

**THE  
BIGGER  
PICTURE**



# Ten Ideas for Equitable Transportation in Oakland

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Leveraging the next generation of  
transportation investment to better  
serve and connect Oakland



**This report is a component of the SPUR Regional Strategy,  
a vision for the future of the San Francisco Bay Area**

[spur.org/regionalstrategy](http://spur.org/regionalstrategy)

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# Introduction

SPUR's Bigger Picture series proposes ideas for key locations in San Francisco, San José and Oakland, the Bay Area's three largest cities. Each exploration represents an opportunity to tackle major regional challenges through local planning processes. And, conversely, each suggests how big investments in infrastructure can — if planned carefully — bring about positive transformation for the immediate neighborhood.

This series is part of the SPUR Regional Strategy, an aspirational 50-year vision for the Bay Area and a roadmap to creating an equitable, sustainable and prosperous future. We partnered with AECOM to identify and explore locations that have important implications for the future of the region. Then we brought together community organizations, businesses and government leaders to identify opportunities and goals for these locations. We see them as great urban places that can uplift both the local community and the greater region — if decision makers keep that bigger picture in mind.

This exploration looks at how key regional transportation infrastructure currently intersects in Oakland — and how it might do so differently in the future: The next generation of transportation investments and policy changes could rectify past planning injustices to facilitate a healthy, climate resilient and equitable Oakland. The ideas here build on existing plans and suggest ways to ensure that they connect with and support one another. The result is a holistic vision that will require bold collective action.

# Our Vision for Oakland

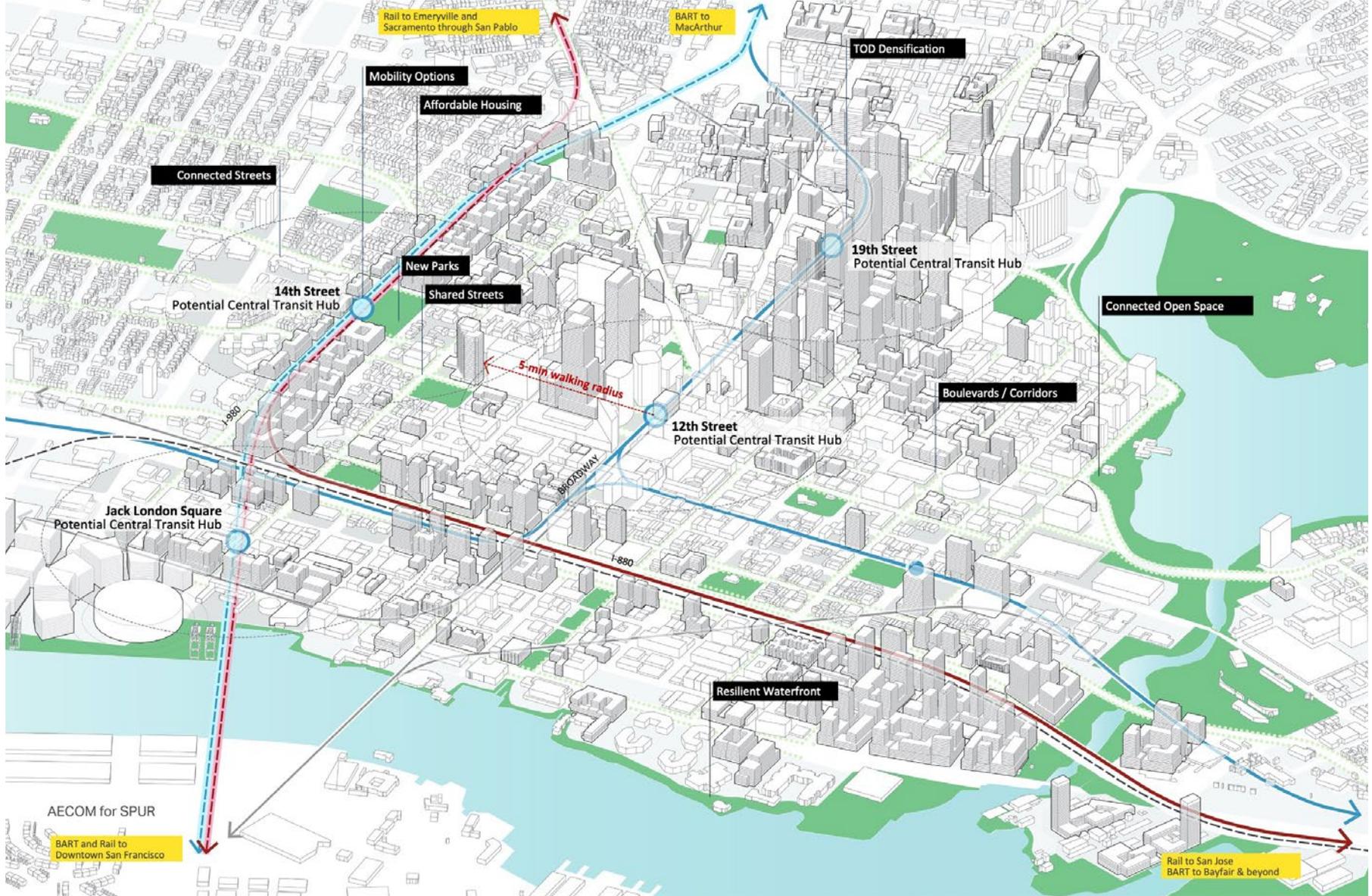
*In 2070, Oakland is among the most transit-rich, interconnected parts of the region and has retained its distinct racial, cultural and economic identity as it has grown and prospered. Major transportation investments have restored public life, created a just city and repaired the natural environment and ecology by putting freeways and trains underground, enabling communities that were once segregated by infrastructure to reconnect and reclaim their neighborhoods. All Oaklanders are housed, supported in part by thousands of additional housing units, across the affordability range, where freeways once stood.<sup>1</sup> Significant new express bus and rail service between Oakland and San Francisco facilitates increased ridership across the region. Passengers enjoy seamless transfers between rail, bus and other travel modes at a landmark transit hub, which is a destination in and of itself. The pollution, noise and speeding cars of the past are a fading memory, along with the environmental and health disparities they once produced.*

