TRANSBAY TRANSIT CENTER:

Key Investment in San Francisco's Future as a World Class City

EXECUTIVE SUMMARY

Transbay Transit Center:
Key Investment in San Francisco's Future as a World Class City

The Transbay Transit Center Project will transform downtown San Francisco by creating a landmark multi-modal transportation station and new parks as part of a vibrant new neighborhood in the heart of the financial district. The approximately $4.5 billion, five-level Transit Center will bring together eleven local, regional, and statewide transit systems, serving as the new northern terminus of Caltrain commuter rail and future high speed rail. The Transit Center's street- and upper-level retail and its 5.4-acre rooftop park will anchor this new downtown neighborhood. The Transbay Project will be the catalyst for new development, including redevelopment of land once occupied by abandoned freeway ramps and the former Transbay Terminal, to create approximately 4,500 new homes, over 1,300 of which will be affordable to low- and moderate-income households, and over 6 million square feet of commercial space.

The attached report, *Transbay Transit Center: Key Investment in San Francisco's Future as a World Class City*, applies numerous economic studies showing that buyers and renters will pay a premium for residential and commercial properties located near public transit and for access to parks, open spaces, and other amenities associated with high quality neighborhoods. The improved transit access, public spaces, and neighborhood amenities provided by the Transbay Project are projected to enhance the value of private properties located within ¾ miles of the Transit Center by an estimated $3.9 billion, or 5 percent on average, adding $1.2 billion to the value of residential property and $2.7 billion to the value of commercial property. Value enhancement for properties directly adjacent to the Transit Center is estimated at 11 percent. In addition, redeveloping the public property once occupied by the former Transbay Terminal and abandoned freeway ramps is projected to stimulate over $4 billion in new development.

These value premiums reflect the convenience and improved quality of life that the Transbay Project will provide to local residents, commuters, and employers. The underground Downtown Rail Extension will bring more than 31,000 Caltrain passengers to the Transit Center each day, along with millions of high speed rail passengers annually. Better transit connectivity will expand the regional labor market and make it easier for workers to reach jobs. Moreover, the use of transit instead of cars will reduce air pollution and greenhouse gas emissions by removing thousands of vehicles from California streets and highways, increase physical activity and productivity, and foster better health.

The Transbay Project will also strengthen San Francisco's position in the global economy. World class cities such as New York, London, Paris, Tokyo, and Berlin are pursuing major multi-modal transit projects to enhance economic competitiveness and simultaneously revitalize communities in the urban core. For San Francisco, the Transbay Project's investment in transit connectivity, public open space, and urban design will create strong synergies with the city's world-renowned technology and social media sectors, which thrive in compact, transit-rich environments. The Transbay Project will help keep San Francisco at the forefront of the ever-changing global economy.

We invite you to visit our project at **www.transbaycenter.org**.

Maria Ayerdi-Kaplan

Executive Director

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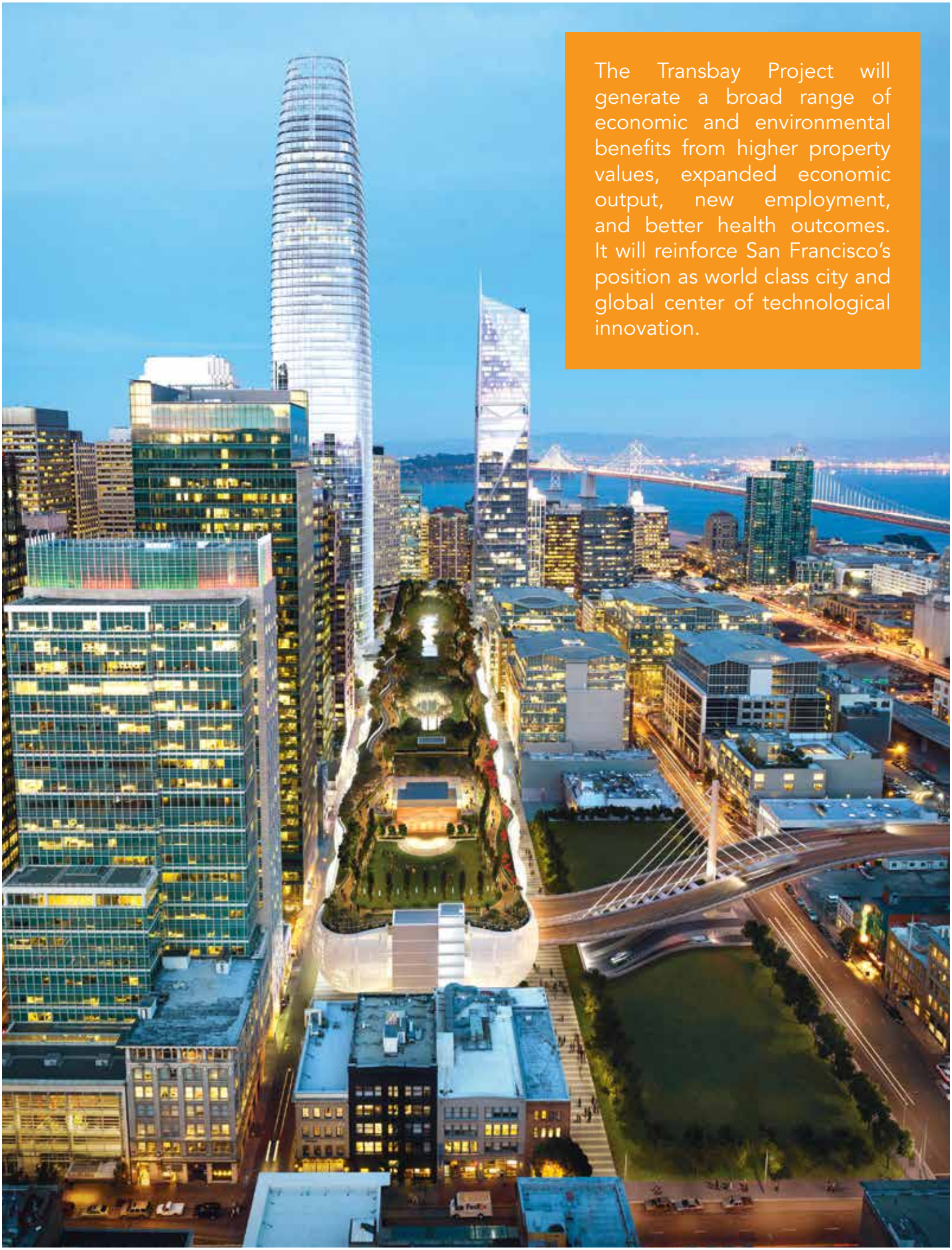


The Transbay Project will generate a broad range of economic and environmental benefits from higher property values, expanded economic output, new employment, and better health outcomes. It will reinforce San Francisco's position as world class city and global center of technological innovation.

LANDMARK MULTI-MODAL TRANSPORTATION HUB IN NEW DOWNTOWN NEIGHBORHOOD

1

The Transbay Transit Center Project is an inspiring and forward-thinking transit oriented development that will transform downtown San Francisco and the Bay Area's regional transportation system by creating a landmark multi-modal transit hub in the heart of a vibrant new downtown neighborhood. The Transbay Project consists of three key elements:

- New multi-modal Transit Center, which will be the "Grand Central Station of the West."
- Redevelopment of vacant and underutilized State-owned parcels into a walkable, mixed-use, mixed-income, and transit oriented community.
- Creation of a new downtown neighborhood with parks, retail and urban amenities, which will serve as the Bay Area's most dense employment and residential center.

The Transbay Transit Center Project is an inspiring and forward-thinking transit oriented development that will transform downtown San Francisco and the Bay Area's regional transportation system.

A. Transbay Transit Center

The approximately $4.5 billion Transit Center will be the new "Grand Central Station of the West," a multi-modal transit hub that will centralize the region's transportation network and streamline access to statewide, national, and international transportation networks. The first phase of the Transbay project features a unique, curvilinear steel station design that will be the centerpiece of San Francisco's newest neighborhood. It will feature:[1]

- **Five-level, multi-modal station** that will connect eleven transit systems under one roof—Muni, AC Transit, Golden Gate Transit, SamTrans, WestCAT Lynx, Greyhound, Paratransit, BART, Caltrain, Amtrak, and future high speed rail—enabling passengers to travel seamlessly throughout the region and California on public transit, as well as connect to global travel networks.

- **Welcoming, secure, and sustainable (LEED Gold Certified) building design**, including a "living" roof, infusion of natural daylight through a dramatic light column in the station's Grand Hall, and green building systems that feature energy efficiency, passive cooling, and water reuse.

- **City Park**—a 1,400-foot long, 5.4-acre linear park on top of the Transit Center with open lawns, gardens, performance areas, walking/jogging paths, a playground, and unique restaurant/café space.

- **Exciting new retail** integrated within the Transit Center and lining the surrounding streets, featuring a mix of cafés, specialty shops, and neighborhood shops, including an urban grocer.

The Transit Center will enhance regional and national connections to transit for Bay Area residents, workers, and visitors. While Caltrain connects San Francisco to Silicon Valley by rail, its service currently terminates 1.3 miles from downtown San Francisco, greatly limiting utility for both commuters and riders of the planned statewide high speed rail system. The second phase will extend Caltrain downtown into the new Transit Center, saving commuters up to an hour each day in travel time. More than 31,000 Caltrain passengers are projected to use the Transit Center each weekday,[2] dramatically reducing single occupant vehicle use and related congestion in the Bay Area.

The underground Downtown Rail Extension (DTX) will run beneath Second and Townsend Streets and is being designed to accommodate high speed rail, making the Transit Center the future hub for an integrated rail system in Northern California. When completed, California High Speed Rail will provide an 800-mile system that spans the length of California, connecting San Francisco to Sacramento, Los Angeles, and San Diego, with additional service to the Central Valley.

CALIFORNIA HIGH SPEED RAIL

California High Speed Rail (CHSR) will allow trains to travel at speeds up to 220 miles per hour, similar to high speed trains in Europe and Asia, reducing travel time between San Francisco and Los Angeles to under 3 hours while transporting, system-wide, about 26 million intercity passengers annually. It will connect with existing rail, air, and highway systems, allowing intercity commuters and long distance travelers easier access to metropolitan regions and other transit options and improving traffic conditions and air quality by reducing automobile traffic. This will help address traffic congestion in California cities, which is projected to continue to be among the nation's worst in 2029 when CHSR is planned to become operational. California's $2.7 billion investment in the first phase of high speed rail is projected to return over three times this amount in statewide GDP (up to $8.8 billion), generating new construction jobs and stimulating local economies.[3]

B. Transbay Neighborhood Transformation

Downtown San Francisco is at the center of the world's innovation engine and serves as the region's premier commercial district, accommodating about three-quarters of the city's office jobs.[4] The new Transit Center will further reinforce the city's status as the most desirable place to concentrate new growth in the Bay Area. The Transit Center will also anchor the new Transbay neighborhood that is connecting downtown with the emerging Rincon Hill residential neighborhood to the south.

