

Great Highway Concepts Evaluation Final Report

District 4 Mobility Study



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Transportation Authority Agenda Item 11

June 22, 2021

Today's Presentation

Process

Review of Concepts

Evaluation Approach

Findings

Recommendations

Next Steps



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Process

- **Great Highway Concepts Evaluation conducted as part of the District 4 Mobility Study – focus is on the long-term future of the Great Highway**
- **SFMTA Board and Rec Park Commission had a joint meeting to discuss near term steps during economic reopening – may make a recommendation about next steps**
- **Board of Supervisors will make final decision about short and long-term future of the Great Highway**



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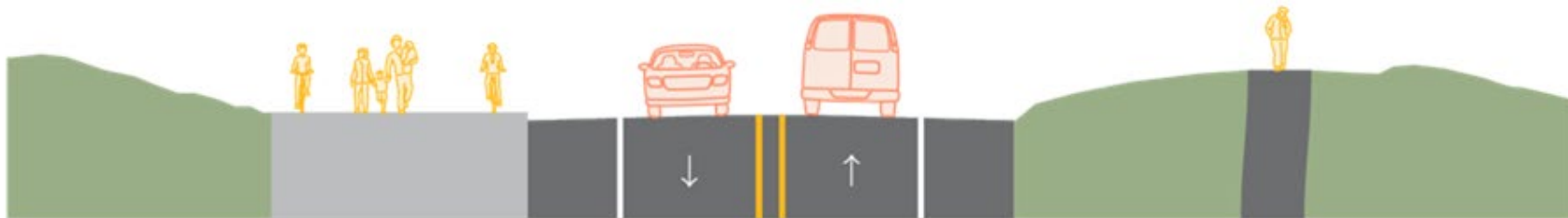
Review of Concepts



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Concept 1: Four-Lane Roadway



Concept 2: Promenade/Two-way Roadway

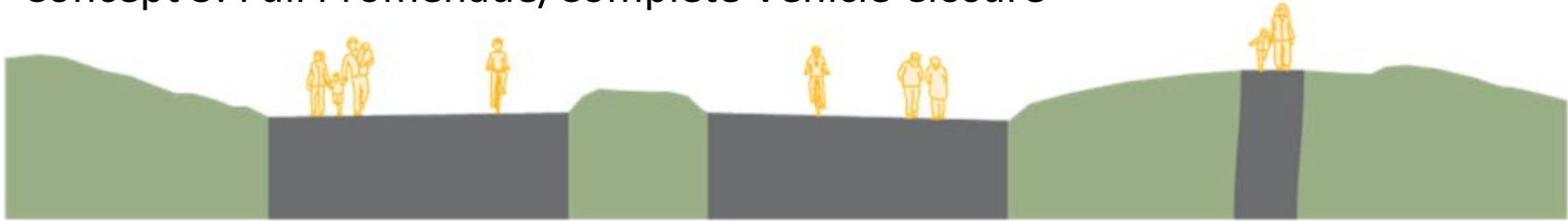
Review of Concepts



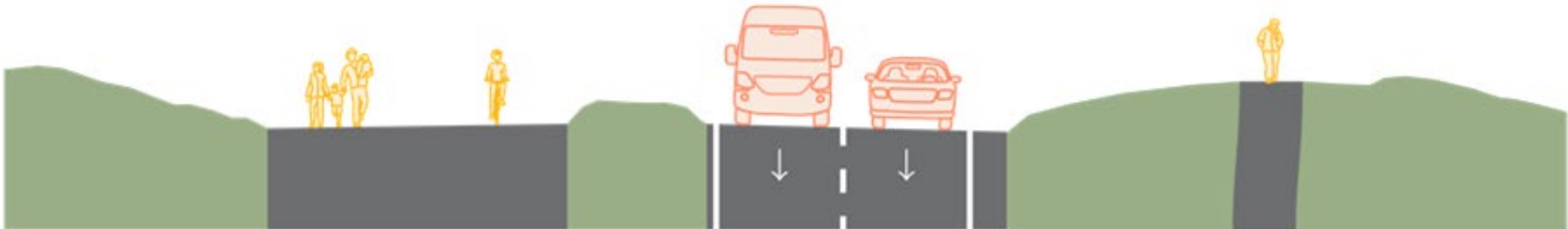
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Concept 3: Full Promenade/Complete Vehicle Closure



Concept 4: Timed Promenade (Weekends)



Concept 5: Promenade/One-way Roadway

Evaluation Approach



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- Considered factors that align with City policies
 - Climate change /resiliency
 - Well-being and health
 - Transit first/sustainable mode choices
 - Vision Zero/safety
 - Economic Vitality/mobility
- Identified high-level concept costs
- Reviewed public support



Climate Change Resilience



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Added Park Acreage

Concept 1: Four-lane Roadway 0 acres	Concept 2: Promenade/ Two-Way Roadway 6.7 acres	Concept 3: Full Promenade/ Complete Vehicle Closure 17 acres
	Concept 4: Timed Promenade 17 acres (part-time)	Concept 5: Promenade/ One-Way Roadway 6.7 acres

