

ConnectSF

STREETS AND FREEWAYS STRATEGY

FINAL REPORT

JULY 2022



Acknowledgments

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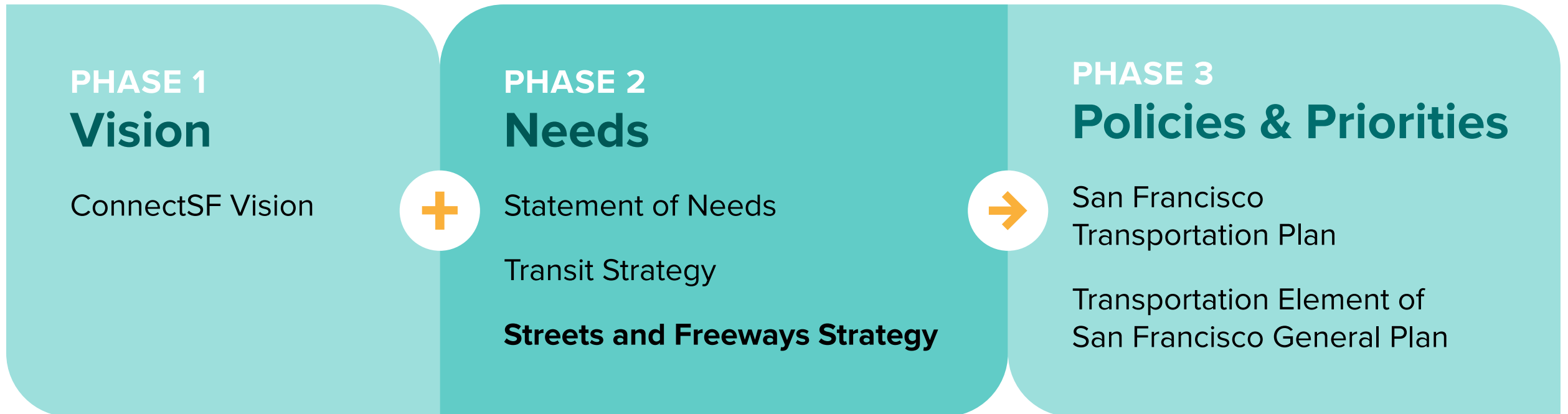
Introduction

The Streets and Freeways Study is the first comprehensive planning effort for San Francisco’s streets and freeways network. The Study was guided by the ConnectSF goals and **Statement of Needs** which respond to San Francisco’s **Transit First** and **Vision Zero** policies, **Racial Equity framework**, and **Climate Action Plan**.

The Streets and Freeways Study identifies five strategies to address our challenges and move us closer the **ConnectSF Vision** for an effective, equitable, and sustainable future.

About ConnectSF

ConnectSF is a multi-agency process to build an effective, equitable, and sustainable transportation system for San Francisco's future.



ConnectSF Goals

To achieve our goals, we need to **reduce congestion and greenhouse gases** by creating an **equitable, safe, and efficient transportation network** that makes it easier for people to get around by transit, biking, walking, and carpooling.

For the Streets and Freeways Strategy, this means making sure our infrastructure is maintained, low-carbon modes are accessible, safe, and reliable to use, and goods can easily be moved and delivered across the city.



**Economic
Vitality**



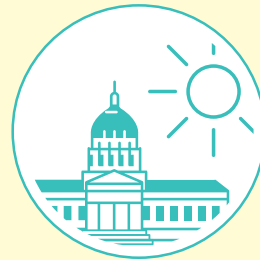
Equity



**Environmental
Sustainability**



**Safety and
Livability**



**Accountability and
Engagement**

Challenges for our Streets and Freeways

Street space in San Francisco is limited. We can't build our way out of the congestion we have and expect to see in the future.

To make our streets work well for everyone, we need to move more people and goods through the street space we have today.



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Challenges for our Streets and Freeways

Past investments in **freeways and our largest roads** frequently **divide communities**, create transportation barriers to parts of the city, contribute to poor air quality, and create safety challenges, especially for people walking and bicycling.

Challenges for our Streets and Freeways

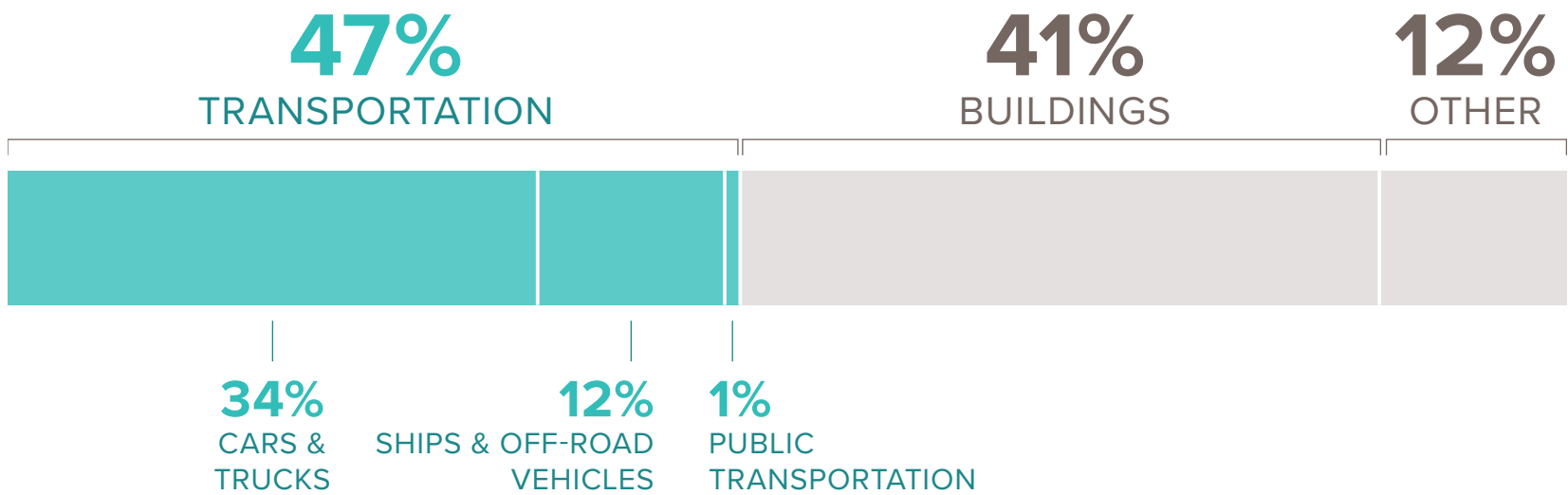
The world is in a climate crisis.

San Francisco’s climate goals include achieving net zero emissions by 2040.

To meet these goals, we need to make transit, carpooling, walking, and biking more convenient for more people. This is especially true for local trips. Currently, more than 40% of car trips in San Francisco are 3 miles or less.

San Francisco also faces risks from earthquakes, sea level rise, and flooding.

San Francisco’s GHG Emissions



2019, <https://sfenvironment.org/carbonfootprint>



photo credit: SF Department of Public Works

Outreach Overview

Community outreach for the Streets and Freeways Strategy helped to identify priorities for different types of investments to advance the recommendations. Outreach was held during Summer 2021 and included an online survey, available in English, Filipino, Chinese, and Spanish, and town hall meetings.

What we heard

» Top strategies to prioritize efficient travel options on our streets:

- Manage curbs space to reduce conflicts that come from double parking
- Traffic calming to create more comfortable space for people walking and biking
- Rewards and discounts for using transit

» Top strategies to improve street safety:

- Traffic calming to slow speeds and increase visibility of people walking and biking
- More dedicated space to walk and bike
- Reduce speed limits
- Advocate for the authority to use speed safety cameras

» Priorities to build a complete network for walking and biking:

- All strategies were ranked as important by about 70% of respondents.
- These include:
 - creating more space on neighborhood streets for walking and biking
 - high-quality separated bike lanes, and
 - improved connections to transit
- There was a slight preference to improve walk and bike connections to transit stops and stations

» Principles to guide future transformations to the streets and freeways network:

- Developing complete streets that better allocate space for transit, walking, biking, and driving was ranked as important most often (~80%).
- Reconnecting communities that have experienced harms of past investments and pairing freeway redesigns with land use planning to support sustainable development and avoid future displacement were ranked as important by about 70% of respondents.

Strategy Recommendations

The Streets and Freeways Strategy identified five strategies to address the challenges and move us closer to the ConnectSF Goals:

- » **Maintain and reinvest** in the current transportation system
- » **Prioritize transit and carpooling** on our streets and freeways
- » **Build a complete network** for walking and biking
- » **Prioritize safety** in all investments and through targeted programs
- » **Repair harms and reconnect** communities



Maintain and Reinvest in the Current Transportation System

In 2020, San Francisco reached a 10-year pavement quality goal. We want to continue this progress and keep streets in overall good condition.

Well maintained streets and freeways reduce costs and advance our equity goals because they are less expensive to repair, support safe and efficient travel for all modes, and reduce vehicle repair costs.

As work is done to maintain roads, it is important that we also make investments to prepare our road infrastructure to address the realities and future risks of climate change like flooding and sea level rise.



photo credit: Sergio Ruiz, flickr/p/2iru3dJ

Prioritize Transit, Carpooling, and Traffic Management on our Streets & Freeways

Changing how street space is used can support a future where people have many efficient options for getting around, vehicles are not stuck in traffic, and streets are safe and enjoyable for everyone.

The ConnectSF Transit Strategy recommends a five-minute bus network, however for this to work buses can't be stuck in traffic. Transit lanes, traffic signal adjustments, and improved boarding islands allow buses to travel more quickly and reliably.

On streets, freeways, and bridges, converting a travel lane to a high-occupancy vehicle (HOV) lane can improve bus travel times. Equitable road pricing can further improve travel times and generate revenue to reinvest into improving travel choices. Goods delivery and traffic circulation can benefit from curb management and improved truck route planning.



photo credit: SFMTA Photography Department



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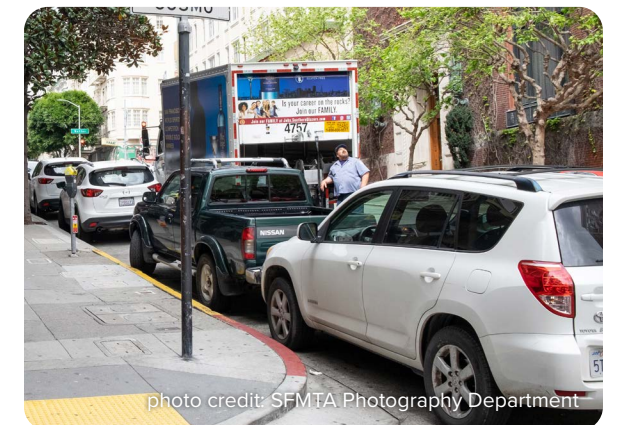


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Build a Complete Network for Walking and Biking

San Francisco is creating more spaces for people to safely and walk and bike.

We need to continue to fill gaps in the bike and pedestrian network and improve many of our existing streets to create a more comfortable environment by building infrastructure that meets the needs of people of all ages and abilities.

Bike lanes, low-speed streets, neighborways, and shared spaces allow us to reimagine our streets as spaces that promote healthy communities and support the local economy by giving more space for people to spend time together in our diverse communities.

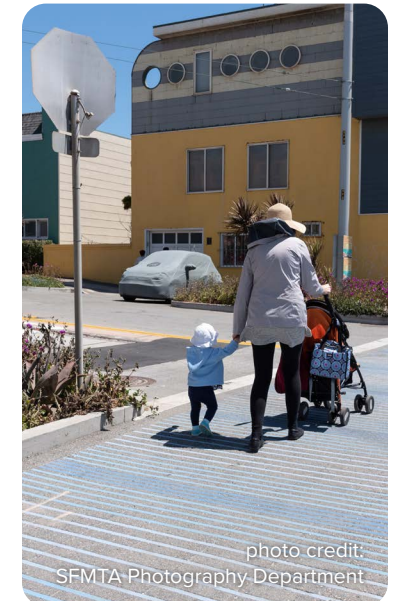




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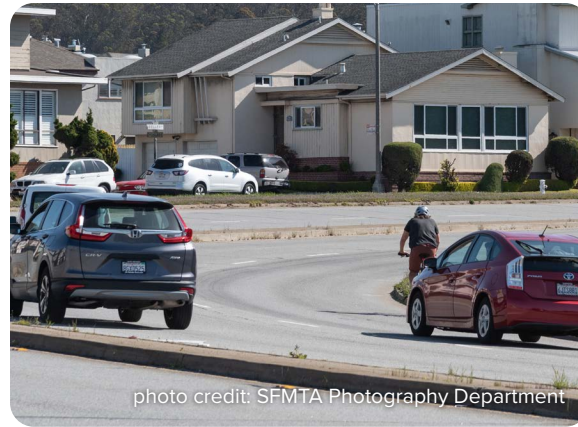


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Prioritize Safety in all Investments and through Targeted Programs

To make more progress in street safety, successful quick-build projects—reversible, adjustable traffic safety improvements like paint, signs, and traffic delineators—need to be upgraded to permanent treatments.

We need a citywide street safety strategy that includes traffic calming, complete streets, and equitable enforcement to help reduce speeds and driving behaviors that are the biggest safety risks.

In 2022, the State of California passed legislation that allows municipalities to lower speed limits from 25mph to 20mph. Reducing speed limits in commercial areas and on major arterials will reduce conflicts and save lives, helping us achieve our goal to have zero traffic related deaths and serious injuries.



photo credit: SFMTA Photography Department

Repair Harms & Reconnect Communities

Our freeways and streets make it possible to get around, but these investments also divide communities and create pollution, noise, and safety impacts that primarily affect low income communities and communities of color.

Reimagining our major transportation infrastructure alongside land use investments can help reconnect communities that have experienced these negative impacts.



photo credit: Fletcher Studio Landscape Architecture



photo credit: SFMTA Photography Department



photo credit: Sergio Ruiz, flickr/p/NNkBNY

Concepts in this report are organized by project type. Combined, these concepts advance the five Streets and Freeways Strategy recommendations.

Concepts do not identify specific projects but are intended to guide future planning efforts. Each concept addresses:

- » Transportation challenges
- » Opportunities for safety improvements
- » Potential walk, bike, or transit connections

The Streets and Freeways Strategy recommends concepts for further study and implementation, however it does not determine the relative priority of different concepts. Each concept would need to undergo technical analysis and a formal planning and community engagement process.

