



# Recommendations to Improve Pedestrian & Bicycle Safety for the Community of North Shore



October 2017



**Berkeley SafeTREC**  
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

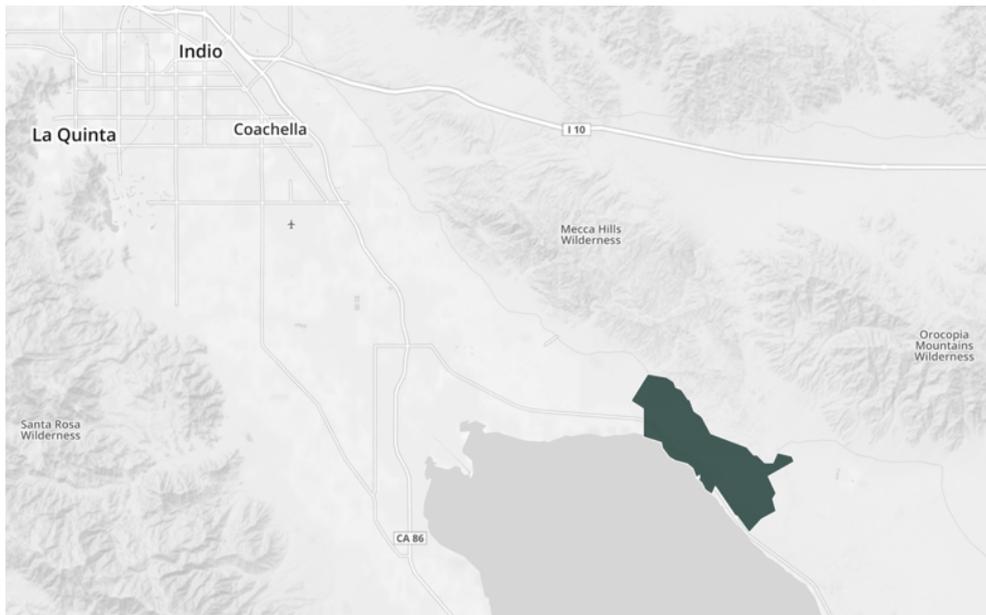
# Recommendations to Improve Pedestrian & Bicycle Safety for the Community of North Shore

By Tony Dang, Wendy Ortiz, California Walks;

Jill Cooper, Ana Lopez, UC Berkeley Safe Transportation Research & Education Center (SafeTREC)

## Introduction

At the invitation of the non-profit organization Leadership Counsel for Justice and Accountability, the University of California at Berkeley’s Safe Transportation Research and Education Center (SafeTREC) and California Walks (Cal Walks) facilitated a community-driven pedestrian and bicycle safety action-planning workshop in the unincorporated community of North Shore in Riverside County to improve pedestrian safety, bicycle safety, walkability, and bikeability across the community. North Shore is a rural unincorporated community located along the northeast shore of the Salton Sea and has a population of approximately 3,500 people.



The community of North Shore in relation to the Coachella Valley (northwest photo area).

Prior to the workshop, Cal Walks staff conducted an in-person site visit on Tuesday, August 29, 2017, to adapt the Community Pedestrian and Bicycle Safety Training program curriculum to meet the local communities’ needs and to provide context-sensitive example strategies for the community’s existing conditions. Cal Walks facilitated the workshop on Friday, September 22, 2017 from 4:00 pm to 8:00 pm at a community resident’s home, which consisted of: 1) an overview of multidisciplinary approaches to improve pedestrian and bicycle safety; 2) two walkability and bikeability assessments along two key routes; 3) an exercise to crowdsource undocumented traffic collisions and to document safety concerns and barriers identified by residents; and 4) action-planning discussions to facilitate the

development of community-prioritized recommendations to inform active transportation efforts in North Shore. This report summarizes the workshop proceedings, as well as ideas identified during the process and recommendations for pedestrian and bicycle safety projects, policies, and programs.

## Background

### Community Pedestrian and Bicycle Safety Training Program

The Community Pedestrian and Bicycle Safety Training (CPBST) program is a joint project of UC Berkeley SafeTREC and Cal Walks. Funding for this program is provided by a grant from the California Office of Traffic Safety (OTS) through the National Highway Traffic Safety Administration (NHTSA). The purpose of the CPBST program is to train local neighborhood residents and safety advocates on how to improve pedestrian and bicycle safety and to strengthen their collaboration with local officials and agency staff to make communities safer and more pleasant to walk and bike. For each training, the program convenes a multi-sector, multi-disciplinary local planning committee to tailor and refine the training's curriculum and focus to meet the community's needs. Additionally, Cal Walks staff conduct pre-training site visits to collect on-the-ground observations of existing walking and biking conditions to inform the training's scope and focus.

The half-day training is designed to provide participants with both pedestrian and bicycle safety best practices and a range of proven strategies (the 6 E's: Empowerment & Equity, Evaluation, Engineering, Enforcement, Education, and Encouragement) to address and improve pedestrian and bicycle safety conditions and concerns. Participants are then guided on a walkability and bikeability assessment of nearby streets before setting pedestrian and bicycle safety priorities and actionable next steps for their community.

