STOCKTON BOULEVARD CRASHES

CORRIDOR CRASH SUMMARY (2009-2017)

ALL INJURY CRASHES	47	5	13
FATAL AND SEVERE CRASHES	2	3	2

KEY CHARACTERISTICS

SPEED LIMIT 35

Four travel lanes plus raised median/center turn lane.

Class II bicycle lanes along entire corridor.

CORRIDOR-WIDE CRASH TYPES

VEHICLE

Unsafe Speed

"Unsafe Speed" was the primary violation cited in 23% of all crashes.

1 2 3 4 5 6
7 8 9 10 11

Proceeding Straight

More than 60% of drivers were proceeding straight or stopped at the time of the crash.

1 2 3 4 5 6
7 8 9 10 11

Broadside

40% of all crashes were broadside, also called T-Bone.

1 2 3 4 5 6
7 8 9 10 11

Rear End

Rear End was the second most common crash type - 20% of all crashes.

1 2 3 4 5 6
7 8 9 10 11

Left Turns

More than 70% of drivers who were turning at the time of the crash were making a left turn.

1 2 3 4 5 6
7 8 9 10 11

PEDESTRIAN

Crossing in Crosswalk

60% of pedestrians hit by drivers were crossing in a crosswalk at the time of the crash.

1 2 3 4 5 6
7 8 9 10 11

Senior Victims

60% of pedestrian victims were age 60 or older.

1 2 3 4 5 6
7 8 9 10 11

BICYCLE

Broadside

More than 60% of bicycle crashes were broadside, also called T-Bone.

1 2 3 4 5 6
7 8 9 10 11

Morning

More than 60% of bicycle crashes occurred before noon.

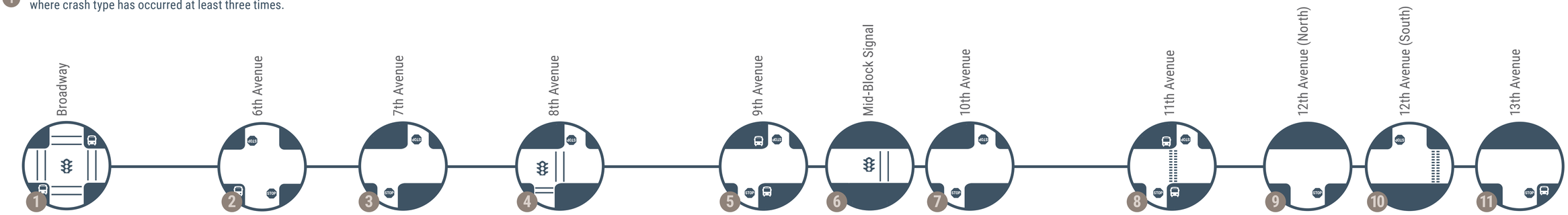
1 2 3 4 5 6
7 8 9 10 11

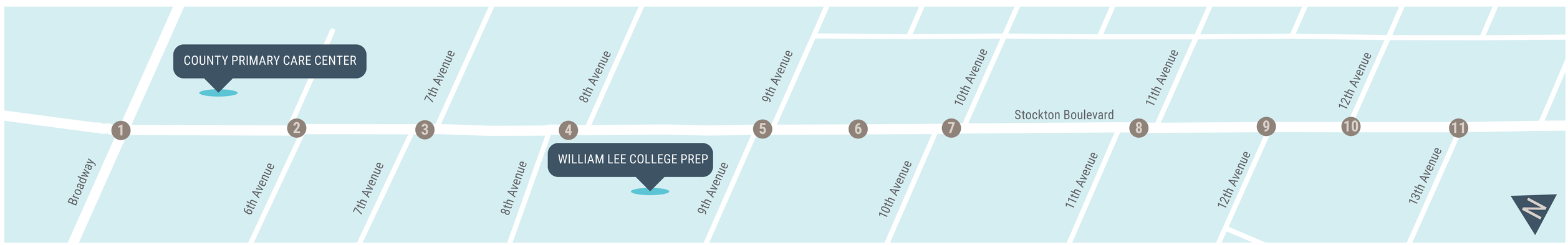
Right Turns

In nearly half of bike crashes, the driver was making a right turn.