Recreation, Health & Well-being

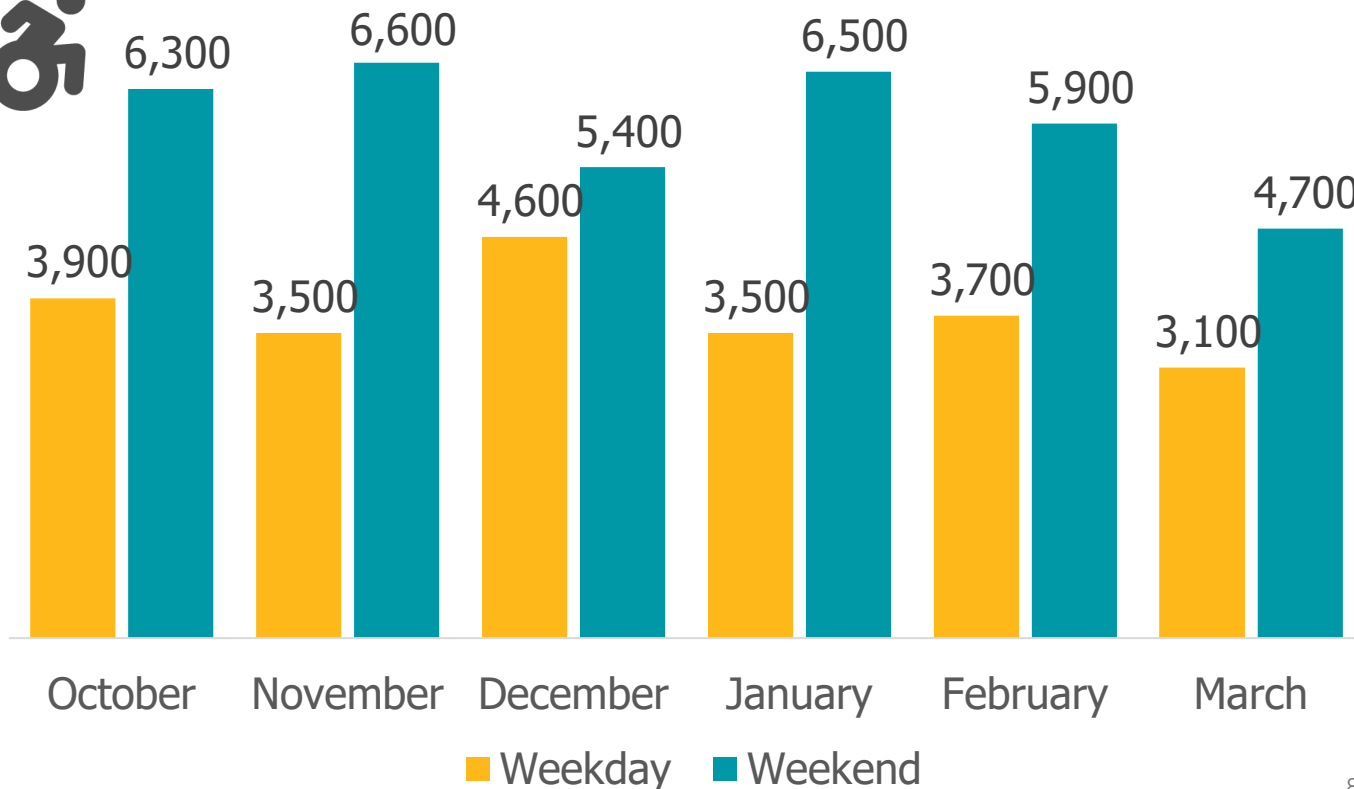


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**Weekday
average
3,200**

**Weekend
average
5,200**



Recreation, Health & Well-being



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Bicycle and Pedestrian Usage

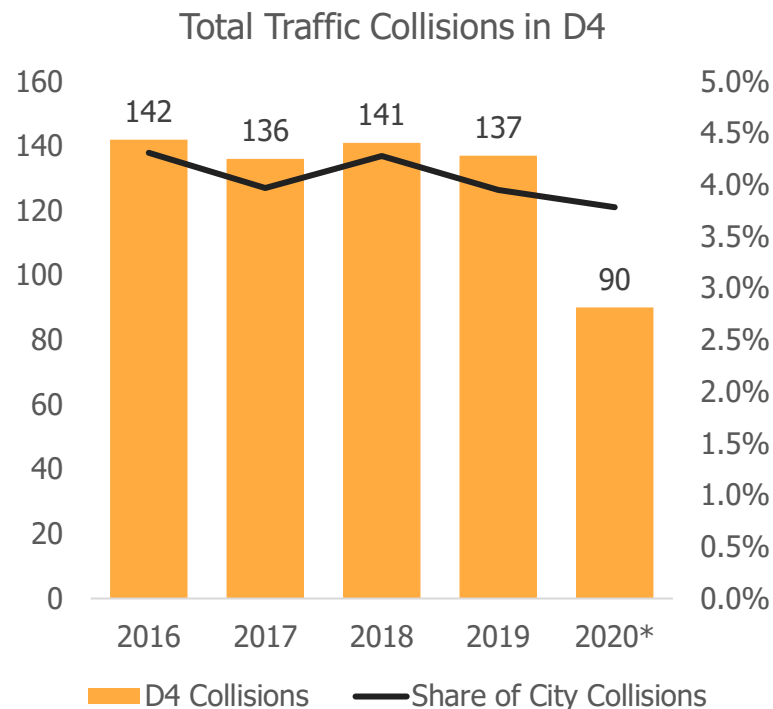
Concept 1: Four-lane Roadway Low	Concept 2: Promenade/ Two-Way Roadway Medium	Concept 3: Full Promenade/ Complete Vehicle Closure High Estimated 19,400 - 26,400 weekly visitors
	Concept 4: Timed Promenade Medium Estimated 9,400 – 10,400 weekly visitors	Concept 5: Promenade/ One-Way Roadway Medium