For a summary of outcomes from past CPBST workshops, please visit:

[www.californiawalks.org/projects/cpbst](http://www.californiawalks.org/projects/cpbst) and <https://safetrec.berkeley.edu/programs/cpbst>

## Selected Pedestrian & Bicycle Safety Conditions in North Shore

### Lack of Sidewalks & Other Pedestrian Facilities

With the exception of the immediate area surrounding Reyes Market, no sidewalks or crosswalk markings exist in the community of North Shore. Combined with the wide streets and lack of travel lane markings, the lack of sidewalks creates unsafe conditions for residents walking in the community, and in particular, for students walking to/from school bus stops distributed throughout the community. In an attempt to ensure the safe passage of their students, the Coachella Valley Unified School District requires its bus drivers to exit their buses with a hand-held stop sign to help manage traffic. However, this also poses a threat to the bus drivers as they often stand in the middle of the street while drivers maneuver around them.



Lack of sidewalks, street lighting, and lane markings, as well as blurring of street edge by sand.



Bus driver required to direct traffic to help kids alight from school bus.

## Lack of Street Lighting, Pedestrian-Scale Lighting, & Shade

With the exception of the immediate area surrounding Reyes Market, no street lighting or pedestrian-scale lighting exists in the community. The dark conditions make it very difficult for drivers to see anyone walking in the streets. Compounded by the lack of sidewalks, these conditions create a dangerous environment for pedestrians and bicyclists to share the roadway with vehicles. Additionally, the community has no shade trees or shade structures, which are especially needed in the hot summer months. The sole exception to this is a relatively new bus shelter in front of Reyes Market that provides some shade; yet this bus stop sits directly across from a completely unimproved bus stop.



Unimproved bus stop lacking shade and lighting across from a newly installed bus shelter.

## Wide Streets & High Speeds

Many streets in the community are very wide and lack lane or center divider markings. Many streets are straight and consequently, are conducive to drivers traveling at very high speeds. The wide streets and high speeds of drivers combined with the lack of sidewalks or other physical separation for people walking in the community result in dangerous conditions for residents, especially for students who travel in all directions when alighting from their school buses.



Wide streets with minimal pavement markings.  
Wide turn radii of streets can encourage drivers to make turns at high speeds.



Wide streets with long straight sections often facilitate drivers to travel at high speeds in the community.

## Pedestrian & Bicycle Collision History

Between 2006-2015,<sup>1</sup> there was 1 pedestrian collision and 2 bicycle collisions. Fortunately, none of these collisions resulted in fatalities or serious injuries. While this is a low number of collisions, the rate of collisions per 100,000 population for a community the size of North Shore is quite alarming. This situation is common in rural communities. To serve geographically and culturally diverse communities means that rate should be taken into consideration. A full discussion of the pedestrian and bicyclist collision data from official data sources prepared by UC Berkeley SafeTREC can be found Appendix A.

Due to the community's remote location where law enforcement and emergency services response times have been reported by residents to take over one hour, there may be a number of unreported

---

<sup>1</sup> Please note 2014 and 2015 data is provisional.

collisions in official data sources where a person in a collision might go directly to receive medical care. As part of the workshop, community members were asked to identify both overall traffic collisions that have occurred in the community that were not captured in the official data sources, as well as other safety concerns and barriers.

Through this crowdsourcing exercise, community members identified an additional 5 traffic collisions not reflected in official data sources (Costa Mesa Drive and 69th Avenue; Sea View Way and 70th Avenue; Flamingo Drive and Miramar Drive; and Via Costa Brava and Miramar Drive), as well as one incident on Coral Reed Road and Harbor Drive where a pedestrian was killed by stray and aggressive pitbulls.



Participants working on large-scale plotter maps to crowdsource collision and other safety data not reflected in official data sources.

In terms of safety concerns and barriers, participants identified high speeds (particularly along 70th Avenue, Harbord Drive, 72nd Avenue, Rocky Point Drive, Vander Veer Road, and Mirarmar Drive); stray and aggressive dogs (especially on the east end of 70th Avenue and near 72nd Avenue and Windlass Drive); the lack of sidewalks near school and SunLine bus stops; off-road vehicle users traveling at high speeds on the weekends and during holidays; and the lack of street and pedestrian-scale lighting (particularly on Vander Veer Road, Seaside Avenue, and Costa Mesa Drive) as their primary safety concerns and barriers that prevent them from walking, biking, or taking transit more often.

## September 22, 2017 Workshop

Leadership Counsel for Justice and Accountability requested a workshop to 1) provide County staff, community organizations, and residents with a toolkit for promoting pedestrian and bicycle safety to inform future active transportation projects; 2) strengthen working relationships between County and other regional agency staff, community organizations, residents, and other stakeholders to ensure the

best outcomes for the residents of North Shore]; and 3) develop consensus regarding pedestrian and bicycle safety priority and actionable next steps that can help inform a regional mobility plan for the unincorporated Eastern Coachella Valley communities, as well as to inform potential grant applications to the state’s Active Transportation Program.