1 2 3 4 5 6
7 8 9 10 11

1 Numbers that are turned on represent a location where crash type has occurred at least three times.





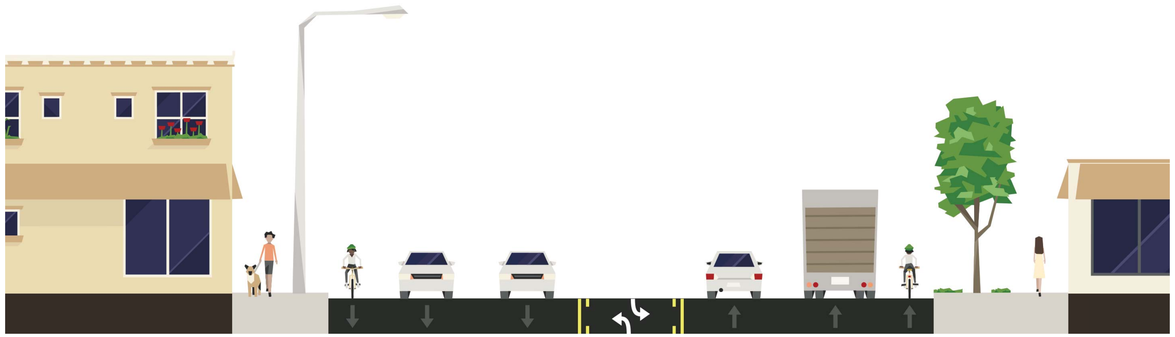
NORTH STOCKTON BOULEVARD
CORRIDOR-WIDE RECOMMENDATIONS

SPEED LIMIT 35

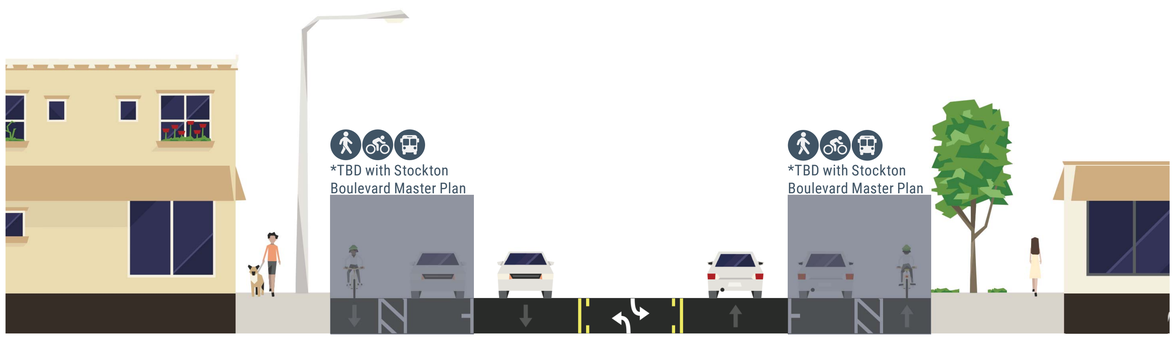
(XXX) Distance Between Crosswalks With Improvements