The Transbay Redevelopment Plan (adopted 2005) and the Transit Center District Plan (adopted 2012) work in concert to create a high-density, mixed-use, transit oriented neighborhood. The Transit Center District Plan is a catalyst for new development by creating special zoning that permits a limited number of tall buildings around the Transit Center. The Transbay Redevelopment Plan facilitates neighborhood transformation through the redevelopment of vacant and underutilized State-owned properties that originally served the former Transbay Terminal or were part of a now demolished, elevated freeway system. Redevelopment of these public properties will generate about 3,000 housing units, of which 35 percent, or about 1,000 units, will be affordable to low- and moderate-income households, as required in the Transbay Redevelopment Plan and State law. Together, these two plans will result in over 4,500 new homes and over 6 million square feet of commercial space.

Proceeds from the land sales of this redeveloped public property (valued at about $600 million) and tax increment generated from the growth in assessed value from their development (valued at about $4 billion) will generate revenues to help fund the Transit Center.[5] Development on these State-owned properties is already transforming the Transbay neighborhood by creating new jobs and a diverse set of housing opportunities in direct proximity to transit:

- The landmark Transbay Transit Tower, an elegant, 1,070-foot office tower designed by celebrity architect César Pelli, will directly connect to the Transit Center and its rooftop City Park. Now under construction, the 60-story Transbay Transit Tower will be the tallest building in San Francisco and will incorporate state-of-the- art workplace, safety and sustainability features.[6]

- More than 1,200 new housing units are in the process of being developed along Folsom Street, including two large scale mixed-income developments (Blocks 6/7 and 9) and the Rene Cazenave Apartments (Block 11). Currently under construction, the Rene Cazenave Apartments will provide 120 units of supportive housing with no onsite parking due to its close transit proximity. Ground floor retail is being developed along Folsom Street to create a new "Main Street" for the neighborhood.

C. Future Development in the Neighborhood

Significant new commercial and residential developments are proposed for areas in close proximity to the new Transit Center. The growth of San Francisco's real estate market is driven by strong employment gains across the Bay Area, the city's emergence as a major hub for rapidly expanding technology companies, and the increased desire for urban living from an expanding, affluent GenY population. (As an example, the number of planned and proposed housing units has grown by more than 25 percent in San Francisco over the past two years.)

Future development in the new Transbay neighborhood (facilitated by the Transbay Redevelopment Plan and Transit Center District Plan) will feature about 4,500 new homes, including nearly 1,300 affordable units, approximately 6 million square feet of new office space, a retail "boulevard" on Folsom Street, and about 11 acres of neighborhood parks.[7] (This includes redevelopment of the State-owned properties described above.) The new Transit Center, along with these neighborhood amenities, will create a premier urban environment where people from all walks of life can work, live, and play.

Developers and investors have been attracted to this new neighborhood given its transit proximity, convenience to employment, current and planned open space, and expanding neighborhood amenities. Overall, about 7 million square feet of commercial development and about 6,400 residential units are planned or currently in San Francisco's development pipeline within ¾ of a mile walking distance of the Transit Center (in addition to what will be developed on the State-owned parcels).

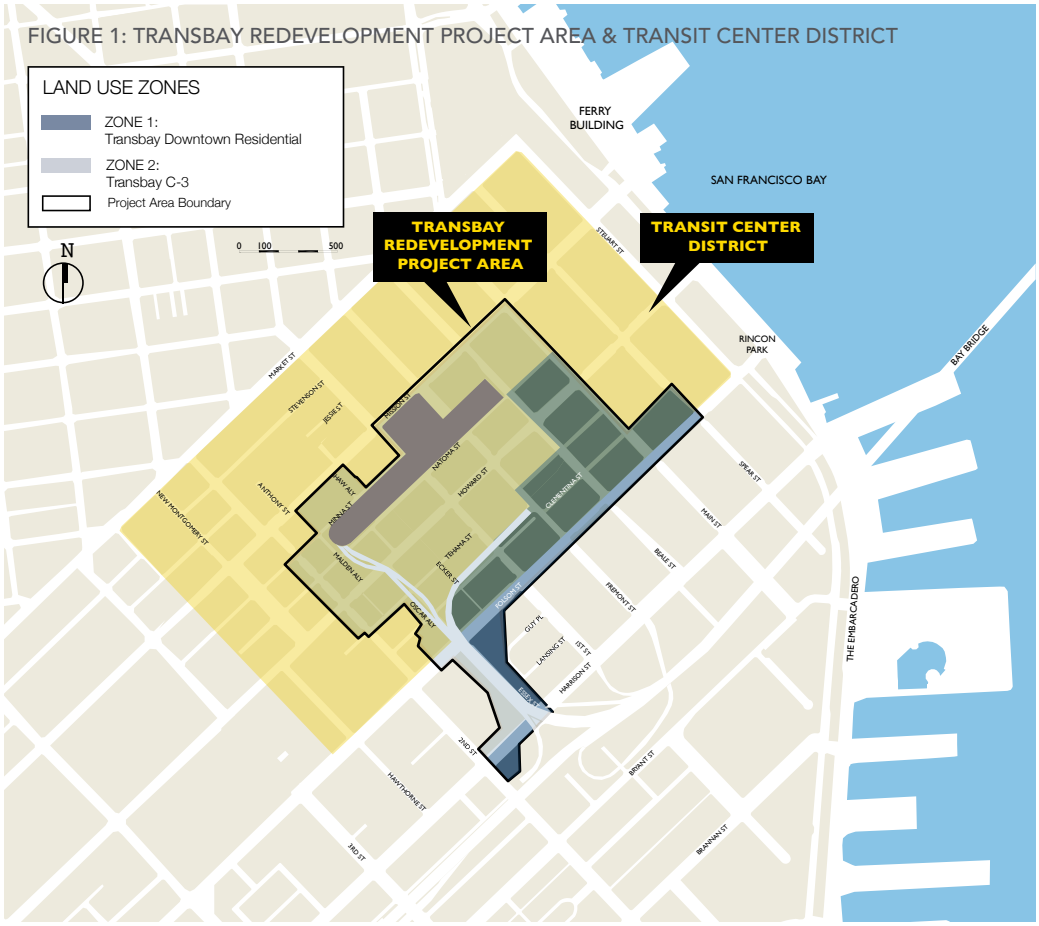
NEW TRANSBAY TRANSIT CENTER DISTRICT NEIGHBORHOOD ELEMENTS[8]

- About **6 million square feet of new downtown office space** in a high density commercial core surrounding the new Transit Center, providing space for more than 24,000 new employees.
- About **4,500 new homes** including about 1,300 affordable units, housing more than 7,000 new residents.
- Approximately **100,000 square feet of new retail in the Transit Center**.
- Approximately **150,000 square feet of new retail in the Transbay neighborhood** surrounding the Transit Center.
- A **dramatic new skyline** punctuated by a limited number of tall buildings, including the tallest high-rise in San Francisco and new hotels.
- New **public parks**, including a 5.4-acre rooftop park on the Transit Center and more than 5 acres of new parks in the Transbay neighborhood.
- **Wide sidewalks** with landscaping, lighting, seating, and pedestrian amenities.
- Mid-block crossings keyed to alleyway systems and other **pedestrian safety improvements**.
- Safe and convenient **bicycle lanes**.

Above: Development Vision for Transbay Neighborhood

Right: Transbay Redevelopment Project Area and Transit Center District Plan Area Boundary, Zones, and Development Blocks

FIGURE 1: TRANSBAY REDEVELOPMENT PROJECT AREA & TRANSIT CENTER DISTRICT



Development on State-owned Properties Transforms Transbay Neighborhood

Parcel T
Transbay Transit Tower Office Building

Hines and Boston Properties
1.4 Million square feet of office and retail

Block 6/7
Mixed-Income Housing

Golub Corporation and Mercy Housing California
409 market rate and 147 affordable units

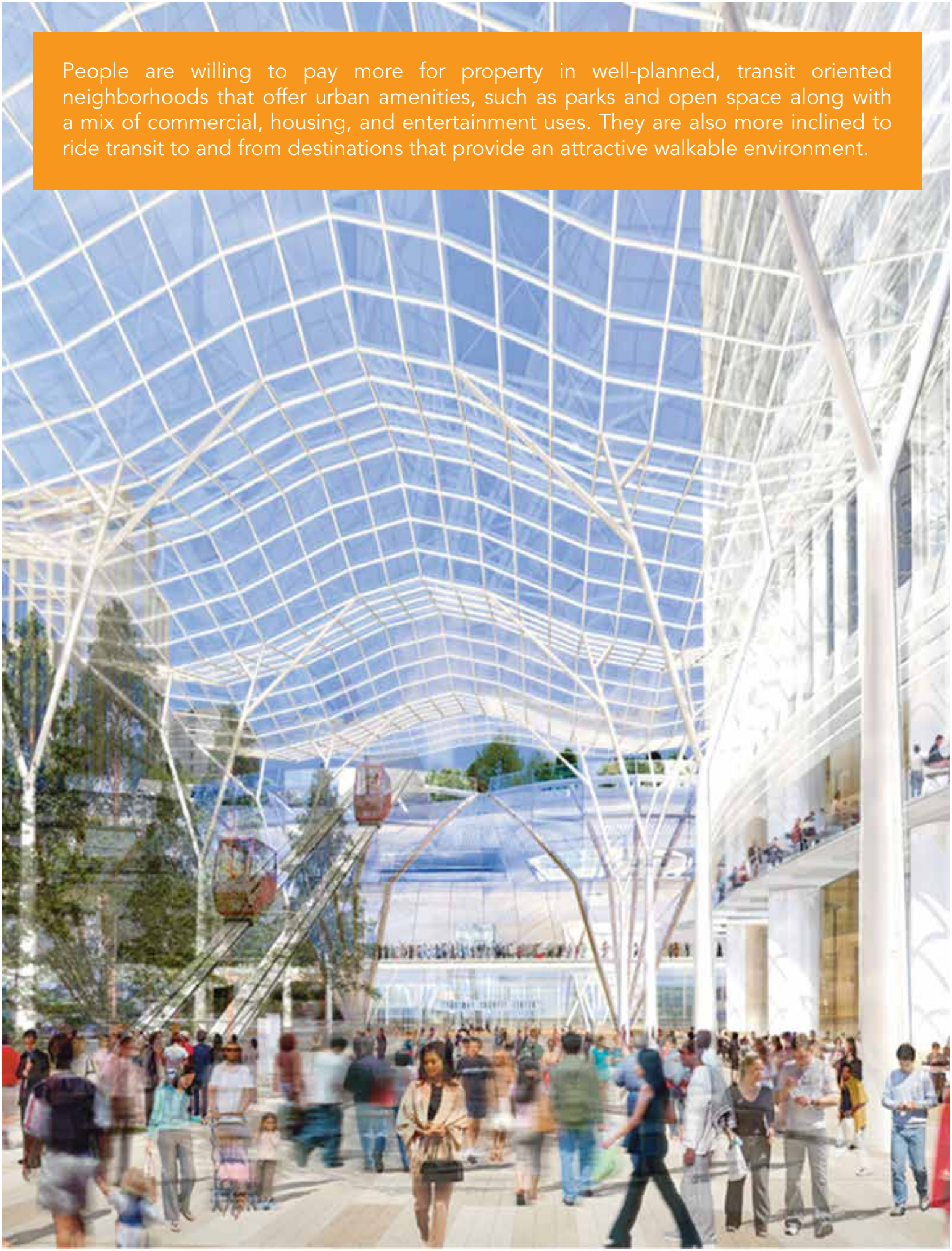
Block 9
Mixed-Income Housing

Avant/Essex and BRIDGE Housing
456 market rate and 114 affordable units

Block 11
Rene Cazenave Affordable Housing

Community Housing Partnership and BRIDGE Housing
120 supportive housing units

People are willing to pay more for property in well-planned, transit oriented neighborhoods that offer urban amenities, such as parks and open space along with a mix of commercial, housing, and entertainment uses. They are also more inclined to ride transit to and from destinations that provide an attractive walkable environment.