Riverside County Supervisor V. Manuel Pérez providing opening remarks for the workshop.

The workshop was hosted from 4:00 pm to 8:00 pm, and dinner and child watch were provided to maximize community participation. Additionally, the workshop was facilitated entirely in Spanish with simultaneous interpretation from Spanish to English to accommodate agency staff participants who do not speak Spanish. Forty (40) individuals attended the workshop, including community residents, Riverside County Supervisor V. Manuel Pérez, and representatives from Leadership Counsel for Justice and Accountability, SunLine Transit Agency, Kounkuey Design Initiative (KDI), Inland Congregations United for Change (ICUC), and Lideres Campesinas.



Participants learning the 6 E's approach to pedestrian and bicycle safety

## Reflections from Walkability & Bikeability Assessment & Community Resident Recommendations

Workshop participants conducted walkability and bikeability assessments along 2 routes:

- Route 1 traveled from Miramar Drive to Dolphin Drive, then traveled down Dolphin Drive to Sea View Way, and finally returned to the workshop location via Lookout Drive. This Route focused on conditions along Miramar Drive, where a school bus stop and small community playground is located, as well as on conditions along Sea View Way, which residents noted felt dangerous to drivers traveling at high speeds.
- Route 2 traveled from Miramar Drive down 70th Avenue to the intersection of 70th Avenue and Vander Veer Road. The focus of this route was to examine conditions along 70th Avenue and to compare and contrast conditions along 70th Avenue and other parts of the community to the improved conditions around Reyes Market.



Participants discussing community conditions during the walk assessment.

Participants were asked to 1) observe infrastructure conditions and the behavior of all road users; 2) apply strategies learned from the 6 E's presentation that could help overcome infrastructure concerns and unsafe driver, pedestrian, and bicyclist behavior; and 3) identify positive community assets and strategies which can be built upon.

Following the walkability and bikeability assessment, the participants shared the following reflections and priorities for improvements to key routes where they currently walk, bike or take transit (in order of priority):

- **Installation of Sidewalks at Key Locations:** Participants underscored the need for sidewalks in the community to provide physical separation to residents and children walking to/from bus stops and other community destinations in North Shore. Participants identified installing sidewalks throughout North Shore as a top priority for improving safety for people walking. Residents prioritized sidewalk installation to connect the community to the planned North Shore Community Park; to connect residences to school bus stops and to SunLine bus stops;

and to connect residences with key community destinations such as Reyes Market and the playground on Miramar Drive.

- **Installation of Lighting at Key Locations:** Participants underscored the complete lack of street lighting throughout North Shore, and universally agreed that pedestrian-scale lighting should be prioritized for areas leading to school bus stops and SunLine bus stops. Participants noted that SunLine has historically refused to install bus shelters and lighting in areas with no sidewalk due to a concern about letting customers disembark safely, so residents feel caught in a bind where neither option offers safety. The playground on Miramar Drive also lacked any sort of lighting. Participants identified the installation of street lighting and pedestrian-scale lighting throughout North Shore as a top priority for improving safety for people walking and biking. Residents also prioritized the installation of pedestrian-scale lighting at the planned North Shore Community Park, at school bus stop locations, at SunLine bus stops, and at the community playground.



Lack of lighting at community playground.

- **Installation of High-Visibility Crosswalks:** Residents strongly supported the installation of high-visibility crosswalks near key community destinations, particularly leading to the planned North Shore Community Park and at the Reyes Market intersection (Vander Veer Rd and 70th Avenue). Participants also identified the following locations for high-visibility crosswalks: Lookout Drive and Miramar Drive and 70th Avenue and Costa Mesa Drive.
- **Regulating Off-Road Vehicle Users & Events:** Residents also noted that people from outside the community come to North Shore to use their all-terrain vehicles (ATVs), off-road vehicles (OHV), and motocross vehicles, primarily on weekends and holidays. These users operate their vehicles at extremely high speeds on residential streets, jeopardizing the safety of North Shore residents and cause a great deal of noise pollution. Participants voiced strong support for the County to better regulate off-road vehicle users and events. Though residents did not identify specific measures, they are committed to work with the County to develop an appropriate and effective response.
- **Desire for Transit Improvements:** Participants underscored that many residents rely on SunLine buses for their transportation to access health care, school, and other essential social services. Residents expressed a strong desire for more frequent SunLine service to North Shore, as well

as to expand bus routes to serve the entire community. Participants also shared that they have experienced SunLine buses regularly failing to have ramps that can be deployed for riders who need them.



Improved bus stop in front of Reyes market that residents would like to see in more locations throughout North Shore.

