



Recommendations to Improve Pedestrian & Bicycle Safety for the Conway Community in Stockton



October 2018



Acknowledgments

Planning Committee

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We would like to thank the Planning Committee for inviting us into their community and for hosting the Community Pedestrian and Bicycle Safety Training for the Conway Community in Stockton.

Thank you to Public Health Advocates and Catholic Charities for providing breakfast, lunch, and refreshments in support of this training.

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.

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Recommendations to Improve Pedestrian & Bicycle Safety for the Conway Community in Stockton

By Esther Rivera, Tony Dang, Jaime Fearer, California Walks; Tracy McMillan, Garrett Fortin, UC Berkeley Safe Transportation Research & Education Center

Introduction

At the invitation of Public Health Advocates and Catholic Charities Diocese of Stockton, California Walks (Cal Walks), the University of California at Berkeley Safe Transportation Research and Education Center (SafeTREC) and the Planning Committee collaboratively planned and facilitated a Community Pedestrian and Bicycle Safety Training (CPBST) in the Conway community in Stockton on September 12, 2018. The CPBST is a joint project of Cal Walks and SafeTREC that aims to leverage a community's existing strengths to develop a community-driven pedestrian and bicycle safety action plan and to identify pedestrian and bicycle safety priorities and actionable next steps in collaboration with community partners.

Public Health Advocates requested a workshop to 1) develop consensus regarding pedestrian and bicycle safety priority and actionable next steps; 2) determine potential improvements or programs to support better connectivity for Conway community residents to reach community amenities like schools, grocery and convenience stores, and the community center; 3) provide the City of Stockton and the San Joaquin County Housing Authority staff, community organizations, and residents with a toolkit for promoting pedestrian and bicycle safety to inform future active transportation projects; and 4) strengthen working relationships between various agencies and organizations and other stakeholders to ensure the best outcomes for the residents of the Conway community in Stockton.

Cal Walks and SafeTREC (Project Team) facilitated the workshop from 8:30 a.m. to 12:00 p.m. on September 12, 2018. Simultaneous English-to-Spanish interpretation, a child watch station, breakfast, and lunch were provided to maximize community participation. Fifteen (15) individuals attended the workshop, including representatives from Public Health Advocates, Catholic Charities Dioceses of Stockton, Conway Neighborhood Association, the City of Stockton, Stockton Police Department, and the San Joaquin Bike Coalition.

The three and a half (3.5) hour training consisted of: 1) three walking assessments along three key routes; 2) an overview of multidisciplinary approaches to improve pedestrian and bicycle safety using the intersectional 6 E's framework including: Equity & Empowerment, Evaluation,

Engineering, Education, Encouragement, and Enforcement; 3) small group action-planning discussions to prioritize recommendations for the Conway community in Stockton's active transportation efforts. This report summarizes the workshop proceedings, as well as recommendations for projects, policies, and programs for pedestrian and bicycle safety in the Conway community in Stockton.

Background

For each training, the program convenes a local multi-disciplinary Planning Committee to tailor and refine the training's curriculum and focus to meet the community's needs. The Project Team conducts pre-training site visits to collect on-the-ground observations of existing walking and biking conditions to adapt the CPBST curriculum and to provide context-specific strategies for the community's existing conditions.

Planning Process

The Stockton Conway community began its planning process in February 2018. The planning process consisted of:

- **Community Plans and Policies Review:** Cal Walks conducted a review of current community planning documents to inform the training with local context and prepare to build off existing efforts. The following documents were reviewed prior to the site visit:
 - [San Joaquin County General Plan: 3.2 Public Facilities and Services Element](#), 2016
 - [City of Stockton General Plan 2035](#), 2007
 - [City of Stockton Bicycle Master Plan](#), 2017
- **Analysis and Mapping of Pedestrian and Bicycle Injury Data:** SafeTREC used the Statewide Integrated Traffic Records System (SWITRS) and the Transportation Injury Mapping System (tims.berkeley.edu) to analyze pedestrian and bicycle collision injury data in the Conway community, as well as Census data to create rates based on population. Patterns of injury collisions, victim characteristics, and demographics were analyzed and presented at the site visit and during the workshop
- **Identification of Priority Discussion Topics for Training:** In reviewing the pedestrian and bicycle collision data for the City of Stockton, the Planning Committee noted stark disparities between neighborhoods and decided on focusing the CPBST on a South Stockton community. During the site visit a resident from the Conway community prepared a presentation reviewing community concerns for walking and biking and urged the Planning Committee to consider hosting the workshop with a focus on the Conway community. After further discussions, the Planning Committee identified the

Conway community as the focus of the Stockton CPBST and developed the following goals for the training:

- To determine potential solutions to make walking and biking to and from the Conway community safer for residents;
 - Identify opportunities to create safe routes to school for children walking to Marshall and Taylor Elementary Schools; and
 - Identify opportunities to create better connectivity to healthy food including the Food-4-Less on Carolyn Weston Boulevard and the California Stop convenience store on Manthey Road.
- **Site Visit:** The Project Team facilitated an in-person site visit on July 27, 2018 with the Planning Committee at Public Health Advocates' office to: 1) review existing pedestrian and bicycle collision data for the City of Stockton; 2) collect qualitative data based on in-person observations of existing conditions and travel behaviors and; 3) conduct preliminary walking assessments of the Conway community. The Project Team used the site visit findings to develop the workshop presentation, including featuring local infrastructure examples and developing the walking and biking assessment route maps. During the site visit, the Planning Committee identified Conway Community residents, the President of the Conway Neighborhood Association, Stockton Police Department, Councilmember Andrade, Revitalize South Stockton, and Trust Builders as key stakeholders to invite to the CPBST.

Existing Conditions

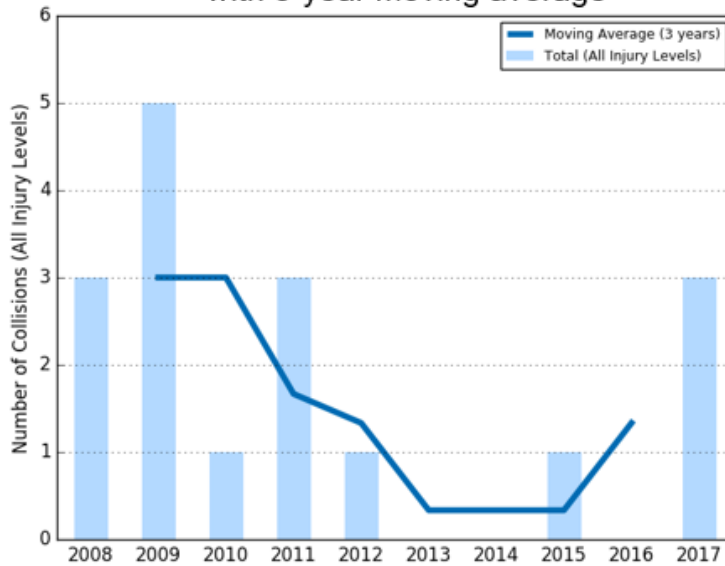
Pedestrian & Bicycle Collision History¹

Between 2013-2017, there were four (4) pedestrian collisions, including one (1) pedestrian fatality and one (1) pedestrian severe injury in the Conway community. Collisions in this time period were concentrated on Manthey Road and 8th Street and primarily occurred in the evening from 6:00 p.m. to 11:59 p.m. The primary collision factor for pedestrian collisions was the pedestrian failure to cross at a crosswalk between adjacent traffic signal controlled intersections (50%).² While pedestrian collisions have generally been on a downward trajectory, 2017 experienced a marked increase in pedestrian collisions.

¹ 2016 SWITRS data are provisional as of March 2018.

² Pedestrians have the right-of-way in marked and unmarked crossings, and drivers are legally required to yield to pedestrians in these instances. However, when pedestrians cross outside of marked or unmarked crossings, pedestrians must yield the right-of-way to drivers. A pedestrian is legally able to cross outside of a marked or unmarked crossing between two intersections where one or none of the intersections is signalized but only if the pedestrian yields the right-of-way to oncoming drivers. This is not the same as the term "jaywalking," which refers to crossing outside of a marked or unmarked crossing between two signalized intersections.

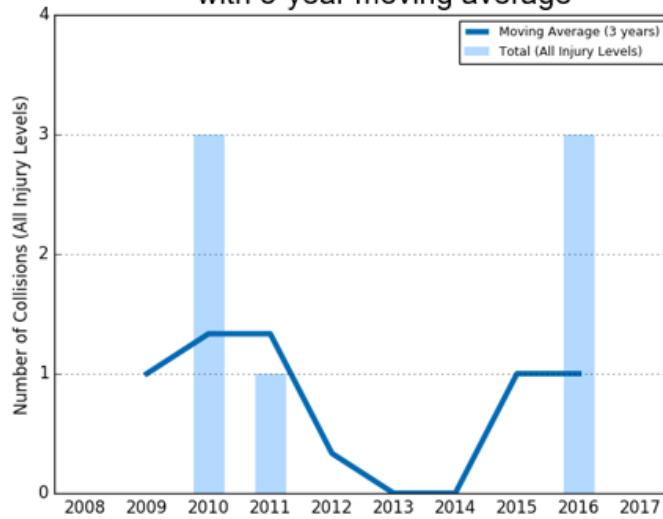
Pedestrian Injury Collision Trend (2008-2017) with 3-year moving average



Between 2013-2017, there were three (3) bicycle collisions, including three (3) bicyclist visible injuries in the Conway community. Collisions in this time period were concentrated on 8th Street and Georgia Avenue. The primary collision factor for bicycle collisions was failure to drive/ride on the right half of the roadway, also known as riding against traffic (100%).³ While bicycle collisions have generally been on a downward trajectory, 2016 experienced a marked increase in bicycle collisions.

³ According to California Vehicle Code 21200, bicycles are considered vehicles, therefore, bicyclists on public streets have the same rights and responsibilities as automobile drivers. This makes it difficult to discern whether a bicyclist or driver is at fault.

Bicycle Injury Collision Trend (2008-2017) with 3-year moving average

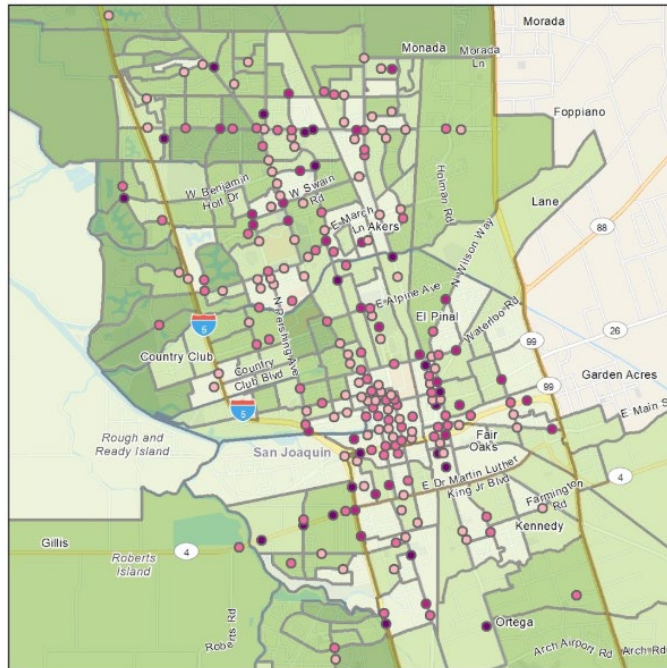


A full discussion of the pedestrian and bicyclist collision data prepared by UC Berkeley SafeTREC can be found in Appendix A and B.