*Complete streets, greenways and trails connect downtown, the surrounding neighborhoods and Lake Merritt to one another and to the waterfront. Everyone feels safe traveling anywhere in Oakland by foot, bike, bus or other sustainable modes of travel. Oakland's waterfront serves as a resilient barrier to sea level rise, using nature-based solutions to protect communities and infrastructure that are vulnerable to rising tides.*

*Transit investments have contributed to equitable and sustainable growth while providing more robust and efficient options for residents to travel both within and beyond Oakland. Abundant, well-connected local and regional services make public transit a fast and easy way for residents and visitors to get around. New transit stations and their surrounding communities are hubs of activity, providing local shops and restaurants, housing that everyone can afford, amenities for residents and visitors to enjoy, and welcoming public spaces that provide a sense of belonging. Housing-stabilization policies enable long-time residents to stay in Oakland and benefit from new transit access, public services and economic opportunities.*

PHOTO BY SERGIO RUIZ

<sup>1</sup> The draft Downtown Oakland Specific Plan (August, 2019) estimates that removing the I-980 freeway would release land that could result in more than 5,000 residential units and 1.5 million square feet of commercial space. See: [https://cao-94612.s3.amazonaws.com/documents/FINAL\\_DOSP-Public-Review-Draft-Plan\\_082819\\_Compressed.pdf](https://cao-94612.s3.amazonaws.com/documents/FINAL_DOSP-Public-Review-Draft-Plan_082819_Compressed.pdf)



## Oakland, 2070

In our future vision, Oakland is the hub of the region’s robust and resilient transit network. Interstate 980, parts of Interstate 880, and portions of freight rail have been put underground, reconnecting Oakland’s neighborhoods to one another and to the waterfront. Land that was once dominated by freeways, freight lines and rail transit has been reclaimed for housing, public spaces and boulevards that are safe and welcoming to pedestrians and cyclists and that prioritize public transit.

# The Infrastructure Landscape Today

The Bay Area's transportation infrastructure — including major freeways, freight lines and rail transit — was largely built during the 20th century and in many ways created the region we know today. It connects our nine counties (and 101 cities), enables the flow of goods from outside and within the region, and is a major driver of economic growth. However, our regional infrastructure landscape poses three existential threats for Oakland that must be addressed by the next generation of transportation investments:

## 1. Negative impacts on public health and local communities

Many of the Bay Area's infrastructure projects were designed without regard for their impact on local communities, which have included noise pollution, barriers to walking and cycling, and higher rates of asthma and cardiovascular disease connected to poor air quality. These environmental and health burdens have fallen heavily on people of color and historically marginalized communities. Oakland is at the heart of this story and illustrates the tension between infrastructure's benefits and harms.

**At the intersection of 5th Street and Broadway, pedestrians walk under the I-880 and I-980 overpasses. The interstates act as barriers between downtown Oakland and Jack London Square and create an unwelcoming environment for pedestrians.** PHOTO BY SERGIO RUIZ



Oakland's original railways and port facilities shaped its early growth and economy, creating many of its vibrant and diverse central neighborhoods. Over time, as port and rail activities expanded, the health and interests of nearby Black communities were not adequately accounted for. While still an important source of living-wage employment for thousands, the port and railway infrastructure are also major barriers, cutting off access to open space and the waterfront.