- **Need to Address High Speeds:** Residents repeatedly expressed concerns with drivers traveling at high speeds, particularly along Sea View Way, Costa Mesa Drive, 70th Avenue, Vander Veer Road, Bounty Avenue, and 72nd Avenue. Participants supported the installation of speed bumps and other traffic calming measures to slow drivers on 70th Avenue. Participants were asked to 1) observe infrastructure conditions and the behavior of all road users; 2) apply strategies learned from the 6 E's presentation that could help overcome infrastructure concerns and unsafe driver, pedestrian, and bicyclist behavior; and 3) identify positive community assets and strategies which can be built upon.



Off-road vehicle users observed during walk assessment.

## California Walks/SafeTREC Recommendations

California Walks and SafeTREC also submit the following recommendations for consideration by the Riverside County Transportation Department, SunLine Transit Agency, and community groups:

- **Train Residents to Conduct Additional Walk/Bike Assessments:** Cal Walks and SafeTREC recommend that Leadership Counsel for Justice and Accountability and Kounkuey Design Initiative (KDI)—who spearheaded the planning for this workshop—work with Inland Congregations United for Change (ICUC) and Lideres Campesinas to train more residents to conduct additional walk/bike assessments. The community collection of qualitative data is critically important to better position North Shore to be competitive for grant opportunities. Specifically, we recommend working with residents to identify the key routes to school bus stops, SunLine bus stops, and the planned North Shore Community Park. Conducting walk/bike assessments along these routes to collect data should be coupled with photos to document existing conditions and safety concerns/barriers. Cal Walks has provided large-scale plotter maps of North Shore depicting designated school bus stops to assist in this effort and is able to offer follow-up technical assistance to community organizations if needed.
- **Develop a Safe Routes to Transit Application to Active Transportation Program (ATP):** With an anticipated call for projects for the state Active Transportation Program (ATP) slated for Spring 2018, we recommend that the Riverside County Transportation Department and SunLine Transit Agency work with community organizations and residents in Fall 2017/Winter 2018 to

begin developing a “Safe Routes to Transit” grant application that would fund many of the residents’ priorities, including the installation of sidewalks, pedestrian-scale lighting, and high-visibility crosswalk markings to school bus stops and to SunLine bus stops. Findings from community-led walk/bike assessments (as recommended above) can support the proposal and strengthen the grant application.

- **Develop a Rural Safe Routes to School Program:** Cal Walks and SafeTREC recommend that the Riverside County Department of Public Health partner with Leadership Counsel for Justice and Accountability as it begins its Safe Routes to School program for the Eastern Coachella Valley. Particularly if the Safe Routes to Transit project is awarded ATP funds, the Public Health Department can work with parents and residents to organize walking school buses to/from the school bus stops, as well as to/from the planned North Shore Community Park to encourage additional physical activity opportunities. Additional resources that may help include the Safe Routes to School National Partnership’s “Rural Communities: Best Practices and Promising Approaches for Safe Routes” guide to help rural communities develop a SRTS program in light of their unique infrastructural and environmental obstacles. Investing time and resources in this programming now can help the community develop a program at the school anticipated to be built in North Shore in the coming years.

## Acknowledgments

We would like to thank Rebecca Zaragoza (and her predecessor Mariela Magana) of Leadership Counsel for Justice and Accountability for inviting us to North Shore and to Maria (“Conchita”) Concepcion Pozar-Gonzalez for inviting us into her community and hosting the Community Pedestrian and Bicycle Safety Training in her home. We would also like to thank Juan Antonio Ramirez of Circulate San Diego for facilitating the training in Spanish.

Lastly, we would like to acknowledge the many community members and agencies present at the workshop and their dedication to pedestrian and bicycle safety. Their collective participation meaningfully informed and strengthened the workshop’s outcomes.

Funding for this program was provided by a grant from the California Office of Traffic Safety through the National Highway Traffic Safety Administration.

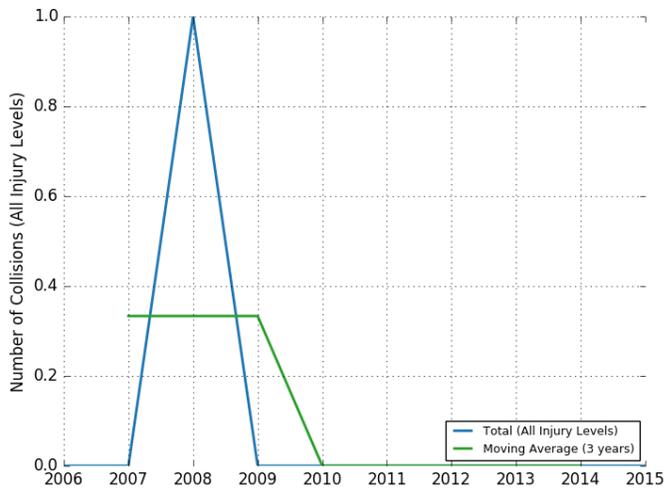
# **Appendix A**

## **Pedestrian and Bicycle Collision Data Analysis**

CPBST – North Shore, CA – September 22, 2017  
 Pedestrian and Bicycle Collision Analyses, 2006-15\*

**PEDESTRIANS**

**Number of Collisions Involving Pedestrians, 2006-15**



The blue line shows the number of pedestrian collisions where a fatality and/or injury occurred. There were 1 people injured or killed in 1 pedestrian collisions over the last 10 years.