All planning level cost estimates are shown in 2020 dollars.

Streets and Freeways Concepts

1. Maintenance and Resilience Concepts

help prepare our transportation infrastructure for the risks of climate change

2. Transit and HOV Priority Concepts

prioritize street space for transit and high-occupancy modes and improve traffic management

3. Safety and Active Transportation Network Concepts

expand the bike and walking network and improve street safety for the most vulnerable road users

4. Concepts to Reconnect Communities

include medium-term and long-term concepts to redesign infrastructure and create more complete streets

1. Maintenance and Resilience Concepts

		Streets and Freeway Strategy Recommendations				
Concept	Description	Maintain and Adapt	Prioritize Transit and Carpool	Complete Walk/Bike Network	Safety	Repair Harms
1a. Maintain and Adapt Road Infrastructure	Invest and maintain street infrastructure and a pavement condition index of 75, the goal set by San Francisco's Capital Plan .	✓		✓	✓	
1b. Embarcadero Seawall Program	Citywide effort to create a more sustainable and resilient waterfront.	✓		✓		
1c. Ocean Beach Master Plan	Comprehensive vision to address sea level rise, protect infrastructure, restore coastal ecosystem, and improve public access.	✓		✓	✓	
1d. Islais Creek Adaptation Strategy	Actionable strategies that address sea level rise and coastal flood risk through a robust public engagement process.	✓		✓		



photo credit: SFMTA Photography Department

1a. Maintain and Adapt Road Infrastructure

Maintaining road infrastructure includes street repaving, traffic signal upgrades, and repairs to our sidewalks and bike lanes.

San Francisco aims to maintain our infrastructure and the current citywide average for pavement condition by rehabilitating aging freeways and roadways, with priority for re-paving along key transit streets and bikeways.

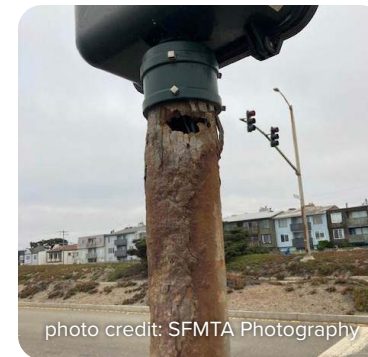


photo credit: SFMTA Photography

1b. Embarcadero Seawall Program

The **Embarcadero Seawall Program** is an effort to create a more sustainable and resilient waterfront. The Seawall is the economic backbone of San Francisco. It protects \$100 billion in assets and annual economic activity along the waterfront.

The risks of damage during a major earthquake and flooding due to rising sea levels will threaten:

- » BART Transbay Tube and stations
- » Muni light rail
- » 4th and King Caltrain Station
- » Utility infrastructure
- » Neighborhoods and businesses





photo credit: Sergio Ruiz, flic.kr/p/krR9ua

1c. Ocean Beach Master Plan

Ocean Beach has 3 seawalls that cover 25% of the beach and 425 feet of emergency erosion control.

The 3.5 miles of beach are subject to severe erosion, jurisdictional issues, and climate-induced sea level rise, posing risks to neighborhoods, roads, infrastructure and parks.

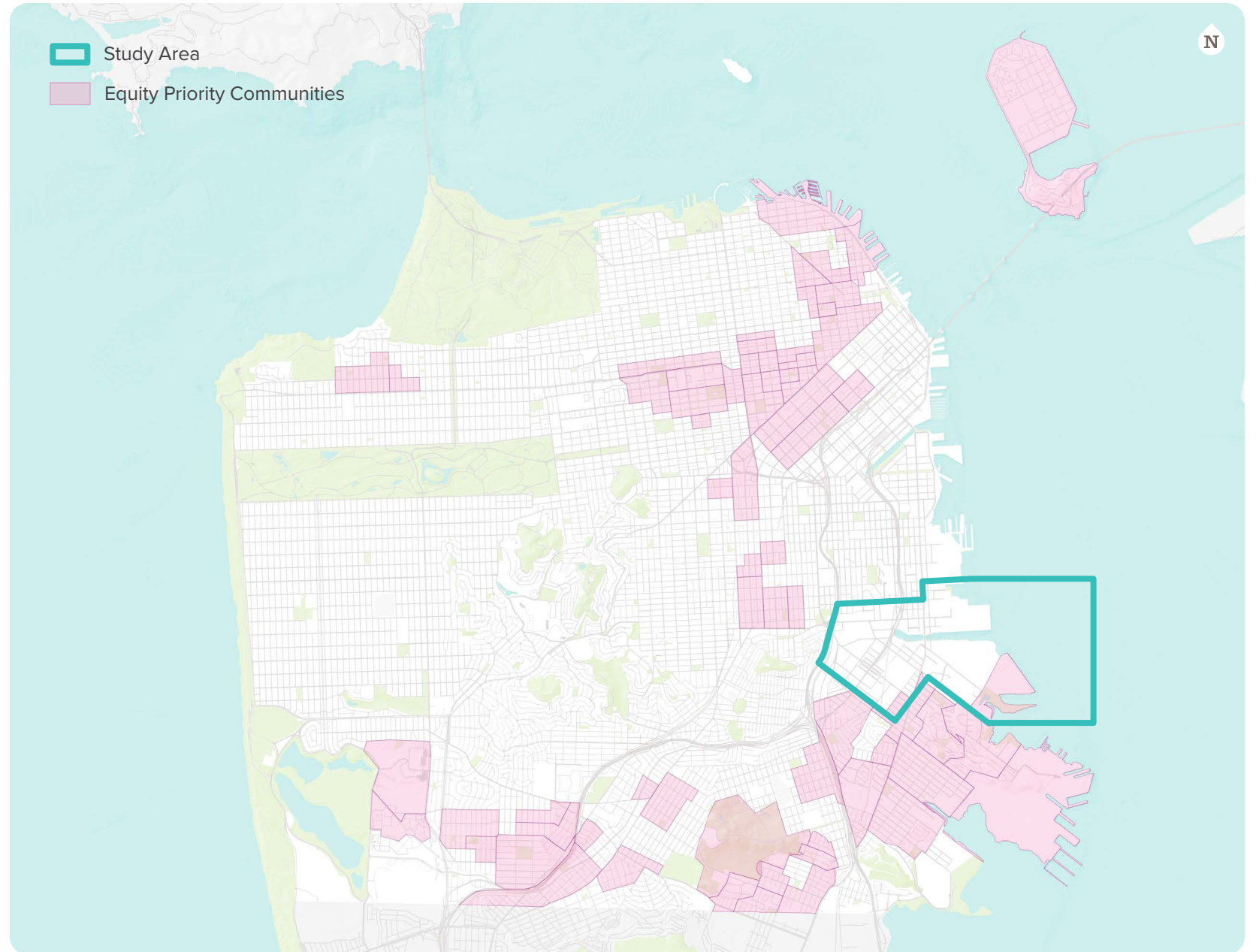
The Ocean Beach Master Plan recommends the closure of the Great Highway between Sloat and Skyline. The closure of the Great Highway presents opportunities for a diversity of beach users through enhanced beach access, pedestrian spaces, and recreational options.

1d. Islais Creek Adaptation Strategy

The **Islais Creek Adaption Strategy** identifies ways to adapt and enhance transportation assets and bring benefits to surrounding communities.

Areas next to the creek already experience stormwater and coastal flooding, creating long-term risks to transportation infrastructure, transit facilities, homes, businesses, utilities, and natural habitat.

Strategies for the area aim to support transportation, the environment, the economy, and community and social equity through improvements to infrastructure, natural habitats, and storm water management.



Maintenance and Resilience Concept Costs






Concept	Estimated Cost (2020 dollars)
1a Maintain and Adapt Road Infrastructure	\$4B Includes maintaining street pavement, signs, signals, and pedestrian and bike facilities
1b Embarcadero Seawall Program	\$5B Phase 1 estimated at \$500 million
1c Ocean Beach Master Plan	\$355M
1d Islais Creek Adaptation Strategy	\$1B – \$2B

2. Transit and HOV Priority Concepts

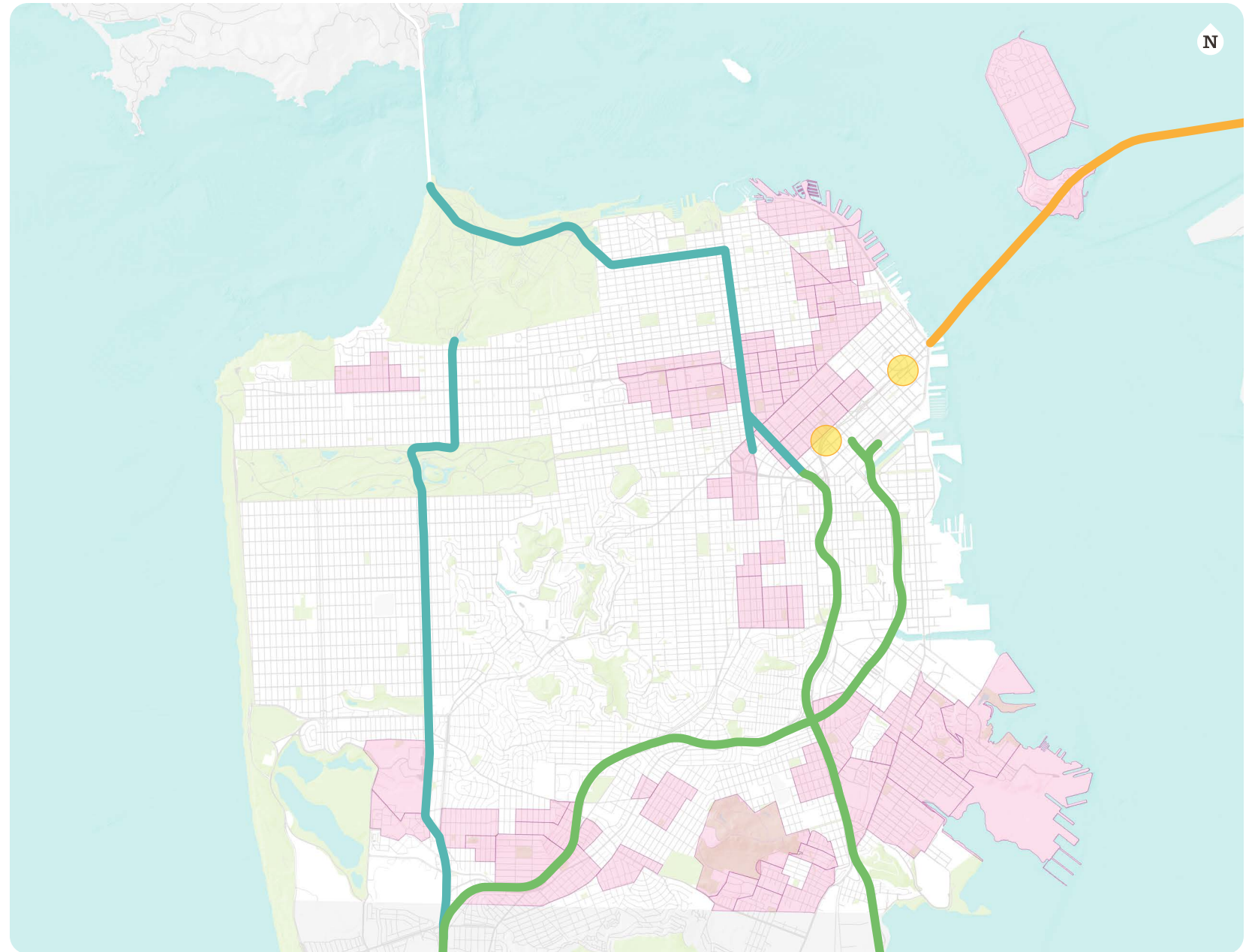
Road Space Priority

San Francisco's freeways and highways are currently unmanaged, meaning that High Occupancy Vehicles (HOVs) like transit and carpools travel at the same speeds as low-occupancy vehicles.

Cross-city priority for HOVs can support quick, reliable express buses in San Francisco.

-  Carpool Lanes and Bus Rapid Transit
-  Managed Lanes on Freeways
-  Bay Bridge Strategies
-  I-80 Ramp Reconfigurations
-  Equity Priority Communities

*An HOV lane pilot was implemented on Lombard in 2021; a Park Presidio pilot is expected in 2022



		Streets and Freeway Strategy Recommendations				
Concept	Description	Maintain and Adapt	Prioritize Transit and Carpool	Complete Walk/Bike Network	Safety	Repair Harms
2a. Arterial HOV 2+ Concept	Restrict one travel lane for use by vehicles with 2+ occupants on 19th Ave., Lombard, Park Presidio, and 9th and 10th street.	✓	✓		✓	
2b. Managed Lanes and Express Bus on Freeways	Designate one lane for transit and high occupancy vehicles such as carpools.	✓	✓			
2c. Westbound Bay Bridge Transit Only Lane	Designate one lane on the Bay Bridge westbound for transit vehicles only.		✓			
2d. I-80 Ramp Mitigations	Adjust I-80 ramps to prioritize transit and high occupancy vehicles.	✓	✓	✓	✓	