Similarly, the Bay Area's major freeways converge in Oakland and pose significant public health and environmental harms. Requiring the demolition of many homes and businesses in the West Oakland neighborhood, and displacing its Black middle class, Interstate 980 continues to act as a barrier between West Oakland and downtown. Interstate 880 aligns with the Union Pacific Railroad to the west of downtown and acts as a significant barrier between Oakland neighborhoods and the waterfront. The areas surrounding Interstate 880 have some of the highest rates of air pollution in the Bay Area.<sup>2</sup>

## **2. Lack of coordination and capacity**

The Bay Area's public transit services are fragmented across operators and geographies, limiting Oakland's connectivity to the region despite its central location. With Caltrain on the Peninsula, Amtrak's Capitol Corridor line in the East Bay, and ACE in the South Bay, regional rail is operated and funded as separate services, rather than functioning as a complete and integrated network. In the East Bay, Amtrak operates on the same tracks as Union Pacific freight rail, which compromises both operations and can result in slow, unreliable passenger service. Buses, including regional buses on the Bay Bridge, don't have dedicated lanes and are stuck behind car and truck traffic, making journeys slow and less reliable. The lack of fare and service integration between the region's transit agencies is a barrier to increasing overall ridership and unfairly punishes transit-dependent riders who must make transfers between services.

Improvements to transit infrastructure are hampered by a complex funding and governance landscape, project delays and cost overruns. Prior to the COVID-19 pandemic, BART's transbay service was at capacity and lacked the redundancy needed for effective service. Once passenger travel resumes to pre-COVID-19 levels, this service will experience the same challenges at a key link in the region's transportation network.

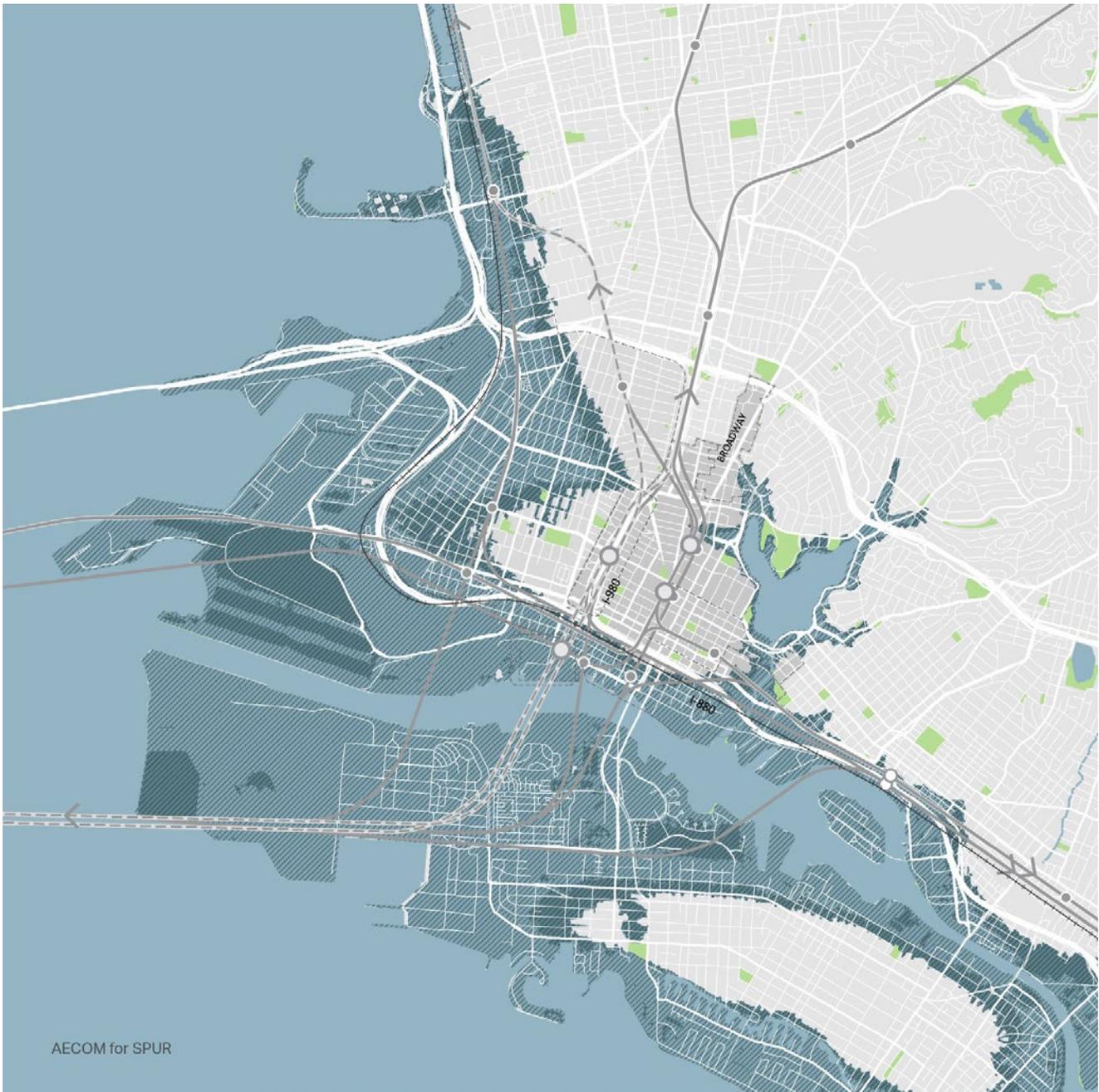
## **3. Vulnerability to sea level rise and other threats**

