

Oakland A's Gondola Economic Impact

KEY FINDING: The proposed gondola system, which will connect the A's planned stadium to downtown Oakland, will generate \$685 million in total economic benefit for the City of Oakland over its first 10 years of operation.

INTRODUCTION

The Oakland A's planned new stadium at Howard Terminal adjacent to Jack London Square will be a transformational investment for the City of Oakland. Our own analysis in June 2017 found that a new downtown stadium could provide \$3 billion of economic benefit to the city over 10 years—in the form of new jobs and increased spending.

However, the Howard Terminal site has challenges in its transportation connectivity that can keep the stadium from achieving its transformative potential. Not only will fans need to make their way to and from Jack London Square for A's home games and other events, planned developments around the stadium have the potential to bring thousands of jobs and new residents. Without a major investment in infrastructure, these fans, workers, and residents will face travel issues for years to come.

ECONOMIC IMPACTS

In the following analysis, we disaggregate the economic impacts that are likely to be derived from the gondola from those derived from the construction of a new stadium (i.e., we want to understand the impact of the gondola as a standalone project). Much like any other piece of fixed route transportation infrastructure, the gondola will have economic impacts on multiple levels.

First, the construction of the gondola will have short-term impacts as it is built, and its operation will provide long-term jobs. Secondly, the gondola will create

Oakland Gondola Route



Source: Oakland Athletics

That is why the Oakland A's have proposed the construction of a gondola system that will carry passengers from Washington St. and 10th St. in Old Oakland to Washington St. and Water St. in Jack London Square. This type of aerial transit system will bring frequency, reliability, and speed that other traditional types of transit lack. It will also create a link between BART and the new stadium and the amenities surrounding it.

additional foot traffic at its stations. This new foot traffic will drive additional sales at local businesses from tourists, locals making additional trips between Jack London Square and downtown Oakland, and from residents and workers. Lastly, commuters that take the gondola will experience time savings, which has economic value to businesses in Oakland and across the region.

We detail our methodology for analyzing each of these impacts below:

CONSTRUCTION AND OPERATIONAL BENEFITS: \$265 million in economic impact over 10 years.

Construction of the half-mile long gondola with two stations is estimated at \$123 million, according to preliminary analyses commissioned by the A's. This estimate is in line with the expected cost (\$125 million) of a similar gondola project that would connect Dodger Stadium to Los Angeles's Union Station. Cost estimates for the ongoing operation of the gondola show approximately \$4.6 million in annual operating costs, which includes labor and variable costs such as electricity, maintenance, and capital reserves.

To calculate economic impacts from construction and operations spending, we use industry-specific multiples provided by the U.S. Bureau of Economic Analysis. Using the Regional Input-Output Modeling System (RIMS II), which tracks a dollar's movement through a regional economy, allows us to estimate the full economic impact of spending within a certain industry. These models also take into account "leakage," which happens when spending occurs outside of the region. We use the multiplier for the "Transit and Ground Passenger Transportation" industry within Alameda County, which is 1.5803.

We take this 1.5803 multiple—which tells us that for every \$1 in gondola spending, an additional \$0.58 is spent on housing, healthcare, food, retail, and other items within the City of Oakland. Using this multiple for two years of construction (we assume the \$123 million expense is split evenly over each year) and 10 years of operational expenses (we assume an expense growth rate of 2% per year) yields a total economic impact of \$275 million in nominal terms. To bring each annual impact back to an equivalent 2023 dollar amount—when the gondola and stadium are assumed to begin

operation—we apply a discount rate of 3% over 10 years to arrive at our total construction and operation impact of \$265 million over 10 years.

SPENDING BENEFITS: \$403 million in economic impact over 10 years.

The biggest benefit that the gondola will bring to the City of Oakland is more people. Not only will the initial novelty of the gondola supplement attendance at A's games with those that may have otherwise not attended, the gondola has the long-term potential to push people from around the region to visit Oakland more often and drive tourists from around the world to add Oakland to their travel itineraries. The economic benefit of these added visitors stems from their spending within the city.

To calculate a total economic impact related to spending, we must first understand the total amount of taxable sales that occur in the areas served by the gondola today. Since sales taxes are administered at the county level, we use data from the California Board of Equalization and the Alameda County Transportation Commission (a recipient of sales tax dollars) to find the level of 2018 sales countywide. For 2018, this number is estimated at \$30.8 billion across the county.