ECONOMIC IMPACT OF THE TRANSBAY PROJECT

2

The conveniences and amenities provided by the Transbay neighborhood will translate into concrete economic gains for residents and employers throughout the Bay Area:

- Downtown properties surrounding the Transit Center will increase in value from improved access to high quality public transit, new open space, and the creation of a well-planned, walkable mixed-use neighborhood with urban amenities.
- San Francisco and the entire Bay Area region will benefit from reduced travel times, better environmental and human health, an expanded labor market, new jobs, and increased economic output.

Station proximity has a significantly stronger impact when coupled with a pedestrian-oriented environment… TOD has a synergistic value greater than the sum of its parts.

—Michael Duncan
University of North Carolina Charlotte[9]

A. Property Value Enhancement

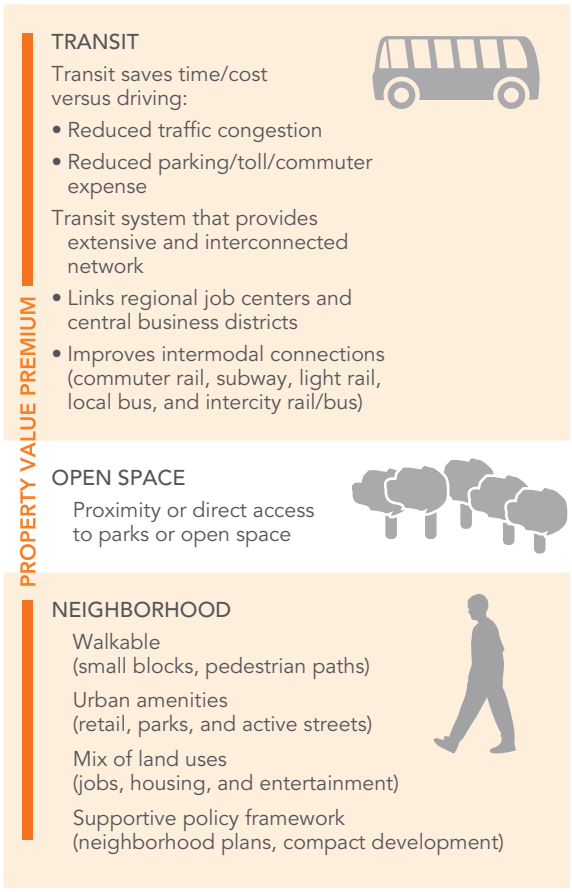
Property values surrounding the Transit Center will be enhanced from improved access to transit, new open space, and the creation of a new vibrant, mixed-use neighborhood. Extensive economic literature documents the premium that buyers and renters of both commercial and residential property pay for locations within ¾ of a mile of high quality public transit. These new transit connections will enhance the value of nearby properties, as will the new 5.4-acre City Park, public plazas, art installations, retail, and other neighborhood amenities that include tree-lined streets, bike lanes, and widened sidewalks that promote walkability. Figure 2 shows key characteristics that affect the level of value premiums found near transit stations, open space, and other neighborhood amenities.

1. Transit Premiums

Transit systems create value when they save riders time and money by providing efficient access to jobs, housing, and other destinations such as retail, recreational, and cultural facilities. Convenient connection to a regional job center or central business district is especially important. The extension of Caltrain into the Transit Center will reduce commute times into downtown San Francisco by up to 30 minutes[10] and avoid the current need to transfer from Caltrain to a bus or light rail to reach downtown. Additionally, connecting 11 transit systems in a single, attractive facility improves the existing transportation network.

Numerous studies examine the extent to which transit increases the value of properties surrounding stations, with nearly all finding a measurable positive benefit for dense, mixed-use areas like Transbay. The Concord Group and Seifel Consulting reviewed more than 50 studies by national and international scholars and research organizations, and found that these studies typically calculated transit benefits at several key radii – adjacent, ¼ mile from station, ½ mile from station, and ¾ mile from station. The studies emphasize that "rail systems be planned to reach regional accessibility centers quickly."[11] The Transbay location is ideal to capture this value, with nearly 180,000 jobs within a ½ mile walking radius,[12] making the Transbay neighborhood the currently-densest cluster of employment in the Bay Area.[13]

FIGURE 2: PROPERTY VALUE PREMIUM COMPONENTS



The benefits of having good connectivity to the rest of the region…get capitalized into the market value of land….Where market conditions are conducive and pro-development policies are in place… land-value impacts can be substantial.

—Robert Cervero, University of California Berkeley[14]

Overall benefits vary, influenced by features such as the quality of station, ridership levels, frequency of transit availability, and distance to employment cores. The figures below present conclusions regarding premiums at various radii. On the whole, stations that are connected to mature, multimodal transit systems and located in walkable neighborhoods like Transbay tend to generate the greatest increase in nearby property values. Figure 3 shows the boundaries of the value premium areas by distance associated with the Transbay Project. Figure 4 shows the research results from the most applicable transit literature.[15]

FIGURE 3: TRANSBAY PROJECT VALUE PREMIUM AREAS

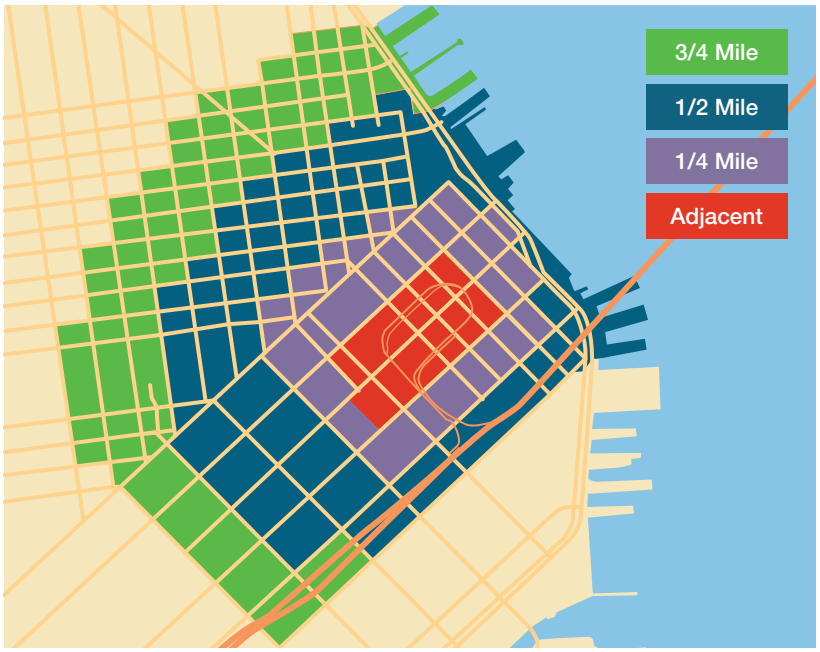
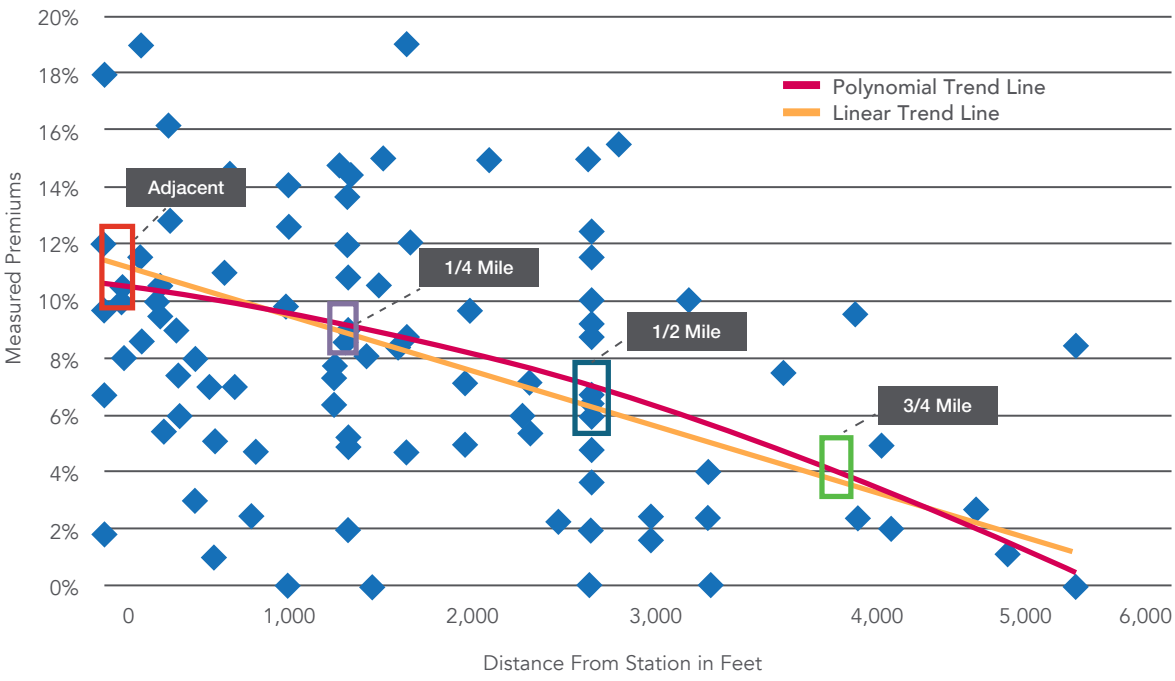


FIGURE 4: APPLICABLE TRANSIT LITERATURE VALUE PREMIUM RESULTS



The majority of academic research focuses on areas that previously did not provide transit or had limited transit service. Recognizing that San Francisco is a city already rich with transit that serves downtown, the analysis adjusted the research findings to take this into account based on consultation with transit researchers: research findings with a premium greater than 15 percent are excluded, and the resulting premiums are further discounted by 50 percent. Table 1 presents the adjusted transit premiums for each radius, which range from 5 percent for properties adjacent to the transit station to 1.7 percent for properties within ¾ miles.

