



Alemany Corridor Safety Project

SFCTA Neighborhood Program Final Report
September 22, 2020



**San Francisco
County Transportation
Authority**





September 22, 2020

Prepared by the San Francisco Municipal Transportation Agency

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Acknowledgements

San Francisco County Transportation Authority

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Introduction and Background

In fall 2019, with support from District 11 Supervisor Ahsha Safai, the SFMTA requested \$100,000 in Proposition K Neighborhood Transportation Improvement Program (NTIP) funds to conduct a planning study, conduct community outreach and develop conceptual designs for safety and accessibility improvements to the Alemany corridor between Rousseau Street to the north and Sickles Avenue to the south (approximately two miles). The focus of this project identifies near, mid and long-term safety improvements to Alemany Boulevard, segments of which are located on San Francisco's High Injury Network, or the 13 percent of streets that account for 75 percent of severe and fatal traffic collisions.

The Transportation Authority's NTIP is intended to strengthen project pipelines and advance the delivery of community-supported neighborhood-scale projects, especially in Communities of Concern and other neighborhoods with high unmet needs. This work leverages and builds upon the Excelsior and Outer Mission Neighborhood Strategy, a neighborhood plan that underwent a robust outreach with the community and was led by the San Francisco Planning Department.

The overall project goals include:

- Improving safety for all who travel on Alemany Boulevard
- Reducing the number of conflicts and collisions among those who walk, bike and drive on the corridor

Through this planning process, the SFMTA developed a number of near, mid and long-term safety improvement recommendations for consideration for implementation.



Figure 1 Alemany Boulevard existing conditions

Existing Conditions

Alemany Boulevard between Rousseau Street and Sickles Avenue is a four-lane road (two lanes in each direction), with a four-foot center concrete island and traditional bike lanes going in each direction. The land uses on this stretch of Alemany Boulevard are mostly residential, with a number of faith institutions scattered on the corridor and some commercial use on the south end. Muni does not run on Alemany unless there is a special event on Mission Street or due to an emergency re-route. The legal speed limit on Alemany Boulevard is 35 miles per hour. Although the posted speed limit is 35 miles per hour, Alemany has had a history of collisions related to speeding. Based on a speed survey conducted by SFMTA staff in 2019, the 85th percentile speed between Lyell Street to Silver Avenue was 35.5mph (northbound and southbound), while the 85th percentile speed north of Farragut Avenue was 41.8mph northbound and 38.6pmh southbound. Approximately 11,000 vehicles travel on Alemany on an average day.

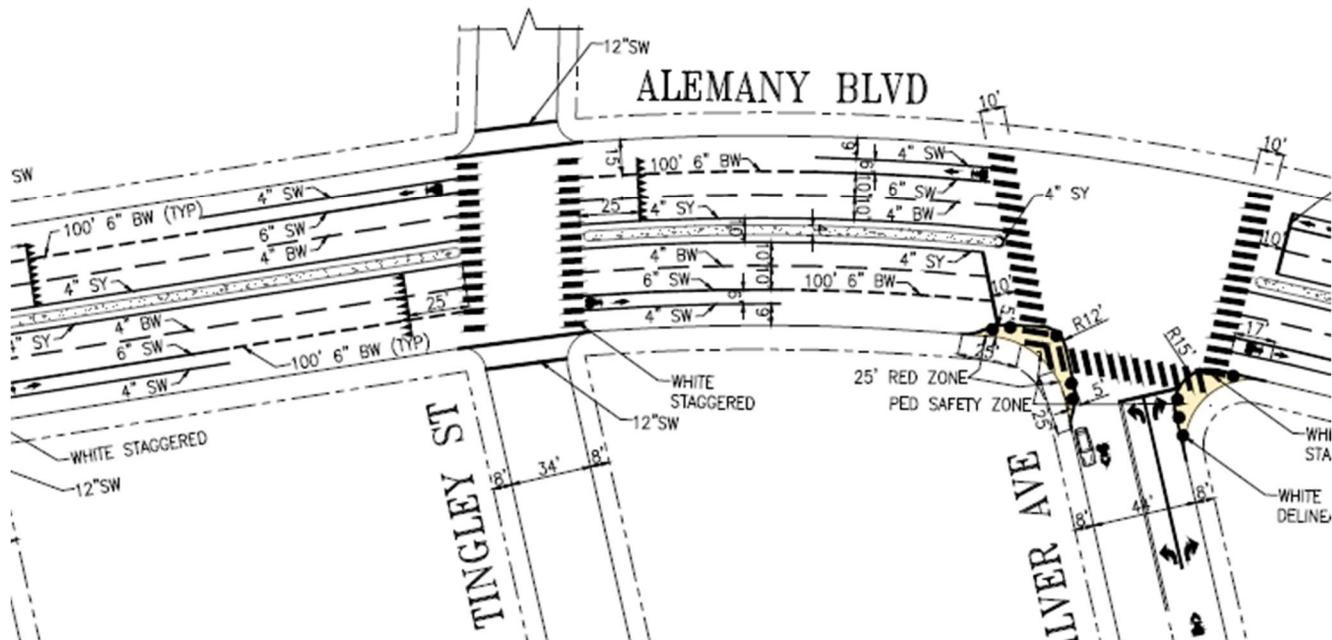


Figure 2 Existing Typical Alemany Boulevard Striping

Crash Analysis

Alemany is on the city's High-Injury Network or the 13 percent of streets that account for 75 percent of severe and fatal traffic collisions. Based on the latest data available to staff, over a five-year period between October 2014 to September 2019, there were 145 reported injury collisions, of which one was fatal, and ten resulted in severe injuries. A large majority, about 80 percent, involved collisions between vehicles, while 14 percent involved vehicles and pedestrians. Approximately 90 percent of all reported collisions occurred at intersections, while the remaining 10 percent happened midblock.

The top three collision locations included: Alemany Boulevard at Sickles Avenue (12 collisions), Alemany Boulevard at Niagara Avenue¹ (10 collisions) and Alemany Boulevard at Theresa Street (10 collisions). Approximately 34 percent of intersection collisions involved vehicles turning, 27 percent involved two vehicles proceeding straight, and 22 percent involved rear-ending another vehicle.

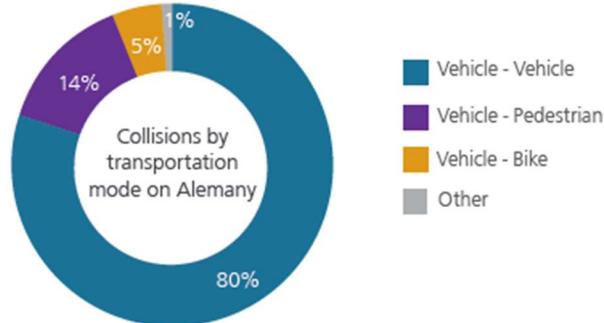


Figure 3 Collision by Transportation Mode on Alemany

¹ After a traffic signal was installed at Alemany/Niagara in 2018, the collisions dropped to zero.