Pedestrian Collisions and Income 2012-2016 Total: 337 collisions mapped

- Collision Severity (2012-2016)**
- Fatal (31)
 - Injury (Severe) (42)
 - Injury (Other Visible) (124)
 - Injury (Complaint of Pain) (140)

- 2017 Median Household Income**
- < 35K
 - 35K - 50K
 - 50K - 75K
 - > 75K



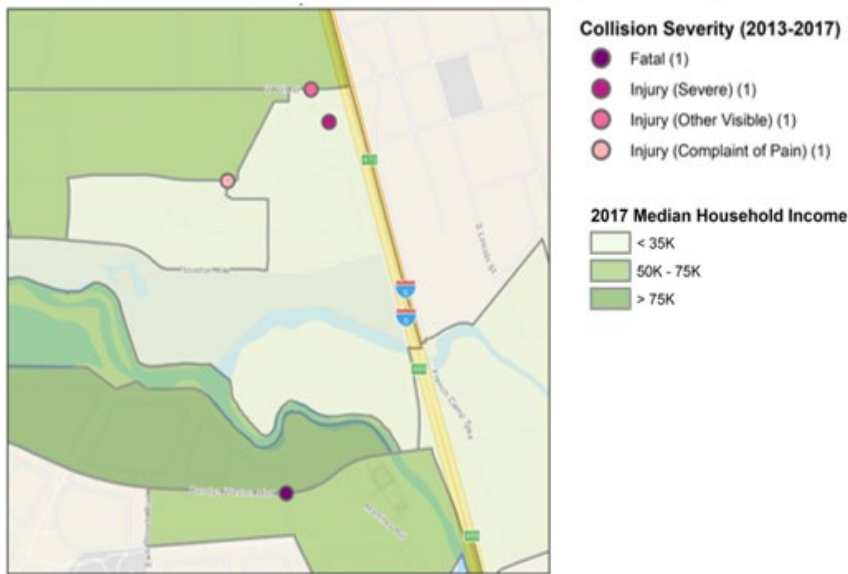
Equity Concerns

One of the greatest concerns for the Conway community in Stockton is its isolation and limited connectivity to other parts of the City. The Conway community is surrounded by the Walker

Slough to the south and west, Manthey Road and Interstate 5 to the east, and 8 Mile Road to the north. These barriers create challenges to leaving the area without a vehicle due to limited infrastructure to support safe walking and biking. The San Joaquin County Housing Authority maintains jurisdiction over the Conway community as an affordable housing complex, which creates additional challenges and barriers to coordination among the Housing Authority and the City of Stockton for basic road maintenance and other improvements.

During the CPBST site visit, the Planning Committee requested that the workshop be held in South Stockton. As noted on the Pedestrian Collision and Income Map, a large proportion of collisions occur in the Downtown and South Stockton communities. These communities are also lower income segments of the City of Stockton, as noted on the map. Residents of the Conway community reported that oftentimes collision in their neighborhood go unreported due to concerns over liability and a preference to avoid involving law enforcement.

Conway Community Pedestrian Collision Map (2013-2017) Stockton, CA

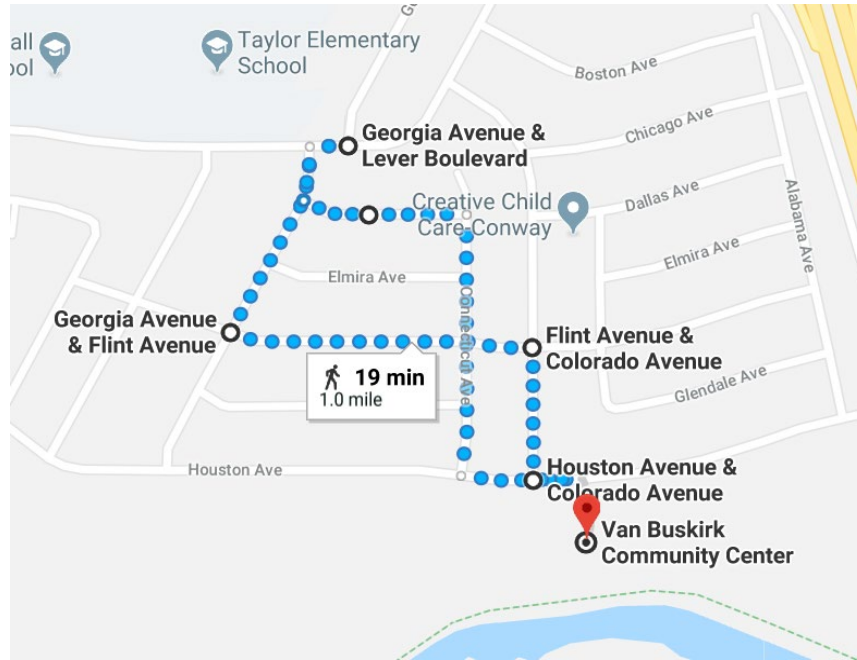


Walking & Biking Assessment Reflections

Participants were asked to: 1) observe infrastructure conditions and the behavior of all road users; 2) assess the qualitative and emotional experience of walking or biking along the route; 3) identify positive community assets and strategies which can be built upon; 4) consider how the walking and biking experience might feel different for other vulnerable users.

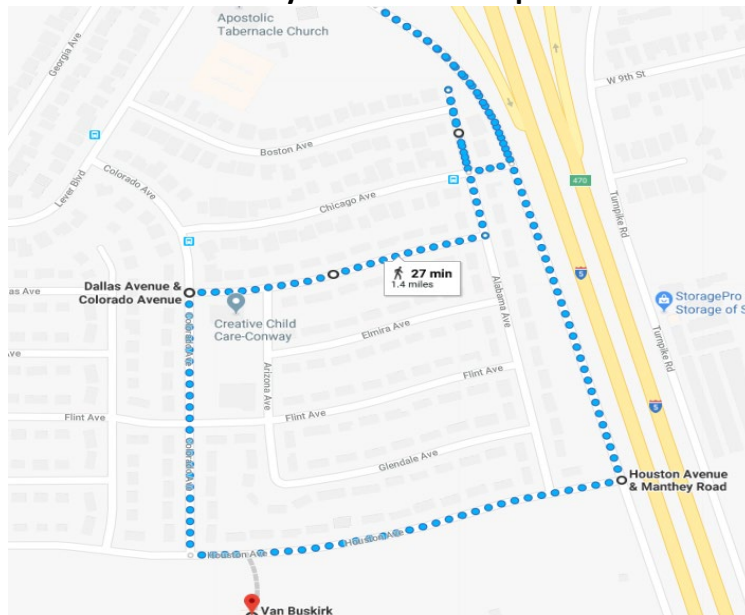
Workshop participants conducted walking and biking assessments along three key routes:

Route 1: Taylor & Marshall Elementary Schools

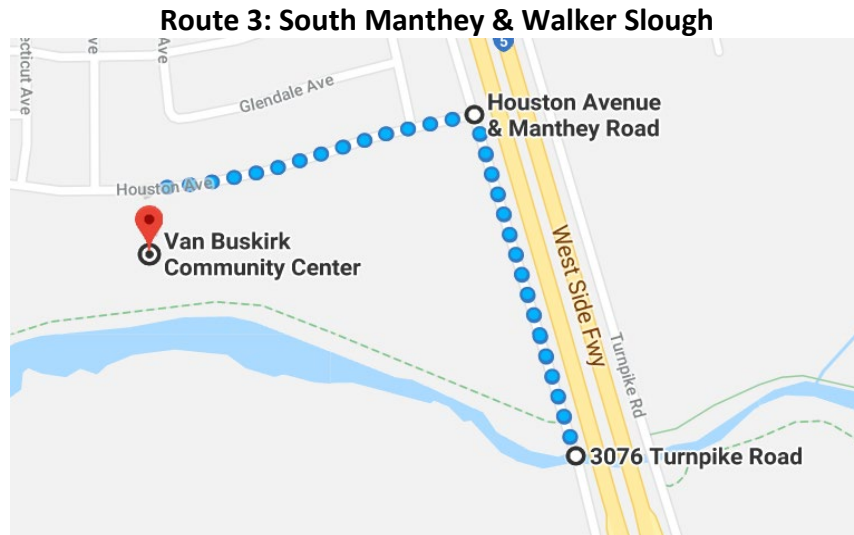


The first walking route focused on Georgia Avenue and Flint Avenue, which students use to access Taylor and Marshall Elementary Schools located along Lever Boulevard. Starting the walking assessment at the Van Buskirk Community Center, the group walked west on Houston, north on Colorado, west on Flint, North on Georgia to Lever Boulevard, south on Georgia Avenue, east on Dallas Avenue, South on Connecticut Avenue and east on Houston to end at the Community Center.

Route 2: North Manthey & California Stop Convenience Store



The second walking route focused on Manthey Road north of Houston Avenue, which residents use to reach California Stop, their local convenience store. Starting the walking assessment at Van Buskirk Community Center, the group walked east on Houston Avenue, north on Manthey Road, and then used the foot path that connects Manthey to Alabama Avenue. The group then went south on Alabama Avenue, west on Dallas Avenue, south on Colorado Avenue, and east on Houston Avenue back to the Community Center.



The third walking route focused on Manthey Road, south of Houston Avenue, which community residents use as the main route to access the closest grocery store in the community on Carolyn Weston Boulevard. The Planning Committee selected this route due to reports of a recent collision involving three teens walking on Manthey. Starting the walking assessment at Van Buskirk Community Center, the group walked east on Houston Avenue, south on Manthey Road to the bridge at Walker Slough, north on Manthey Road, and east on Houston Avenue ending at the community center.

Following the walking and biking assessment, the participants shared the following reflections:



A Number of intersections in the Conway community have newer, ADA-compliant curb ramps. Many of these ramps, however, are not aligned with the marked crosswalks and have been placed behind the stops signs and STOP road markings



Residents commonly legally cross outside of crosswalks to access Van Buskirk Community Center and Park on the south side of Houston Avenue from their homes on the north side.

- **Challenging Unmarked and Uncontrolled Crossings:** While standard marked crosswalks exist along Flint Avenue and at the intersections of Lever Boulevard/Georgia Avenue and Flint Avenue/Colorado Avenue, the vast majority of crossings in the neighborhood are unmarked and/or uncontrolled crosswalks. These create challenges for pedestrians crossing, as well as for drivers who may not be expecting people walking or crossing. Many unmarked and uncontrolled crossings are located in very wide intersections with high posted speed limits, which create very challenging and potentially unsafe conditions for pedestrians. Community residents reported multiple collisions due to inattentive drivers and high speeds at the uncontrolled intersection of Flint Avenue/Connecticut Avenue. Participants on all routes agreed that a marked and enhanced crossing at Houston Avenue directly in front of the Van Buskirk Community Center is needed due to the high level of pedestrian activity and the lack of existing signage or markings indicating that residents and children regularly cross to the community center and playground. Participants on Route 2 identified the need for installing a legal, marked crossing on Manthey Road that connects the informal footpath on the west side of Manthey Road to the east side of Manthey Road to create safer conditions for residents walking and biking north out of the neighborhood.



Facing south on Manthey Avenue with the sole section of sidewalk on the bridge crossing the slough. The well-worn path indicates residents are choosing to walk on the east side of Manthey Road to avoid having to cross the road multiple times because the sidewalk ends abruptly after the slough.



Wide uncontrolled intersection at Flint Avenue/Connecticut Avenue.



Well-worn foot paths on either side of Manthey Road indicate residents are using these routes frequently. Residents using wheelchairs or other mobility assistive devices are unable to use these foot paths and must travel in the street.

- **Sidewalk Gaps and Poorly Maintained Roads:** Participants noted that although there are sidewalks and curb ramps in and along most residential streets, there are significant gaps in sidewalks and missing curb ramps along key routes used by the community.

Most significantly, Manthey Road—the only street leading out of the Conway community to a grocery store—lacks sidewalks for almost the entirety of its length. This forces residents to use the unpaved shoulders along the curb on the east side of the road as informal sidewalks. Though there is a single section of sidewalk on the west side of Manthey Road that crosses the Walker Slough, the segment ends shortly after crossing the slough. As a result, residents often choose to walk on east side where there are no sidewalks to avoid having to cross Manthey Road multiple times.

Despite the lack of sidewalks, residents heavily travel along Manthey Road on a daily basis as noted by workshop participants and evidenced by the well-worn dirt paths. However, parents with strollers and people using wheelchairs and other mobility devices are forced to travel in the street due to the lack of curb ramps and smooth surfaces. Going north on Manthey Road, a sharp curve obscures the people using the informal paths from drivers and vice-versa.

Lastly, participants on Route 1 noted multiple issues with deteriorating roadways. Residents within the community often resort to laying out traffic cones to warn drivers of a large section of roadway with loose and missing pavers on the northwest corner of Dallas Avenue/Connecticut Avenue.



Traveling northbound on Manthey Road, the foot path on the west side becomes un navigable, forcing residents to walk in the street where they are obscured from oncoming traffic by overgrown vegetation.



Frequent illegal dumping along Manthey Road exacerbates residents' feelings of neglect by City, County, and state agencies.