Vision Zero/Safety



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- About 5-6 collisions per year on Upper Great Highway, Lower Great Highway & La Playa
 - No change during pandemic
- About one third fewer collisions in D4 overall during the pandemic



Source: Transbase

* 2020 data are preliminary

Vision Zero/Safety



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Safety Risks and Advantages by Concept Design

	Concept 1: Four-lane Roadway	Concept 2: Promenade/ Two-Way Roadway	Concept 3: Full Promenade/ Complete Vehicle Closure	Concept 4: Timed Promenade	Concept 5: Promenade/ One-Way Roadway
Potential Risks	Pedestrians cross 4 lanes. Bicyclists ride with vehicles	Risk of head on collisions. Some traffic on local streets.	Increased traffic/speed on local streets	Increased traffic/speed on local streets (weekends). Schedule confusion.	Some traffic on local streets.
Potential Advantages	Less traffic on local streets	Active modes separate from traffic Somewhat less traffic on local streets	Walking and biking separate from traffic	Walking and biking separate from traffic (weekends)	Active modes separate from traffic Somewhat less traffic on local streets

Safety – Emergency Response



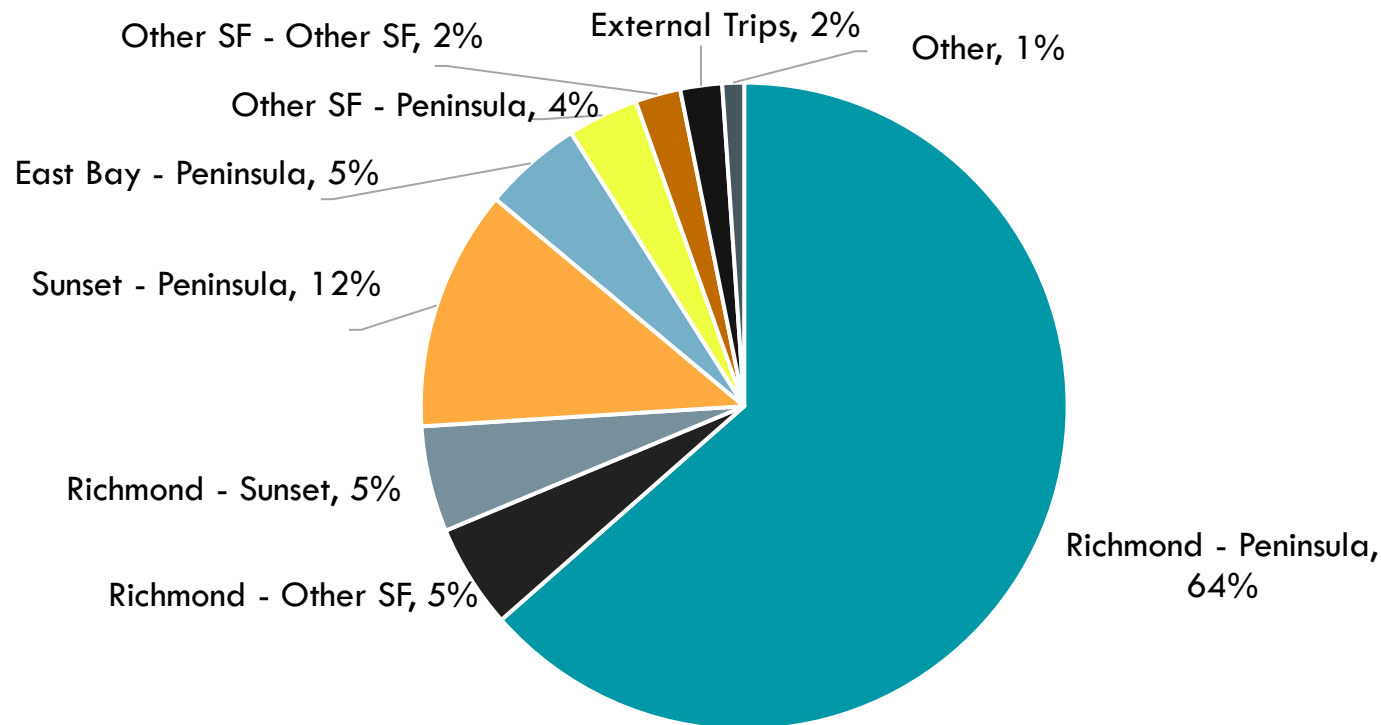
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- Great Highway is and will remain accessible to emergency response vehicles when needed
- Needs monitoring and design of a solution under full and partial promenade concepts