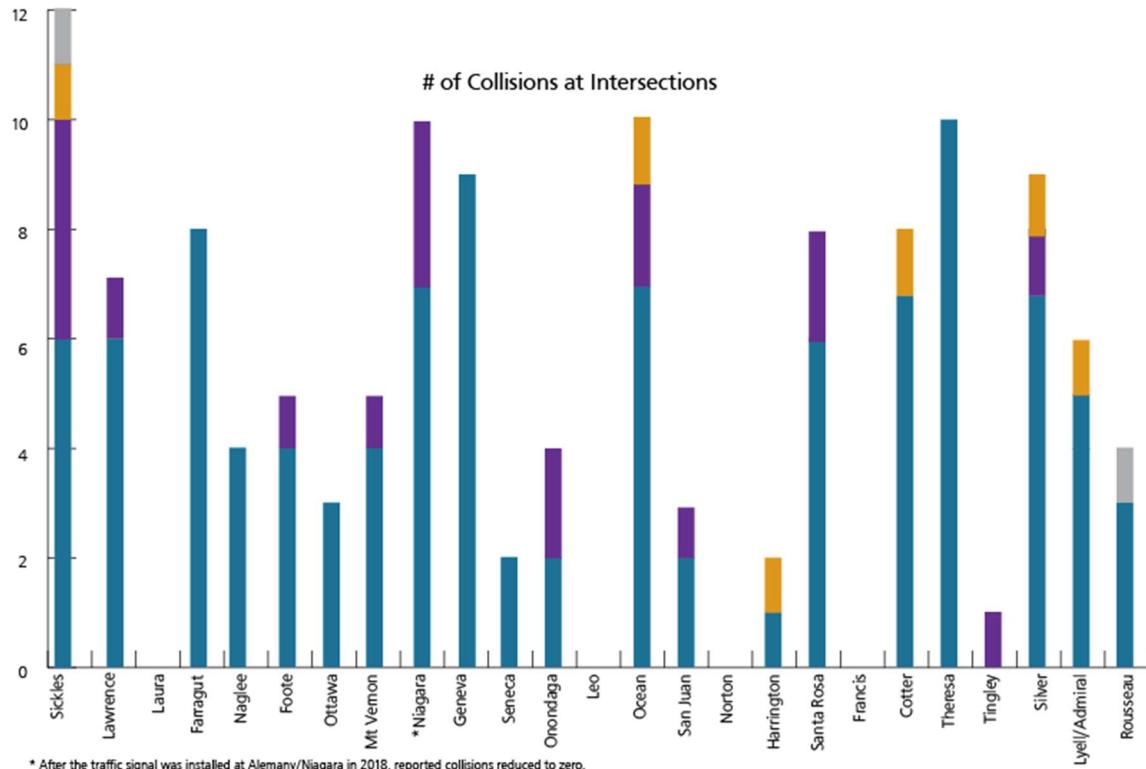


Figure 4 Traffic Collisions at Intersections (October 2014 to September 2019)²

Community Engagement

After conducting an existing conditions and collision analysis of the corridor, the project team developed materials to share with the community at an open house at Balboa High School in December 2019. The open house was advertised through a multi-lingual mailer that was sent to residents that lived on and nearby the corridor, emails that were sent to neighborhood organizations and announcement through the District 11 office.

Due to the robust community outreach that was conducted through the Excelsior and Outer Mission Strategy led by the SF Planning Department, the project team had a general understanding that community members were concerned with vehicles speeding and pedestrian safety, particularly at intersections without traffic signals. This open house



Figure 5 Supervisor Safai Speaking to Community Members at the December 2019 Open House

² After a traffic signal was installed at Alemany/Niagara in 2018, the collisions dropped to zero.

further confirmed those community concerns. Amongst the 40 community members who attended, general community themes included:

- Concerns when using crosswalks at unsignalized and uncontrolled intersections
- Speeding and traffic enforcement
- Interest in more traffic signals at intersections that currently do not have one
- Interest in signal modifications to include protected left turns and lagging left turns
- Pedestrians safety, as a whole
- Intersection visibility
- Intersection conflicts between turning vehicles and through-vehicles
- Drivers losing control and colliding with parked vehicles and homes

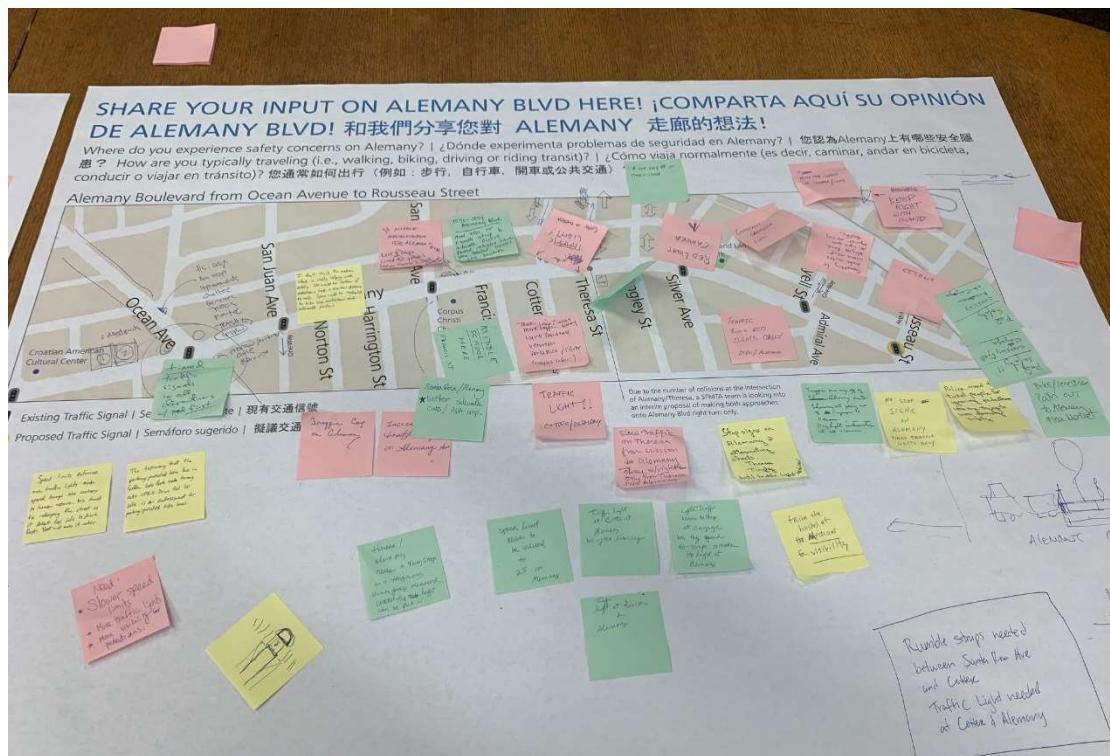


Figure 6 Example of comments received at open house

Appendix 1 showcase the materials from the December 2019 open house.

Based off the feedback received and technical analysis from the existing condition and traffic collision history, staff developed a number of near, mid and long-term safety improvement recommendations for the corridor by March 2020. However, this also was the start of the COVID-19 pandemic. After discussions with Supervisor Safai's office, staff decided to share the recommendations and materials with the community through the existing project emailing list and through mail. The New Mission Terrace Improvements Association further bolstered the advertisement of the safety improvement recommendations along with the Supervisor's office. Community members were asked to take a short survey, sharing their support or opposition for the proposed improvements.

Overall, staff received 70 responses where 67 percent of respondents agreed with recommendations, 30 percent somewhat agreed, and 3 percent were opposed. Generally, those who somewhat agreed to the recommendations wanted to see more aggressive and concrete measures to support Vision Zero and the



slowing down of vehicles and promoting pedestrian and bike safety. The survey was open and available for the community to complete during the month of June 2020.

Appendix 2 details the materials and recommendations shared with the community in spring 2020.

Safety Improvement Recommendations

Through this planning process, a number of safety improvements were suggested for the SFMTA to further consider and develop detailed designs, pending available funding. The following categorizes the recommendations as near, mid and long-term improvements.