Sea level rise (see map on page 9), liquefaction and earthquake damage are threats to waterfront and low-lying neighborhoods and to the region's existing infrastructure, including the Bay Bridge, Capitol Corridor tracks, the transbay BART tube and several transit stations.

Adapting these assets and protecting communities — particularly communities of color, who have already borne the brunt of infrastructural inequities and make up a large proportion of the population that is most vulnerable to future impacts — will require significant collaboration and coordination across jurisdictions and the immediate implementation of bold strategies.

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<sup>2</sup> I-880 has much higher pollution than nearby I-580. See "A Tale of Two Freeways," Environmental Defense Fund, <https://www.edf.org/airqualitymaps/oakland/tale-two-freeways>



This map shows the range of projected sea level rise on Oakland’s waterfront by 2090, highlighting the importance of a waterfront-wide approach to sea level rise resilience. Without action, many of Oakland’s most vulnerable communities and key infrastructure assets would be inundated. As is typical for adaptation planning projects, we included the impacts of a 100-year storm on top of expected sea level rise to understand the worst-case scenario.

- 
Scenario: 5.5 feet sea level rise plus 100-year storm 2090 timeframe  
Medium/High Risk Aversion; High Emissions Scenario
- 
Scenario: 8.25 feet sea level rise plus 100-year storm 2090 timeframe  
H++; High Emissions Scenario

# Why Addressing the Bigger Picture Matters



**Oakland lies at the geographical center of the region, making it the sensible home for a future transit hub.** PHOTO BY SERGIO RUIZ

Proposals to rectify the impacts of regional infrastructure on Oakland and reimagine the city's landscape, such as undergrounding I-980, have long been considered "moonshot" ideas. However, 2021 finds the region in a new moment. Through programs such as Link21, a study of rail investments that would connect the 21 counties in the Northern California megaregion, and with federal funding through the recently passed American Rescue Plan and proposed infrastructure bills, the Bay Area is poised to make once-in-a-generation investments in its transportation infrastructure. These proposals indicate that political will is growing at the local, state and federal levels to address the crises that today's auto-oriented system perpetuates: racial and environmental injustice, the housing crisis and the climate crisis.

Oakland is well-positioned to become the hub of the region's future coordinated transit network because of its position at the center of the region and because it has room to grow.<sup>3</sup> Oakland can leverage investments in regional transportation to redress historical and present-day inequities, improve the local mobility landscape, free up space for housing development, and protect its waterfront amenities and neighborhoods from rising seas. The economic benefits of increased regional connectivity could also be leveraged to catalyze commercial

<sup>3</sup> The draft Downtown Oakland Specific Plan (August, 2019) contemplates adding 20 million square feet of office space and 29,100 new homes in Downtown Oakland by 2040. [https://cao-94612.s3.amazonaws.com/documents/FINAL\\_DOSP-Public-Review-Draft-Plan\\_082819\\_Compressed.pdf](https://cao-94612.s3.amazonaws.com/documents/FINAL_DOSP-Public-Review-Draft-Plan_082819_Compressed.pdf)



**Public events like First Fridays play an important role in elevating Oakland's culture and keeping its communities intact.** PHOTO BY SERGIO RUIZ

development and increase local employment opportunities. Oakland could enact stronger policies that support anti-displacement measures, community wealth-building and placemaking as the local economy expands as a result of transit investments. However, without a clear vision for how the regional investments will benefit Oakland, and how the projects align, there is a risk of history repeating itself.

The Bay Area's next set of transportation investments must be thought of as investments in racial equity, environmental justice, climate resilience and affordable housing — in short, they are investments in Oakland and its residents. Ensuring that these investments serve Oakland will require significant forward thinking and coordination across geographies and agencies. It will also require development of an anti-displacement and racial equity strategy to serve as an overarching guide.

# 10 Ideas to Ensure Oakland Benefits From Regional Transportation Investments

In the following pages, we propose a series of ideas that would position Oakland as a critical hub in a 21-county Northern California regional transit network, help the city benefit from future transportation investments and repair the harms of previous infrastructure. This set of ideas does not represent a singular way forward but illustrates the scale of transformation that is possible when decision makers align and connect transit investments to realize a holistic vision.