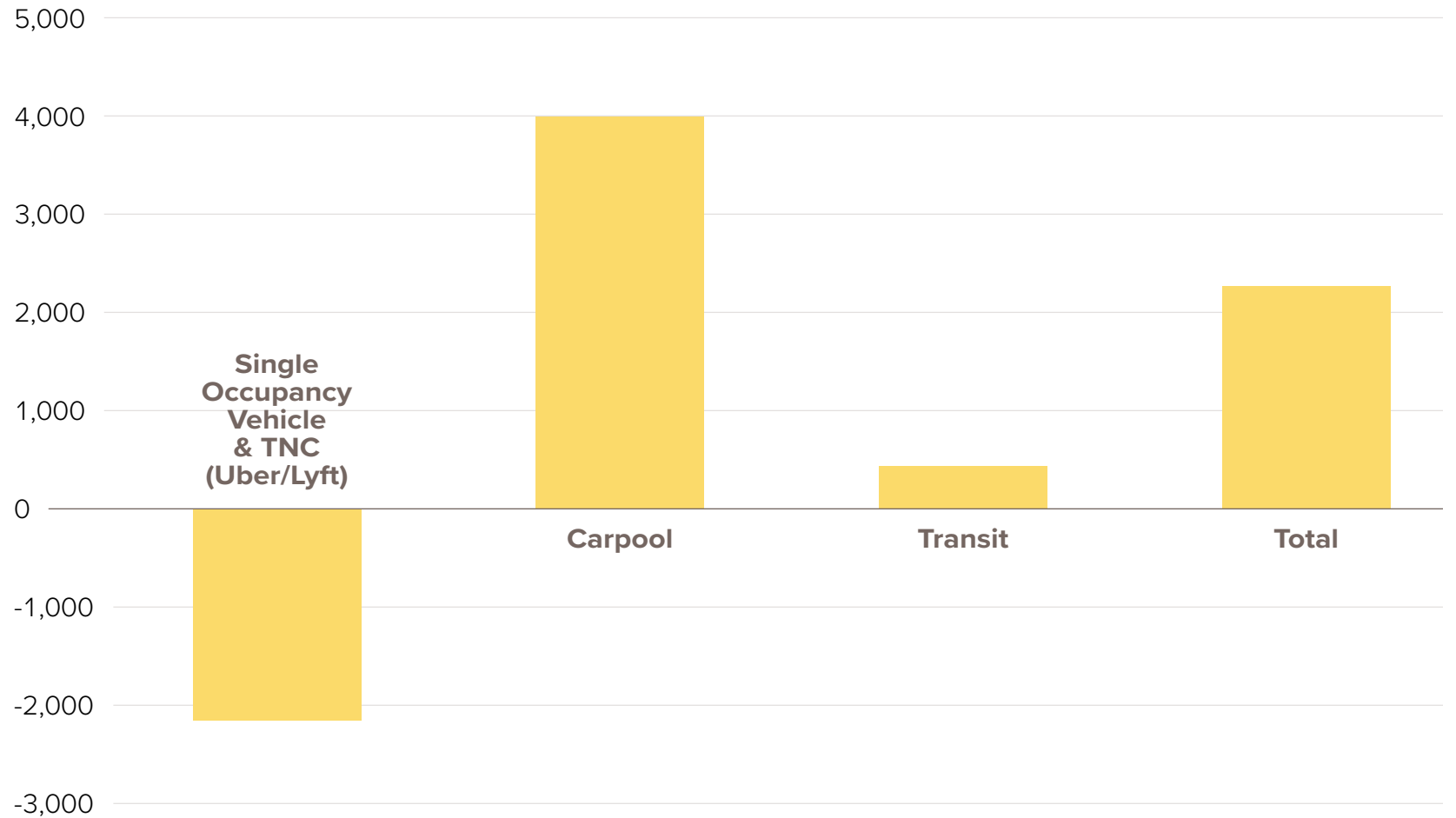
2a. Arterial HOV 2+ Concept

HOV on arterial roads can **move more people in the same amount of space.** The concept would establish HOV lanes on 19th Ave., Park Presidio, Lombard, and potentially on 9th St. and 10th St. approaches to US-101.

As an example, if a travel lane on 19th Ave. were converted to HOV, transit would not be stuck in traffic and more people would be able to move along the corridor.

The chart to the right shows that if HOV 2+ lanes were installed along 19th Ave., more people would travel through the corridor. Fewer people would be traveling in single occupancy vehicles or ride-hail, but many more people would be carpooling.

19th Avenue HOV 2+ Lanes
Change in Daily Person Throughput Between Lincoln Way and Wawona Street







source: SF-CHAMP

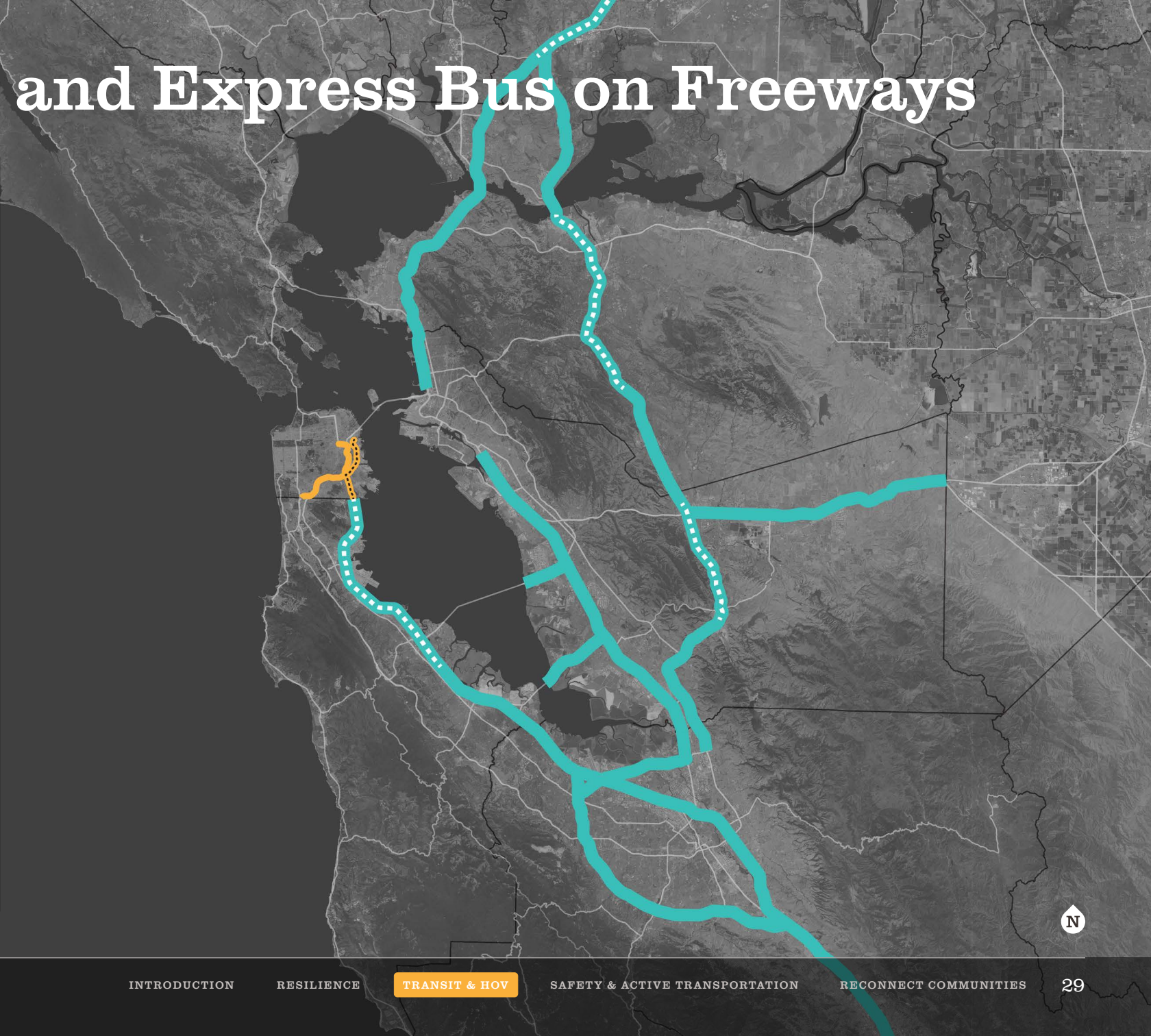
2b. Managed Lanes and Express Bus on Freeways

On freeways, managed lanes can be carpool lanes or express lanes that allow carpools and transit to use the lane for free, while other vehicles pay a fee that is set to achieve about a 45-mph traffic flow.

Converting lanes to carpool lanes and potentially converting these to express lanes with equitable discounts on San Francisco's freeways would support a regional system of managed lanes and improve reliability, increase travel speeds, and move more people.

These changes would be paired with expanded express bus service. More transit hubs or park-and-ride lots could expand access to these new services.

-  Regional Managed Lane
-  Regional Managed Lane Planned
-  SFS Vision managed lanes on all SF Freeways
-  Managed lanes currently being studied



Bay Bridge Priority Improvements

The San Francisco-Oakland Bay Bridge is a frequent bottleneck for regional travel. BART carries twice as many people as the bridge, so the Streets and Freeways Strategy explored ways to re-prioritize the limited space on the bridge to maximize person-throughput with:

- Concept 2c** Transit Priority Lane on the westbound portion of the bridge
- Concept 2d** Changes to on- and off-ramps to improve safety, transit speeds, and reliability



photo credit: SFMTA Photography Department



photo credit: Sergio Ruiz, f1j.c.kr/p/2jcZZMh

AM Peak Hour Traffic (Westbound)



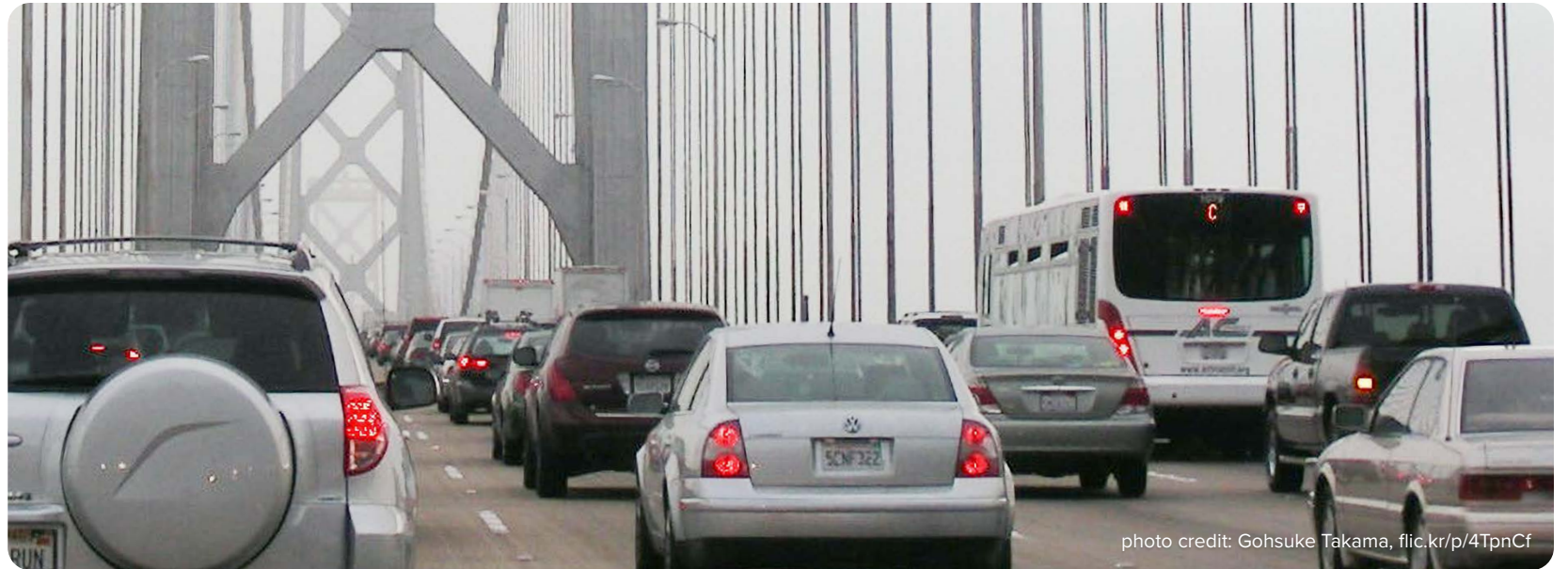
* Assumes average of 1.7 persons per vehicle (Caltrans)

2c. Westbound Bay Bridge Transit Only Lane

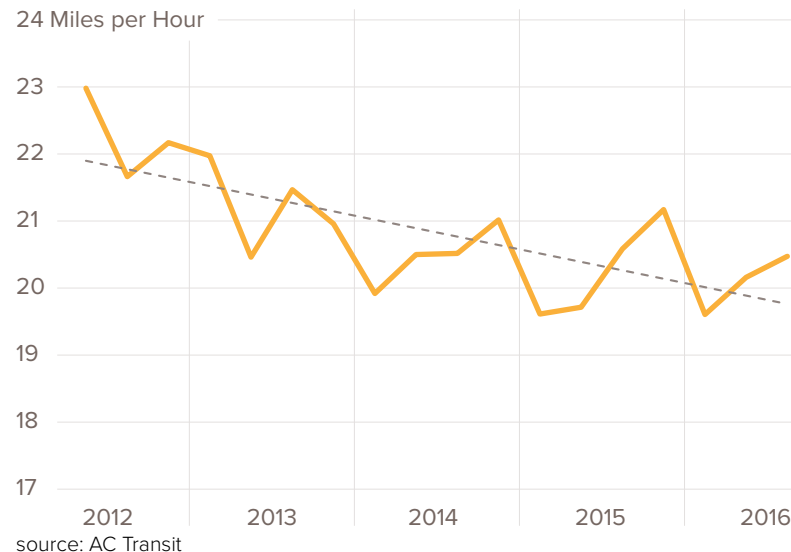
AC Transit and Muni bus speeds and reliability declined as congestion increased on the Bay Bridge between 2012 and 2019.

Dedicated transit lanes on the westbound portion of the Bay Bridge would increase bus speed and reliability and lead to increased bus ridership. Transit or HOV priority on bridge approaches and an eastbound transit lane accessible from the Salesforce Transit Center are recommended for further study.

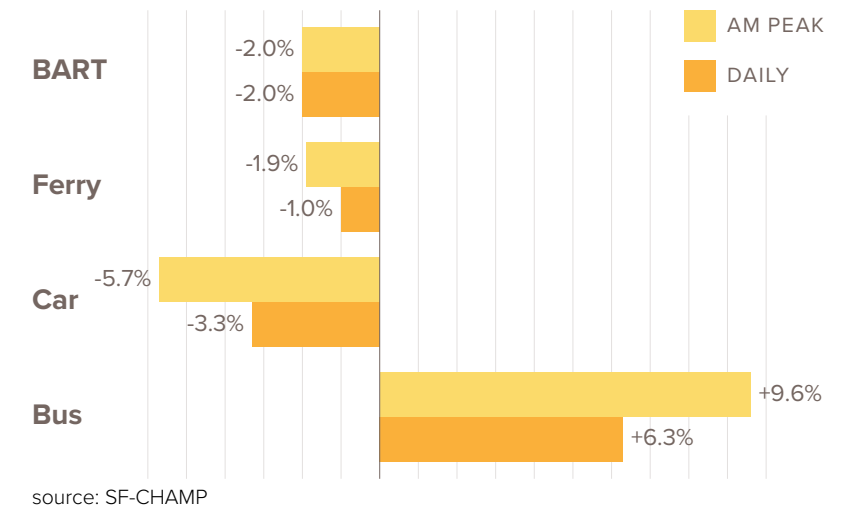
Two-way tolling may increase the benefits of adding bus priority on the Bay Bridge and is also recommended for further study with regional partners.