Vehicle Travel on the Great Highway



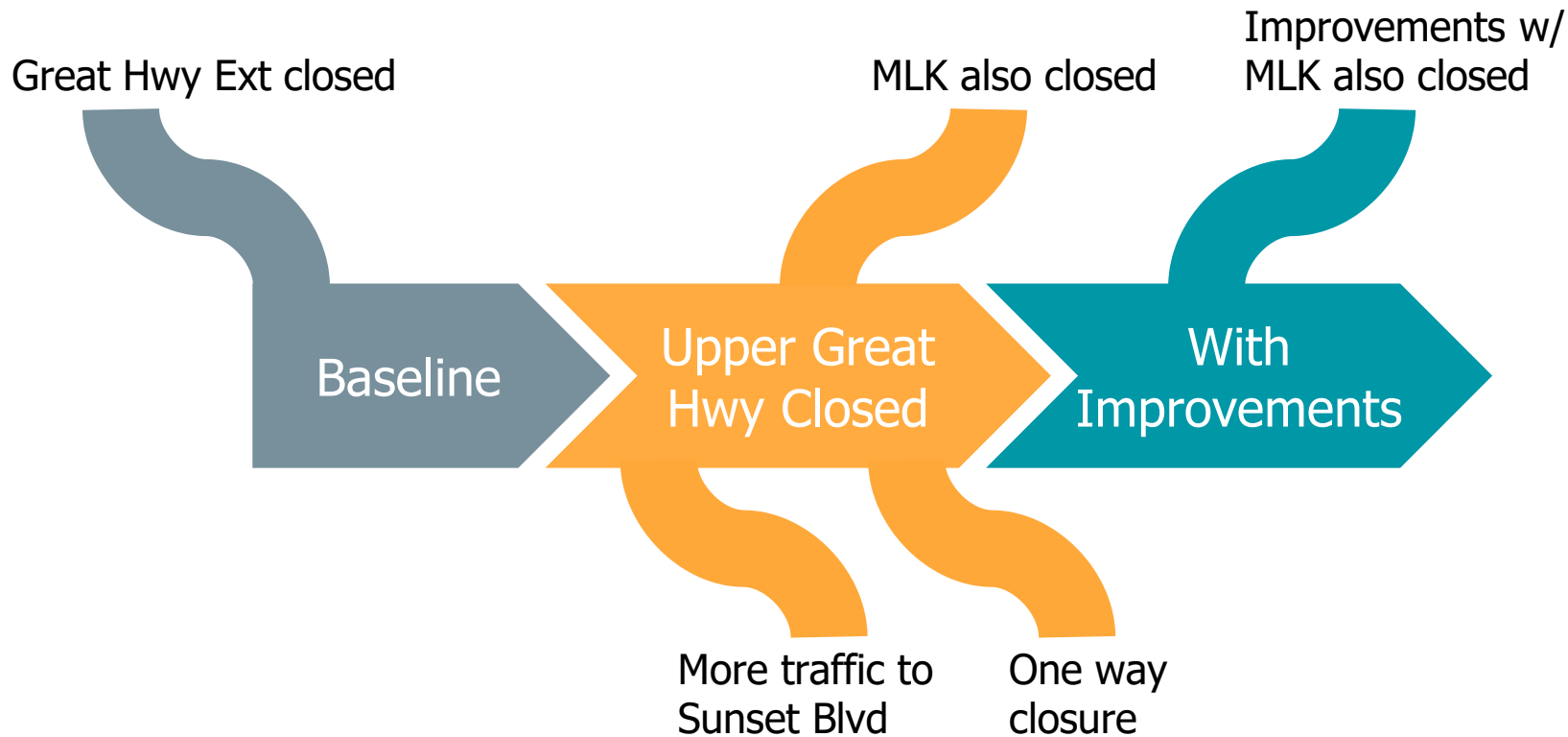
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Mobility – Transportation Scenarios



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The map illustrates traffic volume changes and road closures for the 2019-2020 season in San Francisco. Key features include:

- Increased Traffic Volume (Orange lines):**
 - 19th Avenue: +10% increase.
 - Sunset Blvd: +10% increase between Judah St and Taraval St.
 - MLK Jr Dr: +5% increase.
 - JFK Dr: +5% increase.
 - Lincoln Way: +10% increase.
 - Sloat Blvd: +75% increase.
- Reduced Traffic Volume (Blue lines):**
 - Great Highway: -20% decrease between the top and middle sections, and -25% decrease in the bottom section.
 - 19th Avenue: -25% decrease at the bottom.
- Road Closed (Red line):**
 - A section of Great Highway near the bottom of the map.