XXX Existing Distance Between Crosswalks

On-Street Bicycle Lane

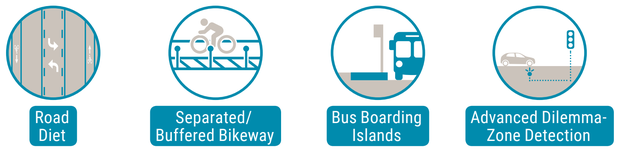


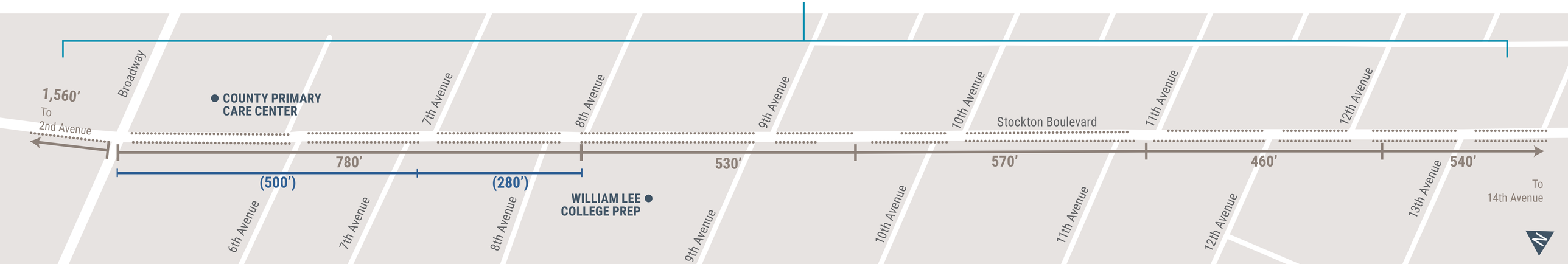
What You See Today



What's Proposed

Corridor-Wide Recommendations





NORTH STOCKTON BOULEVARD
RECOMMENDATIONS

SPEED LIMIT 35

(XXX) Distance Between Crosswalks With Improvements

XXX Existing Distance Between Crosswalks

On-Street Bicycle Lane

Location-Specific Recommendations

Pedestrian Scramble

Shorten Signal Cycle Length

Extend Signal Clearance Time

Red Light Camera

Extend Pedestrian Crossing Time

Consolidate Driveways

Intersection Tightening

Dual Curb Ramps

High Visibility Crosswalk

Raised Median

Leading Pedestrian Interval

Prohibit Left Turn

New Traffic Signal

High Visibility Crosswalk

New Traffic Signal

High Visibility Crosswalk

Relocate Crosswalk

High Visibility Crosswalk

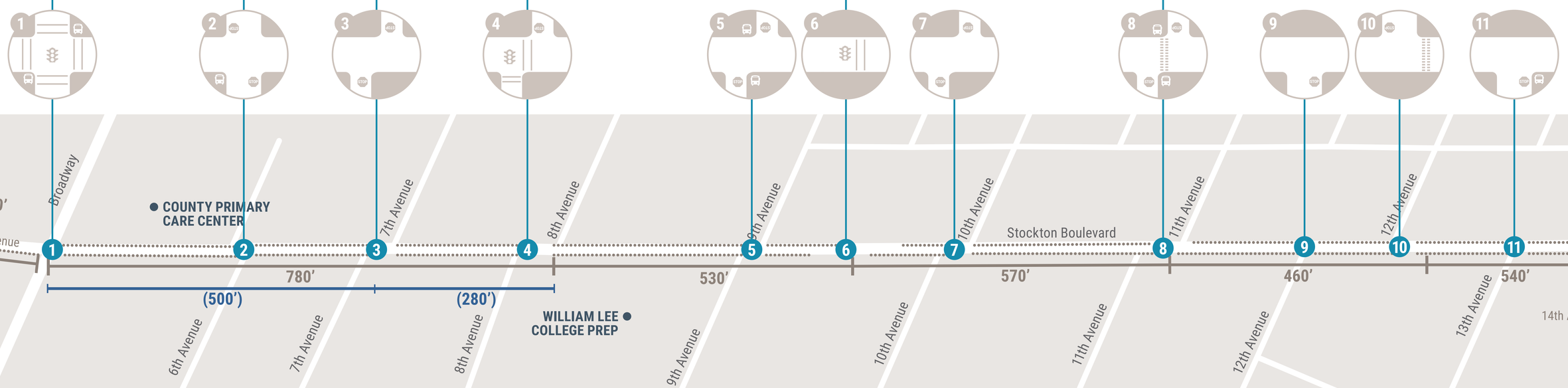
High Visibility Crosswalk

Close Bike Lane Gap

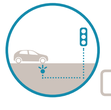
Relocate Crosswalk

High Visibility Crosswalk

Existing Conditions



NORTH STOCKTON BOULEVARD IMPROVEMENTS



Advanced Dilemma-Zone Detection

Signals/Signage

Advanced dilemma-zone detection enhances safety at signalized intersections by modifying traffic control signal timing on the fly to reduce the number of drivers that may have difficulty deciding whether to stop or proceed during a yellow phase. This may reduce rear-end crashes associated with unsafe stopping and angle crashes due to red light running.

Bus Boarding Islands

Bike Safety

Dedicated waiting and boarding areas for passengers that are separated from the sidewalk by a bike channel, eliminating conflicts between transit vehicles and bikes at stops.

Close Bike Lane Gap

Bike Safety

Closing gaps between bicycle lanes increases the amount of dedicated facilities bicyclists can use, reducing mixing of bicyclists and drivers and increasing network connectivity and visibility of bicyclists in the roadway.