AC Transbay Bus Speeds (2012 – 2017)



Transbay Trips with Westbound Bay Bridge Transit Only Lane



2d. I-80 Ramp Mitigations

This concept identifies I-80 ramp mitigation opportunities to improve transit access and circulation, do not require major construction, and are feasible from a traffic operations standpoint. Changes to these ramps would support westbound transit priority on the bridge, arterial HOV concepts, and improvements to overall circulation, transit reliability, and safety in the area.

● Ramp evaluated for reconfiguration opportunities

Feasible Mitigation Options:

- 1 Convert Fremont off-ramp to Bus/HOV only
- 2 Close Fremont/Harrison off-ramp
- 3 Consolidate or close 7th Street off-ramps



Transit and HOV Priority Concept Costs

Concept	Estimated Cost (2020 dollars)
2a Arterial HOV 2+ Concept	\$5M
2b Managed Lanes and Express Bus on Freeways	\$100M Does not include planned 101/280 Managed Lanes and Bus Project Tolling infrastructure would cost an additional \$70M
2c Westbound Bay Bridge Transit Only Lane	\$30M – \$35M Regional project, costs assume ramp improvements in the East Bay
2d I-80 Ramp Mitigations	\$5 – 10M

3. Safety and Active Transportation Network Concepts

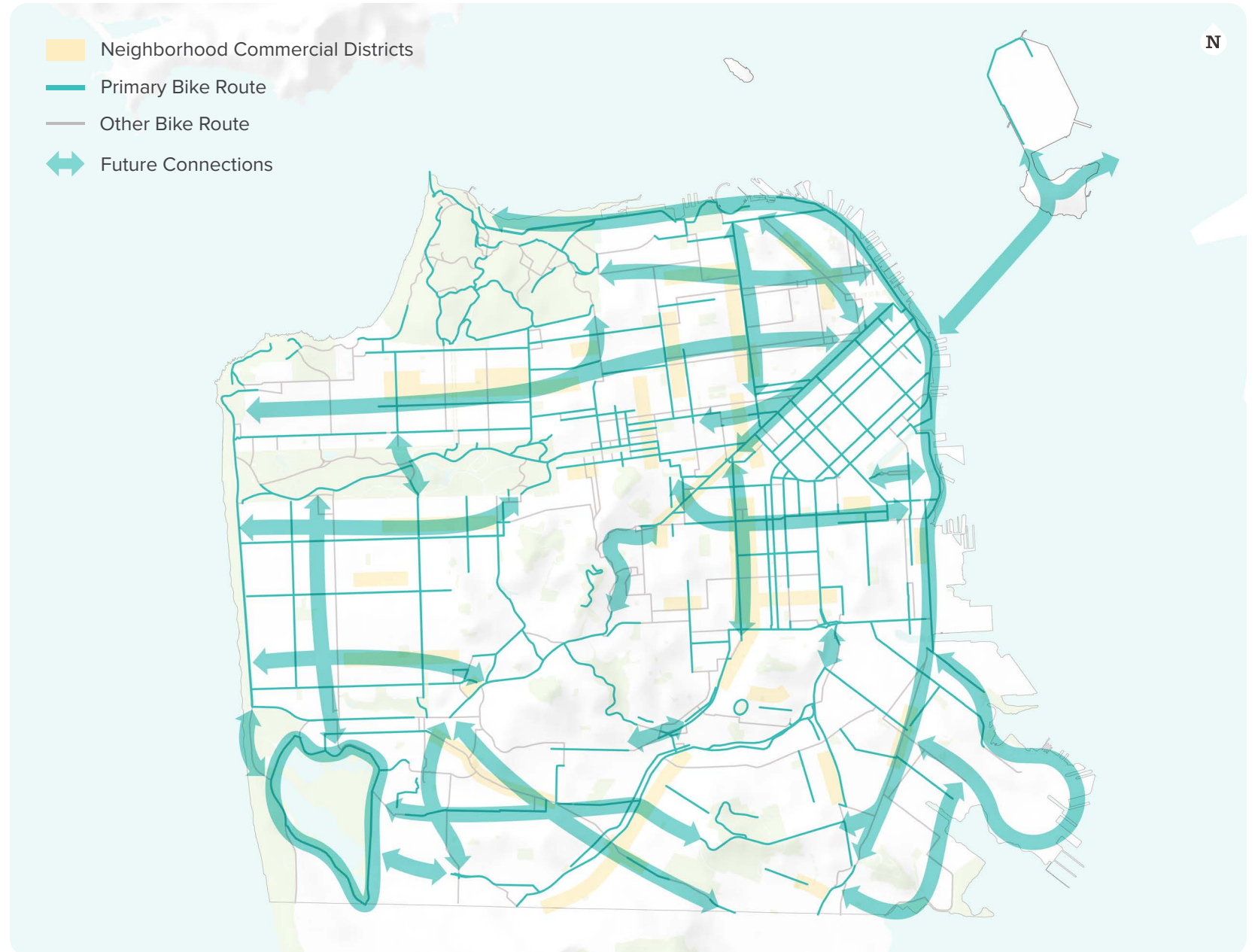
		Streets and Freeway Strategy Recommendations				
Concept	Description	Maintain and Adapt	Prioritize Transit and Carpool	Complete Walk/Bike Network	Safety	Repair Harms
3a. Complete Network for Walking and Biking	Long-range, high-level vision of citywide bike network to account for existing demand and future needs.	✓		✓	✓	
3b. Freeway Ramp Safety Improvements	Near-term ramp safety improvements at fourteen locations with identified safety challenges.	✓		✓	✓	
3c. Bayview Circulation and Safety	Infrastructure and policy changes to improve safety and circulation for all modes of transportation, guided by the Bayview CBTP , and other studies.	✓	✓	✓	✓	✓
3d. New/Improved Freeway Crossings	Improve pedestrian and bike connections through underpasses or overpasses with safety-focused street improvements and urban greening.	✓		✓	✓	✓
3e. Westside Circulation	Improve traffic circulation on the westside. Redesign intersections, reconfigure roadways, and improve access for all road users.	✓	✓	✓	✓	
3f. Alemany Maze	Reconstruct ramps at the US-101 / I-280 interchange to improve safety, large vehicle access, and create space for community priorities.	✓		✓	✓	✓

3a. Complete Network for Walking and Biking

The strategy aims to improve about 200 miles of the existing bike network by closing gaps, adding bike lanes, establishing mobility hubs, improving regional connections along the waterfront, and implementing Vision Zero improvements across the city.

Vision Zero improvements include traffic calming, complete streets, and pedestrian crossing improvements. These can be paired with curb management tools to reduce parking conflicts in transit and bike lanes.

Mobility Hubs expand transit access and include options for safe bike storage, electric charging, and bike/scooter share.








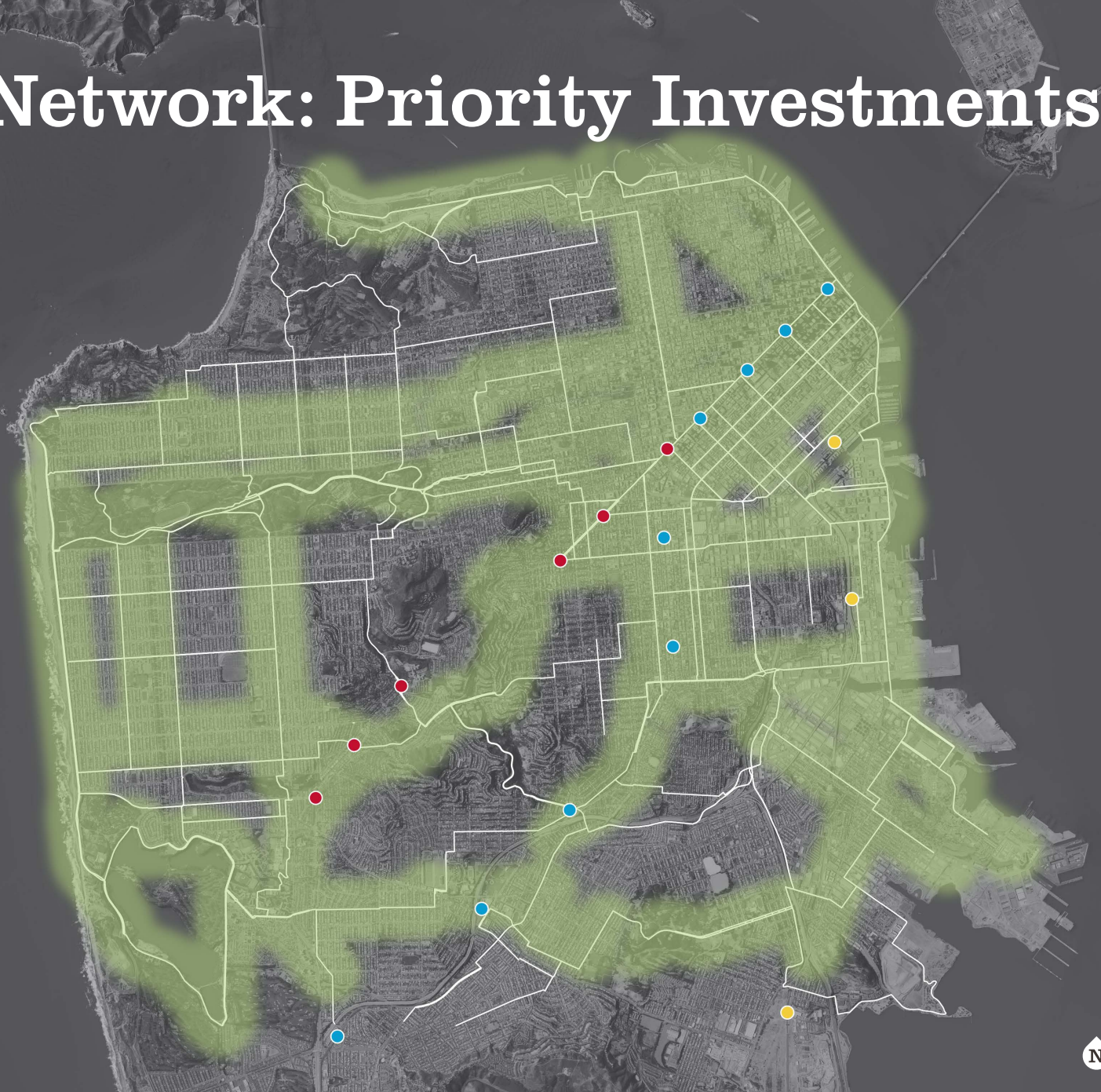
Active Transportation Network: Priority Investments

The proposed network of approximately 87 miles of corridors represent priority investment areas to add or improve bike infrastructure in Equity Priority Communities and areas of high growth.

This network would improve access to regional and rapid transit via low-stress routes and incorporate mobility hubs to enhance transit access by many travel choices.

It will also be the foundation for the Active Communities Plan (the citywide bicycle plan), which will build on these priority corridors to achieve a complete network for active modes.

-  Priority network for active transportation investments
-  Recommended bike route
-  BART Station
-  Caltrain Station
-  Muni Rapid Station

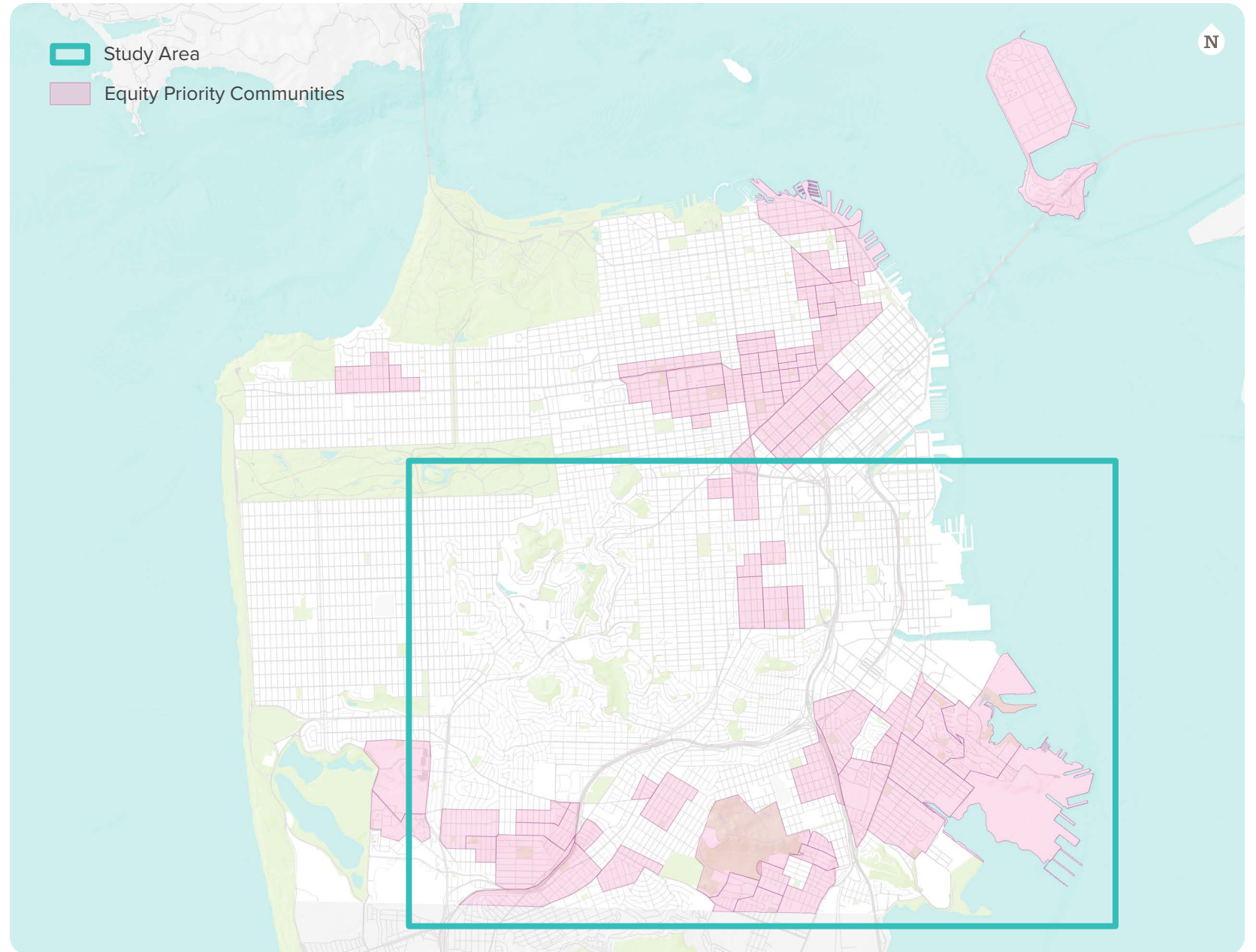


3b. Freeway Ramp Safety Improvements

The **Vision Zero Ramp Intersection Studies** designed safety improvements for freeway ramp touchdowns in the South of Market neighborhood. Expanding these improvements to the rest of San Francisco can improve safety for all travelers.