2. Open Space and Neighborhood Premiums

Research demonstrates that properties located near parks or open space also derive a value premium. People are willing to pay more for a home located near a nice park, and public space provides workers a needed respite and gathering place near their jobs. Development of the 5.4-acre rooftop park on the Transit Center as well as other new neighborhood parks and public plazas will provide valuable amenities to residents, workers and visitors alike.

Another key factor influencing the value premium accruing to property owners and tenants is the quality of neighborhood amenities and conveniences. Both residents and businesses are willing to pay more for property in walkable neighborhoods that offer urban amenities such as a mix of retail and land uses including employment, housing, and entertainment. People are also more inclined to take transit to and from destinations that provide an attractive pedestrian environment, including dense street networks, pedestrian paths, and ample retail offerings.

The consultant team reviewed literature describing open space and/or neighborhood amenity premiums. Using more than 20 research studies (one of which compiled results from 30 studies), open space and neighborhood amenity value premiums ranged from 3 percent to 15 percent. The well-designed City Park, neighborhood parks and public plazas throughout Transbay are conservatively projected to add 3 percent to the value of property adjacent to and within ¼ mile of the Transit Center. No premium associated with proximity to open space was assumed beyond ¼ mile.

More than 30 studies have shown that parks have a positive impact on nearby residential property values. Other things being equal, most people are willing to pay more for a home close to a nice park. Economists call this phenomenon "hedonic value."

The Trust for Public Land[16]

Additionally, the development of the Transit Center will bring activity, energy, vibrancy, and improved walkability to downtown San Francisco, qualities that will drive value premiums associated with the creation of the most dense residential neighborhood and employment center in the Bay Area. The neighborhood premium or "cool factor" is attributable to the diverse urban amenities, vibrant mix of commercial and residential development activity, landmark architecture (including the state-of-the-art Transit Center), tree-lined streets, and improved walkability in a neighborhood with limited current prestige. This new neighborhood will draw high-end businesses and residents in search of a well-designed urban environment with diverse retail options and street-level activity. Although premiums on values could become much higher upon build-out of the Transbay neighborhood, the neighborhood premium is calculated as an additional 3 percent to the value of property adjacent to and within ¼ mile of the Transit Center, while no premium was assumed beyond ¼ mile. Table 2 summarizes the transit, open space and neighborhood value premiums.

TABLE 1: SUMMARY OF TRANSIT PREMIUM RESULTS AND ADJUSTMENTS FOR TRANSBAY

Approximate Radius	Applicable Transit Research Results	Constrained Transit Research Results	Adjusted Transit Premium
Adjacent	11.1%	10.0%	5.0%
1/4 Mile	8.6%	7.8%	3.9%
1/2 Mile	6.0%	5.6%	2.8%
3/4 Mile	3.5%	3.4%	1.7%

FIGURE 5: SAN FRANCISCO CONSTRAINED TRANSIT VALUE PREMIUM RESULTS

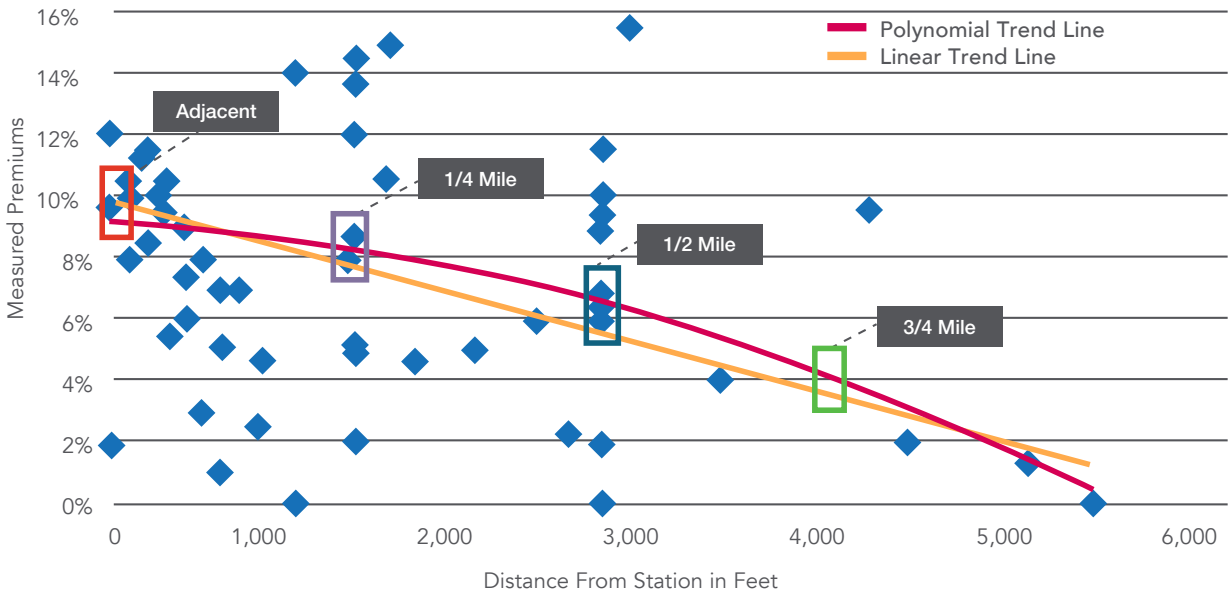


TABLE 2: TRANSIT, OPEN SPACE AND NEIGHBORHOOD VALUE PREMIUMS WITHIN TRANSBAY AREA

Approximate Radius	Adjusted Transit Premium	Open Space Premium	Neighborhood Premium	Total Premium
Adjacent	5.0%	3.0%	3.0%	11.0%
1/4 Mile	3.9%	3.0%	3.0%	9.9%
1/2 Mile	2.8%	0.0%	0.0%	2.8%
3/4 Mile	1.7%	0.0%	0.0%	1.7%

3. Value Premium on Surrounding Private Properties

The consultant team applied the transit, open space and neighborhood premiums to the value of existing and new commercial and residential property within each of the identified radii.[17] Using data from the San Francisco County Assessor and other real estate research sources, the consultant team estimated the square footage and value of existing commercial and residential development within ¾ miles of the Transit Center to be approximately $69 billion, consisting of about 104 million square feet of commercial development and about 44,000 housing units. In addition to the $4 billion in new development from redevelopment of public properties, about 7 million square feet of new commercial development and about 6,400 residential units are currently underway or planned on private properties within ¾ miles of the Transit Center, representing a future development value of $9 billion (before consideration of the value premiums). Table 3 summarizes the amount of existing and new development in the Transbay area on private properties. (Value enhancement from redevelopment of public properties is discussed in the next section.)

TABLE 3: EXISTING AND NEW DEVELOPMENT ON PRIVATE PROPERTIES*

APPROXIMATE RADIUS	EXISTING DEVELOPMENT		NEW DEVELOPMENT	
	Commercial Square Feet	Residential Units	Commercial Square Feet	Residential Units
Adjacent	6.9M SF	775	2.9M SF	900
1/4 Mile	33.2M SF	8,225	2.3M SF	2,960
1/2 Mile	42.6M SF	13,612	522K SF	883
3/4 Mile	21.7M SF	21,487	1.3M SF	1,652
Total	**104.4M SF**	**44,099**	**7.0M SF**	**6,395**

* Represents existing and new development on private properties, not located on public (State-owned) properties. New development is based on private development currently underway and within the Planning Department pipeline. Actual new development in the Transit Center District Plan Area and downtown is anticipated to be greater.

As illustrated in Figures 6–8 and summarized in Table 4, the consultant team applied the combined value premiums applicable to each radii (ranging from 11 percent for adjacent properties to 1.7 percent for properties within ¾ mile) to both existing and new development. On average, private properties within the surrounding area are anticipated to increase in value by about 5 percent or $3.9 billion.

As the intensity of commercial development is higher than residential development in the surrounding area, almost three quarters of the projected property value premium—$2.7 billion—will accrue to commercial properties while $1.2 billion will flow to residential properties.

FIGURE 6: PRIVATE PROPERTY VALUE WITHOUT PREMIUMS (IN $MILLIONS)

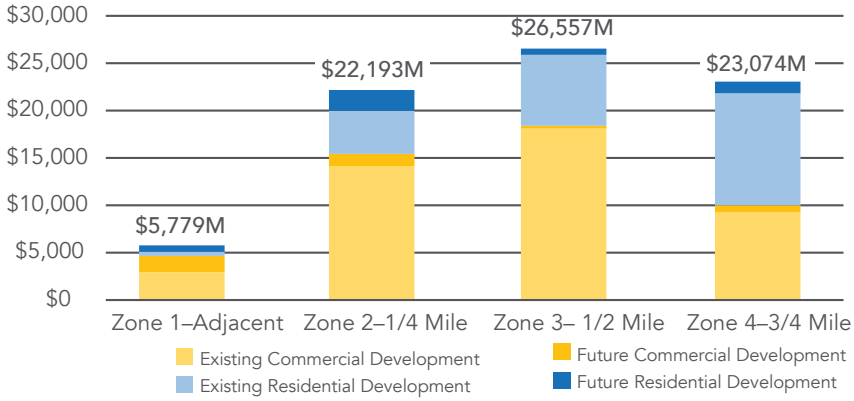


FIGURE 7: TRANSBAY BENEFIT PREMIUMS BY ZONE

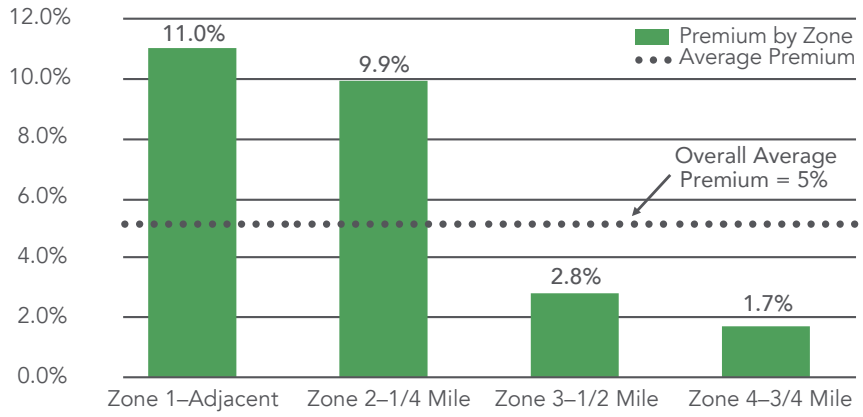


FIGURE 8: TRANSBAY AREA PRIVATE PROPERTY VALUE (IN $MILLIONS)