- **High Vehicle Speeds, Wide Roads, and Unsafe Driver Behavior:** Participants noted that vehicles travel at high speeds along Manthey Road, which has a posted speed limit of 45 mph. Participants on Routes 2 and 3 expressed concerns with walking along Manthey Road due to high vehicle speeds, sidewalk gaps, and inattentive drivers. Participants shared that many people also park on Manthey Road alongside the park during sports season, which forces people to walk further in the street and also encourages sporadic pedestrian crossings from the east side of Manthey Road. Overall, participants communicated that drivers often exceed the speed limit on Manthey Road and Houston Avenue—which have posted speed limits of 45 miles per hour and 35 miles per hour, respectively—and that there was not enough physical separation between people walking or biking and drivers to feel safe given the high travel speeds. Alongside high vehicle speeds, participants noted a lack of respect by drivers towards people walking and biking. Driver etiquette and attitudes towards pedestrians and bicyclists made participants feel unsafe, with drivers often passing extremely close to pedestrians at high speeds. Participants felt that many of the drivers were passing through their community without regard for the safety of the people who live there.



The lack of sidewalks on Manthey Road forces people to walk on an unpaved and unmaintained shoulder on the east side of the road.



An informal and unpaved footpath provides direct access into the neighborhood from the California Stop convenience store. This path is just north of a blind curve on Manthey Road.

- **Lighting Challenges and Assets:** Participants noted that Manthey Road lacks any street lights or pedestrian-scale lighting. Participants also shared that many residents walk with flashlights in order to illuminate their route on Manthey Road when traveling to or from the grocery store on Carolyn Weston Boulevard. The soundwall on Manthey Road adjacent to Interstate 5 abruptly ends as one heads south on Manthey Road, which participants noted creates a hazard where drivers are blindsided by the bright lights and glare from the northbound highway traffic.

While many of the roadways within the Conway community are adequate and have been recently upgraded to LEDs, the unlit roadway on Manthey Road in combination with limited infrastructure for pedestrians and bicyclists creates unsafe conditions for residents walking and biking.

- **Lack of Signage:** Participants noted a lack of signage, including speed limit, school zone, and wayfinding signs throughout the neighborhood and supported additional signage to encourage drivers to slow speed and to keep children safe. In particular, participants on all routes noted a lack of sufficient signage on Houston Avenue to communicate to drivers the reduced speed limit and higher likelihood of pedestrian crossings along this street. Van Buskirk Park and Van Buskirk Community Center are located on the south side of Houston Avenue, while residents live on the north side, which results in very frequent crossings of Houston Avenue.

Key Opportunities to Improve Walking and Biking Safety

Following the walking and biking assessment, the Project Team facilitated small-group action planning discussions where participants prioritized and preliminarily planned infrastructure projects and community programs aimed at reducing the number of injuries and fatalities, as well as increasing the number of people and the frequency of walking and biking in the Conway community in Stockton.

Through a voting and self-selecting process during the training, participants chose to focus on and preliminarily plan for Temporary Demonstration Projects, Crossing Enhancements, and Sidewalk Improvements. Workshop participants were very forthright about the need for more residents who lived in the community to be at the table to develop the pedestrian and bicycle safety improvements that the City and County should pursue. Accordingly, many of the preliminary action plans identified the need to increase engagement of residents proactively as a core component. For the development of preliminary plans during the workshop, participants

self-selected which project they wanted to collaborate on with their fellow participants and discussed:

- The problem the infrastructure project/community program is intended to solve;
- The people, organizations, and agencies that should be involved to implement the infrastructure project/community program;
- Resources needed to implement the infrastructure project/community program; and
- Short-term and long-term action steps to implement the infrastructure project/community program.

Community Recommendations

Workshop participants provided the following recommendations and next steps for overall pedestrian and bicyclist safety improvements:

Infrastructure Improvements

- **Enhanced Crossings and Signage:** Residents noted the lack of enhanced crossings and signage throughout the Conway community, and they prioritized four areas for near-term improvements:
 - The entrance to Van Buskirk Community Center;
 - The entrance to Van Buskirk Park at the intersection of Houston Avenue/Alabama Avenue;
 - The intersection of Houston Avenue/Manthey Road; and
 - At or near the foot path that extends north from Alabama Avenue to Manthey Road.

The group identified the need for establishing a multi-sectoral stakeholder team to oversee the development and implementation of crossing improvements and signage in the community. The stakeholder team would include: Conway Homes residents and the Resident Council, City of Stockton Public Works Traffic Engineering Section, City of Stockton Community Services, City of Stockton Police Department and Volunteers In Police Service (VIPS), City Councilmember Jesús Andrade's office, the San Joaquin County Housing Authority, and residents of the "Near Conway" neighborhood located to the north of Conway Homes. This stakeholder team would also be the body to establish a concrete timeline with short-, mid-, and long-term steps that would culminate in construction of improvements in the next three to four years. This group developed the following initial actions and desired improvements for the stakeholder team to build off of and refine:

- **Short-term Actions**
 - Create a temporary demonstration for the high-visibility crosswalk in front of the Van Buskirk Community Center;

- Install Chevron Alignment Signs at the sharp curve on Manthey Road; and
 - Research and apply for potential grant funding, including the Caltrans Sustainable Communities Transportation Planning grants and the state Active Transportation Program.
 - **Mid-term Actions**
 - Conduct crosswalk enforcement actions that focus on issuing warnings to drivers who do not yield the right-of-way to people crossing in a crosswalk, with an emphasis on the intersections of Houston Avenue/Alabama Avenue and Houston Avenue/Manthey Road; and
 - Install portable speed radar feedback signs, alternating locations on Manthey Road and Houston Avenue.
 - **Long-term Actions**
 - Secure grant funding and move through planning and construction phases
- **Sidewalk Improvements:** Participants identified installing sidewalks along Manthey Road as a priority, given Manthey Road’s role as a main route connecting residents to the grocery store and convenience store. Several participants noted the need for cultivating more support from elected officials to leverage and shift funds to support a sidewalk project. City Councilmember Jesús Andrade’s office has been active in the community, especially since the recent collisions involved three pedestrians. Participants outlined the following steps needed to make the improvements possible:
 - Host public participation workshops to garner support, as well as identify priorities for the phases of the sidewalk segment;
 - Identify potential state grant funds or local measures for construction; and
 - Develop temporary demonstrations to help the community envision potential improvements that create better connectivity for people walking and biking.

Community Programs, Policies, and Campaigns

- **Temporary Demonstrations:** Participants in this planning group worked to develop a plan for implementing temporary demonstrations of a high-visibility crosswalk in front of the Van Buskirk Community Center and/or a roundabout at the Flint Avenue/Connecticut Avenue intersection. The group identified these areas because they are concerned about collisions and accessibility for community residents. They believe that the project team needs to be more heavily composed of Conway residents, and that they should have the final say over which location should be prioritized for a temporary demonstration. The group’s preliminary plans are as follows:

Target Completion Date	Activity
October 2018	<p>Assemble project team to finalize date and location of temporary demonstration(s), scope of temporary demonstration(s), and administrative requirements for City and County sign-off.</p> <p>Project team should include Conway Resident Council, Taylor Elementary Leadership Academy, City of Stockton Public Works, San Joaquin Public Health Services, Stockton Unified School District Board Trustee Cecilia Mendez, and Stockton City Councilmember Jesús Andrade’s office.</p>
December 2018	<p>Conduct community outreach and surveys to identify location and specific treatments desired and/or by residents.</p> <p>Leverage existing events at Taylor Elementary to engage residents and families.</p>
February 2019	<p>Create a project scope and traffic control plan that is approved by the City or County agencies, as needed, and to secure necessary permits.</p> <p>Explore whether permits, if required, can have their fees waived.</p>
April 2019	<p>Solicit donations for planters, hay bales, chalk, paint, safety vests, traffic cones, barricades, and stop sign paddles.</p> <p>Secure and potentially adapt educational handouts on pedestrian and bicycle safety that can be distributed at the event.</p> <p>Recruit volunteers from the community, specifically targeting the Conway Resident Council and Taylor Elementary Leadership Academy.</p> <p>Identify and potentially adapt volunteer training materials related to event set up, traffic control in partnership with law enforcement, and survey collection.</p> <p>Conduct outreach to promote the temporary</p>

	demonstration, including mailing/distributing flyers. Ensure that outreach materials are translated into Spanish, Khmer, and Hmong.
May 2019	<p>Implement temporary demonstration and concurrent evaluation of demonstration in conjunction with the Taylor Elementary School Resource Fair.</p> <p>Develop short survey to be used during the temporary demonstration to collect qualitative data from residents, including identifying residents' top challenges to walking and biking safety and whether the temporary improvement makes walking or biking feel safer.</p>
June 2019	Reconvene the project team after the demonstration and before the school year ends to review evaluation results and to determine next steps.

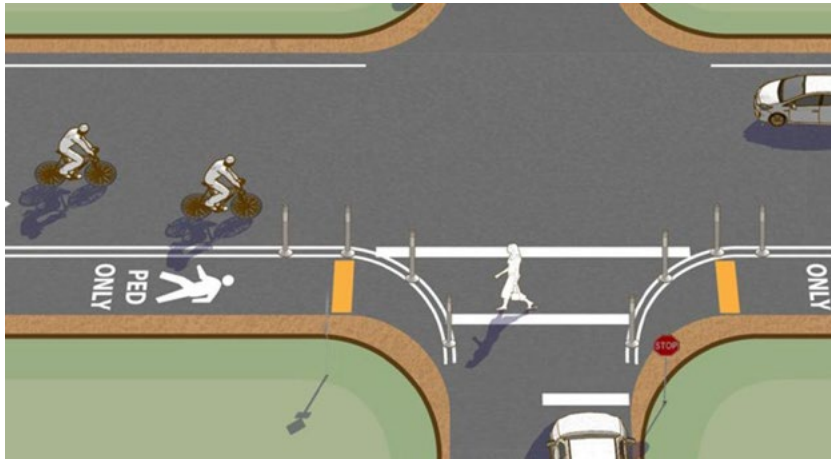
Cal Walks/SafeTREC Recommendations

California Walks and SafeTREC also submit the following recommendations for consideration by the Planning Committee:



Participants noted the potential for leveraging the existing maintenance pathway on the levee to create a greenway that could serve as a sidewalk alternative to Manthey Road.

- **Apply for Urban Greening Grant - Van Buskirk Green Pathways:** During the walking assessment, participants observed the neighborhood's proximity to the San Joaquin River and Walker Slough as a positive community asset. In particular, participants on Route 3 saw great potential in transforming the current levee maintenance road into a pathway for residents to use and to enjoy nature. Due to the pathway's proximity to the Van Buskirk Community Center and Park, the levee road could serve as the backbone of a network of green pathways in the community center and park area and provide an alternative route to Manthey Road for residents. The Project Team **recommends the City of Stockton work with Conway residents to develop and submit an application to the state [Urban Greening Grant Program](#) during the next grant cycle** focused on transforming the levee maintenance road into a pedestrian and bicycle pathway and on constructing a roughly 0.3 mile asphalt path in the park parallel to Manthey Road from Houston Avenue to the levee. With these two paths, residents would be able to travel half the distance south toward Downing Avenue with full physical separation from traffic. The project would also provide residents with additional facilities with which to be physically active, as well as increase access to the area's scenic resources.
- **Establish Traffic Safety Action Team at Conway Homes Resident Council:** Many of the preliminary action plans developed during the workshop will require an ongoing body to oversee successful implementation of these community priorities. Two recurring themes in conversations throughout the day were the need to increase engagement with residents, as well as to resolve the question of jurisdiction/responsibility between the City and the Housing Authority. The Project Team **encourages the Conway Homes Resident Council to establish a Traffic Safety Action Team** that would be a time-limited body to help see the initial ideas developed during this workshop through to fruition. The Action Team could be a subset of the Resident Council who are most interested in improving traffic safety in the community and the Team could set aside a short amount of team at each Council meeting to focus solely on implementation of the preliminary action plans. Moreover, with a regularly meeting schedule and focused purpose, the Action Team meetings could also be the perfect venue for the City of Stockton to better communicate with the Housing Authority and residents on addressing traffic safety concerns. Lastly, since the format of the Action Team is necessarily time-limited, there is a reduced likelihood of burnout and fatigue with planning since the group is focused on implementing the preliminary action plans.



Example of a pedestrian lane treatment in lieu of a dedicated sidewalk or sidewalk. Image Credit: Federal Highway Administration.



Example of a pedestrian lane treatment in McKinleyville, CA. Population: 15,177. Photo Credit: Redwood Community Action Agency.



Example of a pedestrian lane treatment in Detroit, OR. Population: 200.