Potential improvements include:

- » Curb Extensions
- » Advanced Pedestrian Signals
- » Protected Turn Signals
- » Street Lighting
- » Advance Stop Lines
- » Larger Signals
- » Improved Signage
- » New Crosswalks



3b. Freeway Ramp Safety Improvements

This concept identifies freeway ramp locations for near-term safety improvements. Implementing safety improvements at freeway ramp locations across the city can improve safety, close gaps in the walking and biking network, and improve connections to transit and key community destinations.

-  Ramp considered for near-term safety improvements
-  San Francisco's High Injury Network
-  Equity Priority Communities

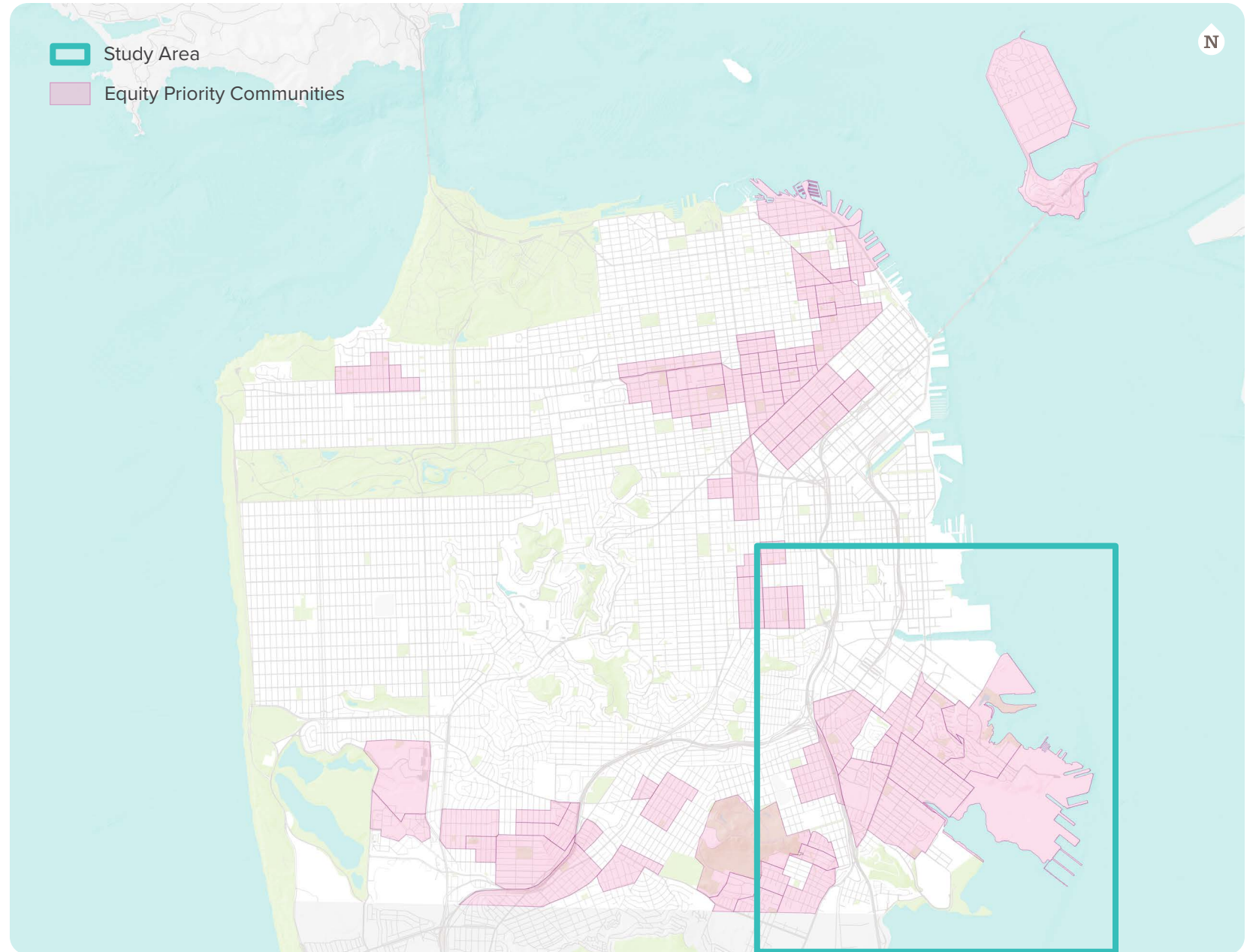


3c. Bayview Circulation and Safety

Third Street is a residential and commercial corridor that is on the High Injury Network. Proximity to the freeway and industrial uses subject surrounding communities to some of the highest pollution rates in the city and create competing transportation priorities.

This concept would route heavy trucks away from residential areas, improve local and regional multimodal connections, increase safety for people walking and biking, and improve transit reliability along Third Street.

City agencies are implementing community priorities from the [Bayview Community Based Transportation Plan](#) and new developments will bring transportation improvements to the area, in line with the [Bi-County Transportation Study](#).



3c. Bayview Circulation and Safety

This concept would reduce emissions and improve safety in residential and commercial areas by creating complete street corridors and routing trucks away from neighborhoods and sensitive land uses.

- 1** Active redevelopment efforts will create new and improved streets for multimodal access to new development and industrial areas from the Candlestick interchange
- 2** Reconstruct, repave, and/or redesign streets to support local and regional multimodal travel
- 3** Modify freeway ramps to improve truck access, pedestrian crossings, and remove redundancies
- 4** Improve transit and active connections across US-101 to support local and regional travel
- 5** Create a high-quality North/South bike connection and improve existing network
-  Improve safety, reduce truck activity, and create continuous transit priority
-  Existing Bike Route



3d.

New/Improved Freeway Crossings

There are many areas along San Francisco freeways that are difficult to cross by walking or biking.

This concept includes improving walking and bike routes through underpasses or overpasses with safety-focused improvements and urban greening to improve connections between neighborhoods.

In some cases, freeway ramps could be removed to create more space for active connections and new development.

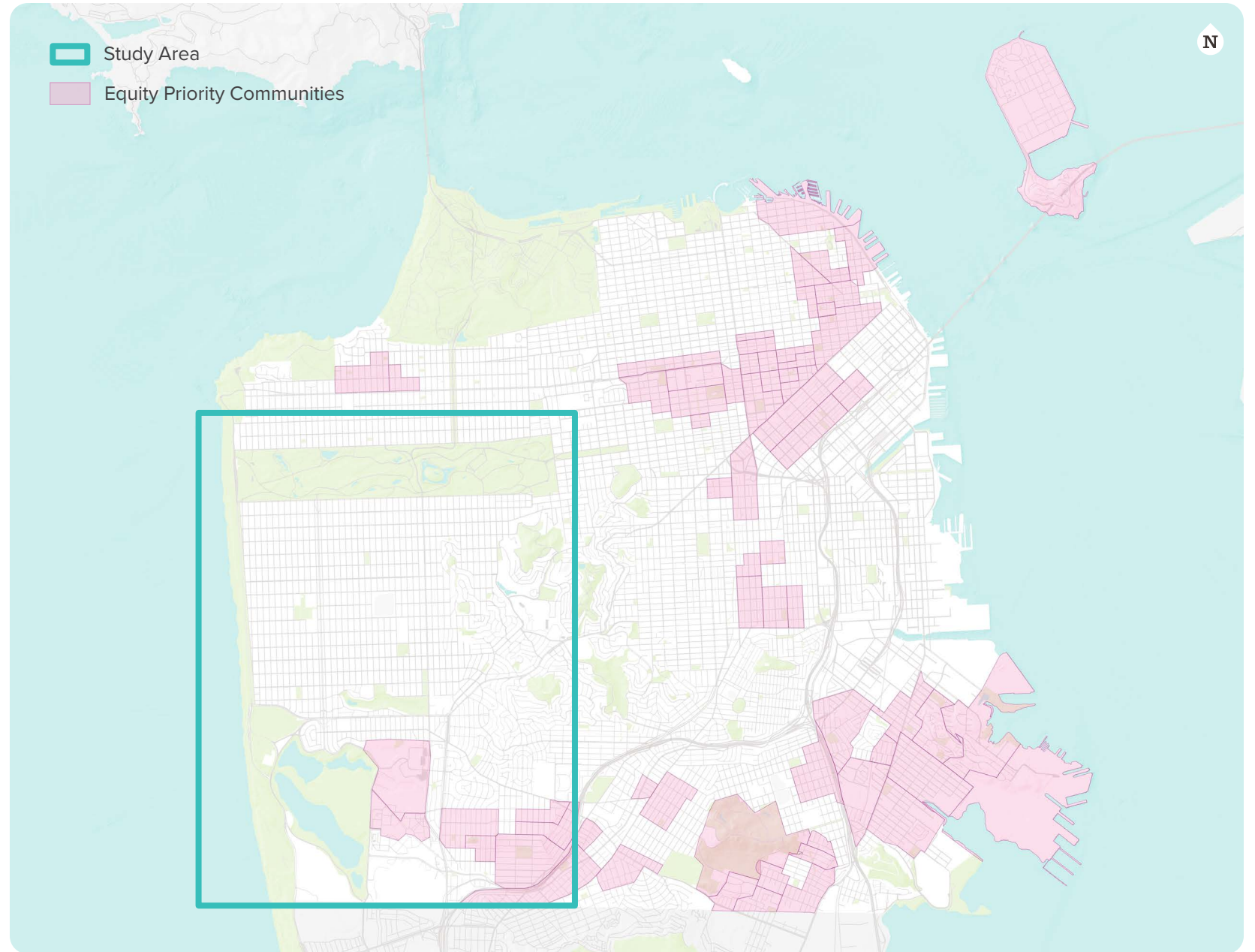


3e.

Westside Circulation

The westside has limited connections for north-south travel. On weekends, Upper Great Highway has been repurposed to make more space for people to walk and bike and connect to Golden Gate Park, Fort Funston, and Ocean Beach. The Great Highway South of Sloat is proposed to be closed due to chronic erosion and the need to adapt to dynamic coastal conditions.

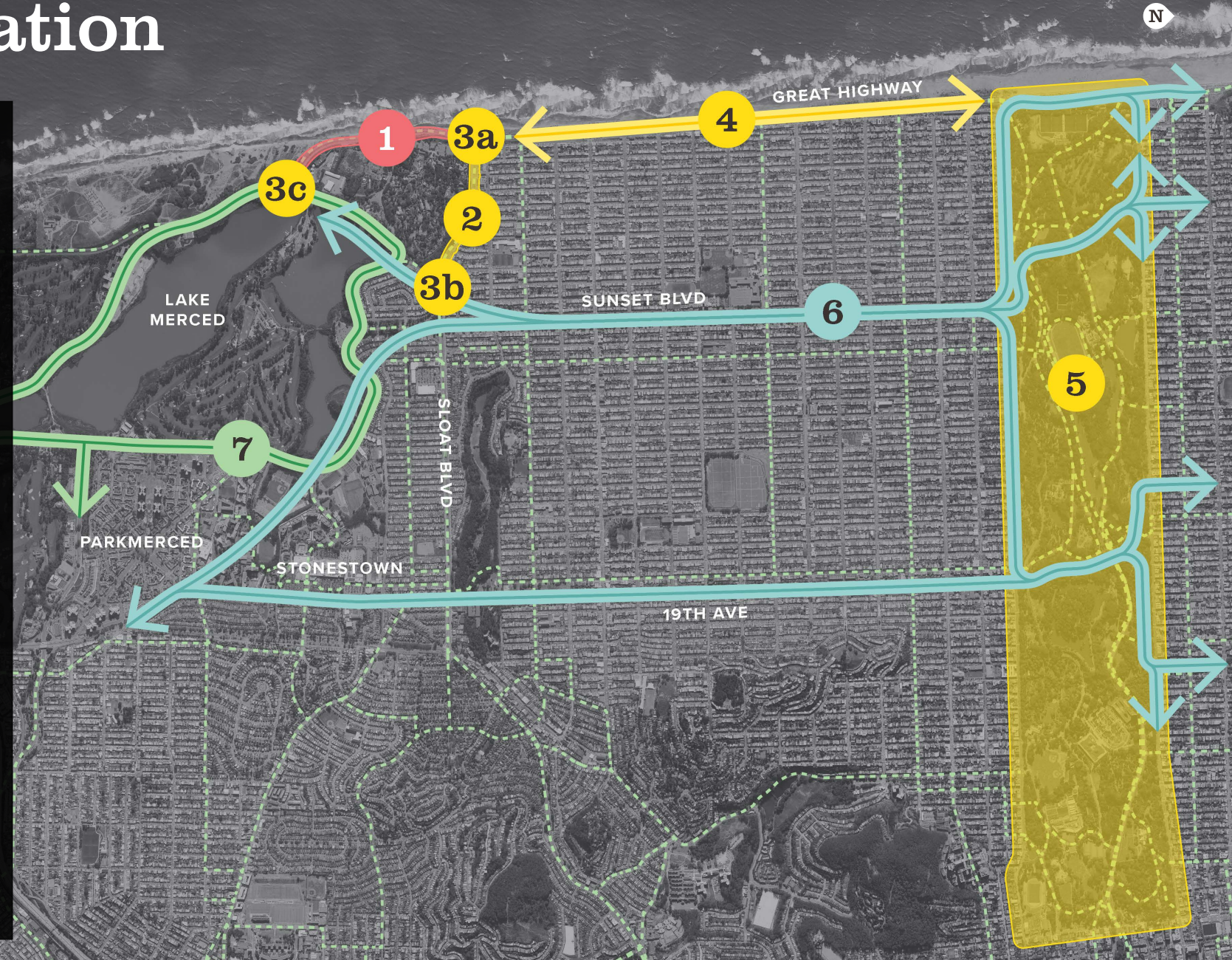
This concept would consider roadway changes to improve circulation, safety, and access on the westside.