Legend:

- INCREASED TRAFFIC VOLUME (Orange line)
- REDUCED TRAFFIC VOLUME (Blue line)
- ROAD CLOSED (Red line)

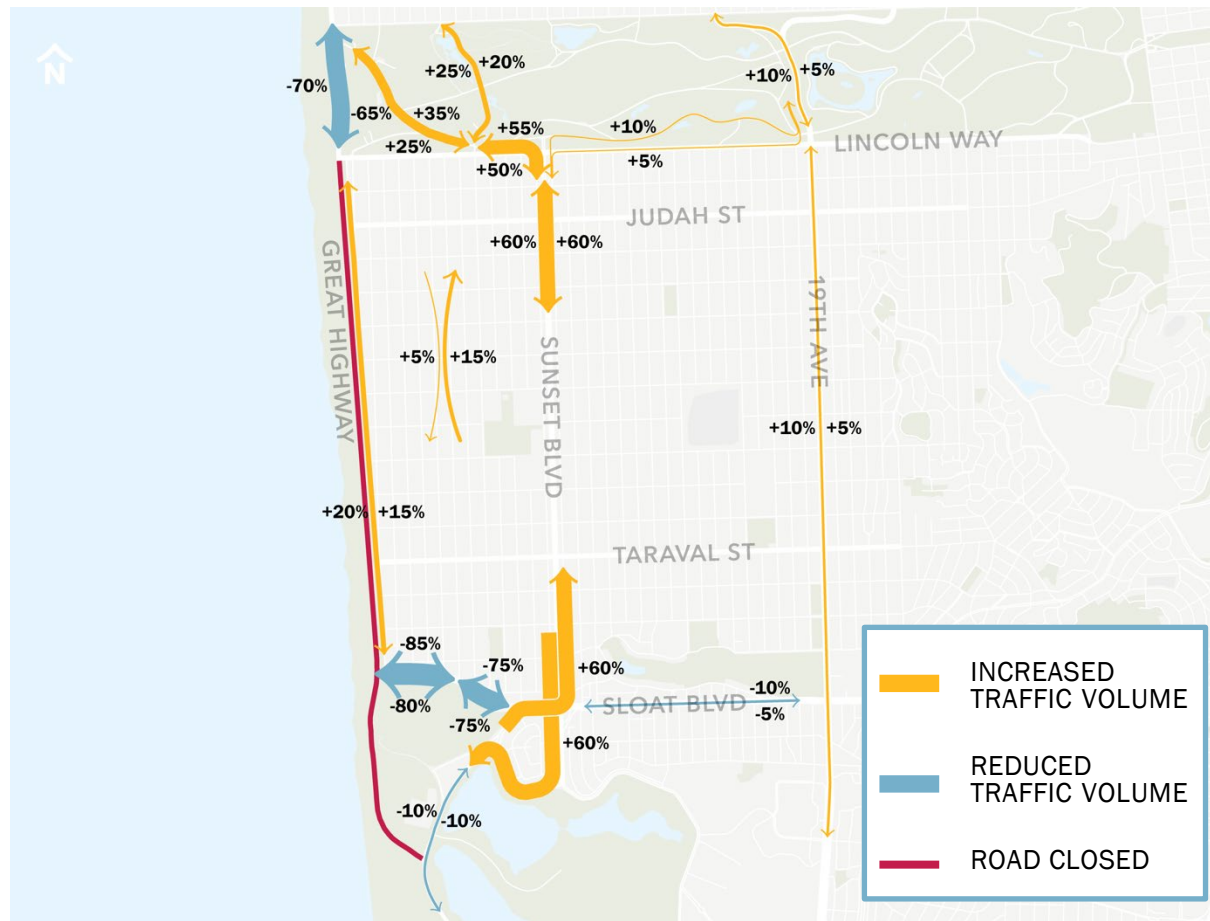
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Upper Great Highway Closed

Change in Traffic Volumes



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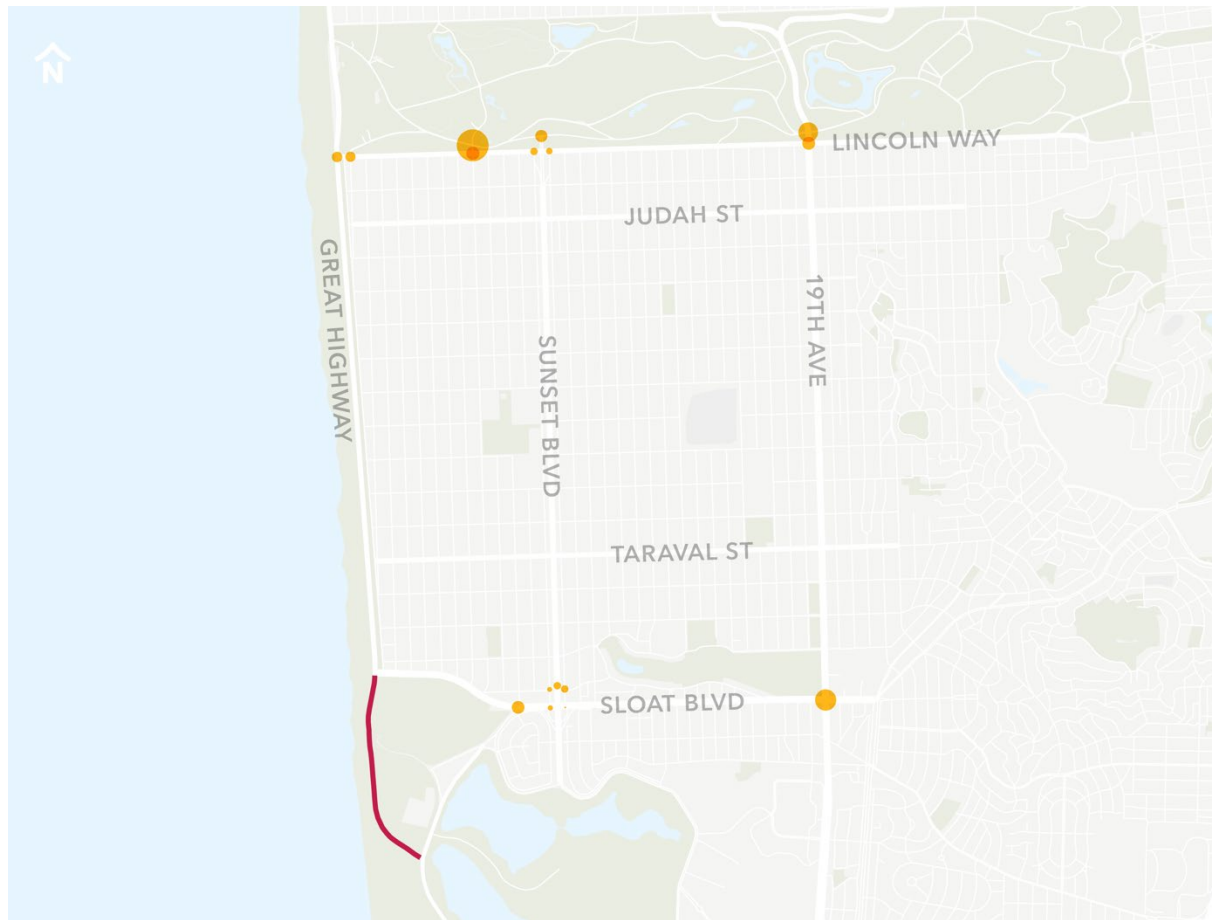