- **Explore Feasibility of Pedestrian Lane on Manthey Road:** Echoing workshop participants' priorities and based on our assessment, Cal Walks and SafeTREC strongly recommend the City of Stockton work toward installing sidewalks on Manthey Road. Due to the potentially high costs and long-term timeline for installing sidewalks on Manthey Road, however, the Project Team ***recommends the City of Stockton explore the feasibility of a creating a safer, more robust shoulder area in the short-term*** that is clearly delineated from the travel lanes with flexible, retro-reflective bollards or soft-hit posts installed at regular intervals to reinforce the shoulder as a pedestrian-only space. This type of treatment is referred to as a "pedestrian lane" and is endorsed by the Federal Highway Administration as a context-sensitive solution for small towns and rural communities.⁴
- **Lighting Assessment:** The Project Team ***encourages and recommends Planning Committee members and the City of Stockton collaborate to perform a community-wide pedestrian-scale lighting assessment focused on Manthey Road, Houston Avenue, and along other key pedestrian and bicycle corridors.*** Community members noted issues with lighting on Manthey Road north of Carolyn Weston Boulevard and south of West 8th Street. Proper street lights provide safety and security as well as improve the overall well-being of road users. A lighting assessment can be used to identify and inventory nighttime pedestrian-scale lighting needs in areas of high night-

⁴ See Federal Highway Administration. Small Town and Rural Multimodal Networks Guide. December 2016. Available at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/fhwahep17024_lg.pdf

time pedestrian activity. A nighttime assessment will also help identify lighting fixtures in need of repair or replacement, and with an inventory, the City can develop a proactive and equitable plan for streetlight maintenance that is not complaint-driven. Lighting should be uniform, consistent, and reduce glare and light pollution.

Appendix A

Pedestrian and Bicycle Collision Data Analysis
Workshop Handout

2013-2017 CONWAY HOMES DATA ANALYSES

Community Pedestrian and Bicycle Safety Training Workshop September 12, 2018

The goal of the Community Pedestrian and Bicycle Safety Training (CPBST) is to make communities safer and more pleasant for walking and bicycling. This workshop will train local residents and safety advocates in pedestrian and bicycle safety as well as create opportunities for collaboration with local officials and agency staff.

This fact sheet highlights 2013-2017 pedestrian and bicycle collision data to help your community better prioritize recommendations that emerge from this workshop.

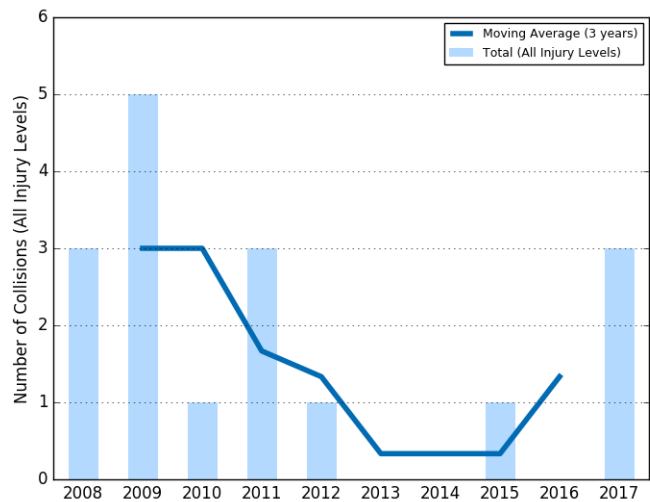
PEDESTRIANS



19 people were killed or injured in **17** pedestrian collisions in the last 10 years (2008-2017).

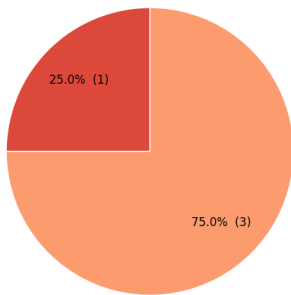
The **three-year moving average** line shows an **upward** trend in pedestrian collisions.*

There was **1** pedestrian collision in 2015, but an average of **1.3** pedestrian collisions per year for the 3-year rolling average between 2015 and 2017.



*This line is useful for tracking change over time, especially when the number of collisions changes a lot between years. Data points are at the midpoint of the three years of data specified.

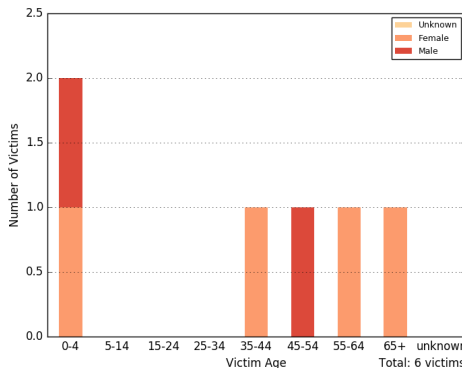
25.0% driver violations
VS.
75.0% pedestrian violations



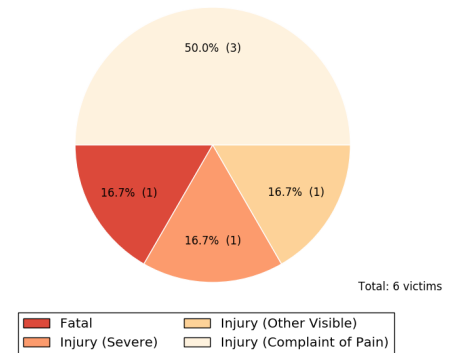
Total: 4 collisions

Driver Violation Pedestrian Violation

*Unclear violations were committed either by the driver, pedestrian or bicyclist.



66.7% of victims were female
33.3% of victims were under age 20



33.4%
of victims (or 2 people) were
KILLED or SEVERELY INJURED

BICYCLES

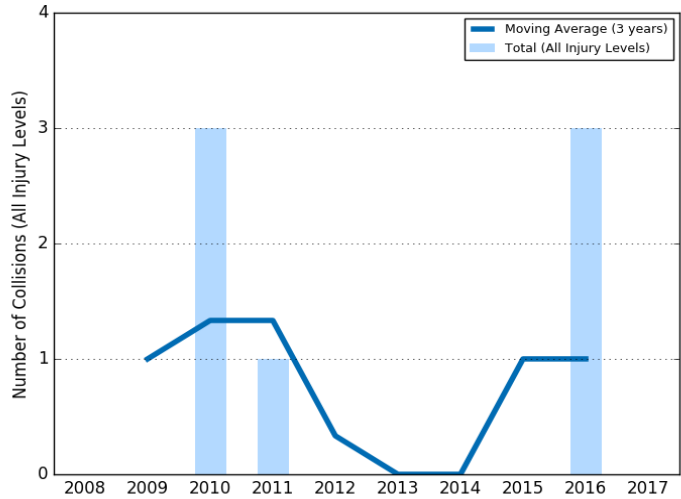


7 people were injured in 7 bicycle collisions in the last 10 years (2008-2017).

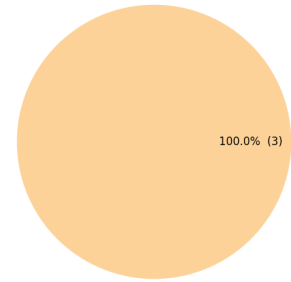
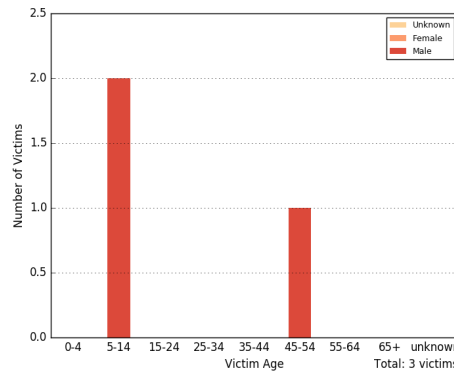
The **three-year moving average** line shows the trend in bicycle collisions.*

There were **0** bicycle collisions in 2015, but an average of **1** bicycle collisions per year for the 3-year rolling average between 2015 and 2017.

* This line is useful for tracking change over time, especially when the number of collisions changes a lot between years. Data points are at the midpoint of the three years of data specified.



Bicycles **must follow all the same rules of the road as vehicles.** As a result, we cannot break down violations by driver vs. bicyclist.



Total: 3 victims

- **100%** of victims were male
- **66.7%** of victims were under age 20
- **33.3%** of victims were between 45-54

100%
of victims (or 3 people)
INJURED

SUMMARY



27.5 pedestrian fatalities & injuries per 100,000 population over the last five years in the City of Stockton, which is **22.2% more than** San Joaquin County and **23.4% less than** California



23.5 bicyclist fatalities & injuries per 100,000 population over the last five years for the City of Stockton, which is **15.2% more than** San Joaquin County and **29.4% less than** California

	Yearly Population Rate of Fatalities & Injuries per 100,000 Population Calculated Over a 5-year Period*	
	Pedestrian	Bicyclist
Stockton	27.5	23.5
San Joaquin County	22.5	20.4
California	35.9	33.3

Source: U.S. Census Bureau, Population Division (intercensal population data for 2016).

* The rate per population is calculated by summing the number of fatalities and injuries from 2012 to 2016 divided by five times the population in 2016.

Pedestrian Collisions 2013-2017

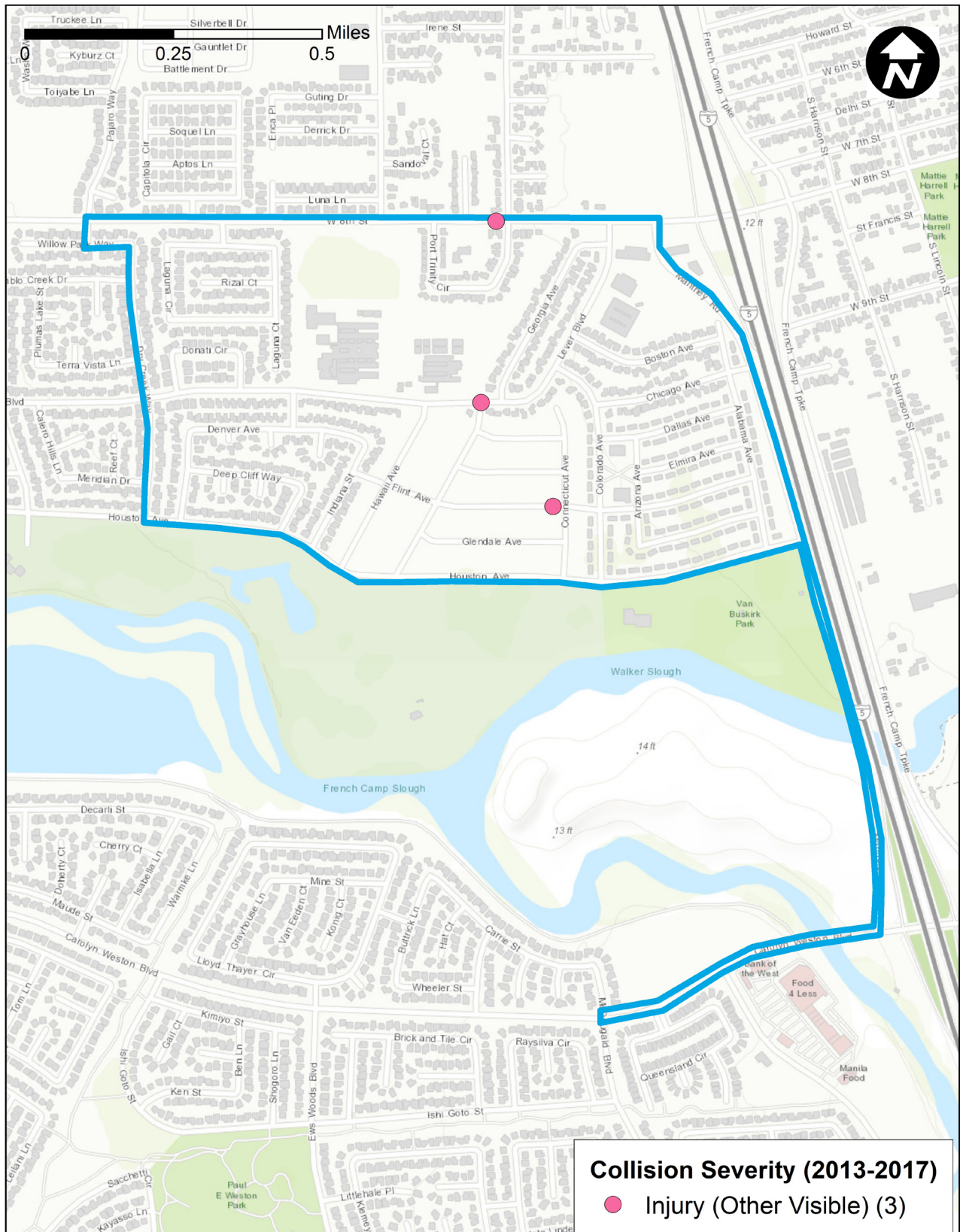
4 collisions mapped for the Conway Homes neighborhood in Stockton, CA.



Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2015 and 2016 are provisional as of November 2017.

Bicyclist Collisions 2013-2017

3 collisions mapped for the Conway Homes neighborhood in Stockton, CA.



Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2015 and 2016 are provisional as of November 2017.

Appendix B

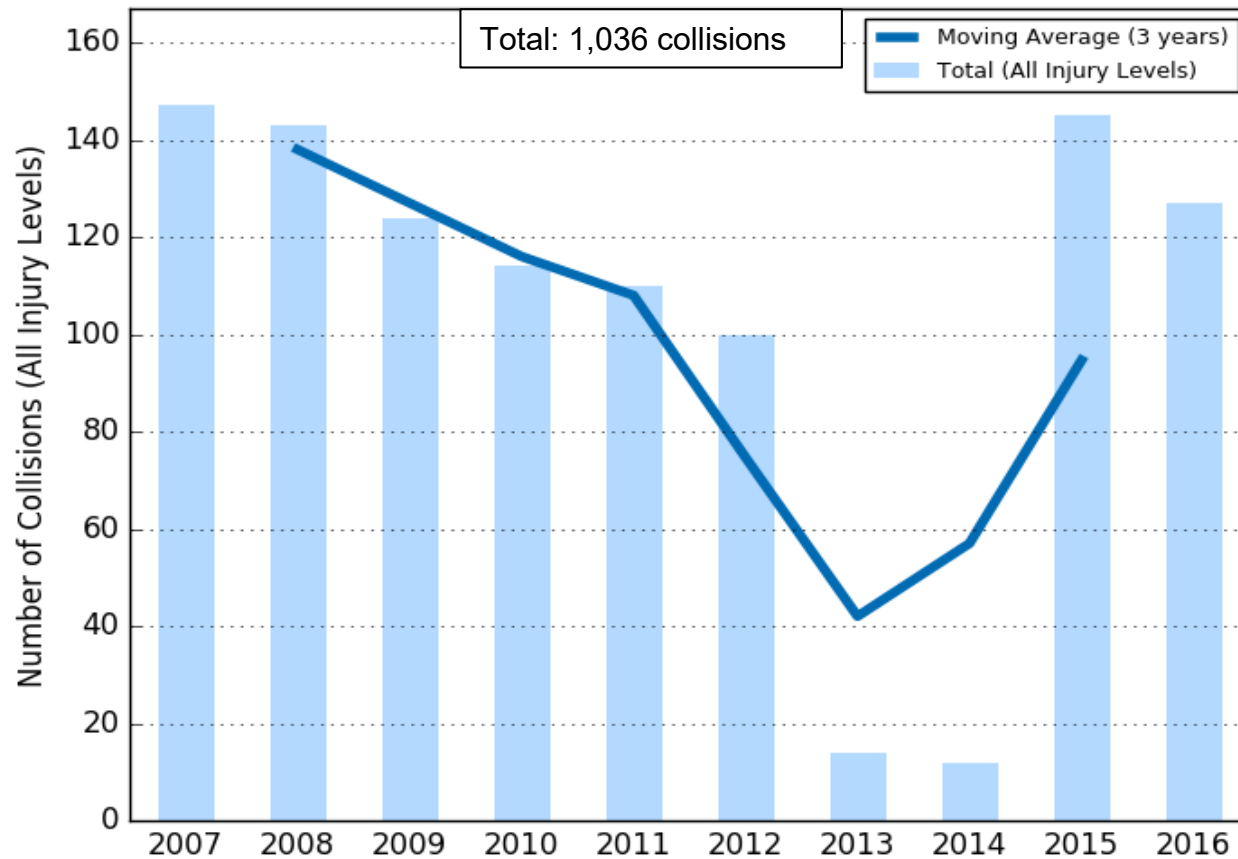
Pedestrian and Bicycle Collision Data Analysis
Site Visit Presentation

Community Pedestrian and Bicycle Safety Workshop - Data

Stockton, CA

July 27, 2018

Pedestrian Injury Collision Trend
with 3-year moving average



Note: 2015 and 2016 Statewide Integrated Traffic Records Systems (SWITRS) data are provisional as of November 2017.

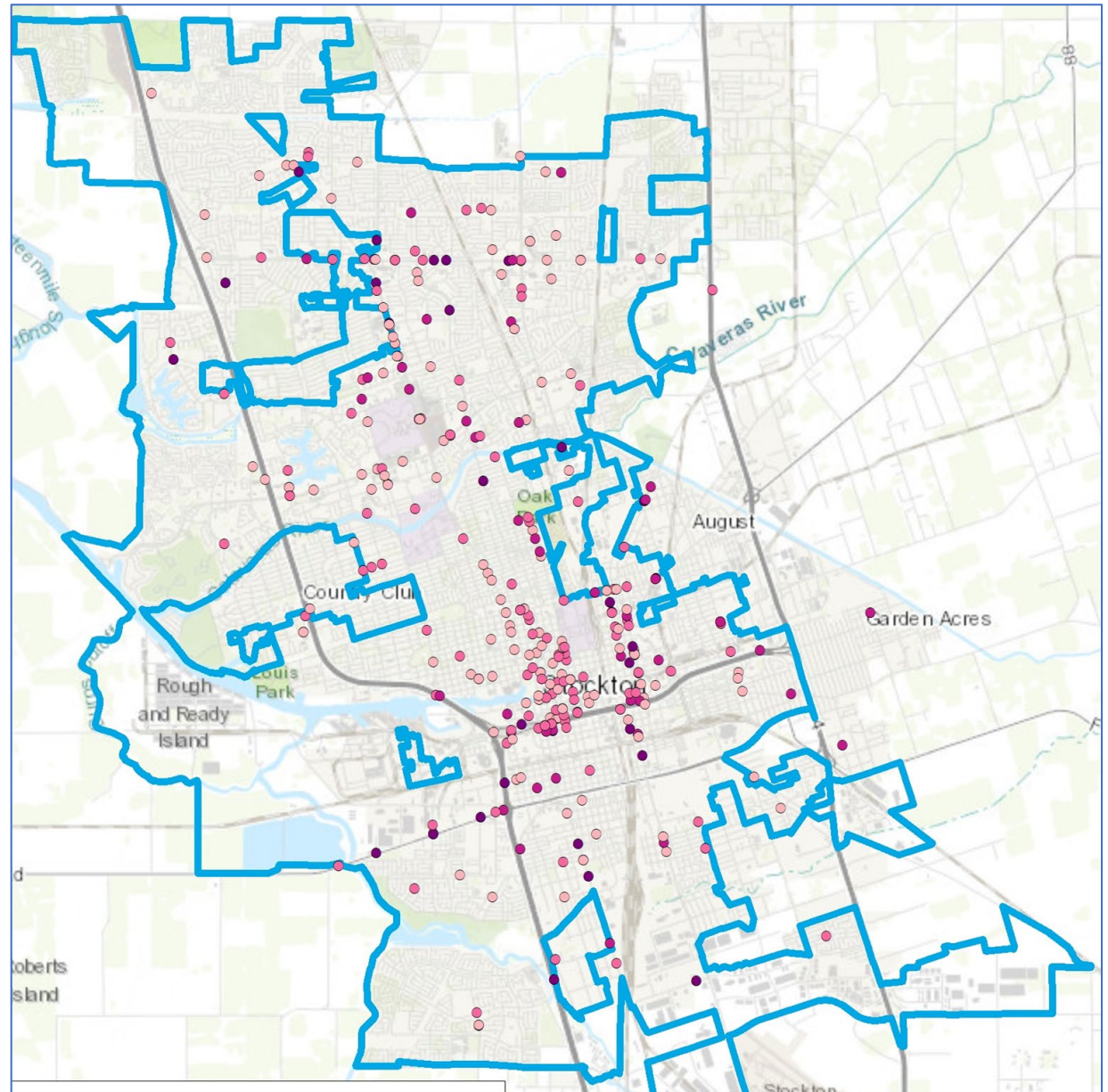
Pedestrian Injury Collisions

2012-2016

Total: 343 collisions mapped

Collision Severity (2012-2016)

- Fatal (31)
- Injury (Severe) (45)
- Injury (Other Visible) (126)
- Injury (Complaint of Pain) (141)



Note: 2015 & 2016 SWITRS data is provisional as of November 2017.

Pedestrian Collisions and Income

2012-2016

Total: 337 collisions mapped

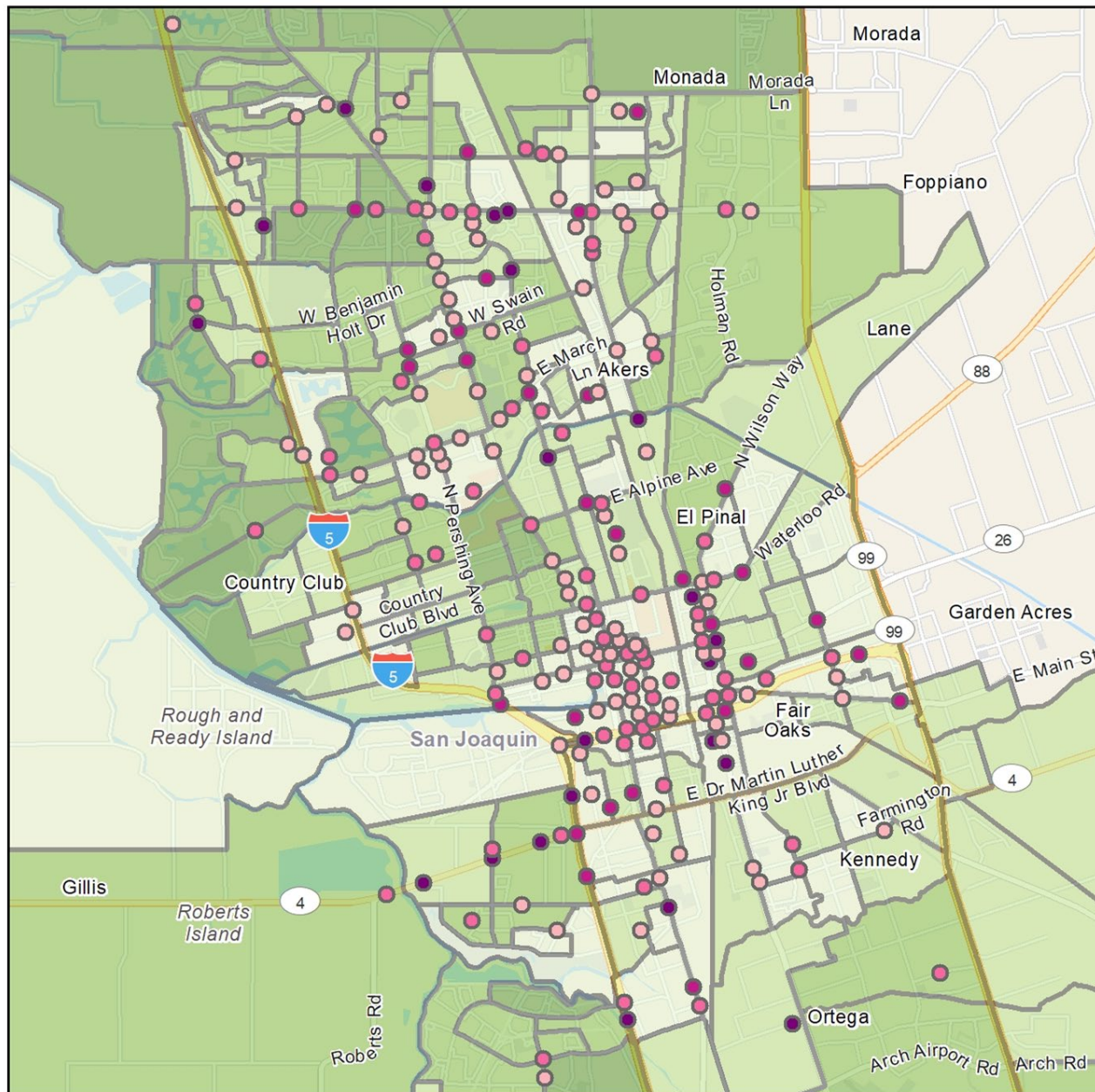
Collision Severity (2012-2016)

- Fatal (31)
- Injury (Severe) (42)
- Injury (Other Visible) (124)
- Injury (Complaint of Pain) (140)

2017 Median Household Income

- < 35K
- 35K - 50K
- 50K - 75K
- > 75K

Source: SWITRS, 2012-16;
Demographics – ESRI, US
Census Bureau; ACS



Note: 2015 & 2016 SWITRS data is provisional as of November 2017.