Near-Term Improvement Recommendations (Six Months to One Year)

To begin implementation of safety improvements on the corridor, staff proposed the following near-term improvements at various locations on Alemany Boulevard

Alemany Boulevard at Sickles Avenue

- Advanced limit lines

Alemany Boulevard at Lawrence Street

- Daylighting

Alemany Boulevard at Laura Street

- Daylighting

Alemany Boulevard at Farragut Street

- Daylighting
- Advanced limit lines

Alemany Boulevard at Ottawa Street

- Daylighting
- Advanced limit lines
- Pedestrian head start signal

Alemany Boulevard at Mount Vernon

- Daylighting
- Advanced limit lines

Alemany Boulevard at Restani Street

- Daylighting
- Continental crosswalks

Alemany Boulevard at Geneva Avenue

- Daylighting
- Pedestrian head start signal
- Two-stage turn boxes for bikes

Alemany Boulevard at Seneca Avenue

- Daylighting
- Advanced limit lines

Alemany Boulevard and Onondaga Avenue

- Daylighting
- Advanced limit lines

Alemany Boulevard at Ocean Avenue

- Daylighting
- Advanced limit lines
- Pedestrian head start signal
- Two-stage turn boxes for bikes

Alemany Boulevard at San Juan Avenue

- Daylighting
- Advanced limit lines
- Pedestrian head start signal
- Continental crosswalks

Alemany Boulevard at Norton Street

- Daylighting
- Continental crosswalks

Alemany Boulevard at Harrington Street

- Daylighting
- Continental crosswalks

Alemany Boulevard at Santa Rosa Avenue

- Daylighting
- Advanced limit lines
- Pedestrian head start signal

Alemany Boulevard between Francis Street and Cotter Street (midblock)

- Pavement markings and signage

Alemany Boulevard at Theresa Street

- Continental crosswalks

Alemany Boulevard at Tingley Street

- Daylighting
- Continental crosswalks

Alemany Boulevard at Silver Avenue

- Daylighting



Figure 7 Example of Pedestrian Head Start Signal



Figure 8 Example of Advance Limit Lines and Continental Crosswalks

- Advanced limit lines
- Two-stage turn boxes for bikes

Alemany Boulevard at Lyell Street

- Daylighting
- Advanced limit lines
- Pedestrian head start signal

Alemany Boulevard at Rousseau Street

- Continental crosswalks

Corridor-wide improvements: buffered bike lanes



Figure 9 Example of a Buffered Bike Lane

Mid-Term Improvement Recommendations (One to Three Years)

Alemany Boulevard between Farragut Street

- Upgrade signal lens to larger size

Alemany Boulevard between Farragut Street and Naglee Street (midblock)

- Speed radar signage (both directions)

Alemany Boulevard at Ottawa Street

- Upgrade signal lens to larger size
- Install pedestrian countdown signals and accessibility improvements crossing Ottawa

Alemany Boulevard at Mount Vernon

- Install pedestrian countdown signals and accessibility improvements crossing Mt Vernon

Alemany Boulevard at Geneva Avenue

- Upgrade signal lens to larger size
- Install pedestrian countdown signals and accessibility improvements crossing Geneva

Alemany Boulevard at Ocean Avenue

- Install pedestrian countdown signals crossing Ocean

Alemany Boulevard at San Juan Avenue

- Install pedestrian countdown signals and accessibility improvements crossing San Juan

Alemany Boulevard at Santa Rose Avenue

- Upgrade signal lens to larger size
- Install pedestrian countdown signals crossing Santa Rosa

Alemany Boulevard between Santa Rosa Avenue and Cotter Street

- Speed radar signage (both directions)



Alemany Boulevard at Lyell Street

- Upgrade signal lens to larger size

Corridor-wide improvements: signal timing to optimize newly installed traffic signals with others

Long-Term Improvement Recommendations (3+ Years)

Alemany Boulevard at Sickles Avenue

- Signal upgrades such as pedestrian signal improvements (i.e., ped head start, countdown signals), mast arms, accessibility upgrades, and left-turn pockets on Sickles Avenue

Alemany Boulevard at Lawrence Street

- New traffic signal

Alemany Boulevard at Ocean Avenue

- Further evaluation of potential left-turn treatment onto Ocean Avenue
- Install pedestrian signal accessibility improvements crossing Ocean Avenue

Alemany Boulevard at Santa Rosa Avenue

- Install pedestrian signal accessibility improvements crossing Santa Rosa Avenue

Alemany Boulevard at Theresa Street

- New traffic signal

Alemany Boulevard at Silver Avenue

- Further evaluation of potential left-turn treatment onto Silver Avenue

Alemany Boulevard at Lyell Street

- Evaluate potential upgrades to traffic signal and improvements for left-turning bikes onto Lyell Street

Alemany Boulevard at Rousseau Street

- New traffic signal

Current Work Underway

A number of improvements are currently underway or completed as part of a paving project on Alemany Boulevard between Rousseau Street to Seneca Avenue. This included installing continental crosswalk, advanced limit lines, curb ramps and a buffered bike lane on this stretch of the corridor.

Additional work such as a traffic signal upgrade is underway at Alemany Boulevard at Sickles Avenue and new traffic signals are undergoing design at Alemany Boulevard at Lawrence Street, Theresa Street and Rousseau Street.

Additional Community Suggestions

Through this planning process, the project team also heard some feedback from community members that were not recommended through this study. This included the idea of adding a parking-protected bikeway on the corridor. Staff evaluated this idea and determined that there would be a number of trade offs to consider, such as reducing the number of travel lanes on Alemany, parking loss as a result of daylighting every driveway on the



corridor for visibility and better sightlines, and potential debris and maintenance in the bikeway from trees, in addition to other considerations.

In addition, reducing the speed limit was another community concern. Because the 85th percentile speed on Alemany Boulevard measured vehicles traveling at 35mph, a reduction would not be justifiable nor enforceable by the San Francisco Police Department and potentially cause a "speed trap".

Funding and Implementation Strategy

The SFMTA plans to start implementing near-term improvements by the end of the year. SFMTA will also work with the SFCTA and Supervisor Safai's office to determine funding strategy for mid and long-term safety improvements for Alemany.

Welcome!

Thank you for participating in today's Alemany Corridor Safety Project open house.

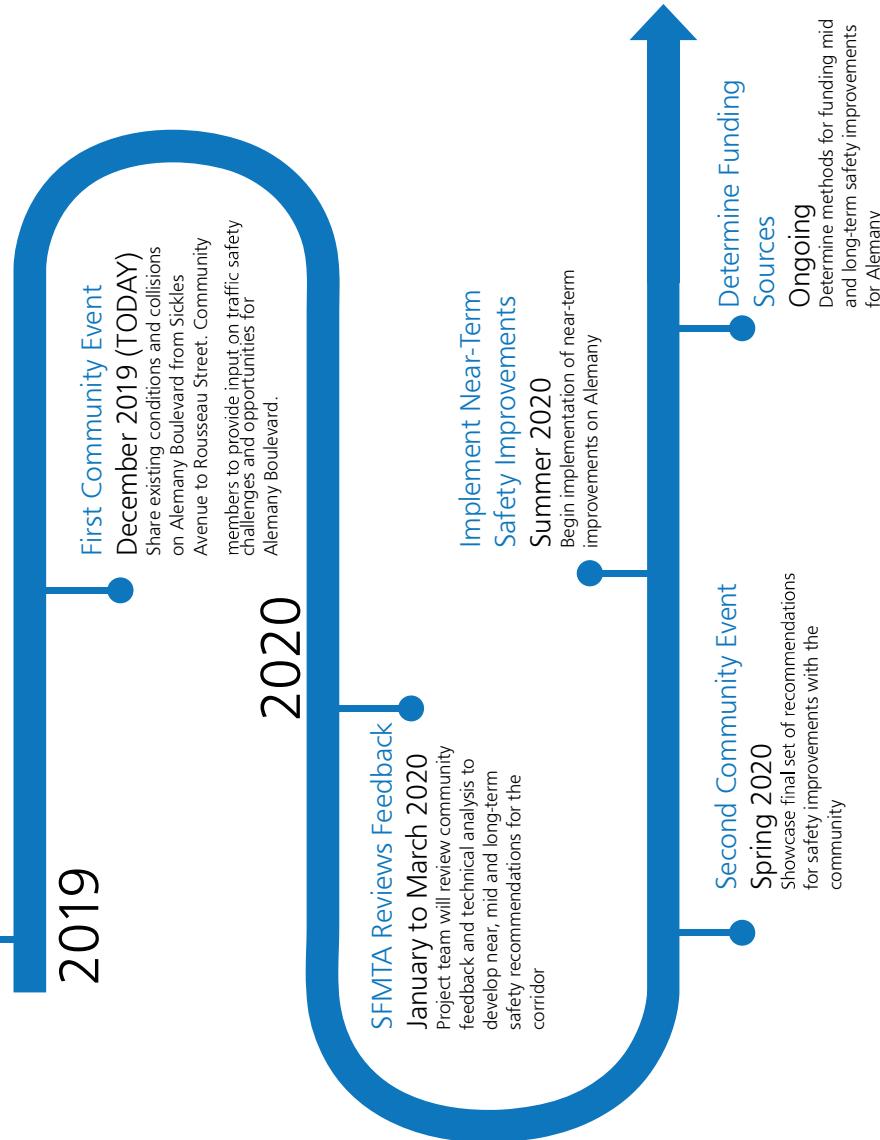
This project aims to:

- » Reduce the number of traffic incidences among those who walk, bike and drive on the corridor
- » Recommend near, mid and long-term safety improvements for Alemany Boulevard

Goals of Today's Open House

- » Share existing conditions regarding traffic safety and collisions
- » Community members to provide input on traffic safety challenges and opportunities for Alemany Boulevard

Where do you experience safety concerns when walking, biking, driving or riding transit on Alemany?



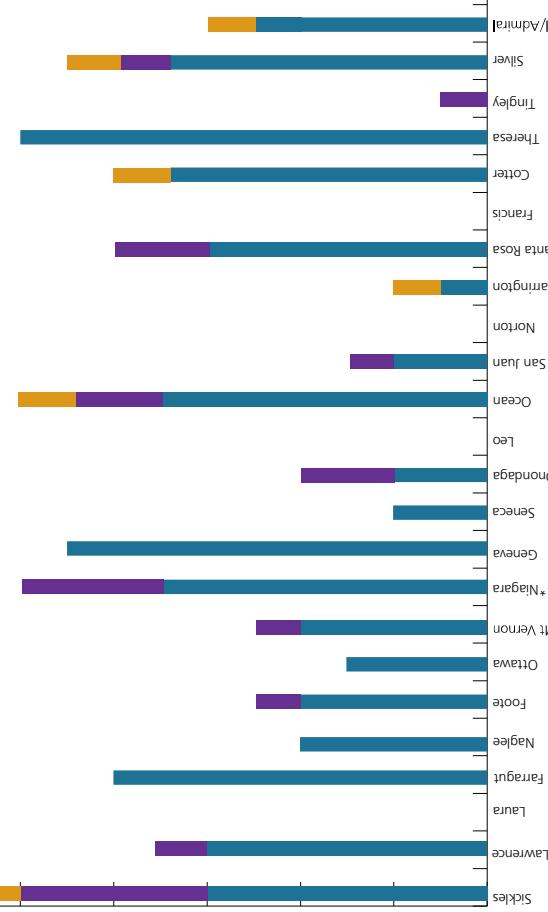
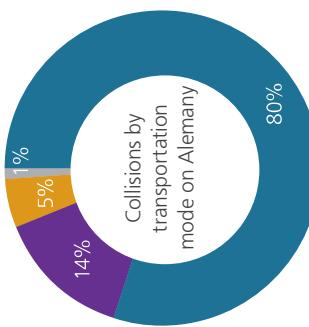
Alemany Corridor Safety Project Open House
Balboa High School
December 12, 2019

PROJECT BACKGROUND

Project Background and Collision History

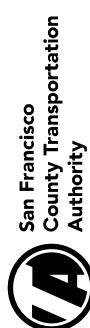
With coordination and funding through the SFCTA's Neighborhood Transportation Improvement Program (NTIP), Supervisor Safai has committed to identifying safety and accessibility improvements on Alemany Boulevard between Sickles Avenue to Rousseau Street. Through this effort, the SFMTA will work with the community in developing near, mid and long-term safety recommendations for the corridor.

Every year, dozens of people are killed and hundreds more are seriously injured in San Francisco traffic crashes. Vision Zero is a commitment by the City of San Francisco to end all traffic deaths. Segments of Alemany Boulevard are also on the city's High-Injury Network, the 13 percent of streets that account for 75 percent of severe injury and fatal traffic collisions.



* After the traffic signal was installed at Alemany/Niagara in 2018, reported collisions reduced to zero.

Alemany Corridor Safety Project Open House
Balboa High School
December 12, 2019



POTENTIAL COUNTERMEASURES TO IMPROVE SAFETY

SFMTA.COM/ALEMANYSAFETY

Countermeasures and Potential Safety Improvements

Dependent on timing and funding, there are different countermeasures that could be implemented to improve safety on Alemany Boulevard. Currently, there is funding to support near-term improvements, but funding has not been identified for mid or long-term countermeasures.

| NEAR-TERM IMPROVEMENTS 6 Months to 1 Year | MID-TERM IMPROVEMENTS* 1 Year to 3 Years | LONG-TERM IMPROVEMENTS* 3+ Years |
|---|---|---|
| Pavement markings (i.e., crosswalks, advanced limit lines, and yield teeth) and daylighting (the removal of parking spaces to improve visibility) | \$ Flashing Beacons | \$\$\$ Bullbouts |
| New signage | \$ Speed Radar Feedback Signs | \$\$\$\$ New signals at intersection |
| Painted Safety Zones | \$ Signal modifications to control left turns | \$\$ Add signal(s) over roadway (i.e., mast arm) \$\$\$ |
| Pedestrian signal timing upgrades (increasing walking time for pedestrian and pedestrian head starts) | \$ Bikeway Enhancements (i.e., bikeway greening, intersection markings) | \$ |
| Speed limit roadway markings | \$ Upgrade signal lenses from 8 inches to 12 inches | \$\$ |
| Left Turn Restrictions | \$ | |

\$: \$50k or less | \$\$: \$50k to \$100k | \$\$\$: \$100k to \$750k | \$\$\$\$: \$750k+

*Funding for mid and long-term improvements have not yet been identified



Alemany Corridor Safety Project Open House
Balboa High School
December 12, 2019

POTENTIAL NEAR/MID-TERM SAFETY IMPROVEMENTS

SFMTA.COM/ALEMANYSAFETY

CROSSWALK IMPROVEMENTS



- High visibility continental crosswalks increase visibility for people crossing the street
- More visible to approaching vehicles and improve driver yielding behavior

FLASHING BEACONS



- Wams vehicles to yield to pedestrians at the crosswalk with flashing lights

PAINTED SAFETY ZONES



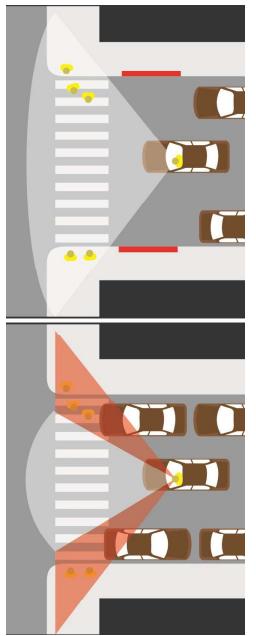
- Help to slow vehicle turning speeds
- May be upgraded to a pedestrian bulb-out in the long-term