3e. Westside Circulation

Circulation, safety, and access on the westside will be improved through traffic calming, quick build projects, signalization, and reconfiguration of roadways and intersections. Traffic levels will be monitored to make sure reroutes are working. Adjustments will be made to ensure public safety and Muni reliability.

- 1** Close section of road, based on SFPUC Ocean Beach Climate Change Adaptation Project. Improve connection for bikes and pedestrians.
- 2** Redesign street with traffic calming to support multimodal travel
- 3** Reconfigure intersections and add new signals to improve vehicle circulation and multimodal safety
- 4** Reconfigure roadway to improve multimodal access and safety
- 5** Improve access and safety to Golden Gate Park
- 6** Manage congestion and improve transit speed, reliability, and safety on North-South arterials
- 7** Bike connection around Lake Merced and to new developments
- Existing Bike Route



3f.

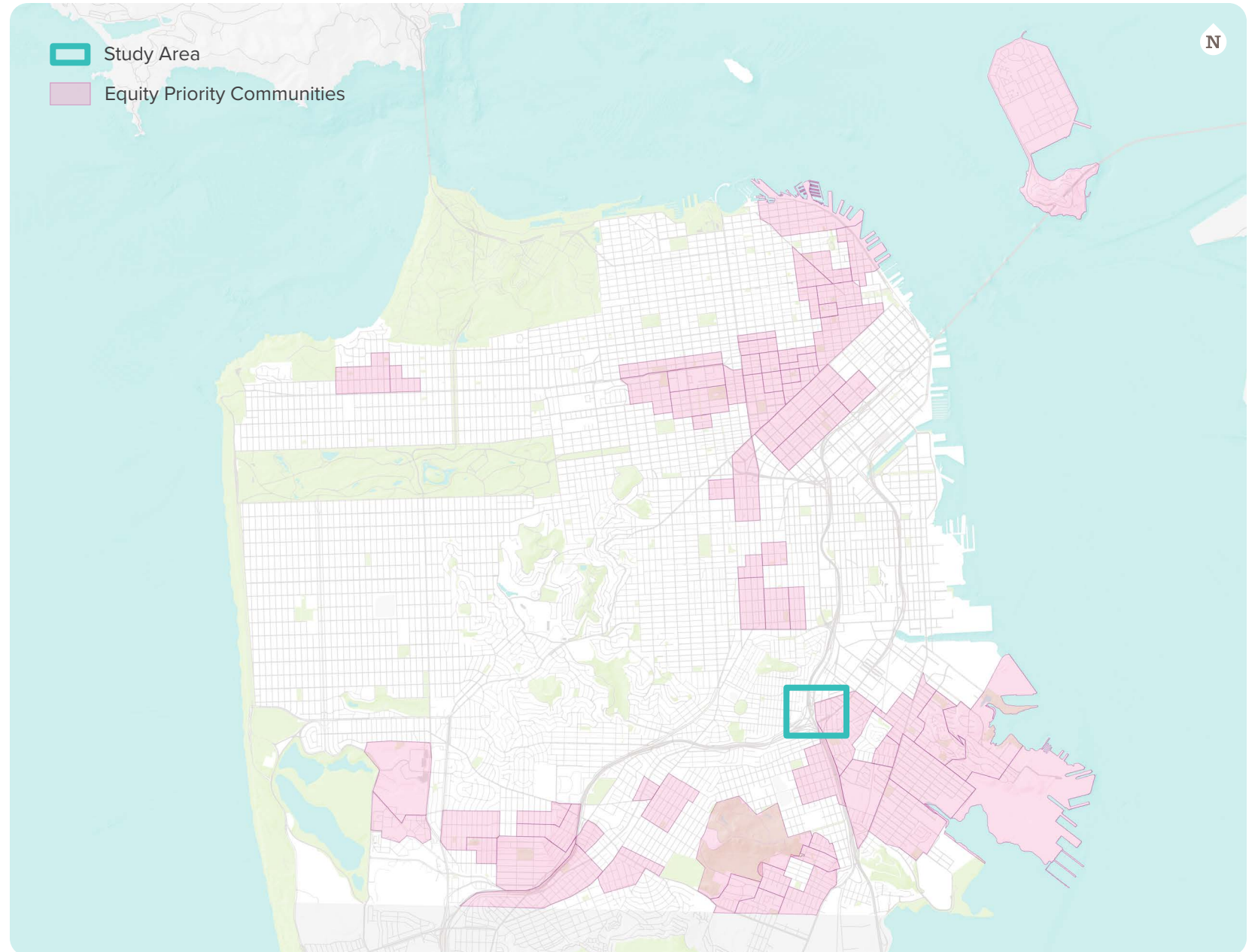
Alemanya Maze

The tangle of ramps and surface streets where US-101 and I-280 converge within San Francisco has been nicknamed “The Maze.”

These ramps cause conflicts between road users and do not work well for large trucks. The area is also prone to flooding.



A redesign of The Maze could:

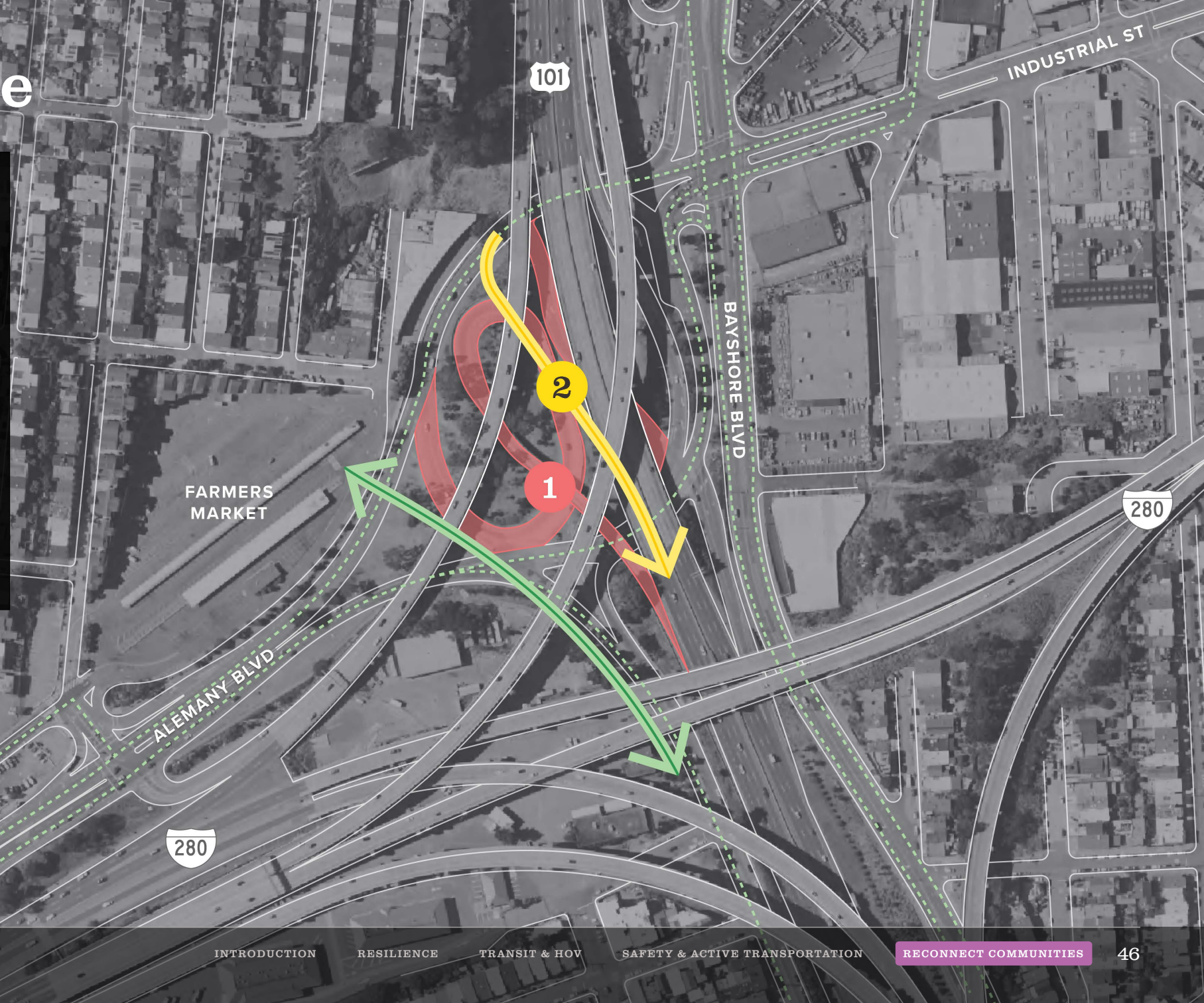
- » Reduce conflict points for people walking and biking
- » Improve access for large vehicles, helping to direct those vehicles away from neighborhoods, as in the Third Street Safety and Truck Relief Concept (3c)
- » Make room for stormwater capture or other community priorities



3f. Alemany Maze

This concept aims to simplify The Maze to improve safety for all road users, improve freeway access for large trucks, and create space for stormwater capture or other community priorities.

- 1** Remove ramp and connector road to create space for stormwater capture, new parking, or potential future realignment of Alemany Boulevard
- 2** Construct new southbound US-101 on-ramp
-  New walk/bike connection between the farmers' market and San Bruno Avenue
-  Existing Bike Route



Safety and Active Transportation Network Concepts Costs

Concept	Estimated Cost (2020 dollars)
3a Complete Network for Walking and Biking	\$2 – \$2.5B Cost reflective of bike network and pedestrian safety improvements
3b Freeway Ramp Safety Improvements	\$10 – 15M Cost assumes all proposed locations
3c Bayview Circulation and Safety	\$5 – 10M Changes to freeway interchanges are not included in cost estimate
3d New/Improved Freeway Crossings	\$145 – 180M
3e Westside Circulation	\$30 – 50M Does not include improvements to Golden Gate Park or the Sloat / Great Highway Intersection
3f Alemany Maze	\$10M

4. Reconnect Communities and Repair Past Harms



photo credit: OpenSFHistory / wnp28.2776

The *Reconnecting Communities and Repairing Past Harms* section of the Streets and Freeways Strategy introduces concepts that pair transportation and new land use opportunities to address the impacts of our past investments in freeways and large roads. Past investments displaced communities and divided neighborhoods. Now, these freeways and major roads are significant local and regional paths of travel for drivers and transit service. However, they also create transportation barriers in the neighborhoods where they are located, contribute to poor air quality and associated health impacts, and create safety challenges for people traveling by transit, walking, private vehicle, or bike.

The Streets and Freeways Strategy is the first effort to consider transformational transportation investments that could begin to repair harms of our past investments in major roads and freeways. The Streets and Freeways concepts are intended to guide future planning efforts, which will include additional study, technical analysis, and community engagement. Repairing past harms will require transformative planning projects across the city and beyond those outlined in this report.

Concepts to Reconnect Communities

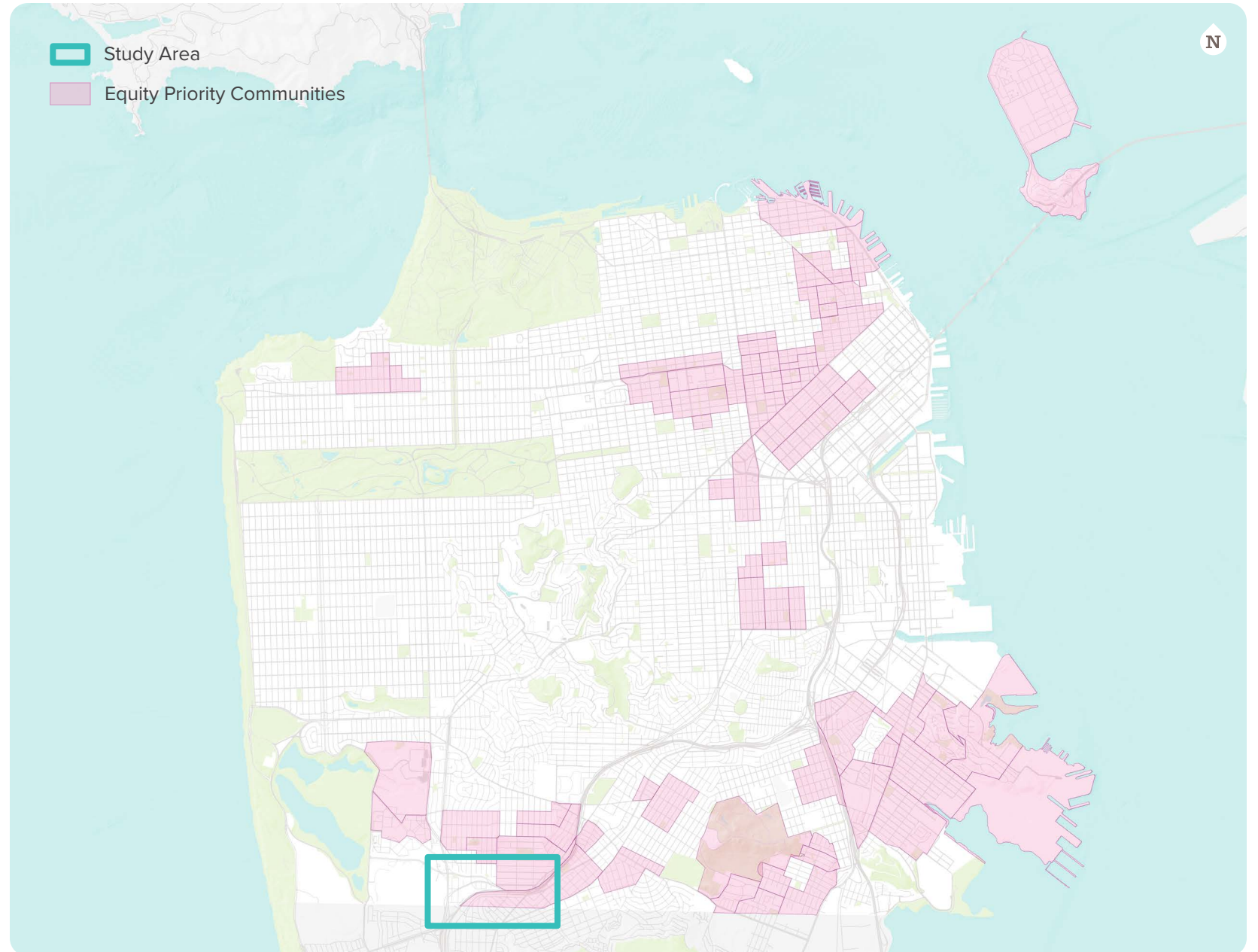
Concept	Description	Streets and Freeway Strategy Recommendations				
		Maintain and Adapt	Prioritize Transit and Carpool	Complete Walk/Bike Network	Safety	Repair Harms
4a. Brotherhood / Alemany / Sagamore	Improve active transportation connections to Lake Merced and regional transit while creating space for a new park, housing, or other community priorities.	✓	✓	✓	✓	✓
4b. Balboa Park Circulation	Improve transit and active transportation connections across I-280. Modify ramps and key intersections to improve operations and safety.	✓	✓	✓	✓	
4c. Alemany Valley Stack	Consolidate I-280 and Alemany Boulevard into a vertical structure between Mission Street and US-101 to reconnect neighborhoods and create land for community priorities.			✓	✓	✓
4d. Geary / Fillmore Underpass	Remove the underpass at Geary Boulevard and Fillmore Street and create a normal intersection to improve safety and reconnect Japantown to the Western Addition.			✓	✓	✓

