MARCH 2021

Riverside PACT

Pedestrian Target Safeguarding Plan
Active Transportation Plan
Complete Streets Ordinance
Trails Master Plan

DRAFT

CITY OF RIVERSIDE

CITY OF RIVERSIDE PACT

SCAG
INNOVATING FOR A BETTER TOMORROW

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Acknowledgments

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Thank you to the hundreds of public participants who engaged with this planning process through public comment forms, committee meetings and over 30 public events from October 2019 - April 2020.

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Section 1:
PACT Introduction

The City of Riverside completed a four part planning process called the Riverside PACT. The City of Riverside PACT consists of: a **P**edestrian Target Safeguarding Plan (PTS), an **A**ctive Transportation Plan (AT Plan), a **C**omplete Streets Ordinance (CSO), and a **T**rails Master Plan (TMP). The PACT provides four plans that will help the City to create robust, sustainable and accessible transportation options and public spaces for residents and visitors well into the future. These plans include creating funding strategies and opportunities to provide more transportation options such as walking, bicycling, and taking public transit from one place to another. The PACT vision statement was developed through the community engagement process and is the aspirational goal for the this entire planning process.

The City of Riverside's vision is to build a safer, healthier, and more sustainable transportation network. PACT is an opportunity to continue to examine neighborhood roadways and set up a vision for years to come.

IMPETUS FOR DEVELOPING THE PACT

The PACT furthers SCAG's regional transportation goals and strategies, including those outlined in the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) in the Active Transportation Appendix, and incorporate strategies outlined in the Draft Connect SoCal. These strategies include developing a regional active transportation network, increasing the number of short trips taken by walking and biking, encouraging the implementation of complete street policies, and others as outlined in the RTP/SCS. The PACT was developed to be consistent with and include all required elements for the California Active Transportation Program. The PACT Goals include:

- Develop a plan that identifies funding sources to implement and maintain active transportation infrastructure.
- Evaluates existing conditions, identifies and prioritizes active transportation projects, provides a community engagement plan, and identifies ATP support programs.
- Develop an Active Transportation Toolbox to include sample plans, exhibits, and photos to be applied along corridors and trails selected for inclusion within the active transportation network.

Photo Caption: Trail segment on the corner of Van Buren Blvd and Wood Rd

- Develop a PTS to identify physical infrastructure designs for high pedestrian activity areas at greater risk of exposure to vehicular traffic and implementation plans to secure high-traffic pedestrian areas at greatest risk.
- Develop a Complete Streets Ordinance to ensure safe, multimodal streets for all ages and abilities.

ACTIVE TRANSPORTATION PLAN

The City of Riverside Active Transportation Plan integrates walking, bicycling, and other transportation modes into a single plan that includes policies, infrastructure recommendations, and supporting programs. It identifies context specific funding sources, prioritized infrastructure projects, and implementation strategies.

TRAILS MASTER PLAN

This Trails Master Plan serves as an update to the Multi-Purpose Recreational Trails Master Plan and Trails Standards document. This update provides the City, residents, trails advocates, and developers with a single, comprehensive reference point representing the most current vision for Riverside's trail network, design, maintenance, and funding. In addition to updating trail design guidelines and standards, the TMP proposes and prioritizes new trails and gap closures, addresses integration of trail facilities with the City's on-street active transportation network, and identifies potential funding sources.

PEDESTRIAN TARGET SAFEGUARDING PLAN

The Pedestrian Target Safeguarding Plan provides building perimeter and public space security design solutions intended to protect against threats resulting from unauthorized vehicles entering public spaces.

Based on stakeholder interviews the Plan identifies and provides design recommendations for six high priority areas within the City of Riverside.

COMPLETE STREETS ORDINANCE

The Complete Streets Ordinance provides guidance on street character, connectivity, access for all users, development of continuous pedestrian paths and urban trails/recreation opportunities, and the inclusion of public gathering spaces equitably placed throughout the City.

The Complete Streets Ordinance references the Pedestrian Target Safeguarding Recommendations, Active Transportation Plan, and Trails Master Plan for specific project location recommendations.