Leveraging the full potential of major transportation investments for Oakland's benefit will require visionary leadership and collective action. Some of the projects and plans mentioned here are already in the works: The decisions that shape these projects should prioritize Oakland's potential and its importance to the region. The lessons learned from past infrastructure projects must be at the forefront, with racial equity guiding the city's transformation. Leaders will need to embrace bold ideas and keep the bigger picture in mind to make the most of these once-in-a-century investments.



## IDEA 1

### **Develop an anti-displacement and racial equity framework to guide the next set of regional transportation investments.**

A framework for inclusiveness that guides the planning and design of the next generation of infrastructure for Oakland will help ensure growth and prosperity for local neighborhoods and the broader region. Each infrastructure project recommended here would require a community engagement strategy that embeds local knowledge, community building, participatory practices, shared decision making and transparent communication. In addition to extensive community involvement, a suite of policies and actions focused on anti-displacement measures, community stabilization and wealth generation will be needed to ensure that existing residents benefit from new investments. Just as the infrastructure itself should be designed in coordination with an overarching vision, so should the strategy for anti-displacement, community wealth-building and repairing historical and present-day racial inequities. A key component of this approach should be to imagine transit hubs as anchors of the community and to place land under public or nonprofit ownership for affordable housing and other community needs.

### Equitable community planning includes:

- Authentic community engagement
- Renter protections
- Anti-displacement measures
- Affordable housing development
- Homeownership and wealth generation
- Small-business protection through construction mitigation

SPUR's report *Rooted and Growing: SPUR's Anti-Displacement Agenda for the Bay Area*<sup>4</sup> provides detailed recommendations for achieving these outcomes.

### Equitable infrastructure should:

- Design to honor past history and repair previous injustices
- Reduce community exposure to air and noise pollution
- Create new transit access and economic opportunity
- Reclaim publicly owned land as an opportunity to provide affordable housing
- Provide public amenities



## IDEA 2

# Create new transbay transit crossings.

Increasing the capacity and resilience of the region's transportation network will mean creating additional ways for transit to cross the Bay. The fastest and easiest way to build a "new" crossing is to dedicate existing lanes on the Bay Bridge to buses and high occupancy vehicles. To be effective, these repurposed lanes should continue on freeways that radiate from Oakland, like I-80, I-880, I-580 and CA-24. At relatively low cost, this could deliver significant transit capacity from San Francisco into the East Bay. This service could compete favorably with driving for most trips and could use existing road infrastructure as its "rails." This bus connection, and the regional express bus network it can catalyze, could be as important as new rail connections for the future of Oakland and the region.

Over time, the region will also need one or more new transbay rail crossings, in addition to the existing BART tube. This is among the investments the Link21 program is studying. Many design and operational decisions are yet to be made for a new rail crossing, including which transit services would use it, the alignment (meaning what route it would take and where the stations would be) and whether it would connect into downtown Oakland.

<sup>4</sup> Kristy Wang, *Rooted and Growing: SPUR's Anti-Displacement agenda for the Bay Area*, SPUR, April 2021, <https://www.spur.org/publications/spur-report/2021-04-22/rooted-and-growing>

SPUR supports the idea of an integrated megaregional transit network and believes the Bay Area should play a key role in it. To be successful, the network should be designed around a set of hub stations, a regular and frequent schedule and timed transfers, following the lead of rail networks in Europe.<sup>5,6</sup> This type of “pulse-hub” network would reduce travel times dramatically, making it possible to get anywhere in the Bay Area by transit in an hour or less. To achieve this vision, we support additional rail crossings with both conventional (standard gauge) rail and BART (wide gauge) rail.<sup>7</sup> Adding one or more new links that do not have to use the constrained Oakland Wye<sup>8</sup> would provide new capacity in the region’s most congested corridor. Additionally, new crossings would add critically needed resilience to the transit system in the event that segments of the network go out of service due to an earthquake, repair work or other disruptions. This becomes increasingly important as the existing crossing ages and requires maintenance. Reliable, seamless, resilient connections between San Francisco, Silicon Valley, Sacramento and the northern San Joaquin Valley would elevate Oakland’s trajectory as both a job and population center. The new crossing could connect downtown Oakland to San Francisco’s SOMA district, connect to a subway on the West Side of San Francisco via Geary and 19th Avenue, then connect to the existing system at Daly City Station, and onward to San José via conventional rail.