4a. Brotherhood / Alemany / Sagamore

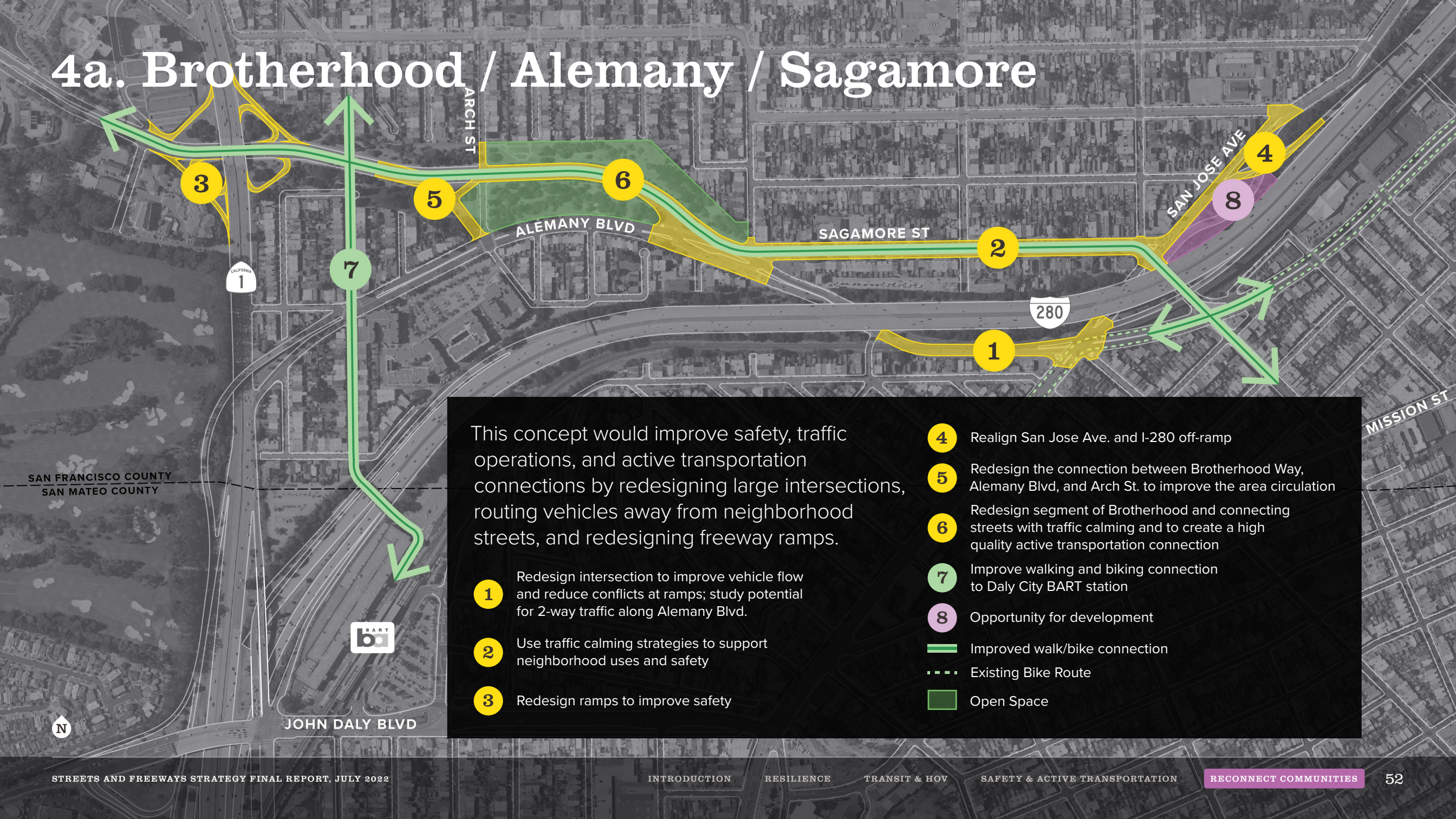
I-280 and major roads wind through San Francisco's Oceanview and Ingleside Heights neighborhoods. These roads create a grid with poor pedestrian connectivity, force vehicle traffic onto neighborhood streets, and create safety and livability challenges.

Redesigning portions of Brotherhood Way, Alemany Boulevard, & Sagamore Street would:

- » Improve connections and safety for people walking or biking
- » Create space for community priorities
- » Slow vehicle speeds and improve livability along neighborhood streets



4a. Brotherhood / Alemany / Sagamore



SAN FRANCISCO COUNTY
SAN MATEO COUNTY

This concept would improve safety, traffic operations, and active transportation connections by redesigning large intersections, routing vehicles away from neighborhood streets, and redesigning freeway ramps.

- 1** Redesign intersection to improve vehicle flow and reduce conflicts at ramps; study potential for 2-way traffic along Alemany Blvd.
- 2** Use traffic calming strategies to support neighborhood uses and safety
- 3** Redesign ramps to improve safety

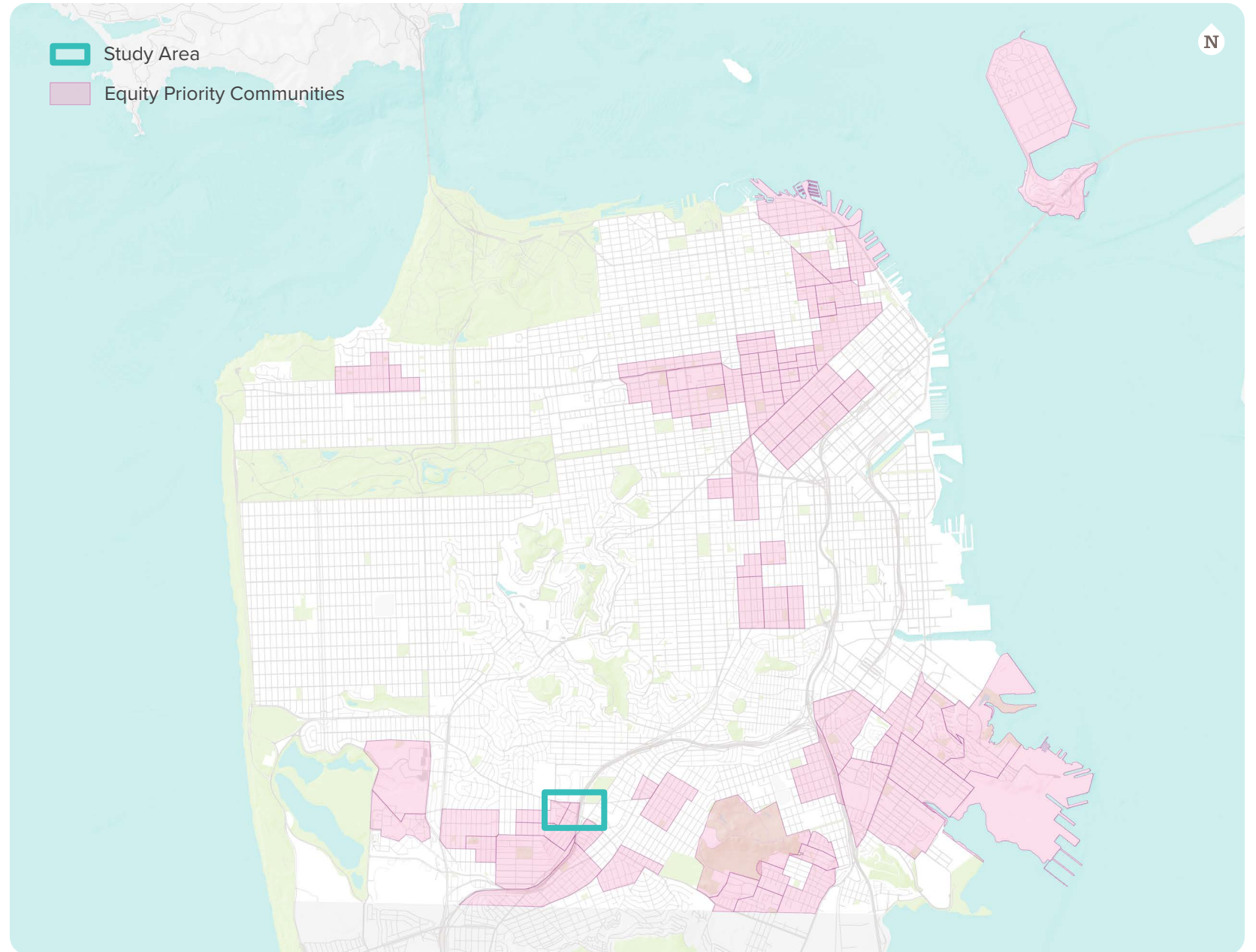
- 4** Realign San Jose Ave. and I-280 off-ramp
 - 5** Redesign the connection between Brotherhood Way, Alemany Blvd, and Arch St. to improve the area circulation
 - 6** Redesign segment of Brotherhood and connecting streets with traffic calming and to create a high quality active transportation connection
 - 7** Improve walking and biking connection to Daly City BART station
 - 8** Opportunity for development
-  Improved walk/bike connection
 -  Existing Bike Route
 -  Open Space

4b. Balboa Park Circulation

Ocean and Geneva Avenues are important transit, bike, and pedestrian corridors that converge at Balboa Park. They are critical links for crossing I-280 and provide freeway access. Conflicts and traffic congestion on these streets create safety challenges, limit transit speeds and reliability, and can block freeway ramps.

Prioritizing transit, walking, and biking on city streets while redesigning ramps in the area would:




- » Reduce conflicts between vehicles and people walking and biking
- » Increase transit speed and reliability
- » Improve freeway operations