CALTRANS ACTIVE TRANSPORTATION PROGRAM

The Active Transportation Program (ATP) was created by Senate Bill 99 (Chapter 359, Statutes of 2013) and Assembly Bill 101 (Chapter 354, Statutes of 2013) to encourage increased use of active modes of transportation. Senate Bill 1 (SB 1) (Chapter 2031, statutes of 2017) stipulates that $100,000,000 of revenues from the Road Maintenance and Rehabilitation Account will be available annually to the ATP. The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program with a focus to make California a national leader in active transportation.

Photo Caption: Riverside residents walking along the Main St Pedestrian Mall

The purpose of ATP is to encourage increased use of active modes of transportation by achieving the following goals:

- Increase the proportion of trips accomplished by biking and walking
- Increase safety and mobility for non-motorized users
- Advance the active transportation efforts of regional agencies to achieve Greenhouse Gas (GHG) reduction goals, pursuant to SB 375 (of 2008) and SB 341 (of 2009)
- Enhance public health
- Ensure that disadvantaged communities fully share in the benefits of the program
- Provide a broad spectrum of projects to benefit many types of active transportation users.

To supplement the ATP funding source, the PACT has identified and developed a comprehensive list of funding sources for implementation that can be found in the following sections of the document.

- *Active Transportation Plan, p.110*
- *Trails Master Plan, p.82*

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Section 2:
Existing Conditions

Introduction

The purpose of this technical report is to identify and evaluate the City of Riverside's existing conditions as they relate to active transportation. A comprehensive understanding of conditions as they exist today is necessary to develop a plan for the future that is consistent with community goals and that ultimately will improve the lives of Riverside residents. This includes analysis of:

- Current walking, biking, and transit usage rates
- Demographics of those who walk, bike, and take transit
- The existing active transportation network
- Key origins and destinations
- Pedestrian and bicycle collisions
- Air quality conditions
- Roadway conditions
- The existing transit network
- Existing plans and policies

This report includes a citywide assessment of these metrics as well as a more detailed assessment for each city ward. The results will inform the recommendations that will be developed at a later phase of the planning process.

PEDESTRIAN TARGET SAFEGUARDING PLAN

In addition to the Active Transportation Plan (ATP), the project team will develop a Pedestrian Target Safeguarding[1] Plan (PTSP) for six priority areas in the City of Riverside. The goal of the PTSP is to improve the walking environment with measures that reduce pedestrian exposure and vulnerability to collisions, while enhancing the look and feel of public spaces. Existing conditions as they relate to the PTSP priority areas, particularly collision history and key amenities, are included in this report to facilitate development of the PTSP at a later stage.

1 ***Pedestrian Target Safeguarding:*** *Ensuring public areas are safe and secure utilizing strategies to reduce the opportunities for crime and acts of terror.*

Current Walking, Bicycling, and Transit Use

Before planning for the growth of walking and biking in the City of Riverside, it's important to understand how people are currently using active transportation to move around the City. However, creating a detailed picture of how people get around in a community is often difficult due to data limitations. The U.S. Census Bureau is the primary source for data related to commuting, but does not include transportation information for people who do not work—including children, retirees, and the unemployed. It also does not capture information for non-work trips. Survey data collected by the community, including data presented later in this section, helps to supplement the Census data but only paints a partial picture due to the relatively small sample sizes. As a result, this analysis of current walking, biking, and transit use in Riverside reflects the available data, but should not be taken as a comprehensive account of all travel behavior.

According to the U.S. Census Bureau, there are approximately 141,435 workers 16 years and over residing in the City of Riverside. Those who walk, bike, or take transit represent roughly 6.1 percent of the Riverside worker population, or approximately 8,628 people. The majority of workers (74.4 percent) drive alone. The rates of driving alone and walking to work in Riverside are similar to those of California as a whole, but public transit use (2.4 percent) and biking (0.7 percent) are considerably lower. The remaining commuters carpool, work from home, or use a taxicab, motorcycle, or other means of getting to work. Figure 2-1 shows the means of transportation for work by each mode for the City of Riverside compared to California.