## Key Operational Considerations for New Transbay Rail Crossings

Designing and building new rail links will require layers of major interrelated design decisions that will impact the functioning of the regional rail network and freight network for the next century and beyond. Whatever design choices are made, they should ensure:

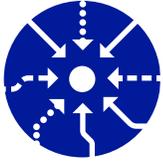
- There is one operational transbay rail crossing at all times
- All BART trains from the East Bay can access a new crossing without using the Oakland Wye
- New crossings do no harm to existing passenger or freight rail and infrastructure by introducing new bottlenecks or other capacity constraints
- Train maintenance and storage facilities for passenger and freight rail are designed to be adequate for train operations while not degrading and polluting surrounding communities
- Decisions about the alignment and construction methods should be based on the best way to provide integrated services with a high-quality passenger experience
- Public investments in private freight systems must lead to significant flexibility for the growth of passenger rail

5 Laura Tolkoff, “Giving Old Infrastructure New Life,” SPUR, July 2019. <https://www.spur.org/publications/urbanist-article/2019-07-29/giving-old-infrastructure-new-life>

6 Laura Tolkoff and Deike Peters, “Lessons for Diridon: Rebuilding Rotterdam Centraal Station,” SPUR, September 2016. <https://www.spur.org/news/2016-09-22/lessons-diridon-rebuilding-rotterdam-centraal-station>

7 This could be in the form of a single, four-track crossing or two, two-track crossings, pending further study.

8 The Oakland Wye is the underground BART junction in downtown Oakland.



### IDEA 3

## Build an Oakland transit hub.

One of the decisions yet to be made about the additional rail crossings is where they might connect in Oakland and how best to facilitate transfers between BART, regional rail and express buses in Oakland. The success of future investments in the Link21 vision would be enhanced by a holistic approach to seamless transfers between different modes of transportation. Two kinds of stations can facilitate this: transfer stations and hubs. Transfer stations are neighborhood stations that provide transfers between modes like local bus and regional rail. They can bring the benefits of greater transit choices to Oakland communities not currently as well served by BART and regional rail, such as San Antonio (see map on page 16). A hub station is a destination in itself that provides coordination between operators and modes, serves as a major connection point for both local and regional trips, provides services, shops and public gathering spaces, and offers opportunity for small businesses, both within and around the station. An Oakland transit hub should integrate transit modes seamlessly, support Oakland's urban aspirations and help anchor public life.

There are several potential locations for a hub, many of which will be studied extensively as part of the Link21 program. It is not too early for Oakland to begin to consider this question. The hub should be a landmark, a driver of growth for generations and a source of local pride. It should be designed to connect and integrate the surrounding neighborhoods, with a commitment to supporting Oakland's residents, workers, small businesses and local entrepreneurs. The hub could be one station or several stations linked together with seamless transfers that bring people into — not just through — downtown and could give Oakland residents better access to the entire Northern California megaregion. Planning for significant new growth must integrate anti-displacement policies for residents and businesses so the unparalleled opportunity for new access to high-quality, regional transit benefits everyone.

Given that the alignment of additional crossings has not been chosen, there are several potential locations for an Oakland hub, including but not limited to the options described below and shown in the map on page 16. The trade-offs in making this decision include whether to provide direct access to downtown Oakland or connect to areas of the city not currently served by rail, increasing potential ridership.<sup>9</sup> Whichever alignment is chosen, it will be critical to design it to position downtown Oakland as the center of the regional transit network.

Possible locations include:

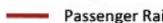
- **The I-980 corridor.** The I-980 trench has long been identified as a promising site for transfers between transbay and East Bay rail lines. This location would serve West Oakland, an area of the city not currently integrated into the regional transit network, and if I-980 is undergrounded (see Idea 5), the hub could also serve as a connection — rather than a barrier — between West Oakland and downtown. One downside is that it could pull focus away from downtown. On the other hand, new development on an estimated 15 acres of land that would be freed-up if the I-980 is undergrounded could provide opportunity for affordable housing and increased ridership while supporting the financial viability of the project.

<sup>9</sup> Ratna Amin and Brian Stokle, *Designing the Bay Area's Second Transbay Rail Crossing*, <https://www.spur.org/publications/white-paper/2016-02-10/designing-bay-areas-second-transbay-rail-crossing>, SPUR, February 2016.

→ **On or near Broadway.** There are several options to modify existing BART stations between 5th and 19th streets along Broadway. A location here would directly serve downtown Oakland and could renew Broadway’s original purpose as the city’s main street. Where I-880 crosses Broadway (between 5th and 6th streets), a hub could serve as a connection point between standard gauge rail tracks and BART tracks. This location would also best serve Jack London Square and potential development at Howard Terminal.

→ **Howard Terminal/Jack London Square.** If the tunnel connects at Howard Terminal, it could be a defining feature for the future of Jack London Square and serve the proposed Oakland Waterfront Ballpark District, should that development move forward. This station could also serve as a transportation option for Alameda, as a plan for a pedestrian bridge across the Oakland Estuary is also underway.

Potential locations for an Oakland rail hub include the I-980 corridor, Jack London Square and various locations along Broadway.