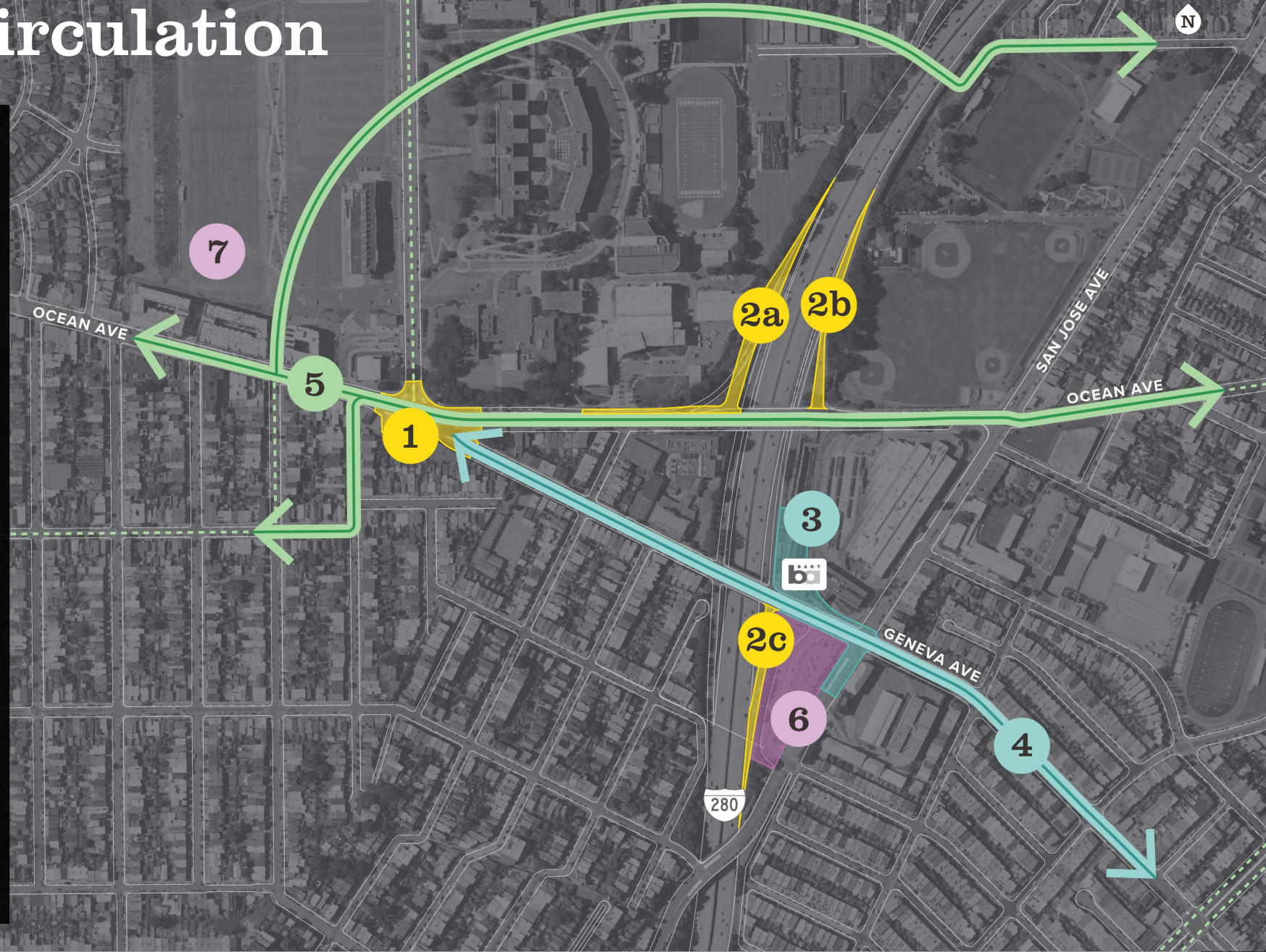


4b. Balboa Park Circulation

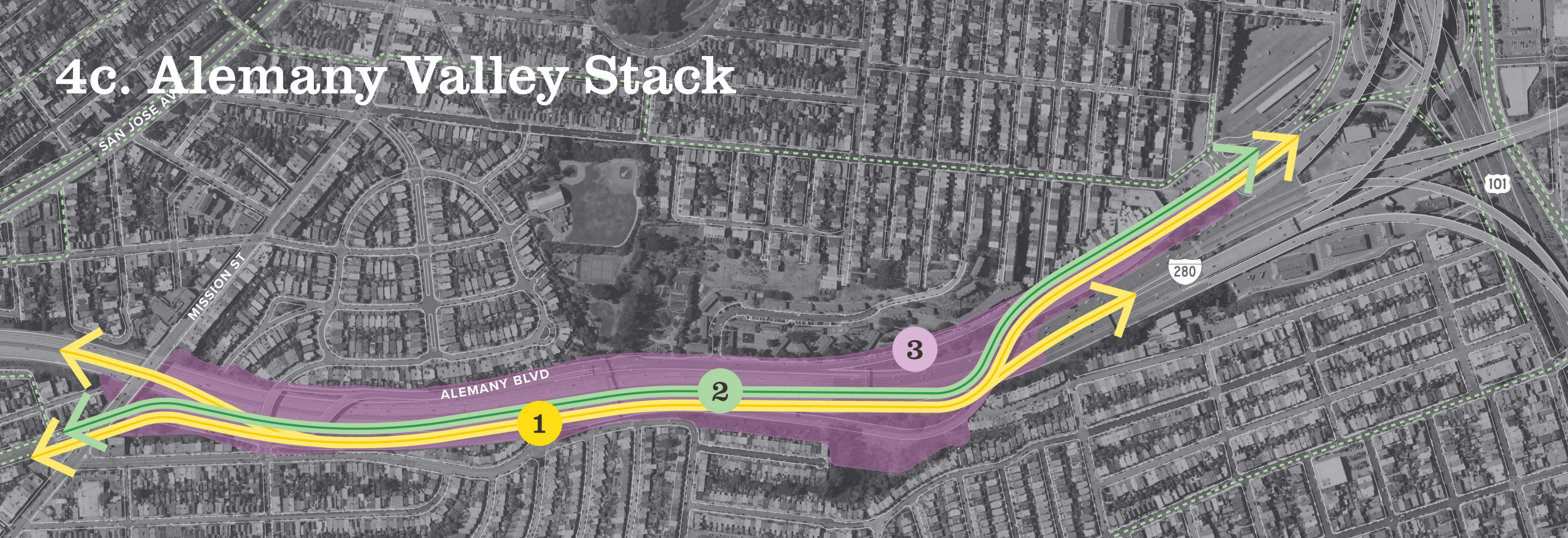
The concept would improve transit and active transportation connections along Ocean and Geneva while reconfiguring freeway ramps to improve safety and circulation.

- 1 Reconfigure Ocean / Geneva / Frida Kahlo intersection to improve safety and transit
- 2 Update and reconfigure ramps to reduce conflicts between vehicles and people walking or biking at off ramps as well as address vehicle queues on the freeway
- 3 Improve connectivity between regional and local transit
- 4 Improve transit operations along Geneva
- 5 Improve bike connections along Ocean including upgrading the freeway crossing and addressing conflicts with rail tracks
- 6 Opportunity for new BART plaza, drop-off area, and affordable housing
- 7 Balboa Reservoir Development

-  Improved transit connection
-  Improved walk/bike connection
-  Existing Bike Route



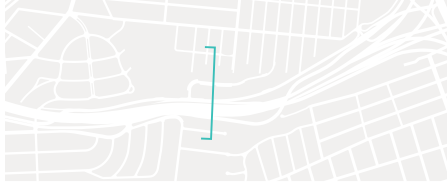
4c. Alemany Valley Stack



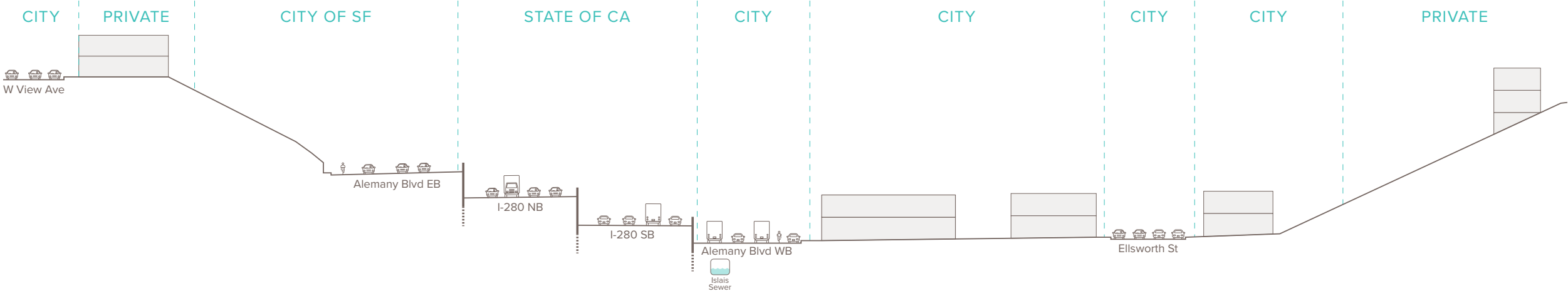
Stacking I-280 in a structure below Alemany Boulevard between Mission and the US-101 interchange would bring new land use opportunities along the corridor and reduce localized pollution, noise, and other negative impacts. The following page shows a potential cross section of possible transportation and land use opportunities.

- 1** Consolidate I-280 in build-on-grade bi-level tunnel, with Alemany Blvd atop tunnel. Reconnect neighborhoods with new crossings
- 2** New walk/bike connection through Alemany Valley
- 3** Development Opportunities
- Improved walk/bike connection
- Existing Bike Route

4c. Alemany Valley Stack Potential Concept Cross Section



Section Existing



Section Concept

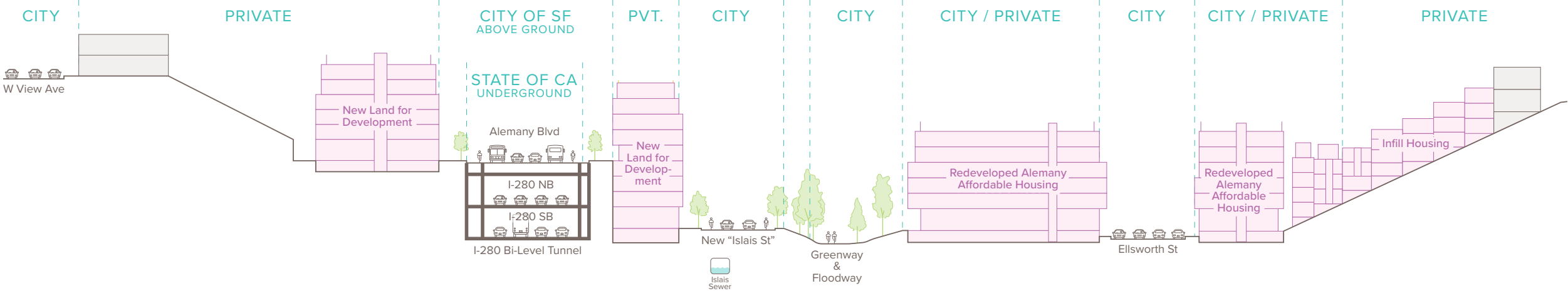




photo credit: SFMTA Photography Department

4d. Geary / Fillmore Underpass

While studying bus rapid transit on Geary, a range of options were considered to fill the underpass at Geary and Fillmore to make a complete at-grade street and improve connections.

Changes to Geary would need to be paired with land use and neighborhood planning efforts with Japantown, Western Addition, and other communities along the corridor. Any redesign of the Geary / Fillmore intersection would also need to be coordinated with future transit projects, such as the Geary/19th rail concept identified in San Francisco's Transit Strategy.

Reconnect Communities Concept Costs

Concept	Estimated Cost <small>(2020 dollars)</small>
4a Brotherhood / Alemany / Sagamore	\$75 – 100M
4b Balboa Park Circulation	\$90 – 120M <small>Does not include Geneva-Harney BRT</small>
4c Alemany Valley Stack	\$2B – \$2.5B
4d Geary / Fillmore Underpass	\$60M – \$65M

Looking Ahead

Projects to reconnect San Francisco's communities that have been divided by transportation infrastructure will take many years.

Repairing harms and addressing the risks of climate change will require transformative planning projects beyond those outlined in this report; for example, removing some segments of freeways that negatively impact surrounding communities. The Streets and Freeways Study recommends that the city continue to explore long-term transformative projects on this scale through coordinated land use and transportation plans that focus on community based planning and concept development.



photo credit: SFMTA Photography Department



photo credit: SFMTA Photography Department

Achieving Goals

San Francisco’s goals can only be achieved through strategic investments informed by ongoing community engagement.

Re-imagining transportation investments through a process that centers the communities that have been harmed by past transportation investments will help stabilize communities and lead to a more livable, accessible, and affordable San Francisco.



Equity



Environmental Sustainability



Accountability and Engagement



Economic Vitality



Safety and Livability

Next Steps: San Francisco Transportation Plan and Transportation Element

The Streets and Freeways Strategy and Transit Strategy, combined with local and regional planning and policy priorities, will shape the upcoming San Francisco Transportation Plan (SFTP). The SFTP will define funding priorities for transportation investments and position San Francisco projects for federal, state, and regional funds, including for opportunities made possible by the federal infrastructure bill that was passed in 2021.

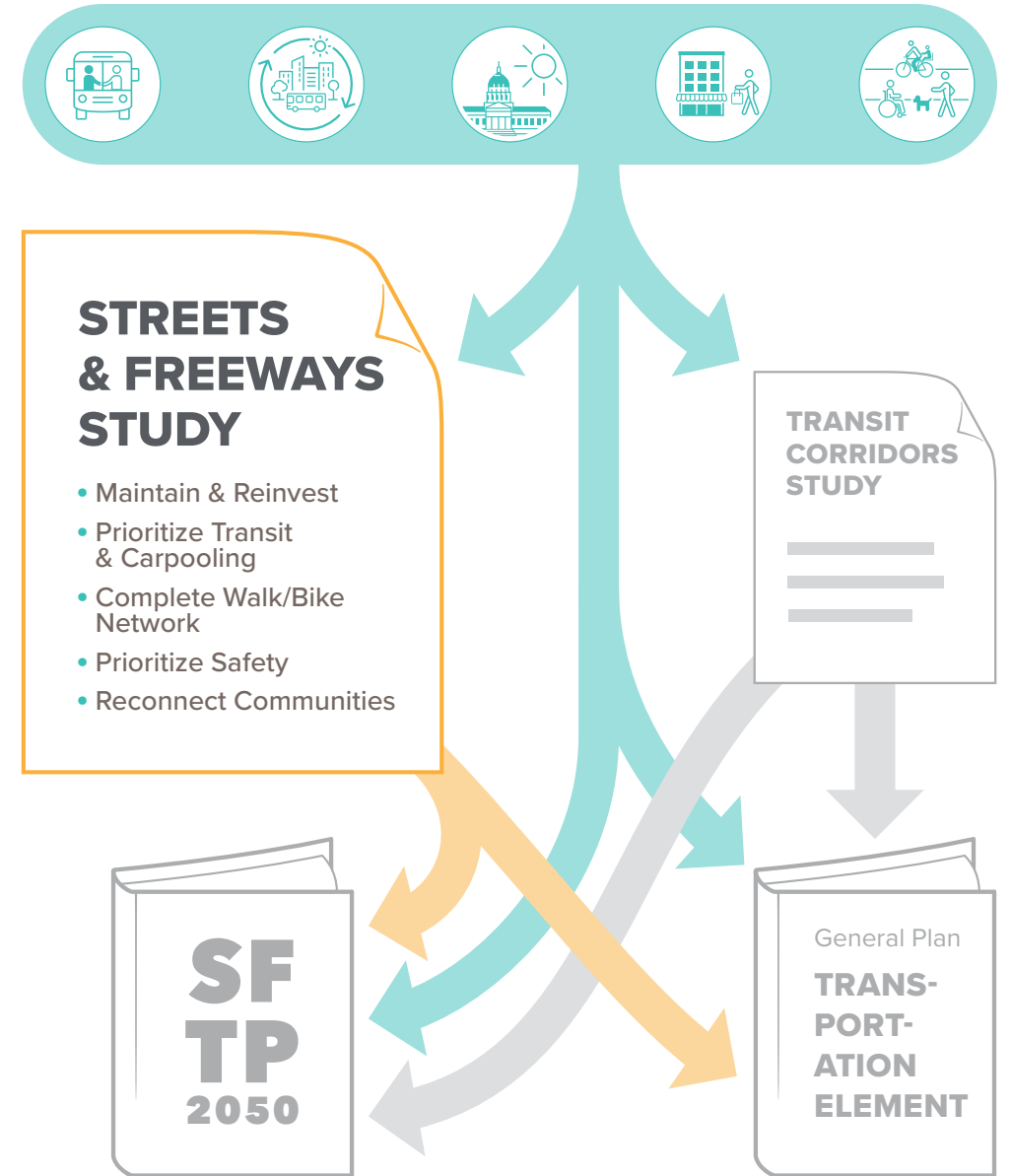
The Streets and Freeways Strategy will also inform San Francisco's update to the Transportation Element of the city's General Plan. The Transportation Element sets the city's guiding transportation policies.

All streets and freeways concepts will require additional study, technical analysis, and community engagement.

ConnectSF Goals

Strategies

Implementation Plans



ConnectSF

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