The green line shows the three-year moving average of the number of pedestrian collisions where a fatality and/or injury occurred. The moving average is useful for tracking trend change over time, especially when the number of collisions is subject to variability. Data points are the midpoint of the three years of data specified.

The following analyses are based on the most current 10 years, 2006 to 2015, of data for North Shore, CA. In the last five years, 2011-2015, there were 0 people killed or injured in 0 pedestrian collisions.

**Top Violation Types for Collisions Involving Pedestrians, 2006-15**

Type of Violation	Collisions N(%)
Unsafe Starting or Backing	1 (100%)
<b>Total</b>	<b>1 (100%)</b>

**Pedestrian Actions in Collisions Involving Pedestrians, 2006-15**

Pedestrian Action	Collisions N(%)
Not in Road	1 (100%)
<b>Total</b>	<b>1 (100.0%)</b>

This crash occurred on a Sunday in August between 6PM and 9PM. The lighting was dark with no streetlights.

The crash occurred at 70<sup>th</sup> Ave at Vander Veer Road.

\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

Funding for this project was provided by a grant from the California Office of Traffic Safety through the National Highway Traffic Safety Administration.

# CPBST – North Shore, CA – September 22, 2017

## Pedestrian and Bicycle Collision Analyses, 2006-15\*

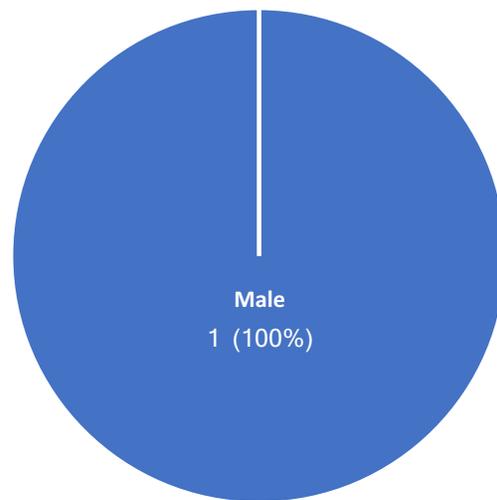
### Pedestrian Victim Demographics

The age of the pedestrian victim ranged between 14 or younger. The victim was a male.



### Victim Injury Severity, 2006-15

The victim injury resulted in complaint of pain.



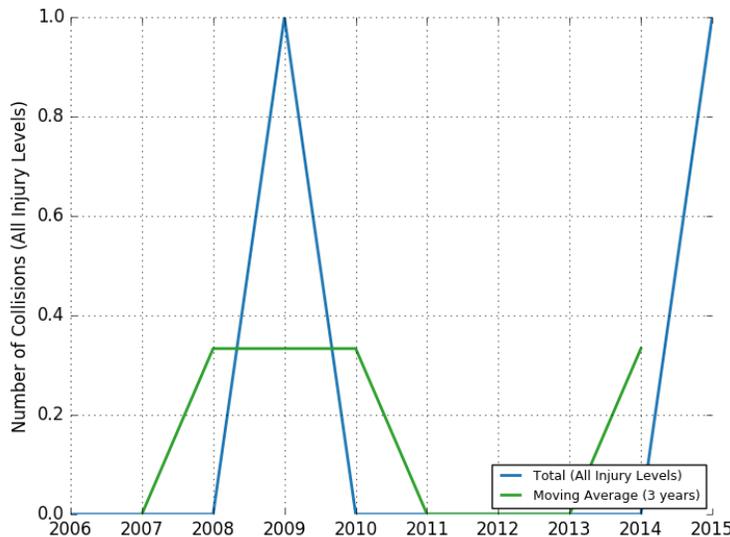
\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

Funding for this project was provided by a grant from the California Office of Traffic Safety through the National Highway Traffic Safety Administration.

CPBST – North Shore, CA – September 22, 2017  
 Pedestrian and Bicycle Collision Analyses, 2006-15\*

**BICYCLISTS**

**Number of Collisions Involving Bicyclists, 2006-2015**



The blue line shows the number of bicycle collisions where a fatality and/or injury occurred. There were 2 people killed or injured in 2 bicycle collisions over the last 10 years.

The green line shows the three-year moving average of the number of bicycle collisions where a fatality and/or injury occurred. The moving average is useful for tracking trend change over time, especially when the number of collisions is subject to variability.

The following analyses are based on the most current 10 years, 2006 to 2015, of data for North Shore, CA. In the last five years, 2011-2015, there was 1 person killed or injured in 1 bicycle collision.