-  Potential Rail Extension
-  Potential BART Extension
-  Freight Rail
-  Passenger Rail
-  BART
-  Other Potential Alignment Alternatives





#### IDEA 4

## Ensure Oakland's land use plans support the infrastructure investments of tomorrow.

Several plans under development, such as the Downtown Oakland Specific Plan and West Oakland Specific Plan, are critical to the future of Oakland and must be implemented with future transportation investments in mind. In order for Oakland to benefit from regional investments in transportation, the city must be prepared to accommodate growth and development near planned transit stations and corridors. As the city moves to update its general plan in the near term, it should ensure that new planning codes and regulations support transit-oriented development in proposed areas of future growth. Additionally, new plans and major development projects must consider new transbay crossings.



#### IDEA 5

## Underground I-980.

I-980 represents one of the most destructive aspects of our region's 20th-century transportation infrastructure. The construction of the interstate demolished homes and businesses in West Oakland, displaced primarily Black households, brought air and noise pollution to a residential neighborhood and created a barrier between West Oakland and downtown. To repair these impacts and reconnect West Oakland to downtown, major portions of I-980 could be decked, with the roadway routed on the new deck as a boulevard. The old I-980 under the deck could be transformed into a transit tunnel and station, as part of an additional transbay rail crossing. The publicly owned land could be repurposed for housing, office development and job growth, and public open space, among other community uses. The advocacy group ConnectOakland presents a similar vision for the redevelopment of this area, and the Downtown Oakland Specific Plan discusses the concept of converting I-980 into a surface boulevard, another idea that could provide significant community and environmental benefits. The Economic Justice Act, currently under review by the federal government, includes \$10 billion for planning and feasibility studies to remove transit infrastructure in urban communities. I-980 is a prime candidate for such funding and could be a seminal project for reclaiming urban land and tearing down destructive freeway infrastructure.



## IDEA 6

# Underground parts of I-880 and freight infrastructure.

I-880, which is particularly vulnerable to rising sea levels and a detriment to the public health of neighboring Oakland residents, could be undergrounded where it intersects downtown, unlocking seven city blocks for mixed-use developments and connecting downtown to Jack London Square and a possible future ball park. The effort to underground this freeway must be paired with sea-level-rise adaptation and mitigation measures, not only for the infrastructure itself but also for the surrounding communities. Undergrounding I-880 could also be an opportunity for Oakland to separate freight rail and passenger rail, which currently operate on a shared track. This “super-corridor” concept is discussed further in Idea 8 and is shown in the map on page 6. A new dedicated freight tunnel could serve the Port of Oakland, relocating both freight rail and port-bound truck traffic to an underground access route south of the Lake Merritt Channel. This concept would support the desire to decarbonize the movement of goods through the use of electric and hydrogen freight traffic, supporting improved air quality and environmental justice, and achieving the region’s greenhouse gas reduction goals.<sup>10</sup> This idea could be undertaken in conjunction with bringing an additional transbay crossing into Oakland, if one of the new crossings uses the I-880 alignment.



## IDEA 7

# Use land freed up by freeway undergrounding to reconnect Oakland, increase affordable housing and support inclusive development.

With I-980 and I-880 buried, Oakland could reconnect its neighborhoods through green spaces, affordable housing, commercial development and resulting jobs, and streets that support public transit, walking and biking. The freeway undergrounding described in ideas 4 and 5 would unlock approximately 40 acres of land and should serve as a catalyst for housing production and other neighborhood uses. According to the draft Downtown Oakland Specific Plan, the I-980 corridor alone could be redeveloped to accommodate 5,000 residential units and 1.5 million square feet of commercial space.

<sup>10</sup> SPUR’s public program “Thinking Big in Downtown Oakland” explored this vision, as well as several other transformational concepts. See the presentations at: <https://www.spur.org/events/2019-07-10/thinking-big-downtown-oakland>



## IDEA 8

# Design transportation investments as resilience investments, and protect existing infrastructure.

Major investments in infrastructure must be viewed as part of a larger climate adaptation and resilience strategy. One example is the concept of an East Bay transportation “super-corridor” that could integrate freight rail, passenger rail and freeway infrastructure along one major corridor, improving efficiency and resulting in better ecological and environmental health outcomes. Undergrounding I-880, rail tracks and key utility infrastructure located south of the Lake Merritt channel could protect them from sea level rise. Additionally, switching rail engines from diesel to electric power along the Capitol Corridor would reduce air and noise pollution.

Implementing the City of Oakland’s 2017 Sea Level Rise Road Map will be a bold and immediate action needed to protect vulnerable communities and key pieces of transportation infrastructure from sea level rise and other threats.<sup>11</sup> Protecting transportation assets is critical to decreasing reliance on car travel and ensuring that households without a private vehicle can easily and safely get where they need to go. The road map outlines several nature-based strategies that should be implemented immediately to prevent flooding, including “living levees” at the Bay Bridge touchdown north of I-80 and bordering the Damon Slough facility in the Oakland Coliseum area. SPUR’s *San Francisco Bay Shoreline Adaptation Atlas* explores this idea for a number of sites around the Bay.<sup>12</sup>



## IDEA 9

# Add a new passenger rail tunnel through downtown Oakland.

If the I-880 corridor is undergrounded as part of a larger resilience strategy (as described in idea 8), this would provide an opportunity to reconsider how passenger rail is directed through Oakland. Moving Capitol Corridor service from its shared tracks through Jack London Square to a passenger rail tunnel that runs through downtown is one option. This tunnel could connect to the existing rail system south of the Lake Merritt Channel, serve an Oakland rail hub and proceed via the existing BART alignment or the I-980 corridor and San Pablo Avenue to Emeryville Station.