PEDESTRIAN HEAD STARTS



- Provide 3+ seconds of lead time for pedestrian crossing
- Pedestrian head starts enhance the visibility of pedestrians in the intersection and improve driver yielding behavior

DAYLIGHTING



- Improves sightlines for pedestrians, bicyclists and vehicles by installing red curbs at approaches to pedestrian crossings
- Increased visibility for people walking, biking and driving
- Requires some parking loss

INTERSECTION MARKINGS



- Advanced limit lines and yield teeth are tools for improving pedestrian safety on streets at intersections
- Encourages vehicles to stop in advance of crosswalks



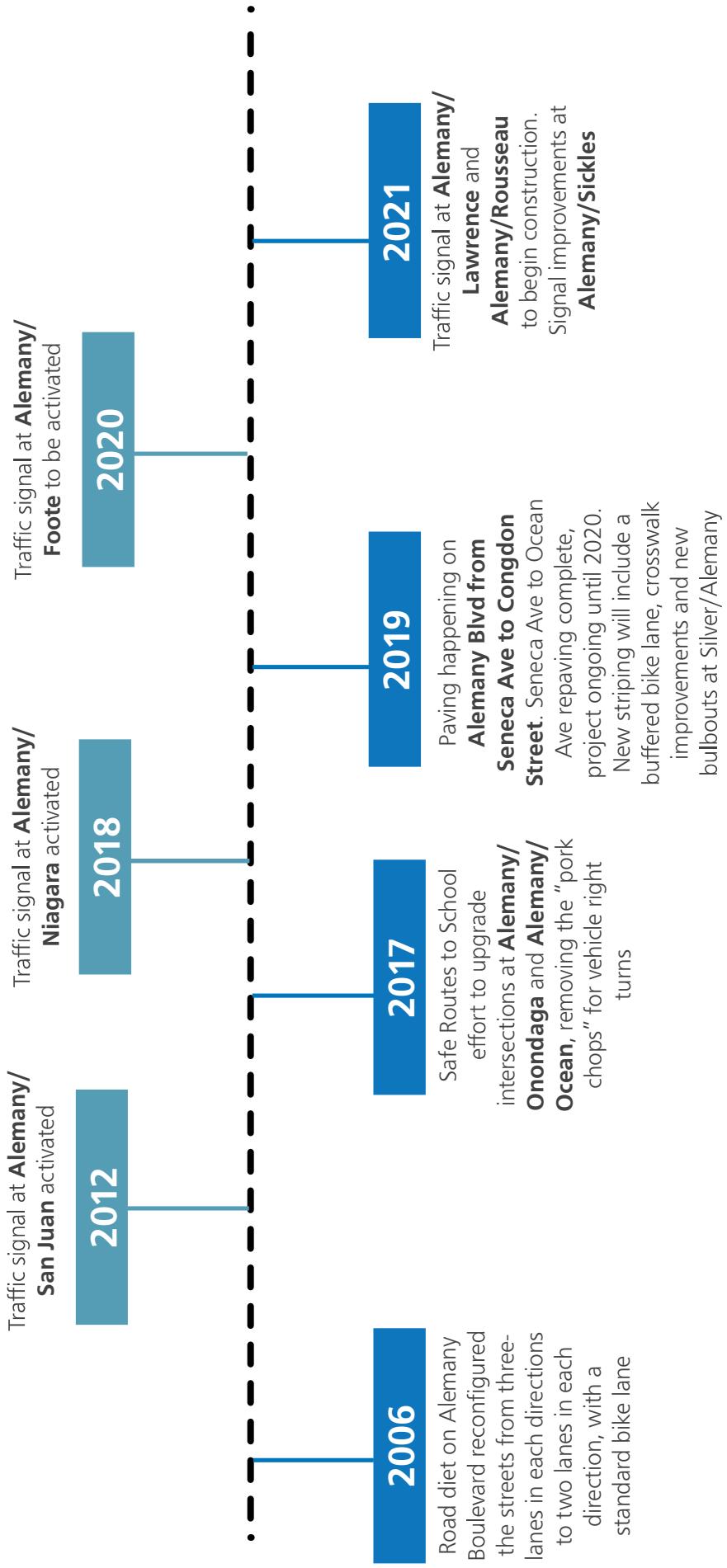
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Alemany Corridor Safety Project Open House
Balboa High School
December 12, 2019

PAST AND UPCOMING WORK ON ALEMANY

SFMTA.COM/ALEMANYSAFETY



San Francisco
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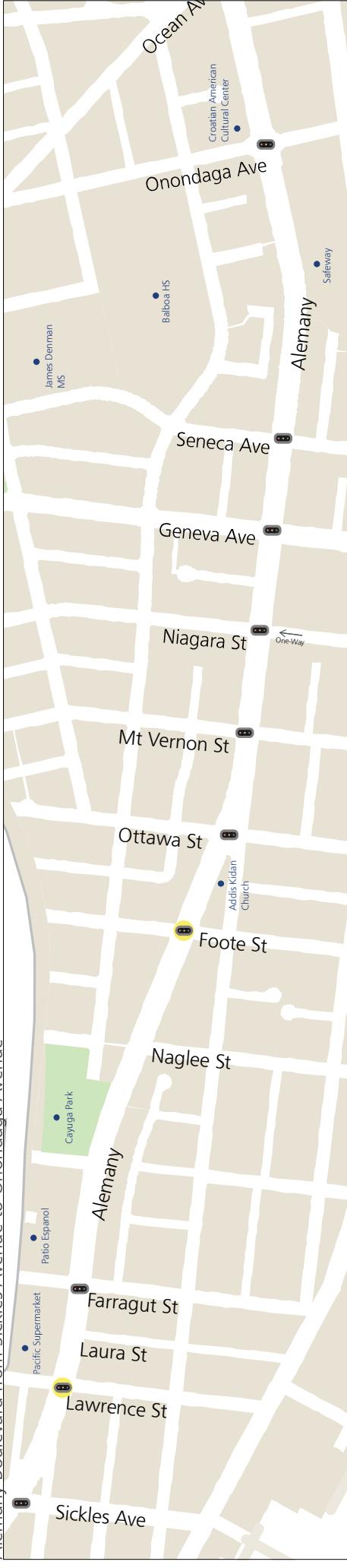
Alemany Corridor Safety Project Open House
Balboa High School
December 12, 2019

SHARE YOUR INPUT ON ALEMANY BLVD HERE! ¡COMPARTA AQUÍ SU OPINIÓN DE ALEMANY BLVD!

和我們分享您對 ALEMANY 走廊的想法！

Where do you experience safety concerns on Alemany? | ¿Dónde experimenta problemas de seguridad en Alemany? | 您認為Alemany上有哪些安全隱患？
How are you typically traveling (i.e., walking, biking, driving or riding transit)? | ¿Cómo viaja normalmente (es decir, caminar, andar en bicicleta, conducir o viajar en tránsito)? | 您通常如何出行（例如：步行、自行車、開車或公共交通）？