In 2019, as part of the Connecting Five Points project in Ward 6, the City distributed a survey that included a question asking respondents how they typically travel around their community. Of the 146 responses, 56 percent drive, 27 percent walk, 7 percent use public transit, and 6 percent bike. Though driving is the most common mode of transportation for respondents, a significant number of them also walk, and to a lesser extent, ride transit or bicycle. Though the survey was limited in number and geography, it suggests that walking, biking, and transit are important modes of transportation for people in Riverside. The results of the survey question are presented in Figure 2-2.

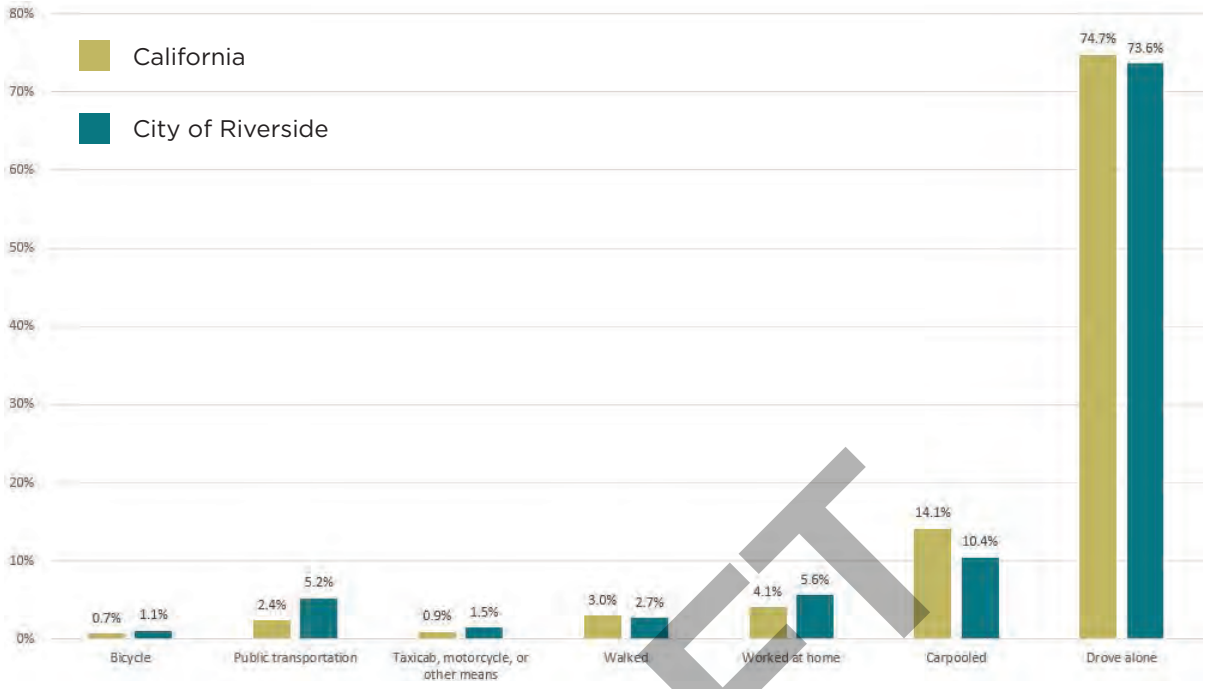


FIGURE 2-1 MEANS OF TRANSPORTATION TO WORK (WORKSERS 16 YEARS AND OVER)