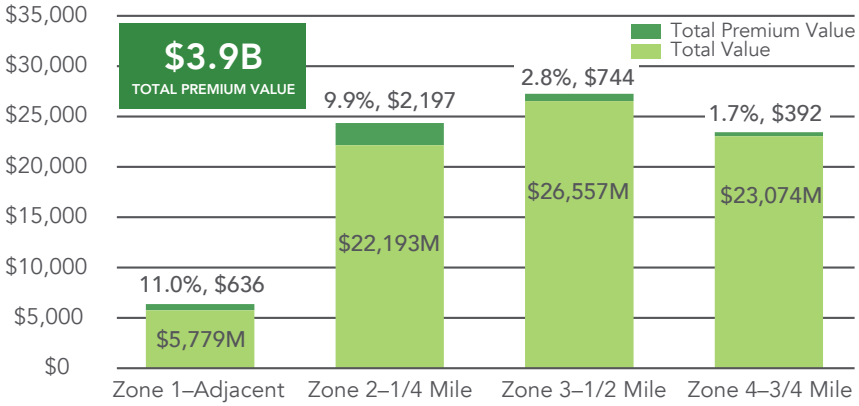


TABLE 4: PROJECTED PRIVATE PROPERTY VALUE PREMIUM ACCRUING TO EXISTING AND NEW DEVELOPMENT (IN $MILLIONS)

APPROXIMATE RADIUS	EXISTING DEVELOPMENT		NEW DEVELOPMENT		TOTAL PREMIUMS
	Commercial	Residential	Commercial	Residential	
Adjacent	$325	$47	$190	$74	$636
1/4 Mile	$1,395	$448	$134	$220	$2,197
1/2 Mile	$507	$210	$9	$19	$744
3/4 Mile	$157	$201	$13	$21	$392
Total	**$2,383**	**$905**	**$346**	**$334**	**$3,969**

4. Value Enhancement from Redevelopment of Public Properties

As described earlier, redevelopment of public properties once occupied by the former Transbay Terminal and abandoned freeway is stimulating new development of residential, retail, and office space adjacent to the Transit Center. A substantial portion of this development is already in progress, including the 1.3 million square foot Transbay Transit Tower and more than 1,200 residential units on Blocks 6, 7, 9, and 11. Once fully redeveloped, more than $4 billion in new development is projected to be built on these properties, including about 2.7 million square feet of commercial development and about 3,000 units of housing of which 35 percent will be affordable to low- and moderate-income households. Redevelopment of these public properties is significantly contributing to the creation of this new compact, desirable, mixed-use and mixed-income downtown neighborhood.

5. Overall Property Value Enhancement

Currently, more than 7 million square feet of new commercial development and about 6,400 residential units are underway or planned on private properties within ¾ miles of the Transit Center, representing $9 billion in new development value before consideration of any value premiums. Reflecting the convenience and improved quality of life that the Transbay Project will provide to local residents, commuters, and employers, the value of existing and new development of private properties within ¾ miles of the Transit Center is anticipated to increase by an estimated $3.9 billion. In addition, the redevelopment of public (State-owned) properties is projected to catalyze $4 billion in new development, with significant residential and commercial development already underway. Improved access to transit, new open space, and the creation of a new vibrant, mixed-use neighborhood will enhance the long-term success and financial sustainability of properties throughout downtown San Francisco.

B. Regional Economic Benefits

From a regional and statewide perspective, the Transit Center will bring a multitude of benefits ranging from improved travel efficiency and decreased travel congestion, access to jobs, environmental and health benefits, access to arts and other cultural amenities, reduced costs for housing and transportation, both construction and permanent job creation, and overall increases to the Gross Regional Product.

1. Improved Travel Efficiency and Decreased Traffic Congestion

The new Transit Center will extend Caltrain into the downtown transit hub and improve connectivity between transit systems. Tens of thousands of passengers will pass through the Transit Center each day. Additionally, the extension of Caltrain to downtown San Francisco is estimated to attract approximately 13,000 new riders[18] and take thousands of vehicles off of Highways 101 and 280.

These travel efficiencies translate into travel time savings (the value of alternative activities that a traveler could conduct instead of spending time in transit) upwards of $380 million,[20] more than $120 million in avoided vehicle operation and maintenance costs, and more than $20 million in benefits from improved safety.[21] Additional transportation benefits will be generated by future direct access from downtown San Francisco to downtown Los Angeles via high speed rail.

Too many cars and trucks on highways that are unable to handle ever-increasing volumes inflict time-wasting costs and productivity declines.

—*What's Next? Real Estate in the New Economy*, Urban Land Institute[19]

2. Access to Jobs

As Bay Area residents enjoy better access to jobs, Bay Area employers will likewise have better access to a larger labor pool of workers, expanding the labor market regionally. For Bay Area companies, this means greater access to top talent that will continue to drive innovation. The expansion of the labor market is projected to increase Gross Regional Product by almost $250 million and personal income by more than $120 million.[22]

Lack of affordable transportation access to jobs is a significant barrier to employment and economic development, particularly for low-income households. In the Bay Area, workers from low-income households rely more heavily on public transportation to commute, but often have poor access to transit from home, work, or both. Consequently, workers from low-income households spend a disproportionate amount of time commuting.[23] The Transit Center, and in particular the DTX, will expand access to affordable transit opportunities to Bay Area residents, and particularly to those who live in the southern neighborhoods of San Francisco and along the Peninsula corridor.

3. Environmental and Human Health

The choice to use transit instead of cars has the additional benefit of reducing emissions of air pollutants, including greenhouse gasses. Local residents will experience health benefits from improved air quality, worth $8 million in cost savings from reduced emissions.[24] The DTX will reduce carbon dioxide emissions by tens of thousands of tons each year,[25] while completion of the full high speed rail system is projected to reduce these emissions by more than 3 million tons each year system-wide by 2030.[26]

Development of the new Transit Center will yield additional health benefits for area residents. Recent studies demonstrate that people who live and work in communities with high quality transit benefit from increased physical activity, improved mental health, and better access to healthy foods and medical care. They tend to drive less and rely more on alternative modes of travel, such as walking and cycling, which not only increases cardiovascular activity and can lead to reduced instances of diabetes but also result in less automobile accidents and related fatalities.[27]

4. Arts and Cultural Amenities

The Transbay Joint Powers Authority has commissioned five major artworks that will be integrated with the Transit Center's design. Currently under development, each piece will emerge from a close collaboration between the artists and the Transit Center's architect (Pelli Clarke Pelli Architects), blurring the line between art and architecture and making both more accessible to the general public.

Improving public transit can be one of the most cost effective ways to achieve public health objectives, and public health improvements are among the largest benefits provided by high quality public transit and transit oriented development.

Todd Litman,
Victoria Transport Policy Institute[28]

At the Transit Center, art will not only serve to inspire, it will help to organize the Grand Hall. For example, the star and cross motifs in artist Julie Chang's floor design will point to entrances, escalators, and staircases. In addition, the rooftop park, amphitheater, public plazas, and retail spaces will create unique amenities that will transcend the Transit Center's basic purpose as a transportation hub, contributing to the social and cultural life of the City, and inspiring the tens of thousands of people who will be exposed to beautiful art, green spaces, and dynamic cultural events.

Transit Center Architecture and Artwork Principles

CREATE a new standard for transit stations that transcends the basic purpose of transporting people and enhances the city's cultural and social fabric.

INTEGRATE five major commissioned artworks within the Transit Center's design.

SHAPE the character of the new mixed-use neighborhood using building design and large-scale artworks that reference San Francisco's history, culture, heritage, and environment.

Grand Hall Art Installation

5. Reduced Housing and Transportation Cost

Housing and transportation costs tend to be the largest expenditures for households. When considering the combined cost of housing and transportation, a recent study prepared by Chicago's Center for Neighborhood Technology found that residents of walkable areas that are well-served by transit pay less in combined housing and transportation costs than those who live in auto-centric suburbs and other areas traditionally thought to have a lower combined housing and transportation cost but that lack mass transit.[29] In San Francisco, the average household spends 39.5 percent of the average regional income on housing and transportation as compared to between 50 and 60 percent for suburban East Bay and North Bay households that are not as well-served by transit.[30]

6. Construction and Permanent Job Creation

The construction of the Transit Center, including the DTX, is estimated to generate over 8,300 construction job-years.[31] Another 27,000 permanent jobs are anticipated from the annual operation and maintenance of the Transit Center, the DTX, and private development in the Transbay neighborhood.[32] Overall, construction of the Transit Center will stimulate the economy by creating more than 125,000 jobs, directly and indirectly.[33]