Pedestrian Injury Collisions by Time of Day and Day of Week

09:00PM-11:59PM	8	5	6	5	5	9	5	43
06:00PM-08:59PM	11	8	13	14	18	18	13	95
03:00PM-05:59PM	8	11	13	14	10	7	8	71
Noon-02:59PM	6	5	13	7	15	5	3	54
09:00AM-11:59AM	6	8	11	3	8	3	6	45
06:00AM-08:59AM	10	14	15	9	14	1	0	63
03:00AM-05:59AM	2	2	1	2	0	2	1	10
Midnight-02:59AM	1	0	2	2	3	3	5	16
	Monday 52	Tuesday 53	Wednesday 74	Thursday 56	Friday 73	Saturday 48	Sunday 41	

Total: 398 collisions

*The color gradient in this graph refers to the collision frequency.



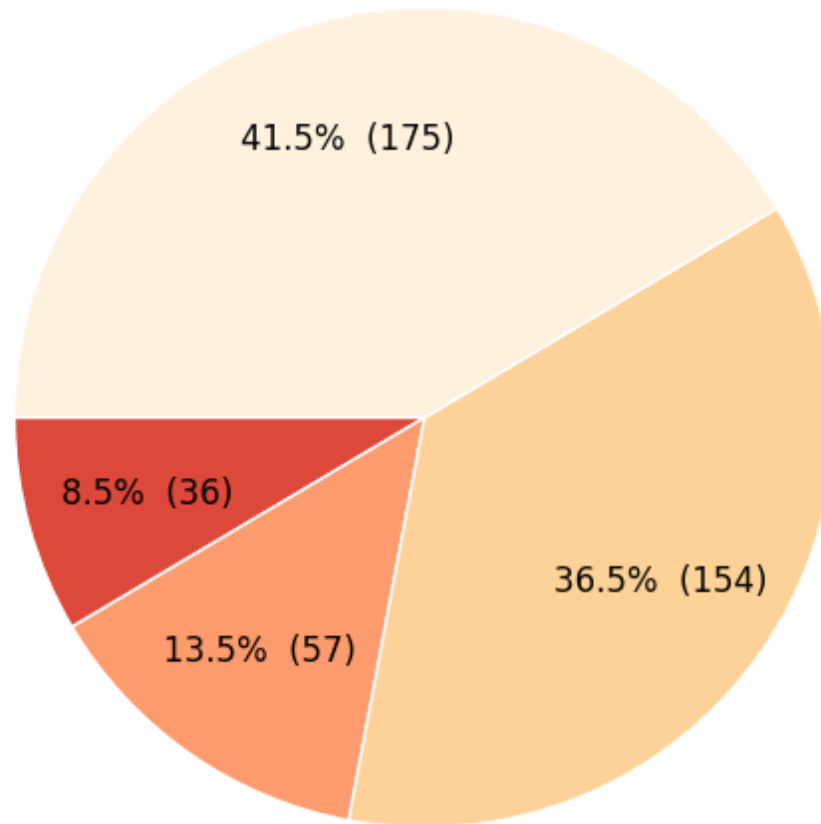
Top Violations in Pedestrian Injury Collisions (with # and %)

21950	Driver failure to yield right-of-way to pedestrians at a crosswalk	136	34.2%
21954	Pedestrian failure to yield right-of-way to vehicles	80	20.1%
22350	Speeding on the highway	34	8.5%
21955	At intersections, pedestrians can't cross anywhere except at a crosswalk	33	8.3%
0	Unknown	22	5.5%
21453	Red or Stop, vehicles stop at limit line or X-walk. When making right turn at a red light/stop sign driver required to yield to any vehicle approaching so closely as to constitute an immediate hazard	18	4.5%
21456	"Walk" pedestrian failure to yield right-of-way to vehicles already in crosswalk	14	3.5%
21956	Pedestrian failure to walk close to the edge of the roadway when there is no sidewalk present	14	3.5%
22106	Unsafe starting or backing of vehicle	10	2.5%
23152	Driving under the influence of alcohol	8	2.0%

Total: 398 collisions



Pedestrian Victim Injury Severity



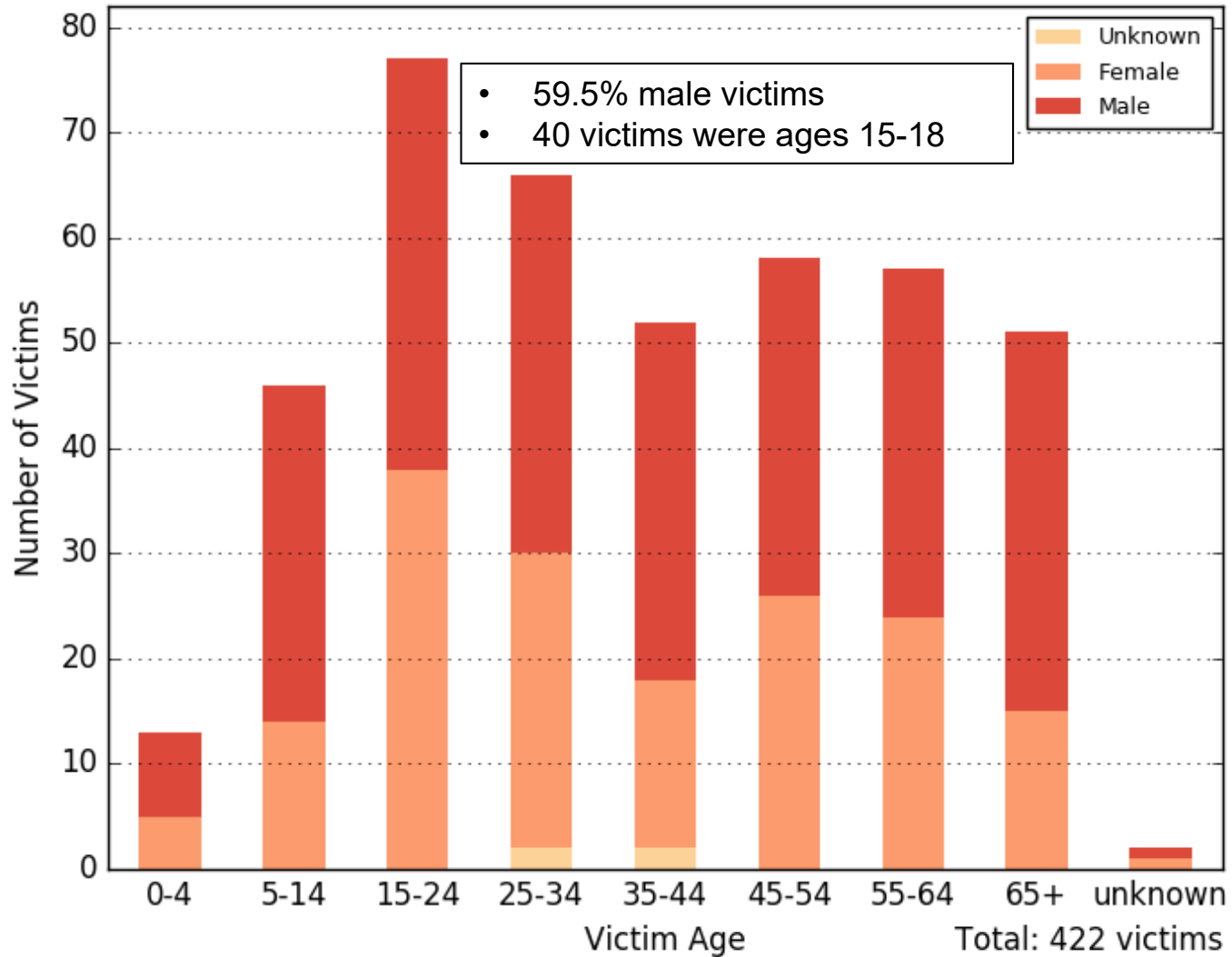
Total: 422 victims



Note: 2015 and 2016 SWITRS data are provisional as of November 2017.



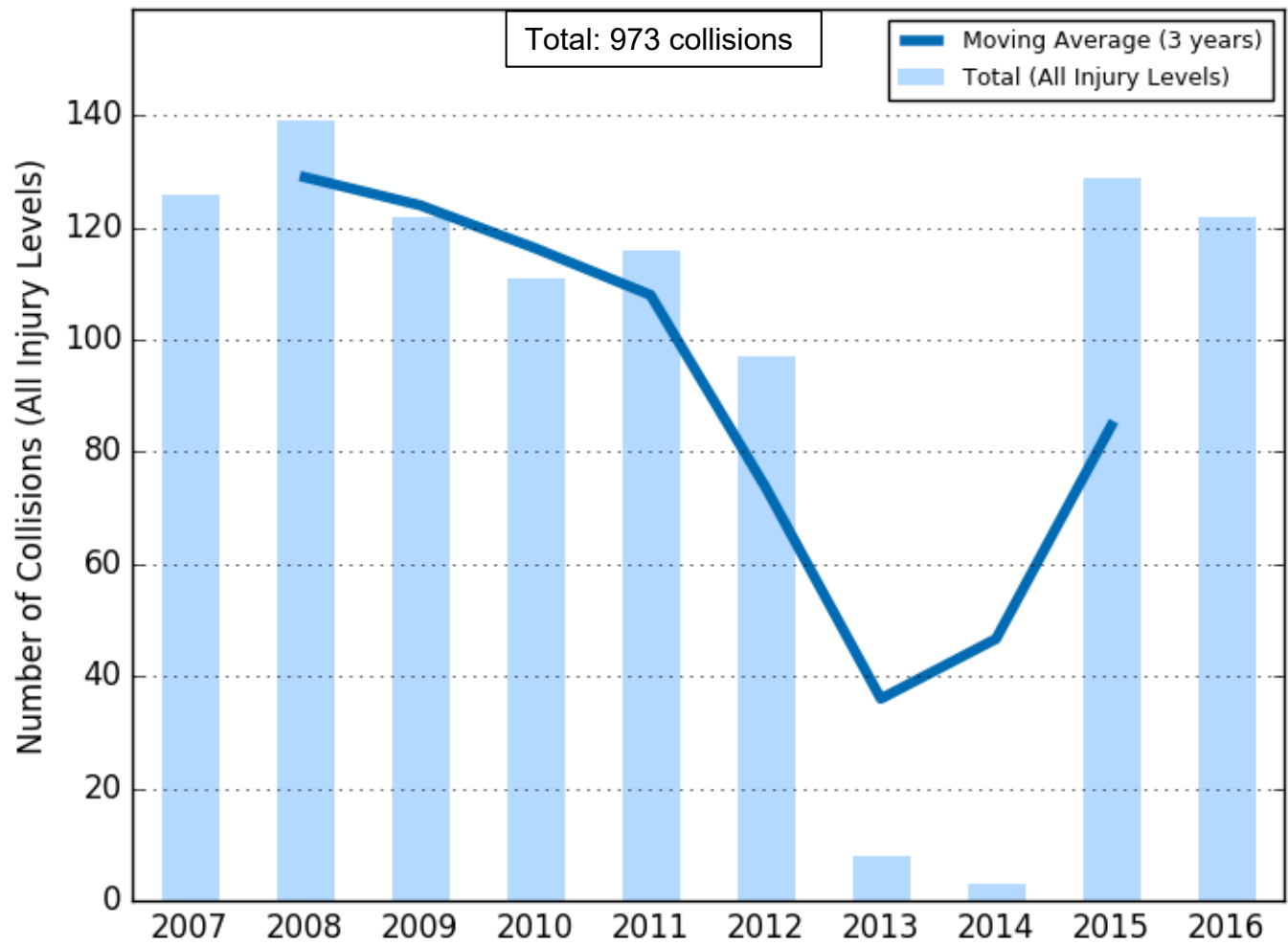
Pedestrian Victim Injury by Age and Gender



Note: 2015 and 2016 SWITRS data are provisional as of November 2017.