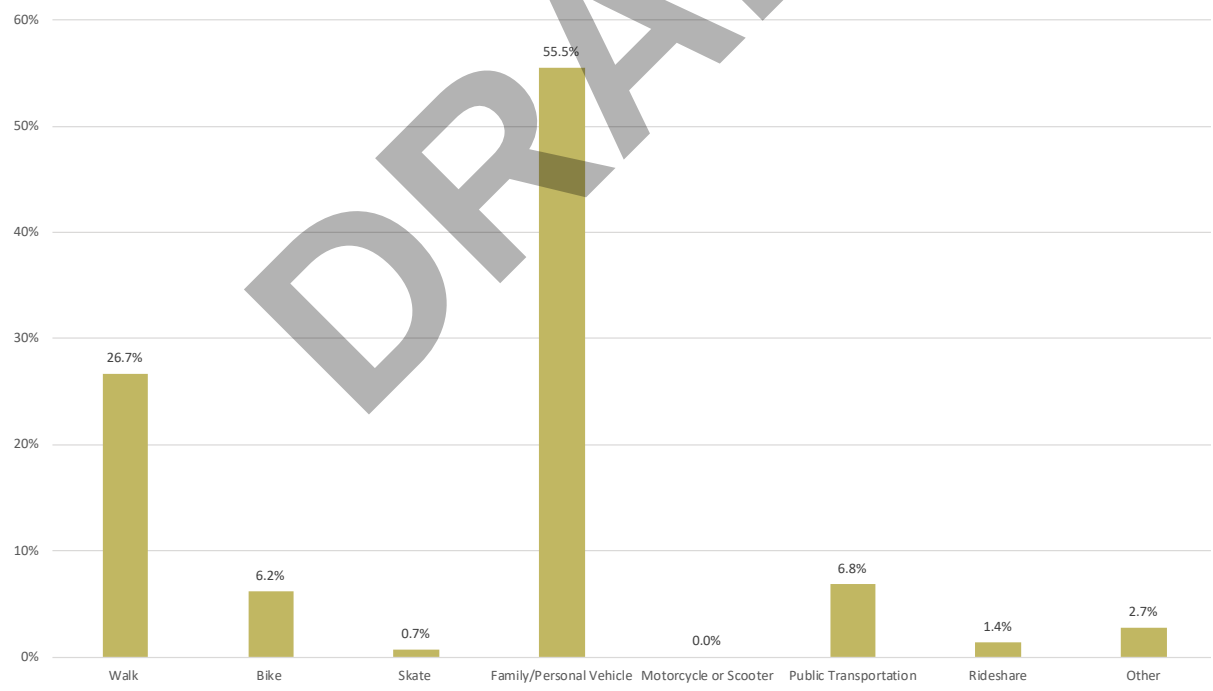


FIGURE 2-2 TYPICAL TRAVEL MODE, CONNECTING FIVE POINTS SURVEY RESULTS

Data Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Demographics

Understanding the demographic characteristics of a community's current walkers, bicyclists, and transit users is helpful to ensure that future transportation improvements will meet their needs. Unfortunately, census data related to the demographics of commuters who walk and bicycle is limited to estimates for each sex. In Riverside, pedestrian commuters are more likely to be female and bicycle commuters are more likely to be male. Women are slightly more likely to take public transit than men.

More detailed demographic data is available for those who commute by public transit, which is summarized in Figure 2-3.

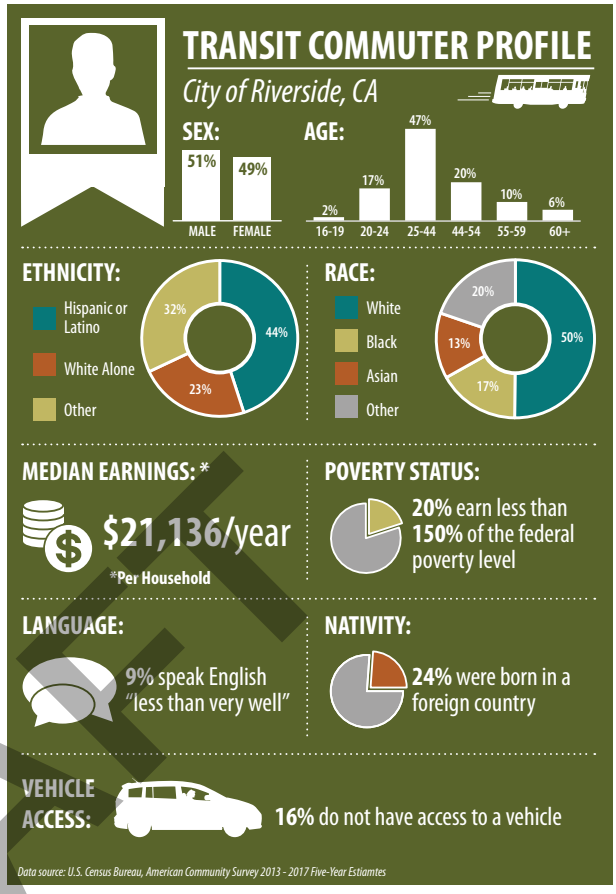


FIGURE 2-3 TRANSIT USER PROFILE

Active Transportation Network

The City of Riverside's existing active transportation network consists of approximately 80 miles of Class I, II, and III bicycle facilities. The majority—69 miles—are Class II bike lanes. There are approximately 10.6 miles of Class I off-street paths and there is one Class III bike route on a .4 mile segment of Eucalyptus Ave.