8,300
construction job-years

27,000
permanent jobs

$87B
in Gross Regional Product through 2030

7. Increased Gross Regional Product

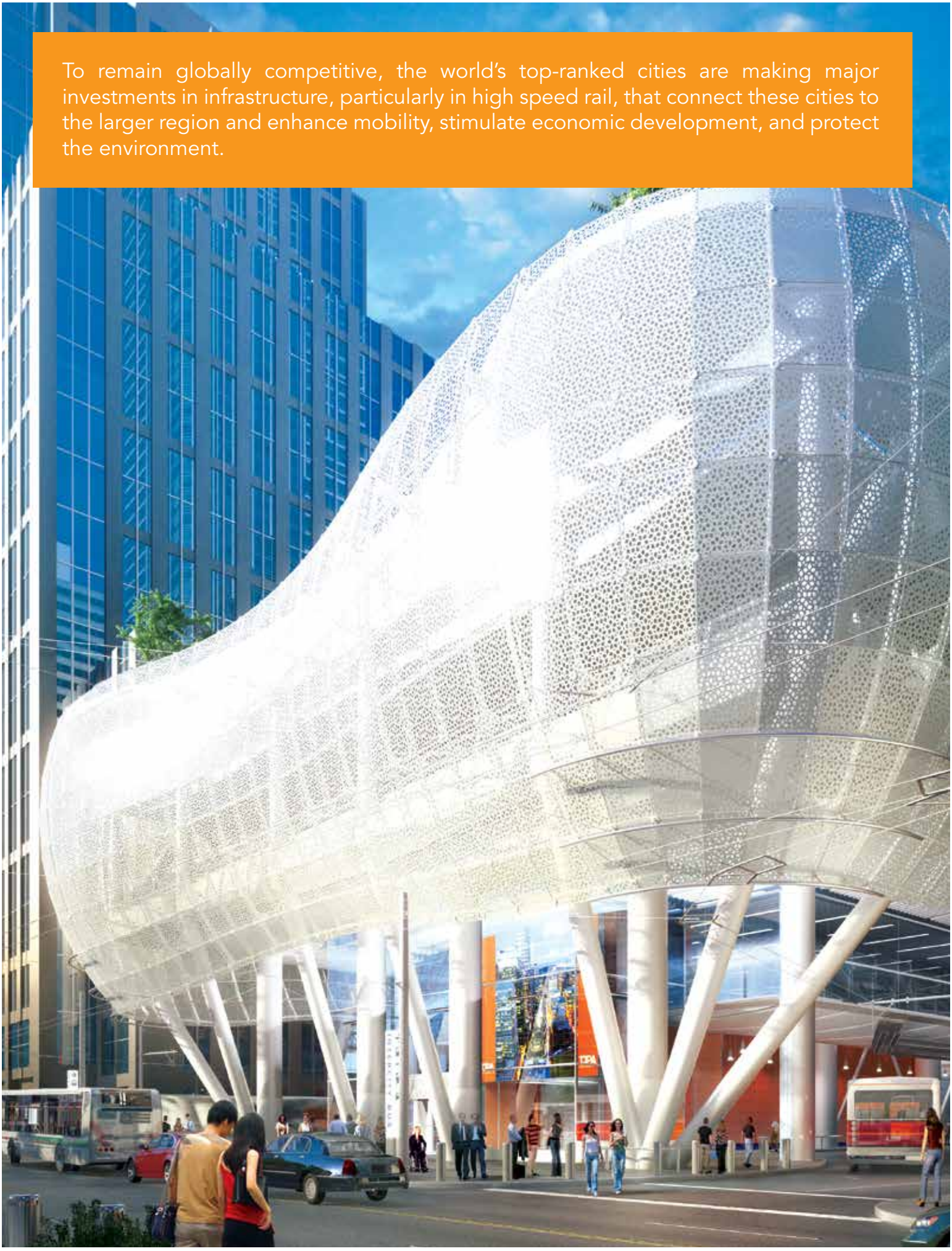
Regionally, the construction of the Transit Center and the buildout of the surrounding neighborhood are projected to generate up to $87 billion in Gross Regional Product and $52 billion in personal income through 2030.[34]

Collectively, the Transit Center and the surrounding public/private development will provide a significant boost to the overall regional economy.

Most places are unaffordable when it comes to combined housing and transportation costs. Seventy-two percent of American communities are unaffordable for typical regional households when transportation costs—the second largest expense in a family budget—are considered along with housing costs.

Center for Neighborhood Technology, Updated and Expanded Housing and Transportation Affordability Index[35]

To remain globally competitive, the world's top-ranked cities are making major investments in infrastructure, particularly in high speed rail, that connect these cities to the larger region and enhance mobility, stimulate economic development, and protect the environment.



3

PRIORITY INVESTMENT FOR BAY AREA'S ECONOMIC FUTURE

The Bay Area is one of the most diverse and robust business centers in the world and home to the nation's most competitive knowledge service sector. Led by companies such as Google, Facebook, Salesforce, and Twitter, this sector has grown despite the recent economic downturn. Research has shown that businesses in the knowledge service sector thrive best in a compact, transit-rich environment.[36] Investments in public transportation and policies that encourage denser living and work environments both facilitate local connectivity and increase regional, state, national, and international competitiveness. The Transbay Transit Center will position San Francisco to achieve its economic growth strategy, capitalize on its increasing transit ridership and improved regional access, and support San Francisco's position as a world class city.

The Transbay Transit Center will position San Francisco to achieve its economic growth strategy, capitalize on its increasing transit ridership and improved regional access, and support San Francisco's position as a world class city.

A. Stimulate San Francisco's Economy

The Transit Center is critical to achieving key policy goals of San Francisco's Economic Strategy to stimulate the city's economy, as summarized in the sidebar below.[37] It is already creating new jobs and providing youth internship opportunities as part of ongoing collaboration with the San Francisco Unified School District. And in particular, the Transit Center is part of the Transbay Redevelopment Plan and the Transit Center District Plan, which set the stage for an entire new downtown neighborhood around the Transit Center.

The Transbay Project will further many goals in San Francisco's Economic Strategy:

- Maximize San Francisco's accessibility to a local and regional workforce
- Upgrade neighborhood commercial areas
- Provide sufficient real estate for strategic priorities
- Recognize and enhance the value of parks and open spaces
- Encourage creativity by continuing to develop San Francisco as a center for the arts
- Streamline business interaction with City government
- Increase business outreach and private sector partnerships
- Better prepare San Francisco's youth for careers

Building on the City's 1985 Downtown Plan, the Transbay Redevelopment Plan and the Transit Center District Plan provide a framework for the development of offices, retail, hotel, and residential property, as well as parks and pedestrian-friendly streets. They will catalyze the revitalization of spaces, including remnant freeway parcels that have stood vacant since the Loma Prieta earthquake in 1989, and make way for the densest urban neighborhood in the Bay Area. These plans will allow the City to streamline and coordinate its regulatory processes. They also present opportunities for public-private partnerships, which translate into positive gains for the City's economic development. Major commercial and residential projects are already in the development pipeline, ready to take advantage of these opportunities. These projects promise to recast the San Francisco skyline and create a vibrant new downtown neighborhood centered around the Transit Center.

> **Downtown San Francisco's capacity to support more workers, through enhanced transit investments that expand its regional accessibility, may be critical to the region's ability to grow in a sustainable way.**
>
> —San Francisco Economic Strategy[38]

B. Enhance Regional Connectivity and Competitiveness

Significant evidence demonstrates that job density and proximity to transit are more important in increasing transit ridership than housing density and proximity to transit. Put simply, people are willing to travel farther from their home to transit than from transit to their workplace.

—*Urban Future of Work*, SPUR[39]

The Bay Area economy is becoming a regional network comprised of the major job centers throughout the region. These job centers are generally located within three miles of a regional rail station, but less than one quarter of all Bay Area jobs are within walking distance from rail stations. Studies show that transit proximity to the workplace is of greater importance to transit riders than close proximity to their homes.[40] Therefore, creating dense job centers near transit is an important component of efforts to increase transit ridership.[41]

While the majority of Bay Area commuters still drive to work (often in single-occupant trips), commute patterns show that this trend is declining where there is convenient and reliable access to transit. Strategic transportation investments like the Transit Center are critical to encourage Bay Area commuters to choose transit over driving and to obtain the full range of local and regional benefits associated with better regional transit connections.

Business districts located near transit benefit not only employees but also employers. Companies have found that dense urban settings facilitate collaboration and the sharing of ideas and information, which promotes business innovation and competitiveness. Research on business agglomeration shows that when businesses, particularly those in the same business cluster, locate close to one another, their proximity generates multiple benefits, including increased productivity, innovation, and business formation.[42] As discussed above, companies will pay more for office locations near transit because doing so attracts talented workers who value streamlined commutes to their homes and to other destinations. Demonstrating this trend, Twitter signed a lease in 2011 to move its offices to San Francisco's Mid-Market District near the Civic Center BART Station, and Salesforce leased 400,000 square feet of office space in a new high-rise tower across the street from the Transit Center. When the DTX is complete, the Transit Center will better connect workers throughout the region to downtown San Francisco. The Transbay Redevelopment Plan and the Transit Center District Plan will catalyze the creation of the Bay Area's most dense employment center and residential neighborhood, helping drive regional growth for years to come.

The Bay Area has maintained and increased its productivity edge over the past few years by further specializing in key knowledge sectors. It is home to more of the fastest growing companies than anywhere else in the country and ranks in the top 10 regions globally.

—*Innovation and Investment: Building Tomorrow's Economy in the Bay Area*, Bay Area Council Economic Institute[43]

C. Support San Francisco's Position as a World Class City

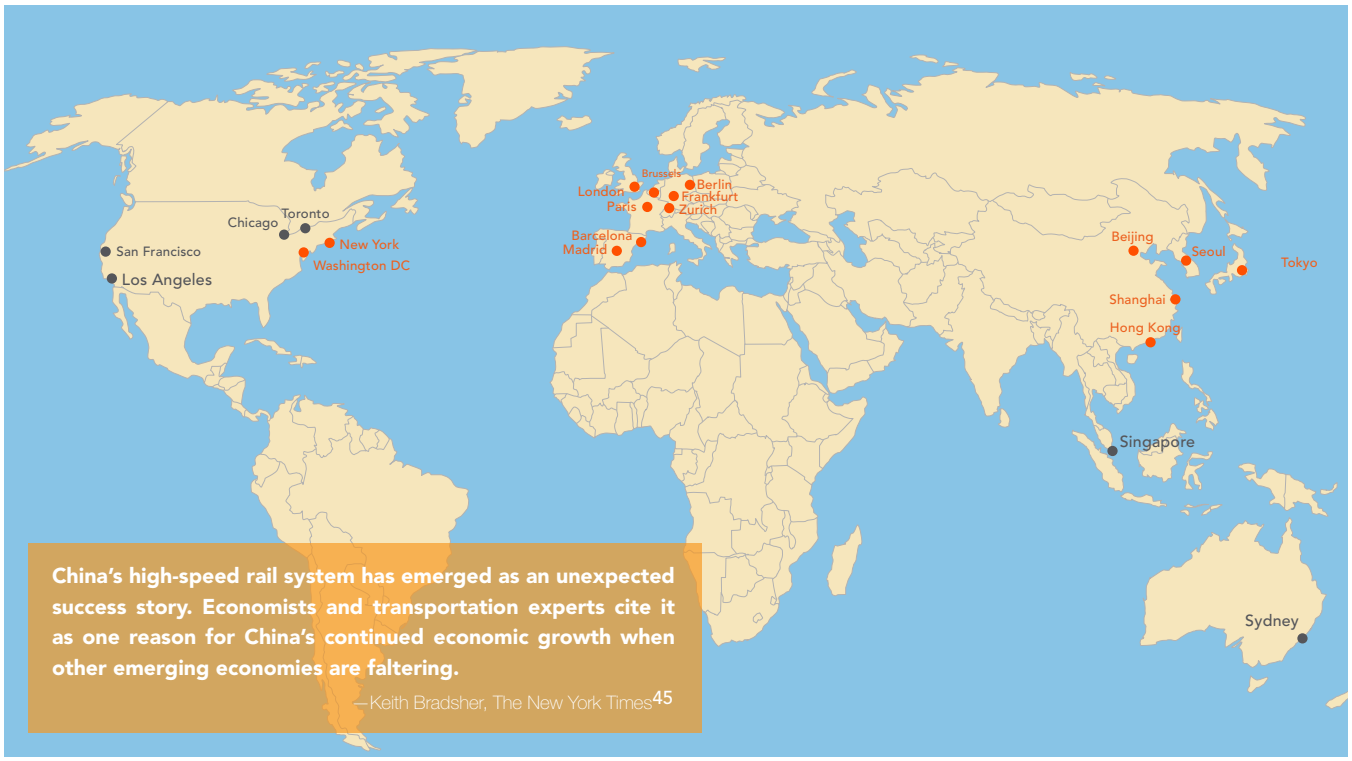
Nearly 500 million more people will live in cities over the next decade, and 60 percent of the world population will settle in urban areas. Here is where business, commerce and wealth creation happen. Expect international city-to-city networks to form… serviced along increasingly well-traveled global pathways.