**Top Violation Types for Collisions Involving Bicycles**

Type of Violation	Collisions N(%)
Automobile Right of Way	1 (50%)
Traffic Signals and Signs	1 (50%)
<b>Total</b>	<b>2 (100.0%)</b>

The two crashes occurred on Wednesday in May and Friday in June between 6PM and 9PM in daylight. One collision involved alcohol.

The collisions occurred at Miramar Drive at Flamingo Drive and at 70<sup>th</sup> Ave at Vander Veer Road.

\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

# CPBST – North Shore, CA – September 22, 2017

## Pedestrian and Bicycle Collision Analyses, 2006-15\*

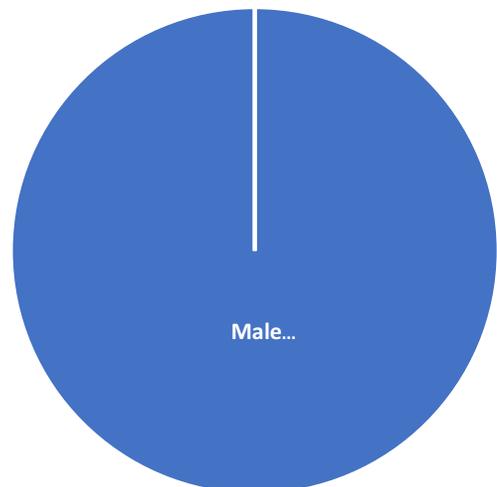
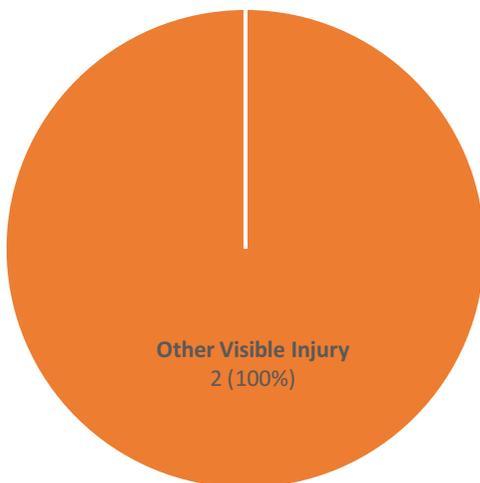
### Bicycling Victims Demographics

The age of bicycling collision victims was concentrated among the youth, with youth age 14 or younger accounting for 100 percent of victims. Both victims were male.



### Victim Injury Severity, 2006-15

Most collisions resulted in 'other visible injuries'.