To estimate the amount of taxable sales occurring today within Jack London Square and in Old Oakland, we use census tract data on employment from the U.S. Census Bureau's Longitudinal Employment-Household Dynamics database as a proxy for sales. The most recent data available shows the census tract encompassing Jack London Square (tract 9832) with 6,687 jobs, and Old Oakland (tract 4031) with 9,558 jobs. These numbers equate to 0.98% and 1.41% of the county's total employment, respectively. Using these percentages as proxies for the total amount of taxable sales occurring within each area, we arrive at \$303 million of taxable sales in Jack London Square and \$433 million in Old Oakland in 2018.

We next apply a conservative growth factor of 3.1% to these numbers to extrapolate taxable sales in each area out to 2023 (at the gondola's opening) and beyond. This 3.1% growth factor mirrors the growth in overall county taxable sales in the five-year period from 2012 to 2017. We use these numbers as our "no gondola" base case.

To understand how taxable sales might increase with a gondola, we turn to Portland's Aerial Tram, which opened in late 2006 and helped to transform the Marquam Hill neighborhood. The Portland Aerial Tram had 2.1 million total rides over the last 12 months (from June 2017 to May 2018), which we believe to be near the potential of the Oakland gondola (1 million riders taking two rides each).

Between 2009 and 2015, the census tract surrounding the lower gondola station in Portland grew employment at an annual rate 1.5 times faster than the City of Portland and 1.2 times faster than the nearby downtown and Pearl District. We apply these same growth multiples (1.5x in Jack London Square and 1.2x in Old Oakland) to our base case over the first five years of gondola operation. For the following five years, we cut these multiples in half given our assumption that gondola-induced growth will taper off over time.

Comparing the sales tax receipts produced by the gondola model in each year of operation against the base case yields the economic impact from increased spending. We again use a discount rate of 3% to arrive at a total impact of \$403 million over 10 years.

Oakland Gondola Spending Impact Model

Year	BASE			BASE WITH GONDOLA			IMPACT	
	Jack London	Old Oakland	Total	Jack London	Old Oakland	Total	Delta	Present Value @ 2023
2018	303,109,488	433,246,671	736,356,159	303,109,488	433,246,671	736,356,159	0 \$	-
2019	312,466,253	446,620,674	759,086,927	312,466,253	446,620,674	759,086,927	0 \$	-
2020	322,111,854	460,407,522	782,519,376	322,111,854	460,407,522	782,519,376	0 \$	-
2021	332,055,208	474,619,960	806,675,168	332,055,208	474,619,960	806,675,168	0 \$	-
2022	342,305,505	489,271,126	831,576,631	342,305,505	489,271,126	831,576,631	0 \$	-
2023	352,872,222	504,374,562	857,246,784	358,263,202	507,415,628	865,678,830	8,432,046	\$ 8,432,046
2024	363,765,125	519,944,230	883,709,356	374,964,820	526,233,014	901,197,834	17,488,478	\$ 16,979,105
2025	374,994,285	535,994,522	910,988,807	392,445,038	545,748,238	938,193,276	27,204,469	\$ 25,642,821
2026	386,570,080	552,540,275	939,110,355	410,740,154	565,987,180	976,727,334	37,616,980	\$ 34,424,865
2027	398,503,211	569,596,783	968,099,994	429,888,158	586,976,678	1,016,864,836	48,764,842	\$ 43,326,930
2028	410,804,709	587,179,813	997,984,522	445,830,456	606,820,690	1,052,651,146	54,666,624	\$ 47,155,910
2029	423,485,945	605,305,617	1,028,791,562	462,363,971	627,335,571	1,089,699,542	60,907,980	\$ 51,009,474
2030	436,558,642	623,990,952	1,060,549,594	479,510,627	648,544,002	1,128,054,630	67,505,036	\$ 54,887,772
2031	450,034,883	643,253,089	1,093,287,972	497,293,163	670,469,430	1,167,762,594	74,474,622	\$ 58,790,954
2032	463,927,125	663,109,834	1,127,036,959	515,735,160	693,136,095	1,208,871,255	81,834,296	\$ 62,719,173
							\$	403,369,052

Analysis: Bay Area Council Economic Institute

COMMUTER TIME SAVINGS: \$17 million in total benefits over 10 years.

Our ridership estimates point to approximately half of the gondola's two million annual trips being completed by commuters. This number takes into account the existing market for trips between Jack London Square and downtown Oakland, and the potential for new

population and jobs to locate near the new stadium. Existing plans for development put forward by the A's and other developers include up to 2,000,000 square feet of office space, over 4,000 residential units, and two new hotels. Given regional occupancy rates for residential and commercial space, we project that these new developments can house over 6,000 new residents and up to 10,000 new workers.