Source: SFCTA SF-CHAMP model, 2019

Intersection Delay Baseline



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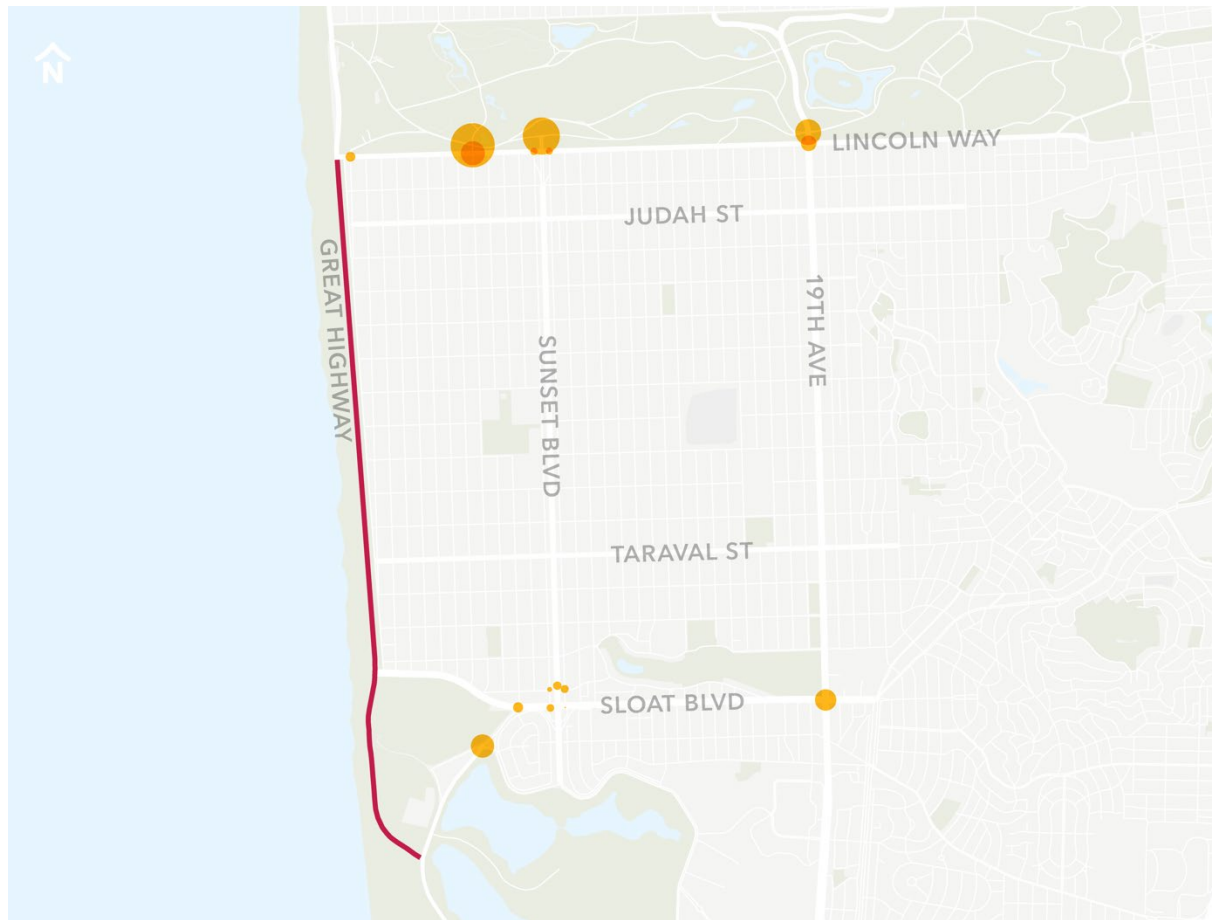
Source: Transmodeler model, 2019