<sup>11</sup> City of Oakland (Resilient Oakland), Fall 2017 “Sea Level Rise Road Map,” <https://cao-94612.s3.amazonaws.com/documents/oak068799.pdf>

<sup>12</sup> Julie Beagle, Laura Tam et al, *San Francisco Bay Area Shoreline Adaptation Atlas*, SPUR and SFEI, May 2, 2019, page 84, <https://www.spur.org/publications/spur-report/2019-05-02/san-francisco-bay-shoreline-adaptation-atlas>



## IDEA 10

# Prioritize projects that support walking, cycling and other sustainable modes of transportation.

While major infrastructure projects are being designed and developed, accessibility and sustainability goals can be served by pedestrian and bicycle projects that are much quicker to build. The draft Downtown Oakland Specific Plan recommends completion of the Green Loop and West Oakland Walk, two proposals that would serve to reconnect Oakland's downtown neighborhoods to the waterfront and Lake Merritt with protected bike lanes, walking paths and public spaces.<sup>13</sup> The draft plan also calls for the implementation of the programs and policies outlined in the 2017 Oakland Pedestrian Plan, which are critical steps toward creating a walkable and bikeable Oakland. These proposals should be viewed as key components of Oakland's transportation infrastructure.<sup>14</sup>

<sup>13</sup> City of Oakland, Downtown Oakland Specific Plan, Draft August 2019, [https://cao-94612.s3.amazonaws.com/documents/FINAL\\_DOSP-Public-Review-Draft-Plan\\_082819\\_Compressed.pdf](https://cao-94612.s3.amazonaws.com/documents/FINAL_DOSP-Public-Review-Draft-Plan_082819_Compressed.pdf)

<sup>14</sup> City of Oakland Department of Transportation 2017 Pedestrian Plan Update, <https://cao-94612.s3.amazonaws.com/documents/Ped-Plan-2017-rev-sep2018-compressed.pdf>



# Case Studies



PHOTO COURTESY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

## Alaskan Way Viaduct Seattle

Cities around the world, from Seattle to Marseille to London, have deployed advanced tunneling techniques to reclaim land for growth and public space. The removal of the Alaskan Way Viaduct, an elevated, two-level highway in Seattle, is an example of a freeway transformation that reconnected Seattle's downtown and waterfront neighborhoods. The viaduct, which was seismically vulnerable, was replaced with a new tunnel for State Route 99 plus a surface street.

**Key idea for Oakland:** This project illustrates how converting a raised freeway into a tunnel and surface boulevard can achieve significant benefits without compromising travel times or the efficiency of port operations. While freeway undergrounding projects are complex, their impacts can be transformational.

## Central-Wan Chai Bypass and Island Eastern Corridor Link Hong Kong

Opened in 2019, the Central-Wan Chai Bypass and Island Eastern Corridor Link is a 2.8-mile highway along the north shore of Hong Kong Island designed to alleviate traffic congestion along the existing major roads. The project also improves air quality by diverting traffic through 2.3 miles of tunneled highway equipped with a state-of-the-art air purification system. Construction took place 65 feet below the Cross Harbor Tunnel southern approach ramp without disrupting the daily journeys of 120,000 vehicles. The design of the ventilation buildings and overhead vent ducts were voted on by the community, with the final designs having a strong focus on greening and enhancing the urban environment.

**Key idea for Oakland:** Significant transportation infrastructure improvements can be delivered to provide significant environmental benefits when decision makers think big and leverage the latest engineering innovations.

PHOTO COURTESY OF AECOM



## Alameda Corridor Southern California

The Alameda Corridor is a 20-mile dedicated freight rail expressway that connects the ports of Los Angeles and Long Beach to the national rail network. The corridor is operated by the Alameda Corridor Transportation Authority, a joint powers authority formed by the City of Los Angeles and City of Long Beach. A 10-mile stretch of the corridor has been sunk in a trench 33 feet below street surface. The project separates freight traffic from passenger rail and the street level to support more efficient freight movement and reduce negative impacts on the surrounding communities. Connectivity across the corridor was improved with a series of bridges, underpasses and overpasses.

**Key idea for Oakland:** Separating Oakland's freight and passenger rail would have significant benefits for environmental justice and sustainability goals while improving port and regional freight activities.

PHOTO COURTESY OF THE ALAMEDA CORRIDOR  
TRANSPORTATION AUTHORITY







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