Bicycle Injury Collision Trend with 3-year moving average



Note: 2015 and 2016 SWITRS data are provisional as of November 2017.



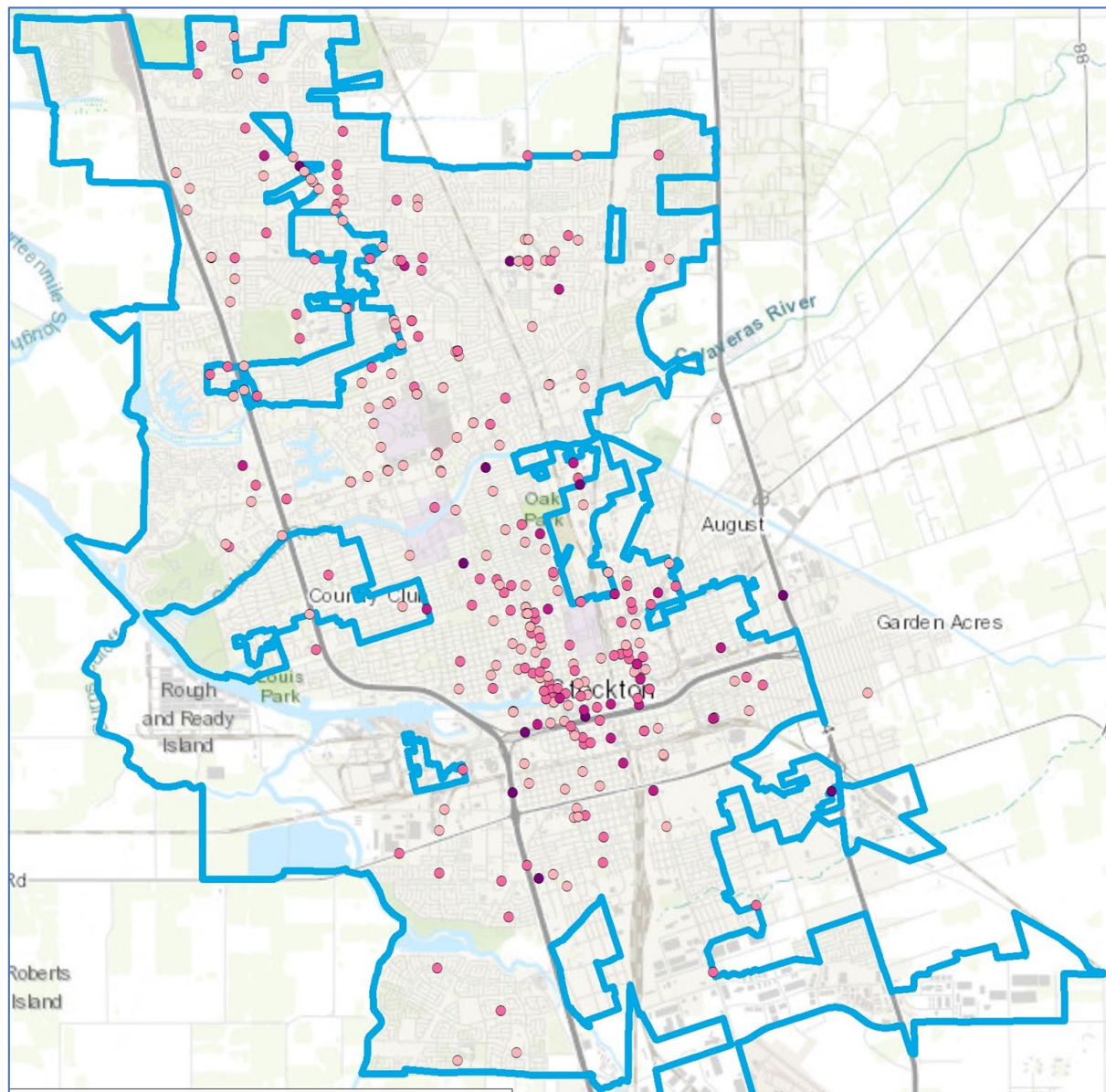
Bicycle Injury Collisions

2012-2016

Total: 314 collisions mapped

Collision Severity (2012-2016)

- Fatal (11)
- Injury (Severe) (23)
- Injury (Other Visible) (125)
- Injury (Complaint of Pain) (155)



Note: 2015 & 2016 SWITRS data is provisional as of November 2017.



Bicycle Collisions and Income 2012-2016

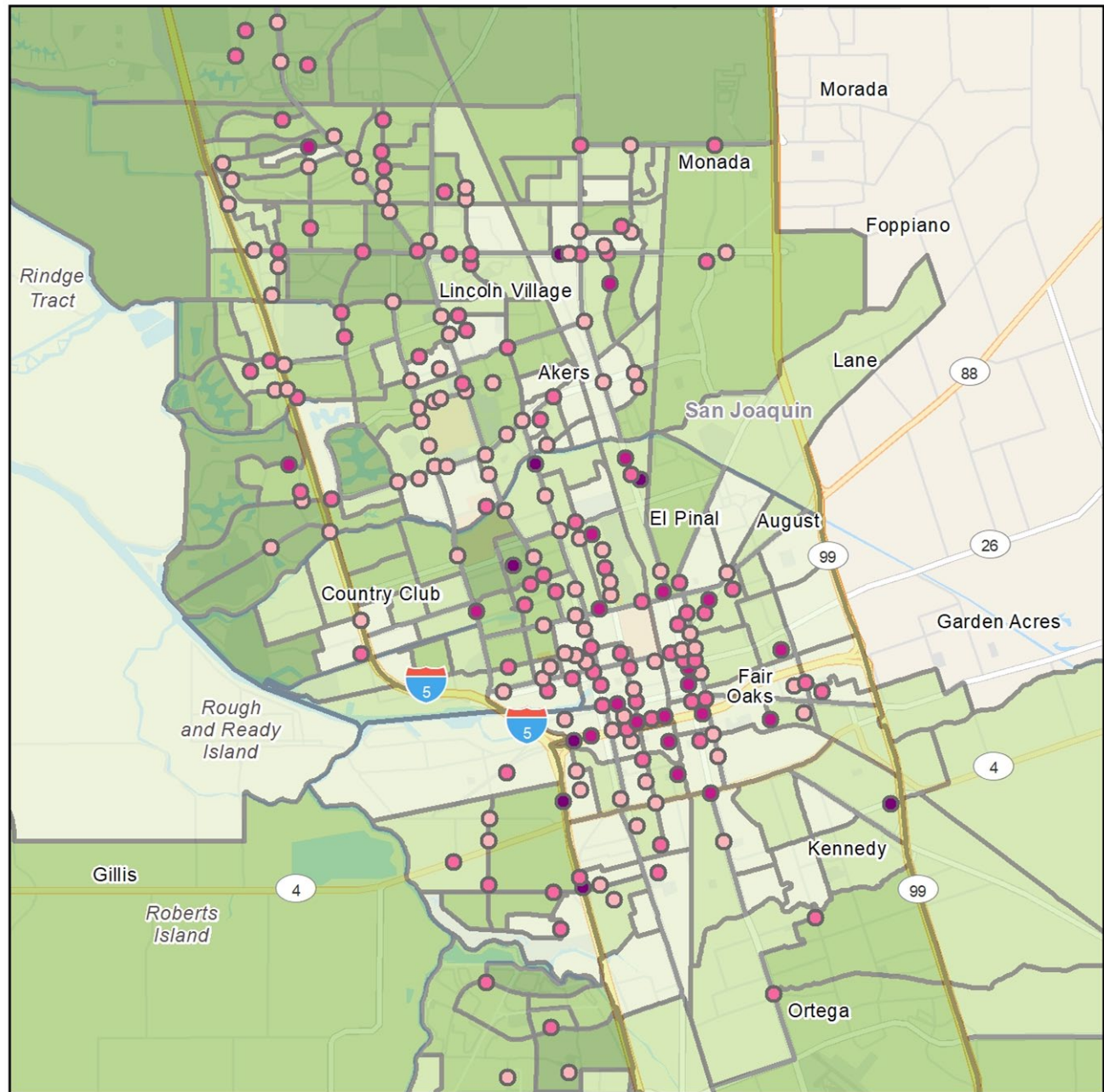
Total: 308 collisions mapped

Collision Severity (2012-2016)

- Fatal (10)
- Injury (Severe) (23)
- Injury (Other Visible) (124)
- Injury (Complaint of Pain) (151)

2017 Median Household Income

- < 35K
- 35K - 50K
- 50K - 75K
- > 75K



Source: SWITRS, 2012-16;
Demographics – ESRI, US
Census Bureau; ACS

Note: 2015 & 2016 SWITRS data is provisional as of November 2017.



Bicycle Injury Collisions by Time of Day and Day of Week

09:00PM-11:59PM	2	3	3	1	5	1	1	16
06:00PM-08:59PM	11	4	7	5	9	10	5	51
03:00PM-05:59PM	21	21	15	10	19	10	12	108
Noon-02:59PM	9	14	18	8	16	6	5	76
09:00AM-11:59AM	9	11	5	3	9	3	2	42
06:00AM-08:59AM	9	12	11	11	8	3	3	57
03:00AM-05:59AM	1	0	0	1	1	1	1	5
Midnight-02:59AM	1	0	0	0	0	1	0	2
	Monday 63	Tuesday 65	Wednesday 59	Thursday 39	Friday 67	Saturday 35	Sunday 29	

Total: 359 collisions

*The color gradient in this graph refers to the collision frequency.



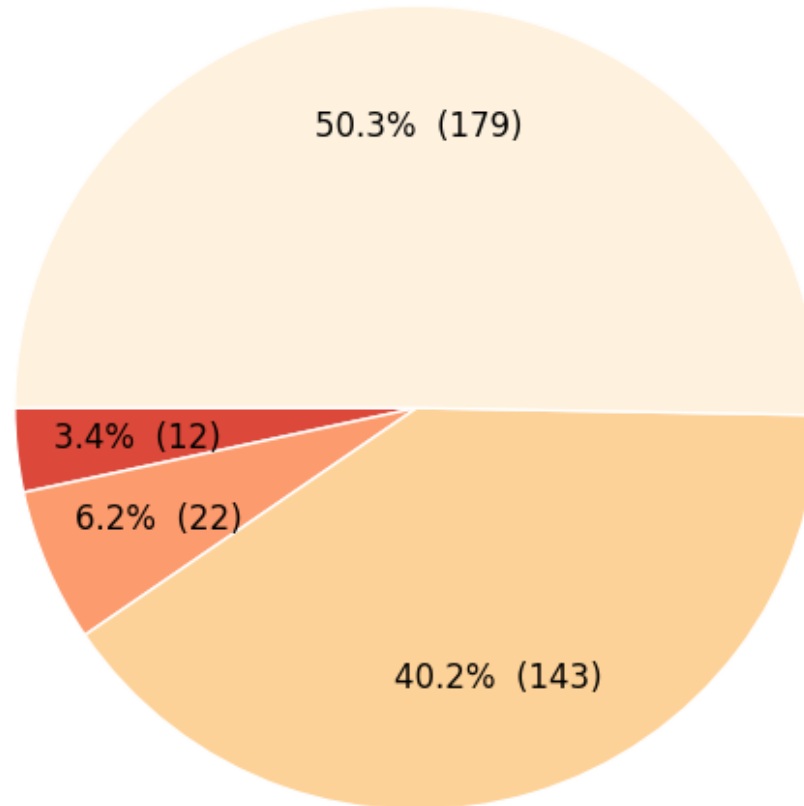
Top Violations in Bicycle Collisions (with # and %)

CVC No.	Description	Freq.	Percent
21650	Failure to drive on right half of the roadway (with some exceptions)	136	37.9%
21453	Red or Stop, vehicles stop at limit line or X-walk. When making right turn at a red light/stop sign driver required to yield to any vehicle approaching so closely as to constitute an immediate hazard	33	9.2%
0	Unknown	27	7.5%
22350	Speeding on the highway	22	6.1%
21202	Bicyclist, failure to use right edge of roadway	21	5.8%
22450	Driver failure to stop at a limit line or crosswalk at a stop sign	20	5.6%
21804	Driver failure to yield right-of-way when entering/crossing a highway	19	5.3%
21802	Failure to stop or yield right-of-way at a stop sign.	14	3.9%
22107	Unsafe turning with or without signaling	12	3.3%
21663	Drivers shall not drive upon sidewalks except to enter/leave property	9	2.5%
Total		313	87.2%