—*What's Next? Real Estate in the New Economy*, Urban Land Institute[44]

Increasingly, cities are ranked according to global standards that measure their relative performance by economic activity, knowledge/innovation, infrastructure robustness, quality of life, cultural activity, and political influence. To remain globally competitive, the world's top-ranked cities in Asia, Europe and the Americas are making major investments in infrastructure, particularly in high speed rail, that connect these cities to the larger region and enhance mobility, stimulate economic development, and protect the environment. Figure 9 below shows how top ranked cities across the world are investing in high speed rail systems.

In recent surveys, San Francisco is ranked as one of the top 25 world class cities. Like other world class cities, San Francisco must continue to invest in infrastructure, particularly in multi-modal transit facilities like the Transit Center, which will enhance rail connectivity between business centers throughout California, the United States, and the world. Furthermore, the development of the new Transbay neighborhood as a sustainable, high-quality urban environment anchored by the Transit Center will create one of the most unique and attractive employment centers and residential neighborhoods in the world.

FIGURE 9: TOP RANKED WORLD-CLASS CITIES (NOTE: CITIES LABELED IN RED HAVE HIGH SPEED RAIL ACCESS)



San Francisco is ranked within the top 25 of world class cities in recent surveys:

- Innovation Cities Global Index (#4), 2thinknow City Benchmarking Data, 2012-2013
- Global Cities Index (#17) - A.T. Kearney and Chicago Council on Global Affairs, 2012
- US and Canada Green City Index (#1), 2011
- Global Cities Survey (#16), Knight Frank LLP, 2011
- Global Power City Index (#21), Institute for Urban Strategies at Mori Memorial Foundation in Tokyo, 2011
- Global Cities Index (#12), Foreign Policy Journal, 2010

1. Long-Term Investments by Top-Ranked Cities

New York, London, Paris, Tokyo, and Berlin consistently rank at the top of world class indices, as these cities are dynamic engines of growth, serve as hubs of global integration, and offer extensive regional and global interconnectivity. As described below, not only are these cities making major transit investments, they are also building new parks, creating other public amenities and implementing comprehensive plans to encourage the development of iconic skyscrapers, transit-rich neighborhoods and dynamic centers of commerce.

> **The world's biggest, most interconnected cities help set global agendas, weather transnational dangers, and serve as the hubs of global integration. They are the engines of growth for their countries and the gateways to the resources of their regions.**
>
> —*The 2008 Global Cities Index*, Foreign Policy Journal[46]

a. New York

New York City Transit, the largest public transportation system in North America, has six million daily users on its 25 subway and 234 bus routes throughout the city's five boroughs.[47] New York City is connected to Long Island, upstate New York, Connecticut, New Jersey, and the greater Northeast via Long Island Rail Road, Metro North, PATH, NJ Transit, and Amtrak, as well as Greyhound and other bus services.

To improve this network, New York City Transit is constructing a new north-south subway line—the Second Avenue Subway—to reach areas underserved by rapid transit. It is also improving cross-town connections by extending the 7 Subway to the west side of Manhattan and connecting the Long Island Rail Road to the east side at Grand Central Station. Both cross-town improvements will reduce travel times to the eastern parts of Manhattan, Queens, and Long Island, which are home to many who work in Manhattan.

World Trade Center Transportation Hub Project, New York

One of the city's key development projects is rebuilding the World Trade Center complex. New York is taking a holistic approach that incorporates a major transit hub, landmark architecture, and significant open space. The World Trade Center PATH Transportation Hub will consist of a multi-story transit hall with links to the subway system, Hudson River ferry terminals, and future JFK airport rail link, as well as 200,000 square feet of retail. Upon completion, the hub will be able to accommodate 250,000 daily passengers.[48] The World Trade Center complex will also provide high-rise office buildings, including a soaring tower—One World Trade Center (104 stories, 2.6 million square feet)—designed by celebrated architects Daniel Libeskind and David Childs and slated for completion in 2014. The 9/11 memorial, an open space surrounding the former World Trade Center towers, already provides a public place for remembering victims and rescue workers.

World Trade Center Complex, New York

The High Line Development, New York

New York is investing in additional open spaces. The High Line Park converted a 1930s-era elevated freight rail line into a 1.5-mile aerial greenway. Opened in 2009, the High Line is now a major destination for both residents and visitors to the city, featuring naturalized plantings, public art, and seating areas that highlight views of the city and Hudson River. It provides much needed open space to dense urban neighborhoods along the West side of Manhattan. The High Line has helped revitalize surrounding neighborhoods. Property and business owners, in particular, have gained from the additional foot traffic resulting from this public amenity, which has led to higher property values and increased sales for businesses.[49] Similarly, the city has created public, pedestrian plazas in sections of Times Square formerly dedicated to street traffic and is building on this effort with a planned $45 million transformation from "what is now painted asphalt into a world class urban piazza."[50]

b. London

The United Kingdom has committed major funds for key transportation projects serving London and surrounding regions. These projects include the $25 billion Crossrail, to be completed in 2017, which will provide an east-west connection for passengers from central London and the financial district in Canary Wharf to Heathrow airport and the eastern suburbs of London. The Crossrail will link to the subway system, commuter rail, and inter-city and international rail, which include high speed rail.

The UK is also investing $26 billion to provide rail connections from the north and south of London into central city stations, as well as linkages to the future Crossrail. Additionally, London will benefit from the $52 billion "High Speed 2" rail project, which will extend high speed passenger service north from London to Birmingham by 2015, with potential stops in Manchester, Leeds, and eventually Scotland.[51]

Shard Tower, London

In central London, just southeast of the London Bridge, lies the newly redeveloped London Bridge Quarter, a mixed-use project anchored by an iconic tower known as the Shard and the revamped London Bridge subway and bus station. Completed in 2012, the Shard (72 stories, 1.2 million square feet), designed by the famous architect, Renzo Piano, is the tallest skyscraper in Europe. The London Bridge Quarter will include high quality office, residential, and retail space, as well as a hotel and new public green space. The improvements and reconfigurations for the London Bridge tube and bus stations will complement the adjacent transit oriented developments within the area.

I want London to be the best big city on earth.

—Boris Johnson
Mayor of London

On the eastern side of London are the long vacant Royal Docks and the site of the 2012 Summer Olympics. The Royal Docks is a concentrated area of publicly owned land on the River Thames that is likely to absorb much of the City of London's future growth. Still in the planning stages, the Royal Docks is envisioned to be a mixed-use neighborhood featuring high tech and innovation companies, along with a range of housing.

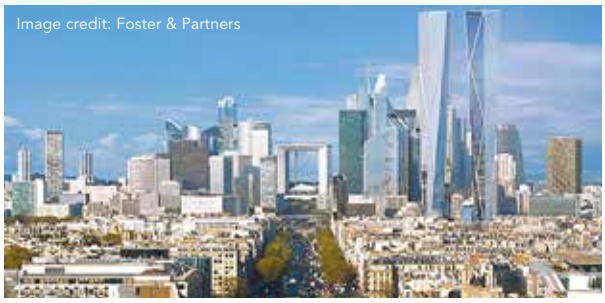
Just north of the Royal Docks is the newly created Olympic Village and Olympic Parklands. As host of the 2012 Summer Olympics, London planned the buildings and infrastructure needed for the Games in a manner that can accommodate Londoners and visitors for years to come. The 250-acre Olympic Parklands, for example, is the largest open space project built in Europe for over a century. Transit improvements that connect the Olympic Village and Park with the Royal Docks and the rest of London also include rail extensions, station upgrades, and increased transit capacity.[52]

Olympic Park, London

c. Paris

The French government and City of Paris are investing in public transit projects to increase mobility and access for the Greater Paris metro area. Part of the "Grand (or Greater) Paris" initiative espoused by the city and federal government, a new rapid transit network encircling the city will connect with existing rail networks to provide connections to the suburbs and a number of major high speed rail stations and airports while fostering economic development in the Paris region.[53] The project is anticipated to begin service by 2018 with the entire network scheduled to be completed by 2025. Former French president Nicolas Sarkozy took the position that "the economic crisis can only be beaten by grand projects. There could be no grander project than to create a Greater Paris."

The La Défense area, one of the largest dedicated business districts in Europe and host to a large number of Fortune 500 companies, is located on the western end of Paris's historic axis, with the Louvre at the other end. This area will be connected to the Greater Paris metro region and suburbs through future rail expansions. La Défense holds many of the city's tallest buildings and high-rises like the modern Grande Arche. The Le Parvis, an esplanade that runs through the district, provides a public space for workers and visitors.



La Defense, Paris, incorporating future development of Hermitage Plaza

Hermitage Plaza, Paris

One of the latest development projects in La Défense, the Hermitage Plaza will give rise to a new, mixed-use community in the area of Courbevoie. A pair of towers rising 1,049 feet high will provide housing and commercial spaces, with shops and cafes as their base. The towers will bookend a new pedestrian plaza, all of which will be well served by nearby public transit.[54] The project recently received planning permits to begin construction and is expected to open by 2016.[55]

The economic crisis can only be beaten by grand projects. There could be no grander project than to create a Greater Paris.