Intersection Delay

Upper Great Highway closed






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Source: Transmodeler model, 2019

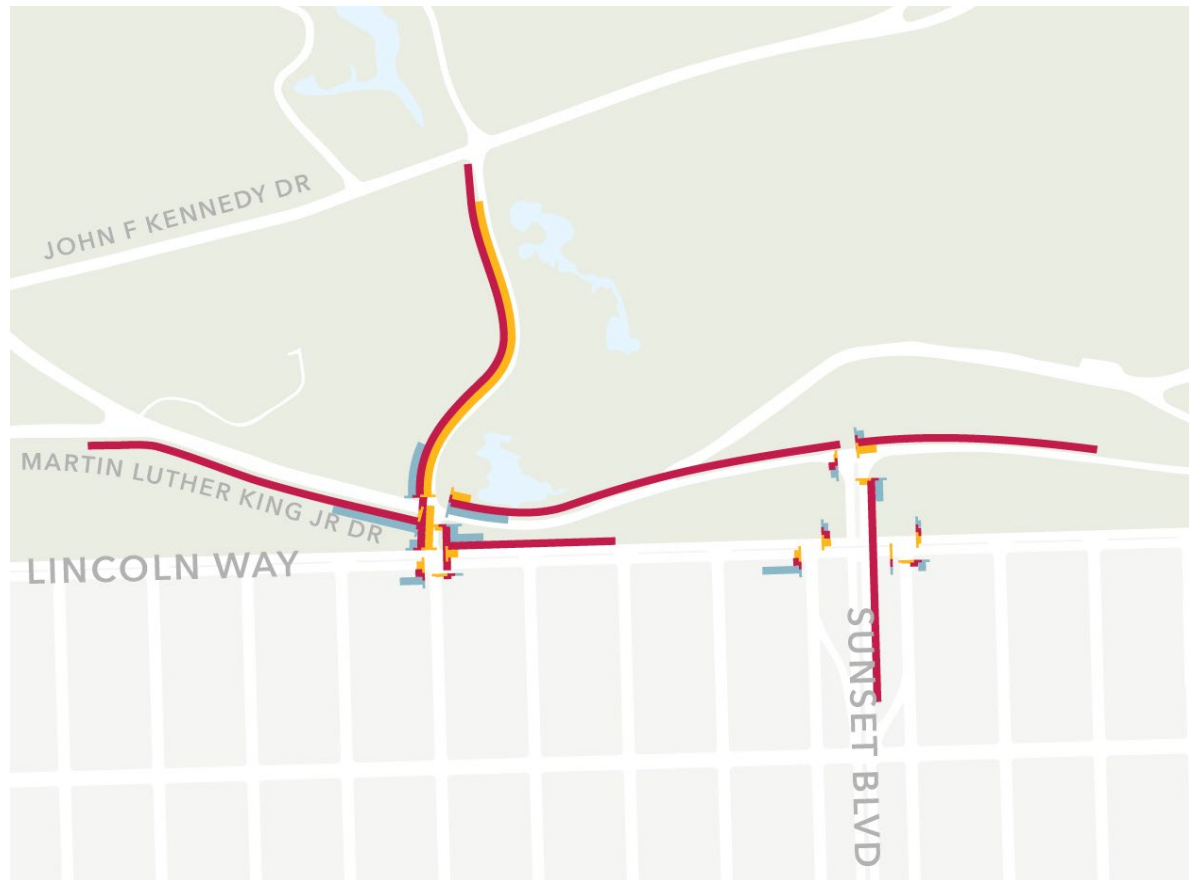
Queuing

Lincoln, Sunset, Chain of Lakes

-  BASELINE
-  UPPER GREAT HIGHWAY CLOSED
-  UPPER GREAT HIGHWAY CLOSED WITH INFRASTRUCTURE IMPROVEMENTS






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Source: Transmodeler model, 2019

Queuing

Lake Merced Blvd, Sloat Blvd

-  BASELINE
-  UPPER GREAT HIGHWAY CLOSED
-  UPPER GREAT HIGHWAY CLOSED WITH INFRASTRUCTURE IMPROVEMENTS



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Source: Transmodeler model, 2019

Improvements Ideas – Northern Zone 1



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Option 1: Both Lincoln and MLK connect to Chain of Lakes

Improvements Ideas – Northern Zone

2



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Improvements Ideas – Northern Zone