Alemany Boulevard from Sickles Avenue to Onondaga Avenue



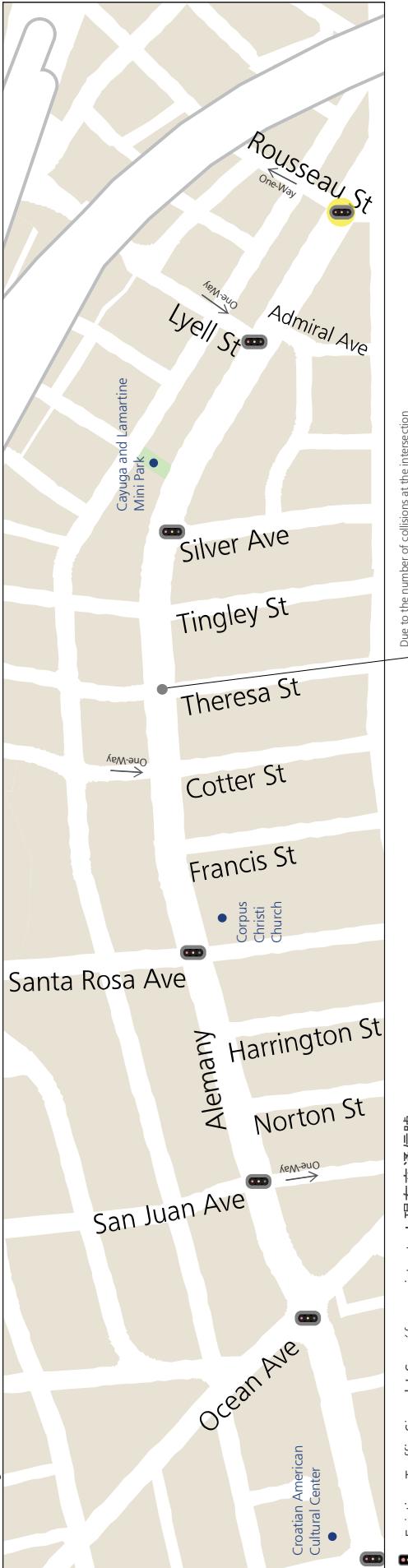
Existing Traffic Signal | Semáforo existente | 現有交通信號

Proposed Traffic Signal | Semáforo sugerido | 計議交通信號

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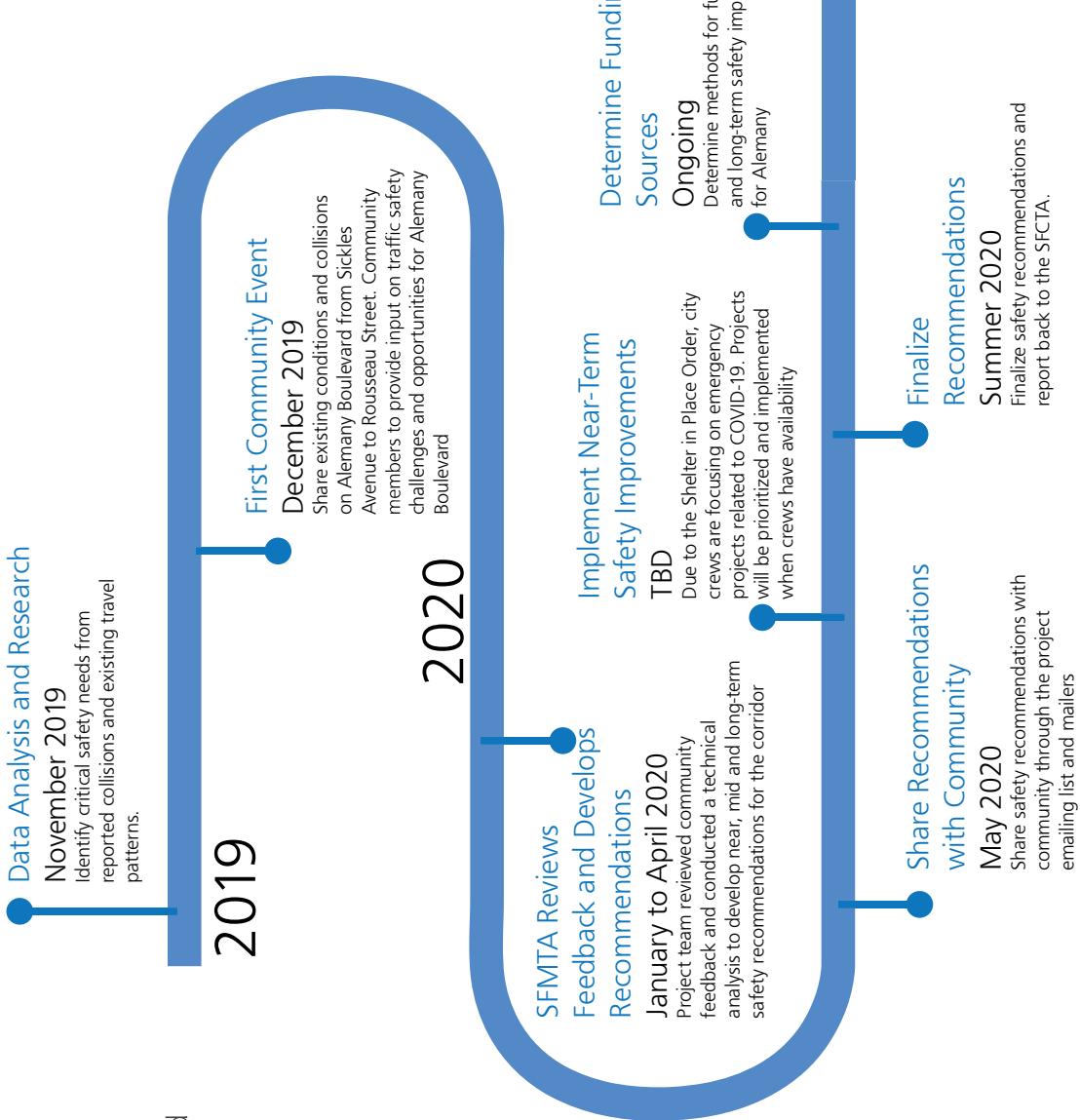
Alemany Boulevard from Ocean Avenue to Rousseau Street



■ Existing Traffic Signal | Semáforo existente | 現有交通信號
■ Proposed Traffic Signal | Semáforo sugerido | 擬議交通信號

Due to the number of collisions at the intersection of Alemany/Teresa, a SMTA team is looking into an interim proposal of making both approaches onto Alemany Blvd right turn only.

ALEMANY CORRIDOR SAFETY PROJECT



Thank you to everyone who attended the Alemany Corridor Safety Project open house in December 2019 or provided feedback via email since then. Since then, the project team reviewed the community comments and assessed the technical feasibility for safety improvement recommendations along the corridor. Common themes included:

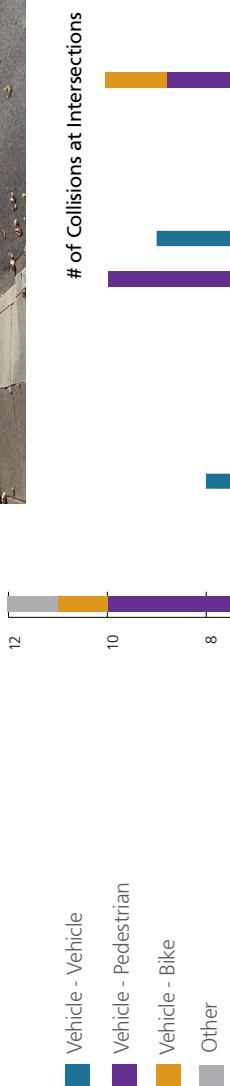
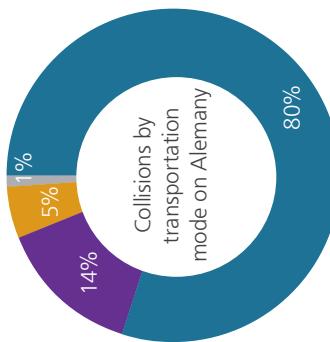
- Concerns when using crosswalks at unsignalized and uncontrolled intersections
- Speeding and traffic enforcement
- Interest in more traffic signals at intersections that currently do not have one
- Interest in signal modifications to include protected left turns, lagging left turns, etc
- Pedestrian safety, as a whole
- Intersection visibility
- Intersection conflicts between turning vehicles and through-vehicles

Based off of this feedback, the project team has developed a number of near, mid, and long-term safety improvement recommendations. The following materials will provide detail and context for those recommendations.