A completed portion of the Santa Ana River Trail, a Class I facility, runs along Riverside's northern border. The Juan Batista De Anza Trail is a planned regional trail that will intersect the Santa Ana trail at Rancho Jurupa Regional Park and will travel southeast through the City.

Class I facilities like the Santa Ana River Trail are off-street paved paths, typically shared by different types of non-motorized users. Because they are completely separated from vehicular traffic, they provide the greatest level of comfort and are the most accessible facility for people of all ages and abilities.

Class II bike lanes are the most prevalent facility in Riverside. Striped lanes for the exclusive use of bicyclists are located alongside vehicle travel lanes. In some instances a striped buffer provides separation from vehicles. Bike lanes are most appropriate on streets with relatively low traffic speeds and not more than a single lane of traffic in each direction. Within Riverside, bike lanes tend to be located on multi-lane roads like Magnolia Avenue and California Avenue with posted speed limits of 35 mph.

Class III bike routes are roads where bicyclists and motor vehicles share a travel lane. Signage or shared lane markings may be present to alert motorists to the potential presence of bicyclists. Bike routes are only appropriate on low-speed, low-volume streets. The portion of Eucalyptus Avenue that is designated as a Class III bike route is a five-lane road with a posted speed limit of 35 mph.

Class IV separated bikeways are on-street facilities reserved for use by bicyclists, with physical separation between the bikeway and vehicular travel lanes. Separated bikeways can be one-way facilities on both sides of the street or two-way facilities on one side of the street. Physical separation can include concrete curbs, landscaping, parking lanes, bollards, or other vertical elements. Riverside has one existing Class IV facility located at the intersection of University Ave and Cayon Crest Dr adjacent to the UC Riverside campus.

Figure 2-4 illustrates the City of Riverside's existing active transportation network, as well as planned facilities. Currently, there is moderate southwest to northeast connectivity, but a lack of complementary facilities in other directions results in an incomplete network. Future facilities, such as bike lanes and bike routes, will help to fill those gaps. There are no planned Class IV (on-street) protected bike facilities at present.