3



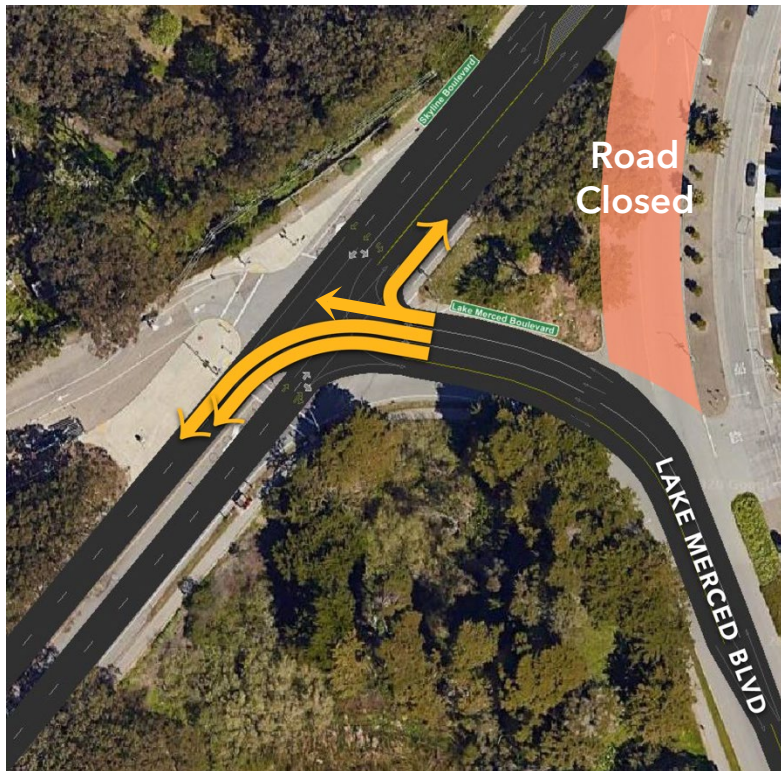
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Improvements Ideas: Skyline/Lake Merced



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- Consolidate Lake Merced/Skyline intersection
- Add left turn capacity from Lake Merced WB to Skyline SB
- All movements would fit in existing pavement
- Road closure could impact 18 46th Ave bus – needs further evaluation

Improvements Ideas: Sloat/Sunset



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- 37th Ave one way southbound from Yorba to Sloat
- Double right from 37th Ave to Sloat Blvd
- Improves Sunset → Sloat → Skyline connection
- Balances traffic between Sloat Blvd and Lake Merced Blvd

Improvements

Outer Sunset Local Streets



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- To date, implemented \$500,000 in traffic calming
- 41st or a parallel street may receive further investment as part of neighborway network
- Assume up to another \$200,000 may be needed for additional traffic calming in the full closure

Upper Great Highway Costs/Risks



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Concept 1: Four-lane Roadway

\$\$

\$5M in capital

\$0.3-2.1M in other network costs

\$1.5M in annual maintenance and
operations

Concept 2: Promenade/ Two-Way Roadway

\$\$\$\$

\$22.8M in capital

n/a other network costs

\$1.5M in annual maintenance and
operations

Concept 3: Full Promenade/ Complete Vehicle Closure

\$\$

\$5.6M in capital

\$1.7-5.7M in other network costs

\$1.6M in annual maintenance and
operations

Concept 4: Timed Promenade

\$\$

\$5.2M in capital

\$1.3-5.4M in other network costs

\$2.1M in annual maintenance and
operations

Concept 5: Promenade/ One-Way Roadway

\$\$

\$6.6M in capital

\$0.4-2.4M in other network costs

\$1.5M in annual maintenance and
operations

Other Network Improvements



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Considering impact areas that may need to be addressed

*denotes existing projects/initiatives	Concept 1: Four-lane Roadway	Concept 3: Full Promenade/ Complete Vehicle Closure	Concept 4: Timed Promenade	Concept 5: Promenade/ One-Way Roadway
Sunset/Sloat or Skyline/ Lake Merced		✓	✓	
Lincoln & Upper Great Highway		✓	✓	✓
Lincoln & 36 th Ave		✓		
Lincoln & 41 st Ave	✓	✓	✓	✓
Subtotal of improvement costs	\$0.3-2.1M	\$1.7-5.7M	\$1.3-5.4M	\$0.4-2.4M

Survey: Concept Preferences



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	All	Sunset (94116/94122)	Outer Richmond (94121)	Other SF Residents
Concept 1: Four-Lane Roadway	21%	22%	52%	11%
Concept 2: Promenade/ Two-way Roadway	10%	7%	10%	11%
Concept 3: Full Promenade	53%	52%	22%	64%
Concept 4: Timed Promenade	13%	15%	13%	12%



- **Concept 3 – Full Closure**
 - Benefits: resiliency, recreation/open space, health, increased biking and walking
 - Needs: transit network and intersection improvements
 - Somewhat higher costs and project delivery risk for network improvements
- **Concept 5 – Promenade + One Way Southbound**
 - Some of the benefits
 - Requires some transit network and intersection improvements as full closure, slightly lower costs



- **If there is a pilot, recommend monitoring of:**
 - Safety: Collisions/conflicts and emergency response times
 - Traffic: incremental queueing at key intersections
 - Transit: travel time/conflicts on 29, 28, and 18 buses
 - Parking: availability of parking for local and visitor use
- **Set thresholds for key metrics that would trigger re-evaluation/re-design**

Great Highway Next Steps



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- Evaluation Report findings and recommendations provided to Rec Park and SFMTA for further analysis and planning
rec-greathighway@sfgov.org
- The Rec Park Commission and SFMTA Board may recommend next steps
- Any interim or permanent changes require Board of Supervisors approval

Thank you. Any Questions?

sfcta.org/d4mobility



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