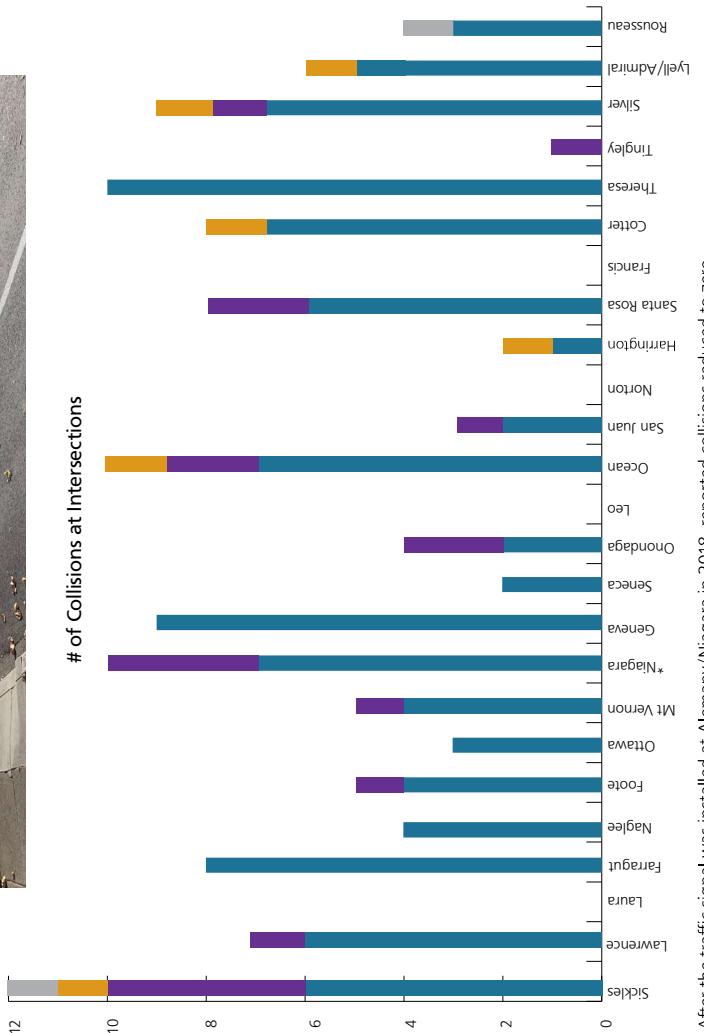
PROJECT BACKGROUND + CONTEXT

With coordination and funding through the SFCTA's Neighborhood Transportation Improvement Program (NTIP), Supervisor Safai has committed to identifying safety and accessibility improvements on Alemany Boulevard between Sickles Avenue to Rousseau Street. Since the last open house, SFMTA staff has taken community input and coupled it with engineering analysis to develop near, mid and long-term safety recommendations for the corridor.

Every year, dozens of people are killed and hundreds more are seriously injured in San Francisco traffic crashes. Vision Zero is a commitment by the City of San Francisco to end all traffic deaths. Segments of Alemany Boulevard are also on the city's High-Injury Network, the 13 percent of streets that account for 75 percent of severe injury and fatal traffic collisions.



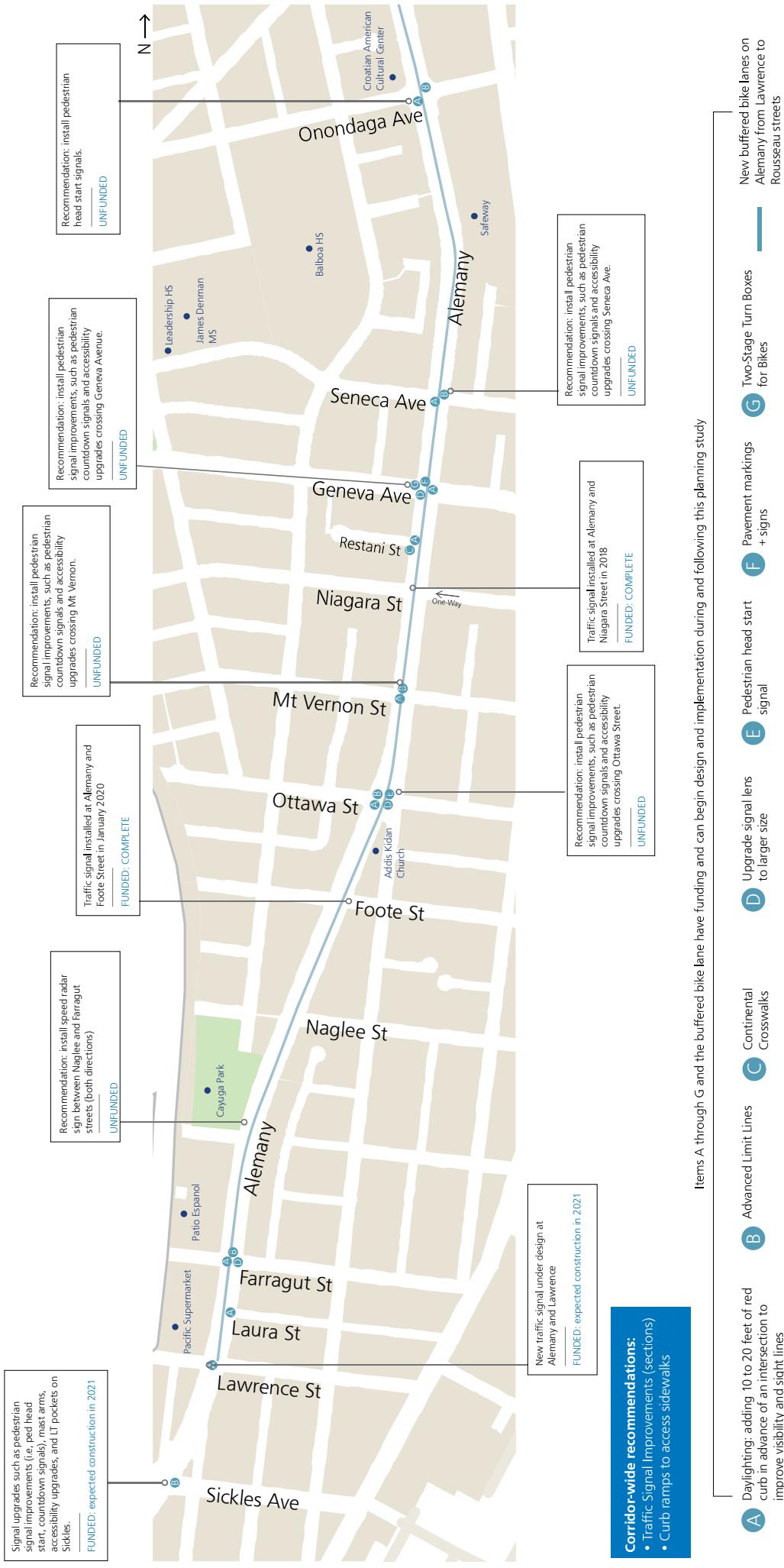
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* After the traffic signal was installed at Alemany/Niagara in 2018, reported collisions reduced to zero.