It is this new development that will drive much of the gondola's future commute use. We estimate that the occupants of new Jack London Square developments will utilize transit at a rate similar to broader trends in Alameda County. U.S. Census data shows that 20% of all Alameda County use heavy rail to get to work (we assume all of this heavy rail usage is BART-related). We assume that the gondola can capture 40% of potential traffic between Jack London Square and the 12th Street Oakland BART station. The other 60% of the demand will be filled by walking or biking. Given these assumptions, we arrive at an 8% gondola capture rate for residents and workers in Jack London Square.

Given an 8% capture rate of the total market of nearly 24,000 total workers and residents, and 250 commute days for workers and residents per year, we arrive at our estimate of 986,504 commute-related trips per

year made by 1,900 commuters using the gondola. To calculate time savings, we assume each gondola trip saves approximately 4-5 minutes (compared to walking) dependent on the origin or destination of the trip in Jack London Square.

Using the median hourly wage in Oakland, we can monetize the total time savings generated in each year. The median hourly wage in Oakland in 2018 was \$22.89, according to the Bureau of Labor Statistics, which we project grows at a 4% rate each year given recent trends. Taking this yearly increase and the calculated time savings of each trip, we arrive at between \$1.6 million and \$2.3 million in economic benefit in each year of gondola operation. When discounting these impacts back to the first year of gondola operation, we calculate total monetized commute time savings at \$17 million.

NON-QUANTIFIABLE IMPACTS

1) Broader regional impact of improved transit connectivity. As a standalone investment in transportation, we have quantified the gondola's potential impacts for those traveling to and from Jack London Square. While the estimated time savings produced economic benefits on a relatively small scale, these benefits could grow in magnitude if the gondola becomes a viable transit option for those living and working on Alameda. Today, the island city of Alameda is relatively disconnected from the regional transportation system, with only a few bridge and tunnel exits for cars and ferry service to and from San Francisco (with a stop at Jack London Square).

One could envision future gondola service extending onto Alameda that could carry residents into Jack London Square and on to downtown Oakland with a connection to BART. If even a bicycle and pedestrian bridge connected Alameda and Jack London Square, the gondola could experience higher ridership

and become a more pivotal part of the East Bay's overall transit system. This is especially true as new development on Alameda Point will bring 800 new residential units, 600,000 square feet of commercial space, and 15 acres of park space to the island. The first new homes are expected to be available in 2021.

2) Environmental/congestion benefits from mode shifts. Our analysis envisions walking, biking, and other forms of short-range transportation as the main competition for gondola use. This is likely to be the case for the future residents and workers in Jack London Square that are trying to make trips into downtown Oakland or wishing to connect to BART in order to travel to other parts of the region.

Where the gondola can contribute to congestion alleviation is on game nights, when we expect up to 16% of arriving fans to use the gondola. While it is difficult to project fans starting locations (i.e., many will be traveling directly from workplaces rather than

their homes), we can assume that the gondola opens up more travel options for A's fans. For example, a family from Pleasanton that may have chosen to drive to the new stadium at Howard Terminal in absence of a gondola may now decide that the BART trip and gondola ride is their preferred mode. This family might also choose to drive into downtown Oakland, park at one of the city's many garages or lots, and then take the gondola to finish their trip.

In either scenario described above, the amount of driving is reduced, congestion is alleviated around the stadium, and carbon emissions are avoided. These are benefits that accrue to the entire region, but that are difficult to precisely quantify without knowing future regional travel preferences.

ABOUT THE INSTITUTE

Since 1990, the Bay Area Council Economic Institute has been the leading think tank focused on the economic and policy issues facing the San Francisco/Silicon Valley Bay Area, one of the most dynamic regions in the United States and the world's leading center for technology and innovation. A valued forum for stakeholder engagement and a respected source of information and fact-based analysis, the Institute is a trusted partner and adviser to both business leaders and government officials.

Through its economic and policy research and its many partnerships, the Institute addresses major factors impacting the competitiveness, economic development and quality of life of the region and the state, including infrastructure, globalization, science and technology, and health policy. It is guided by a Board of Trustees drawn from influential leaders in the corporate, academic, non-profit, and government sectors. The Institute is housed at and supported by the Bay Area Council, a public policy organization that includes hundreds of the region's largest employers and is committed to keeping the Bay Area the world's most competitive economy and best place to live. The Institute also supports and manages the Bay Area Science and Innovation Consortium (BASIC), a partnership of Northern California's leading scientific research laboratories and thinkers.