—Former French President Nicolas Sarkozy

d. Tokyo

Japan has one of the most efficient and extensive public transportation systems in the world, due to many years of investing in its transit infrastructure, particularly the rail networks that serve Tokyo, Nagoya, and Osaka, the country's three largest metropolitan areas. It was one of the first nations to successfully implement high speed rail in the 1960s to enhance mobility for its workers, residents, and visitors. Japan continues to improve upon its high speed rail system to increase the speed of its trains and implement the latest technology. Japan's next generation of bullet trains are set to launch in 2025.[56]

Tokyo Station City is a transit oriented development at a major regional gateway and historic site. The Tokyo Station Marunouchi Building, built near the turn of the 20th Century and modeled after Amsterdam Central Station, is the major focal point of the project. The station is one of the nation's busiest railway hubs and is a terminus of a high speed rail line. Its facilities are currently undergoing renovation to add retail space and a pedestrian deck—the "Gran Roof"—that will provide outdoor space while connecting the station to the GranTokyo North and South Towers (42 and 43 stories, respectively, at a combined 3.8 million square feet).[57]

Tokyo Station

Gran Roof, Tokyo Station

e. Berlin

In 2006, Berlin opened the city's central multi-modal station, the Berlin Hauptbahnhof. Serving almost 350,000 daily passengers, the station is located on the former boundary of West and East Berlin and its new glass structure represents the openness and transparency to commemorate the fall of the Berlin Wall.[58] At five stories and 753,000 square feet, the main station is the largest rail station in Europe and provides access between different transportation modes, such as long distance trains, commuter rails, and buses. The Hauptbahnhof also provides short bus connections to the Tegel and Schoenefeld airports. The station contains a shopping plaza for passengers and visitors as well as two 12-story office towers with a combined 538,000 square feet. Solar panels on the roof provide renewable energy.[59]

Hauptbahnhof, Berlin

Within a mile of the Hauptbahnhof are two mixed-use developments. The 4.3-acre Station Quarter features retail, office, and hotel spaces. The 40-acre master-planned Europa City is currently under development just north of the train station. It is anticipated to have 6.5 million square feet of residential, commercial, and cultural uses.[60] These transit oriented developments will concentrate new higher density development around the Hauptbahnhof.

2. San Francisco Transbay Transit Center: A Critical Investment for the Future

As described above, world class cities across the globe are making significant investments in transit, infrastructure, parks, and walkable, dense neighborhoods that are creating new public and private development opportunities around transit stations. To maintain its position as a cutting-edge, world class city, San Francisco must continue to invest in innovative projects like the Transbay Transit Center and surrounding neighborhood to keep San Francisco at the forefront of the ever-changing global economy.

> **America's third century urgently requires a new strategy to lay the foundation for the nation's future competitiveness, sustainability, and quality of life…[We must] promote integrated investments in mobility, environment, and economic development….and provide capacity for growth by creating a world class multimodal transportation system of new smart highways, high-speed rail, airports, and seaports, all of these linked to concentrated developments at central hubs.**
>
> *—America 2050: A Prospectus*[61]

4

CONCLUSION

Cities around the world are expanding their transit networks and encouraging the development of dense urban neighborhoods to remain competitive globally. New York, London, Paris, Tokyo, and Berlin are all undertaking major transit investments and implementing comprehensive plans to encourage the development of sustainable urban communities that will serve as future dynamic centers of commerce. The Transbay Transit Center Project is San Francisco's next big move and will similarly strengthen its competitive position in the global economy.

The Bay Area is one of the world's most robust business centers and home to the nation's most competitive knowledge service sector. Research has shown that knowledge service businesses thrive best in a compact, transit-rich environment.

The Transbay Transit Center Project is an inspiring and forward-thinking transit-oriented development that will transform downtown San Francisco and the Bay Area's regional transportation system.

The Transbay Project will facilitate connectivity, collaboration, and the creation of dense employment clusters. It will also result in the redevelopment of vacant and underutilized State-owned properties into $4 billion in new transit oriented, mixed-income housing and commercial development on public property once occupied by the former Transbay Terminal and abandoned freeway ramps.

The Transbay Project will also create a landmark multi-modal transit hub and vibrant new walkable neighborhood featuring parks, public plazas, and active retail along tree-canopied streets. This will bring activity, energy, and vibrancy to downtown San Francisco that will drive significant property and other measurable premiums. Together, the improved transit access, public spaces and neighborhood amenities provided by the Transbay Project are projected to add an estimated $3.9 billion to the value of private properties located within ¾ miles of the Transit Center.

The Bay Area region will also benefit from reduced travel times, better human and environmental health, an expanded labor market, new jobs, and increased economic output. The buildout of the Transit Center and surrounding neighborhood are projected to generate up to $87 billion in Gross Regional Product and $52 billion in personal income through 2030.

San Francisco is poised to make its next big mark on the world stage, and the Transbay Project is one of its most important investments to assure San Francisco's long term success in this increasingly global economy.

Regional planners need to attempt to integrate multimodal infrastructure initiatives—including mass transit alternatives—into future land use schemes... These networks will take decades to build out, but the time to start is now.

—*What's Next? Real Estate in the New Economy*, Urban Land Institute[62]

ENDNOTES

1 "Transbay Tower Plans." Hines and Pelli Clarke Pelli, 2012.

2 "Caltrain Downtown Extension and Transbay Ridership Analysis." Cambridge Systematics, Inc., 2008, page 6-9. Table 6.8 has been adjusted to account for 6 trains per hour into the DTX. An average of the ridership for 5 trains per hour and 7 trains per hour was taken, resulting in a ridership of 31,550.

3 "California High-speed Rail Program Revised 2012 Business Plan." April 2012, pages ES-13, 2-31, 5-15 to 5-17, and 9-4.

4 According to 2011 US Census data from OnTheMap, jobs in industry sectors that occupy office space located in downtown San Francisco represent about 78 percent of citywide jobs (about 135,000 out of 172,000 citywide office jobs).

5 Value estimates were prepared by The Concord Group (TCG). TCG's projections of land sales and development of the State-owned properties (between 2013 to 2020) take into account downtown market supply and demand dynamics as well as site strengths and challenges in the greater regional context. Pricing and positioning for each residential and commercial product type is determined according to a rotating set of key market comparables, and reflect the unique locational attributes of the Transbay parcels and their role in the TCDP master planned urban community concept. Overall valuations for residential parcels are calculated based on expected average home prices at time of RFP issuances for the State-owned properties. Inclusionary units in mixed-income parcels are valued based on affordability levels for targeted households. For office parcels or mixed-use development parcels, capitalized value for commercial uses is determined using projected net operating income based on recommended rental rate positioning and industry-driven operating cost inputs.

6 "Transbay Tower 309 Application." Hines and Pelli Clarke Pelli, 2012, page 3.

7 Transbay Redevelopment Plan and Transit Center District Plan development calculations, Office of Community Investment and Infrastructure and City of San Francisco. The Transbay Redevelopment Project Area has a 35 percent affordable housing requirement, which will be achieved through a combination of inclusionary and stand-alone affordable housing. Properties within the Transbay neighborhood but outside of the Transbay Redevelopment Project Area do not count toward this requirement.

8 The Transbay neighborhood, defined by the Transit Center District Plan and Redevelopment Plan, is anticipated to house more than 7,000 new residents, based on 1.6 person per housing unit, and about 24,000 new employees, based on an average of 250 square feet per employee for commercial development.

9 Duncan, Michael. "The Impact of Transit-oriented Development on Housing Prices in San Diego, CA." University of North Carolina, 2010, page 101.

10 "Caltrain Downtown Extension and Transbay Ridership Analysis." Cambridge Systematics, Inc., 2008, page 6-2, Table 6.1.

11 Diaz, Roderick B. "Impacts of Rail Transit on Property Values." Booz Allen & Hamilton, Inc., 1999, page 5.

12 US Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2011.

13 "Urban Future of Work." SPUR, January 2012, page 18, Figure 3.

14 Cervero, Robert. "Effects of Light and Commuter Rail Transit on Land Prices: Experiences in San Diego County." University of California, Berkeley. December, 2003, pages 2 and 20.

15 Any uncertainty regarding future connection of high speed rail to the Transit Center does not affect the estimated value premiums. Most of the literature considers—and the estimated premiums derive primarily from—proximity to transit used for frequent trips covering shorter distances. Proximity to Caltrain through the DTX is particularly important to the generation of potential premiums. (As described on page 12, the analysis adjusts downward the potential premiums reported in the economic literature.)

16 Harnik, Peter, Ben Welle. "Measuring the Economic Value of a City Park System." Trust for Public Land, 2009, page 1.

17 Existing and new development estimates (2013 Dollars) include properties within ¾ of a mile of the Transit Center but do not include State-owned properties. Value enhancement attributable to State-owned properties will be captured by the TJPA in land sales revenues and tax increment that will help fund the Transit Center.

18 Caltrain Downtown Extension and Transbay Ridership Analysis, Cambridge Systematics, Inc, November 2008, page 6-9, Table 6.8. Table 6.8 has been adjusted to account for 6 trains per hour into the DTX. An average of the ridership for 5 trains per hour and 7 trains per hour was taken which resulted in 31,550 passengers. The "No Project" alternative was adjusted down from 10 trains per hour to 6 trains per hour (18,540 passengers). The difference was determined to be approximately 13,000 passengers.

19 "What's Next? Real Estate in the New Economy." Urban Land Institute, 2011, page 74.

20 "Transbay Transit Center Program Economic Impact Study." URS and Wilbur Smith, October 2009, page 56, Table 5.14.

21 "Transbay Transit Center Program Economic Impact Study." URS and Wilbur Smith, October 2009, page 38, Table 4.15 (low estimate safety cost savings).

22 "Transbay Transit Center Program Economic Impact Study." URS and Wilbur Smith, October 2009, page 100, Table 8.5.

23 "Transbay Transit Center Program Economic Impact Study." URS and Wilbur Smith, October 2009, pages 78-79, Studies of Transportation Impacts on Welfare and Employment, and Table 7.1.

24 "Transbay Transit Center Program Economic Impact Study." URS and Wilbur Smith, October 2009, page 38, Table 4.15 (low estimate emission cost savings).

25 "Caltrain Downtown Extension and Transbay Ridership Analysis." Cambridge Systematics, Inc., 2008, page 7-4, Table 7.4. Approximately 60 percent of the daily reduction of carbon dioxide over the course of 260 commute days per year has been assumed which translates to tens of thousands of tons of reduction in carbon dioxide annually.

26 "Addendum/Errata to Final Program EIR/EIS for the Bay Area to Central Valley Portion of the California HST System." US Department of Transportation, June 2008, Table 9.3-1.

27 Litman, Todd. "Evaluating Public Transportation Health Benefits." Victoria Transport Policy Institute, June 2010.

28 Litman, Todd. "Evaluating Public Transportation Health Benefits." Victoria Transport Policy Institute, June 2010, page 1.

29 "Updated and Expanded Housing + Transportation Affordability Index." Center for Neighborhood Technology, February 2012. http://www.cnt.org/tag/housing-transportation-affordability-hta-index/

30 Cabanatuan, Michael. "Transportation Boosts Cost of Living in Suburbs." San Francisco Chronicle, February 2012.

31 "Transbay Transit Center Program Job Creation." Program Management/Program Controls (PMPC) (Prepared for TJPA), October 2009, Table: Transbay Job Creation By Year.

32 "Transbay Transit Center Program Economic Impact Study." URS and Wilbur Smith, October 2009, page 101, Table 9.1.

33 "Job Impacts of Spending on Public Transportation: An Update." Economic Development Research Group, Inc. (Prepared for American Public Transportation Association), April 2009. Job creation calculated as follows: Phase 1 and 2 at $4.196 billion results in 125,880 jobs ("30,000 jobs are supported per billion dollars of spending" (page ii)).

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