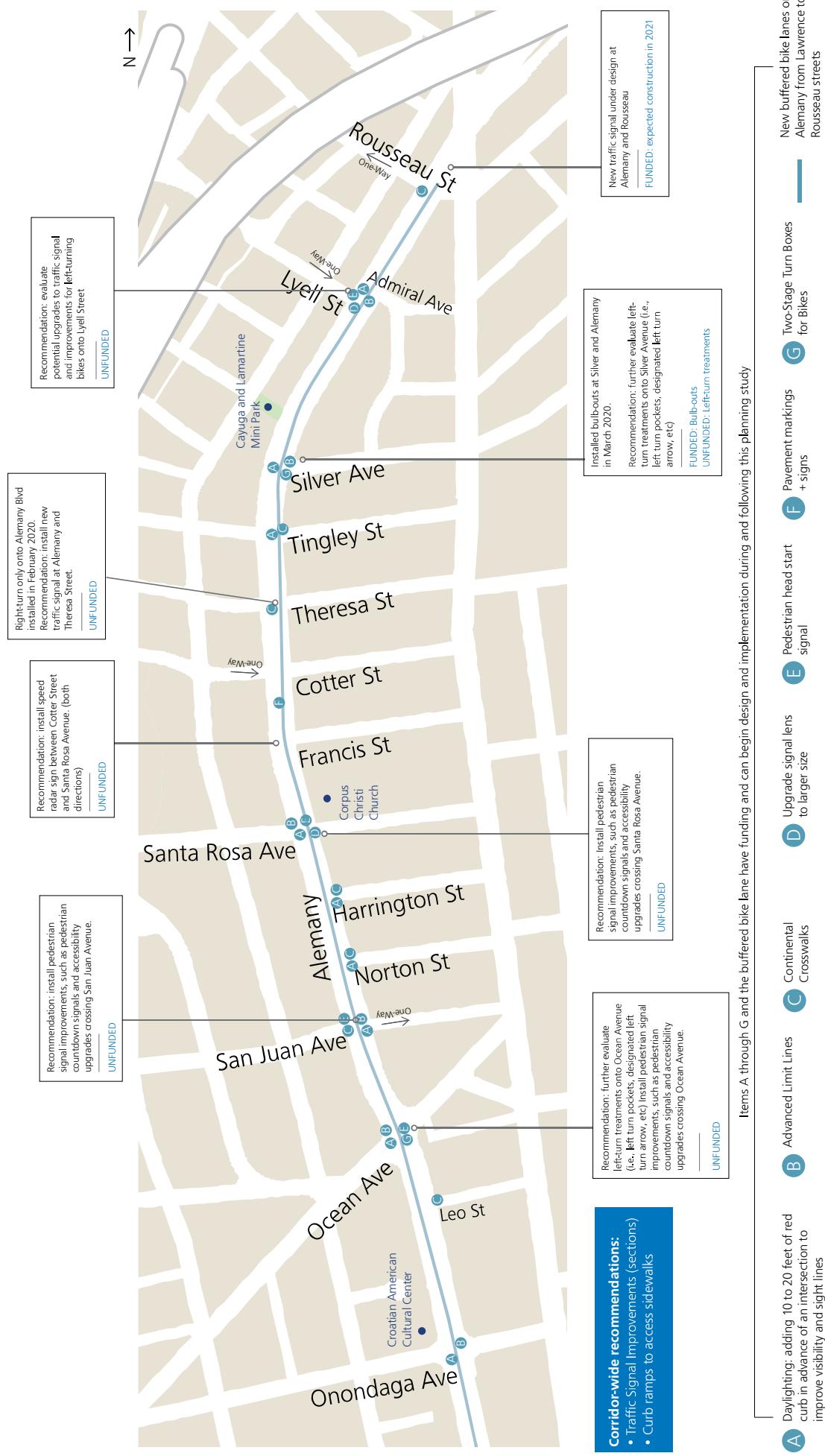
ALEMANY CORRIDOR SAFETY RECOMMENDATIONS

Sickles Avenue to Onondaga Avenue



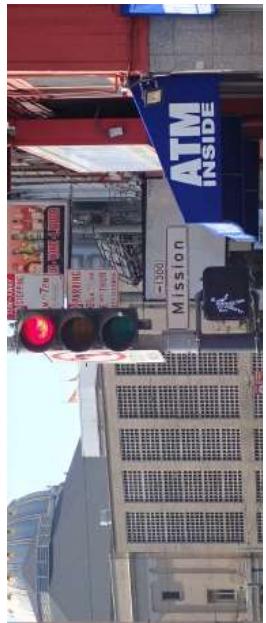
ALEMANY CORRIDOR SAFETY RECOMMENDATIONS

Ocean Avenue to Rousseau Street



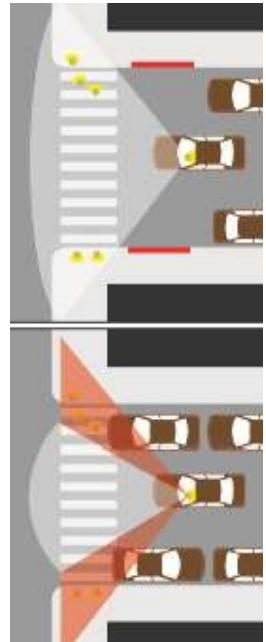
ALEMANY CORRIDOR SAFETY RECOMMENDATIONS

Pedestrian Head Start Signals



- Provide 3+ seconds of lead time for pedestrian crossing
- Pedestrian head starts enhance the visibility of pedestrians in the intersection and improve driver yielding behavior

Daylighting



- Improves sightlines and visibility for pedestrians, bicyclists and vehicles by installing red curbs at approaches to pedestrian crossings
- Requires some parking loss

Pedestrian Countdown Signals



- Provides pedestrian the remaining time they have to cross the street before the traffic signal turns red.

Speed Radar Signs



- Helps traffic calm a street by alerting people driving what their speed is and to slow down

Buffered Bike Lane



- Provides a designated area for people biking
- Provides a greater area of separation between moving vehicles and bikes

Left Turn Treatments



- Left turn treatments being recommending through this process could involve traffic signal improvements or reallocation of lanes.
- Additional feasibility analysis needed

ALEMANY CORRIDOR SAFETY RECOMMENDATIONS

COST AND TIMING

As mentioned at the December 2019 meeting, many of the safety recommendations could be costly and will take time to further design and implement. The total cost for all of the safety recommendations is estimated to approximately \$10.2 million. The SFMTA will continue to work with Supervisor Safai's office in determining funding strategies to prioritize the installation of various safety improvements

| NEAR-TERM IMPROVEMENTS 6 Months to 1 Year | MID-TERM IMPROVEMENTS* 1 Year to 3 Years | LONG-TERM IMPROVEMENTS* 3+ Years |
|---|---|---|
| Pavement markings (i.e., crosswalks, advanced limit lines, and yield teeth) and daylighting (the removal of parking spaces to improve visibility) | \$ Speed Radar Feedback Signs | \$\$ Bullbouts |
| New signage | \$ Signal modifications to control left turns | \$\$\$ New signals at intersection |
| Painted Safety Zones | \$ Bikeway Enhancements (i.e., bikeway greening, intersection markings) | \$ Add signal(s) over roadway (i.e., mast arm) \$\$\$ |
| Pedestrian signal timing upgrades (increasing walking time for pedestrian and pedestrian head starts) | \$ Upgrade signal lenses from 8 inches to 12 inches | \$\$ Curb Ramps \$\$\$ |
| Speed limit roadway markings | \$ | |

\$: \$50k or less | \$\$: \$50k to \$100k | \$\$\$: \$100k to \$750k | \$\$\$\$\$: \$750k+

*Funding for mid and long-term improvements have not yet been identified

NEXT STEPS

Following sharing the Alemany recommendations with the community, the SFMTA will submit a report to the San Francisco County Transportation Authority (SFCTA) for consideration and adoption.

As the Shelter in Place Order is lifted and city crews have more capacity, the SFMTA will support in installing near-term safety improvements on the Alemany corridor. Community members can expect to see ongoing paving work and curb ramp installation through SF Public Works' contractor. Following the paving, crews will begin to install permanent striping, along with a buffered bike lane.

For more information and to view past project materials, please visit: sfmta.com/AlemanySafety