Total: 359 collisions



Bicycle Victim Injury Severity



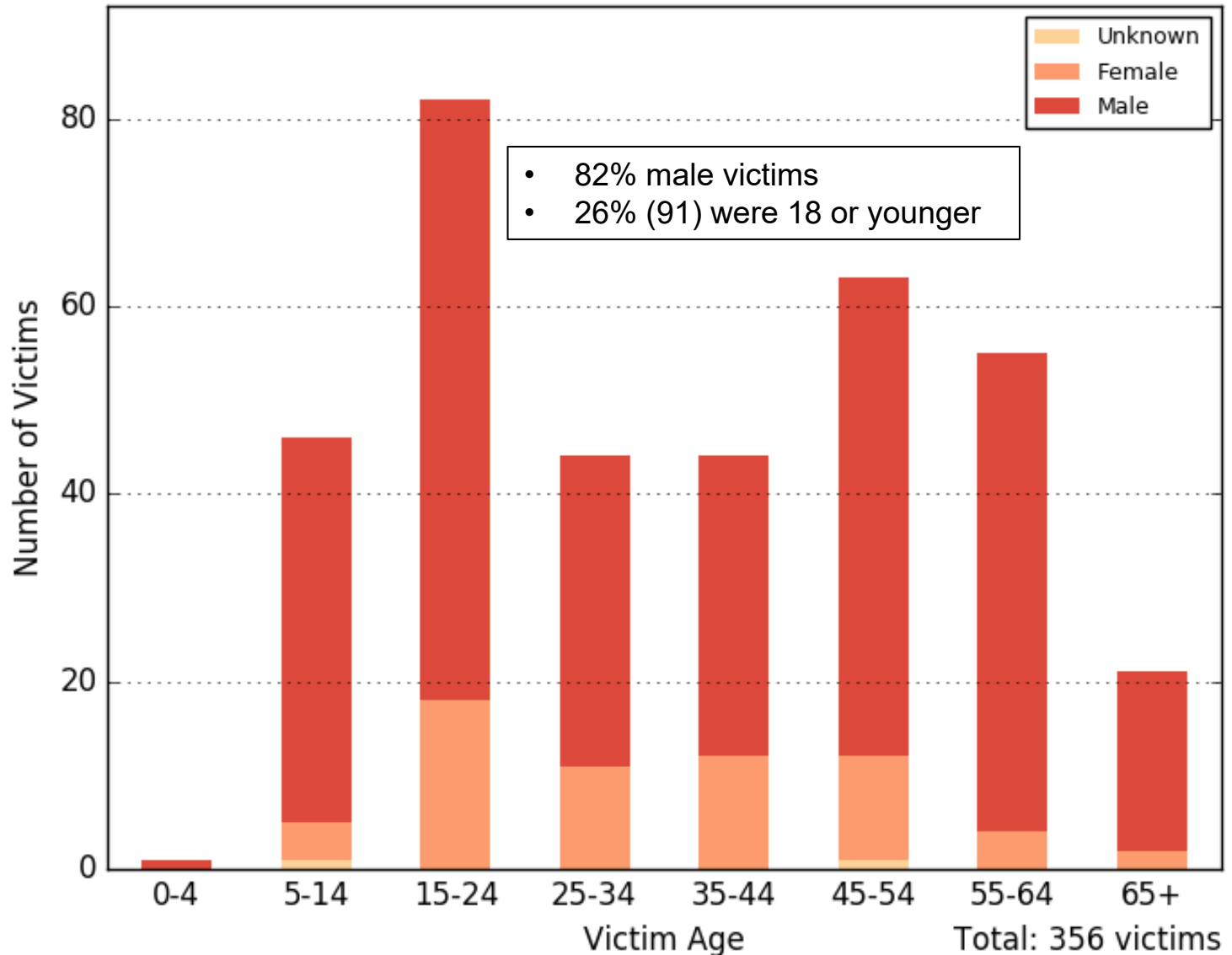
Total: 356 victims



Note: 2015 and 2016 SWITRS data are provisional as of November 2017.



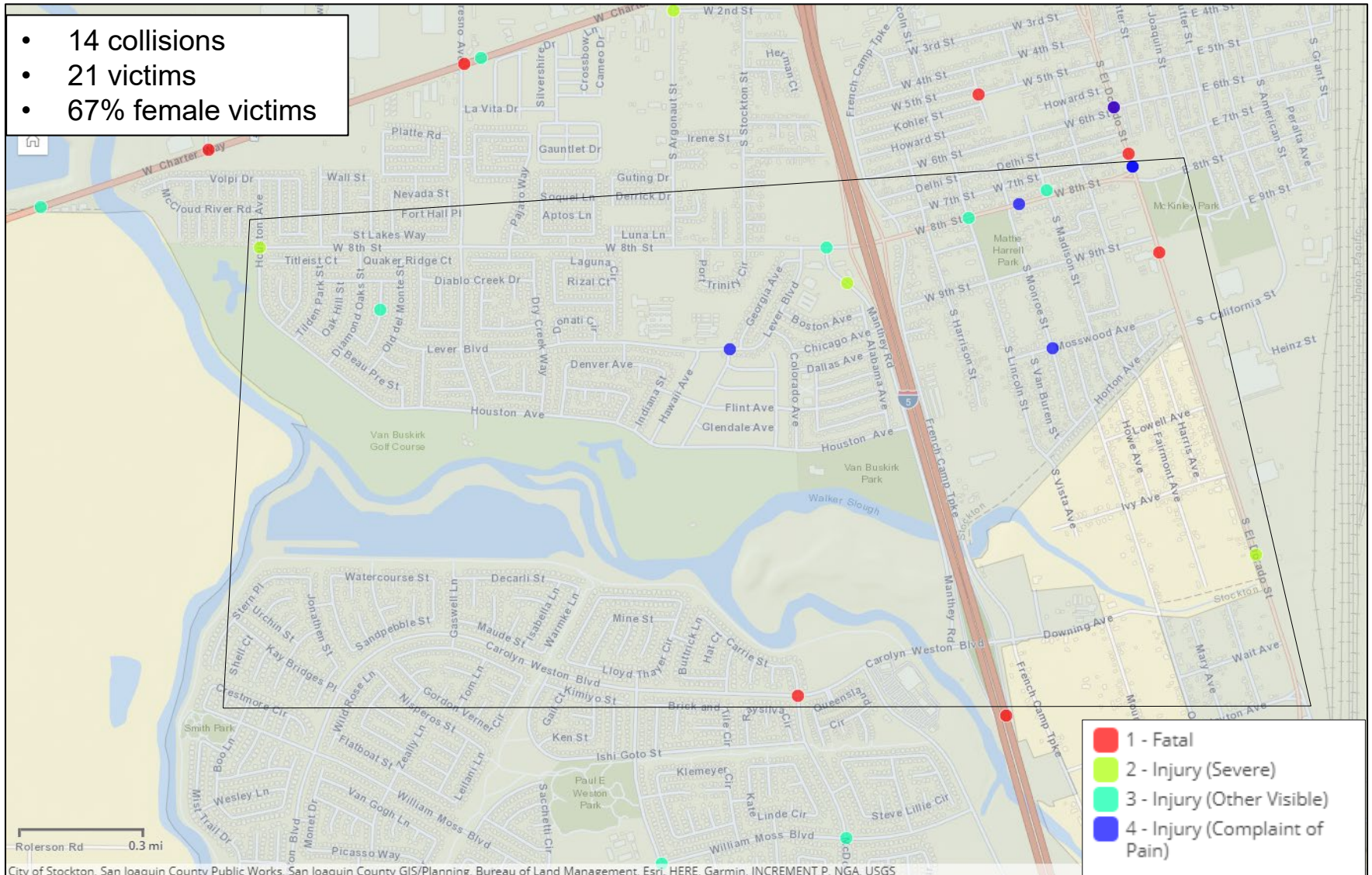
Bicycle Injury Victims by Age and Gender



Note: 2015 and 2016 SWITRS data are provisional as of November 2017.

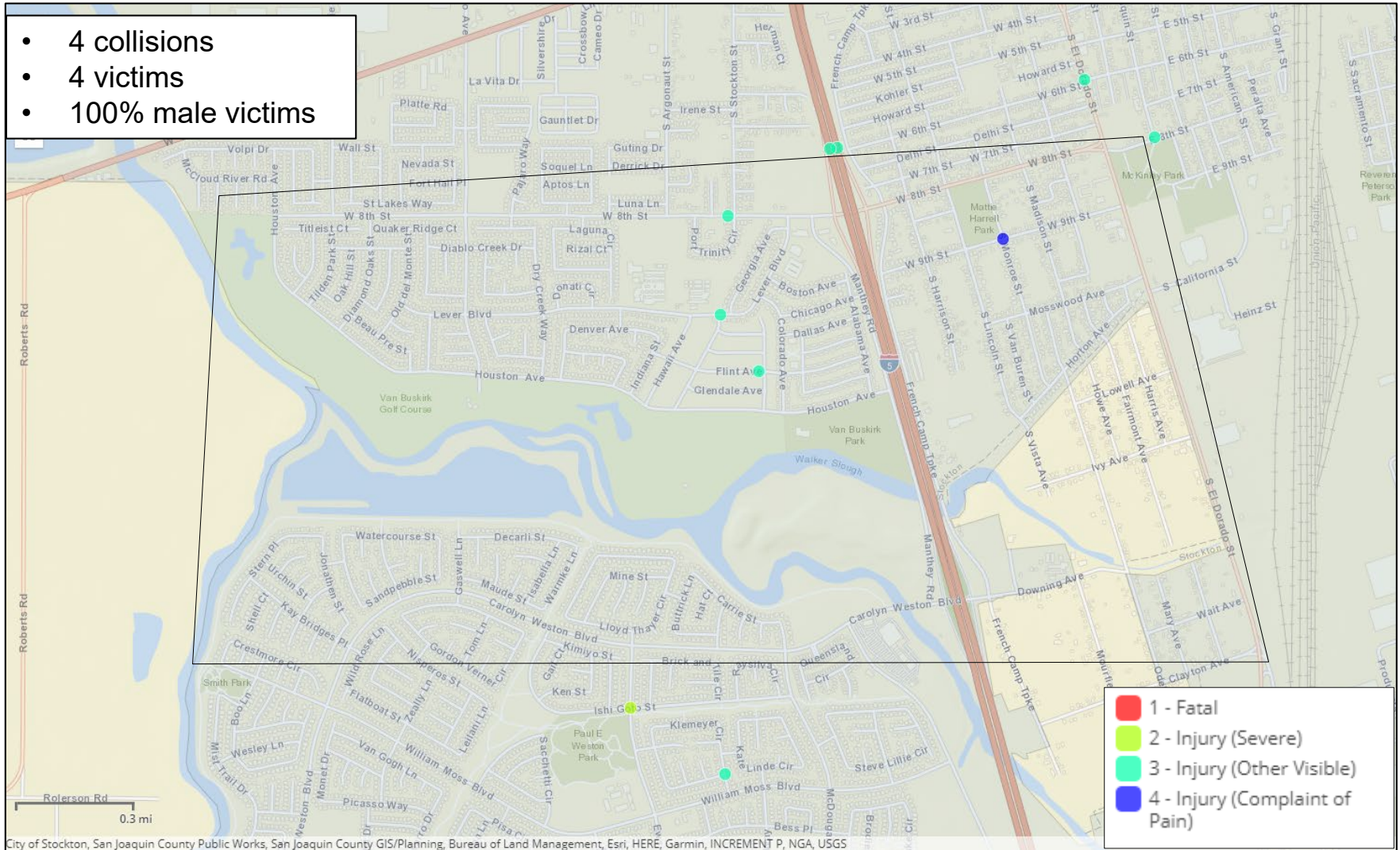
Conway Neighborhood Pedestrian Collisions, 2013-2017

- 14 collisions
- 21 victims
- 67% female victims



Source: SWITRS 2013-2017; 2016 and 2017 data are provisional

Conway Neighborhood Bicycle Collisions, 2013-2017



Source: SWITRS 2013-2017; 2016 and 2017 data are provisional

The Transportation Injury Mapping System (TIMS) is a web-based tool that allows users to analyze and map data from California's Statewide Integrated Traffic Records System (SWITRS).

To further explore collision data, register for a free account to access the tools and resources on TIMS.

<https://tims.berkeley.edu/>

