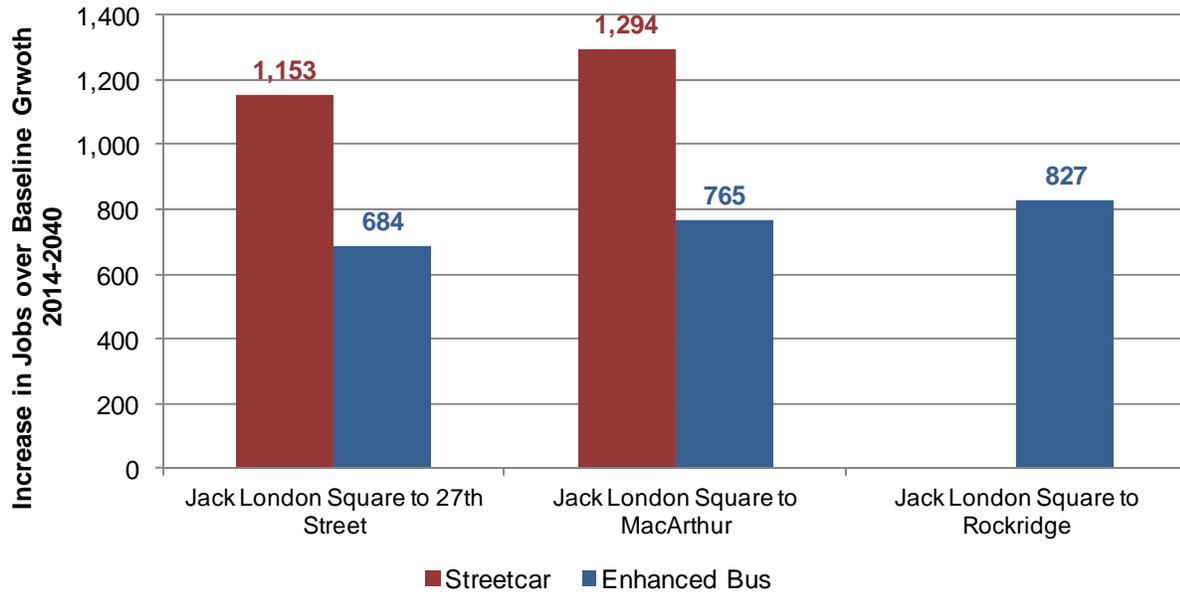


Source: Strategic Economics, 2014.

Job Attraction

Figure 9 shows projected additional jobs in 2040 associated with new development in each of the circulator options (above and beyond baseline projections). As shown, all of the transit scenarios are expected to result in increased jobs located along the streetcar or enhanced bus route, although jobs impacts are significantly higher in the streetcar scenarios than they are in the enhanced bus scenarios.

Figure 11: Increase in Jobs over Baseline Growth, 2014-2040



Source: Strategic Economics, 2014.