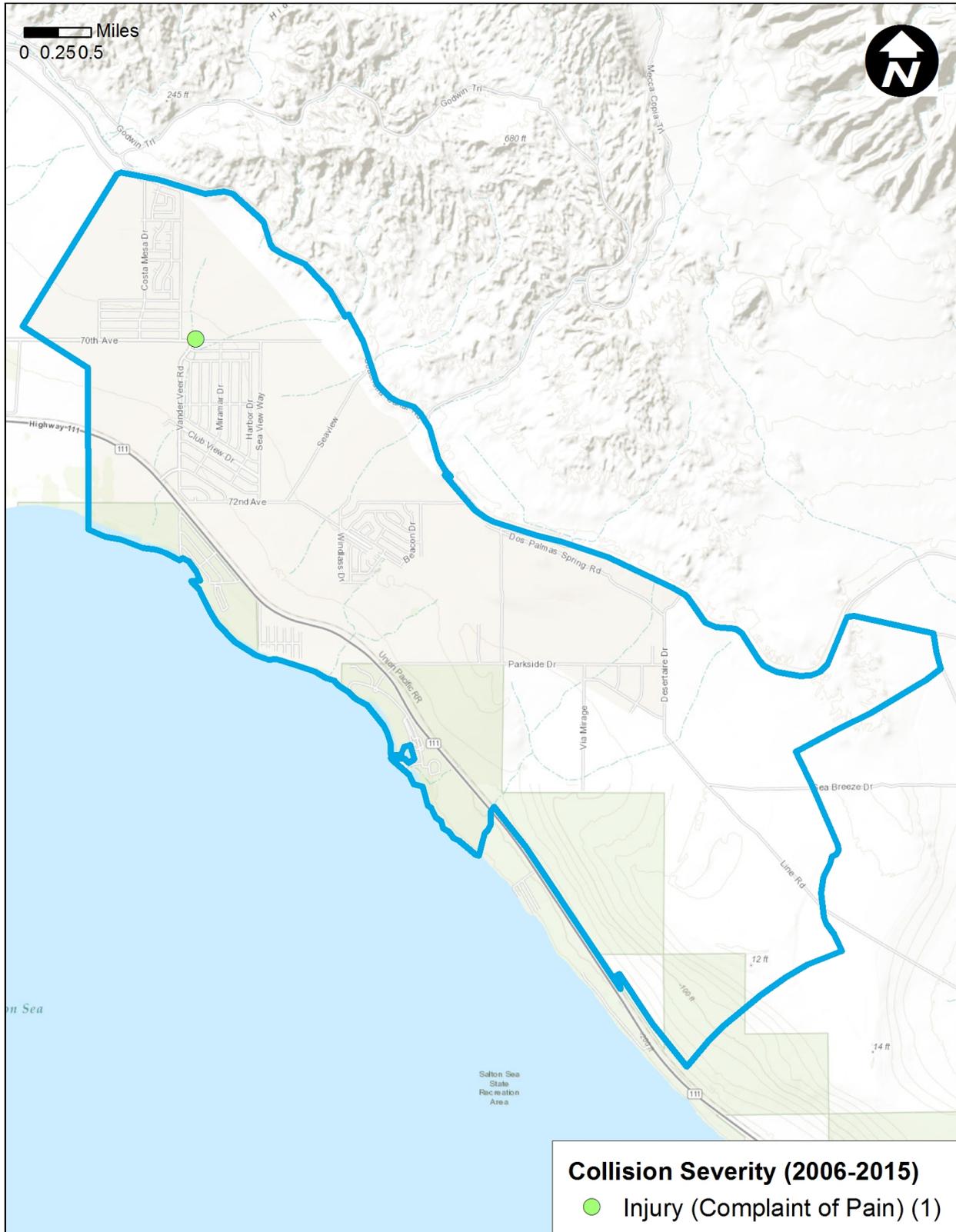


\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

Funding for this project was provided by a grant from the California Office of Traffic Safety through the National Highway Traffic Safety Administration.

CPBST – North Shore, CA – September 22, 2017  
Pedestrian and Bicycle Collision Analyses, 2006-15\*