Consolidate Driveways

Bike Safety, Pedestrian

Reducing the number of driveway entrances/ exits through consolidation limits the exposure of bicyclists, pedestrians, and drivers to vehicles entering or exiting driveways, reducing conflicts.

Dual Curb Ramps

Pedestrian Safety

Dual curb ramps improve ADA accessibility at all intersection approaches so that pedestrians with mobility challenges, or those pushing carts or strollers, can safely enter and exit all crosswalks.

Extend Pedestrian Crossing Time

Crossings, Pedestrian Safety

Increases time for pedestrian walk phases, and can better accommodate vulnerable populations such as children and the elderly.

Extend Signal Clearance Time

Signals/Signage

Extending yellow and all red time allows drivers and bicyclists to safely cross through a signalized intersection before conflicting traffic movements are permitted to enter the intersection.

High Visibility Crosswalk

Crossings, Pedestrian Safety, Visibility

A crosswalk designed to be more visible to approaching drivers, striped with ladder markings using high-visibility material such as thermoplastic tape instead of paint.

Intersection Tightening

Crossings, Pedestrian Safety, Speed, Visibility

Uses temporary materials like paint, plastic bollards, and reflective markers to visually and physically narrow the street at intersections, which can create a shorter crossing for pedestrians and slows vehicles approaching the intersection and turning.

Leading Pedestrian Interval

Crossings, Pedestrian Safety, Visibility

Traffic signals timed to allow pedestrians a short head start in crossing an intersection to minimize conflicts with turning vehicles and improve pedestrian visibility.

New Traffic Signal

Signals/Signage

New traffic signals help organize travel of all modes at an intersection, limiting interactions between vehicles, pedestrians, and bicyclists with conflicting movements. New signals can have a traffic calming effect on long, high-speed straightaways.

Pedestrian Scramble

Crossings, Pedestrian Safety, Signals/Signage

Restricts vehicular movements to provide an exclusive signal phase allowing pedestrians to cross in all directions, including diagonally.

Prohibit Left Turn

Bike Safety, Crossings, Pedestrian Safety, Signals/Signage

Bans left turns at locations where a turning vehicle may conflict with pedestrians in the crosswalk or where opposing traffic volume is high. Reduces pedestrian interaction with vehicles when crossing.

Raised Median

Crossings, Pedestrian Safety, Speed

Curbed sections in the center of the roadway that are physically separated from vehicular traffic. Raised medians can also help control access to and from side streets and driveways, reducing conflict points.

Red Light Camera

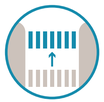
Signals/Signage

Red light cameras can be used for automated enforcement to issue citations to drivers running red lights at signalized intersections, and may discourage this behavior.

R36 35% — Caltrans Local Road Safety Manual ID / Crash Reduction Factor

Safety Issue Categories

NORTH STOCKTON BOULEVARD
IMPROVEMENTS



Relocate Crosswalk

Crossings, Pedestrian Safety, Visibility

Relocating existing crosswalks can help improve pedestrian visibility, shorten crossing distances, and minimize conflicts with vehicles. In some cases, crosswalks currently located between two legs of an offset intersection may be moved to the far side of the intersection to minimize the number of conflicting vehicle turning movements.

R15 30%

Road Diet

Speed, Pedestrian Safety, Bike Safety, Crossings

Road diets generally reassign space in the roadway from vehicle travel lanes to create room for bicycle facilities, wider sidewalks, or center turn lanes. Road diets optimize street space to benefit all users by improving the safety and comfort of pedestrians and bicyclists, and reducing vehicle speeds and the potential for rear end collisions.

R36 35%

Separated/Buffered Bikeway

Bike Safety

Designated bicycle lanes, separated from vehicle traffic by a physical barrier, usually bollards, landscaping, or parked cars. These facilities can increase safety by decreasing opportunities for collisions with over-taking vehicles, and reducing the risk of dooring.

S3 15%

Shorten Signal Cycle Length

Signals/Signage

Reducing the cycle length at intersections may reduce the delay experienced by vehicles, bicyclists, and pedestrians. When delay is significant, road users are more inclined to ignore signal indications.

R36 — Caltrans Local Road Safety Manual ID
35% — Crash Reduction Factor

Safety Issue Categories