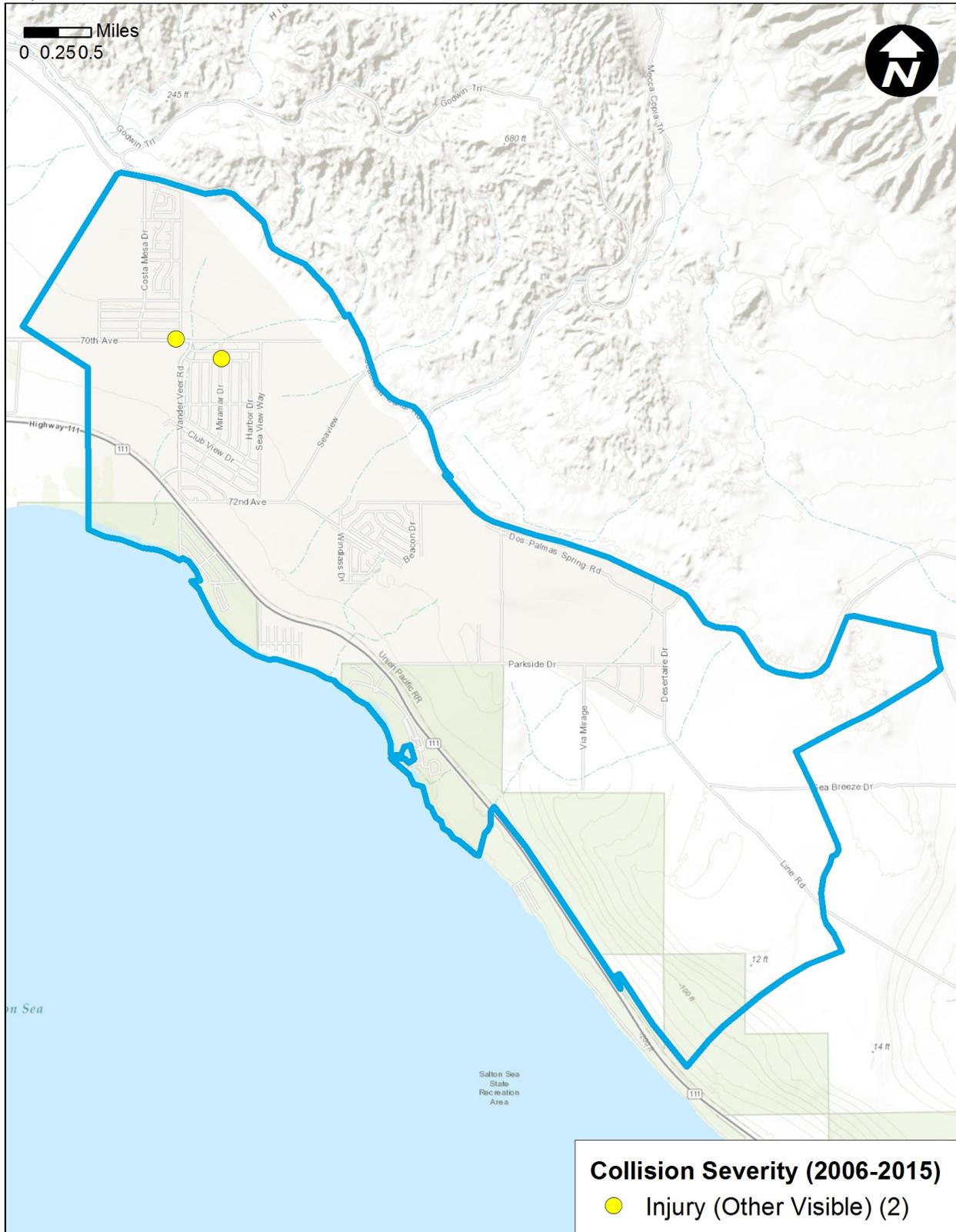
Pedestrian Collision Locations, 2006-15



\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

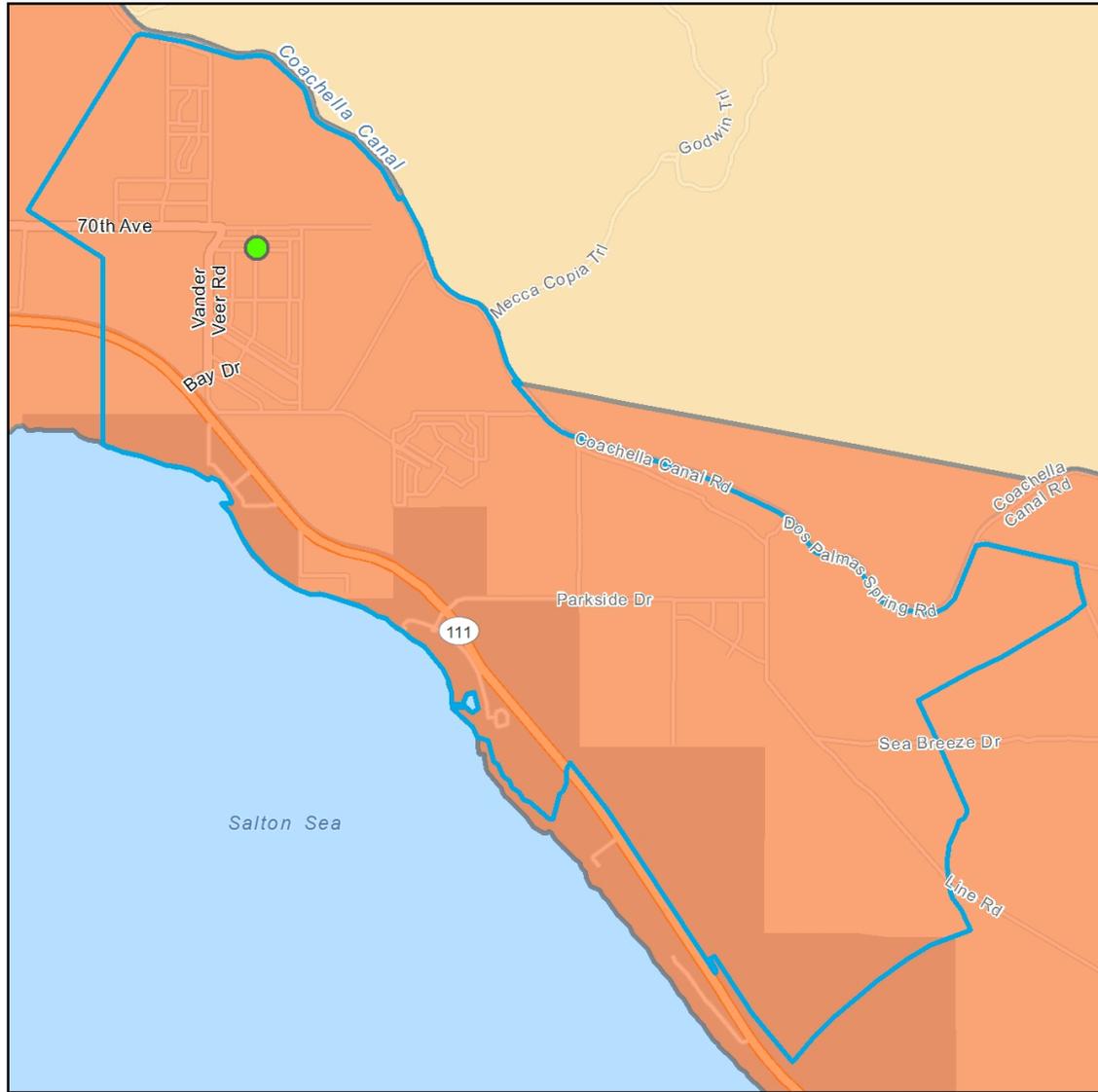
CPBST – North Shore, CA – September 22, 2017  
Pedestrian and Bicycle Collision Analyses, 2006-15\*

Bicycle Collision Locations, 2006-15



\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

# North\_Shore Bicycle/Pedestrian Collision Map (2011 - 2015)



## Collision Severity (2011-2015)

● Injury (Other Visible) (1)

## 2016 Median Household Income

< 35K

35K - 50K