CLASS I - SHARED USE PATH

Santa Ana River Trail

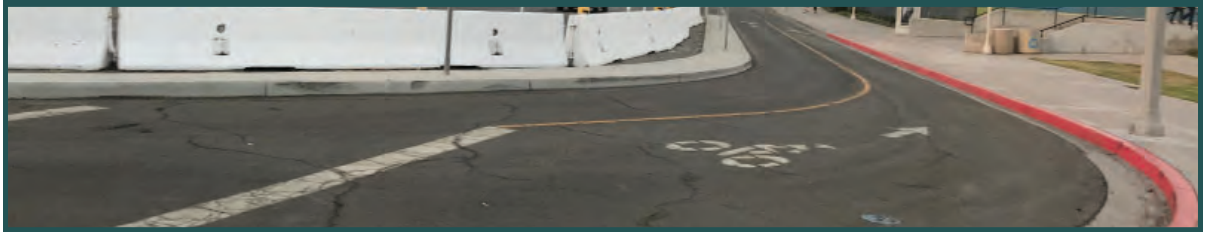
CLASS II - BIKE LANE

California Avenue

CLASS III - BIKE ROUTE

Mission Inn Avenue

CLASS IV - CYCLE TRACK



University Avenue

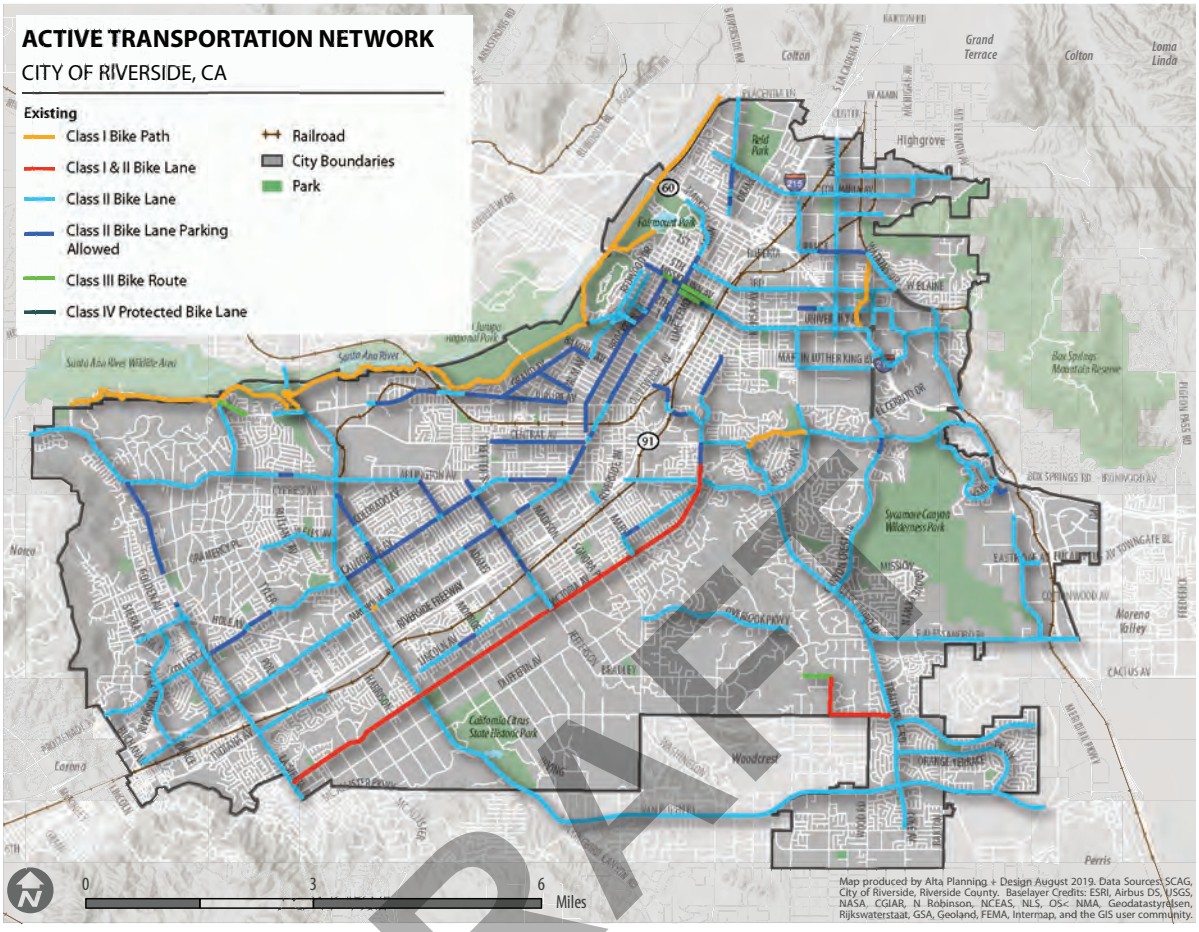


FIGURE 2-4 ACTIVE TRANSPORTATION NETWORK MAP

Origins and Destinations

There are a number of origins and destinations that tend to generate bicycle and pedestrian activity. These typically include commercial or shopping areas, downtowns, areas with high concentrations of jobs, high density neighborhoods, schools, parks, community centers, and cultural institutions like museums, and libraries among others.

Figure 2-5 displays the city facilities and land use categories in Riverside that constitute these types of origins and destinations. They are concentrated along State Route 91 (the Riverside Freeway) which runs southwest to northeast through the center of Riverside. There are considerably more origins and destinations located north of the freeway, including downtown Riverside. The most northern and eastern extents of the City also have employment zones of significant size.

The street grid in these areas is dense and follows a primarily orthogonal pattern, which is amenable to walking and biking.

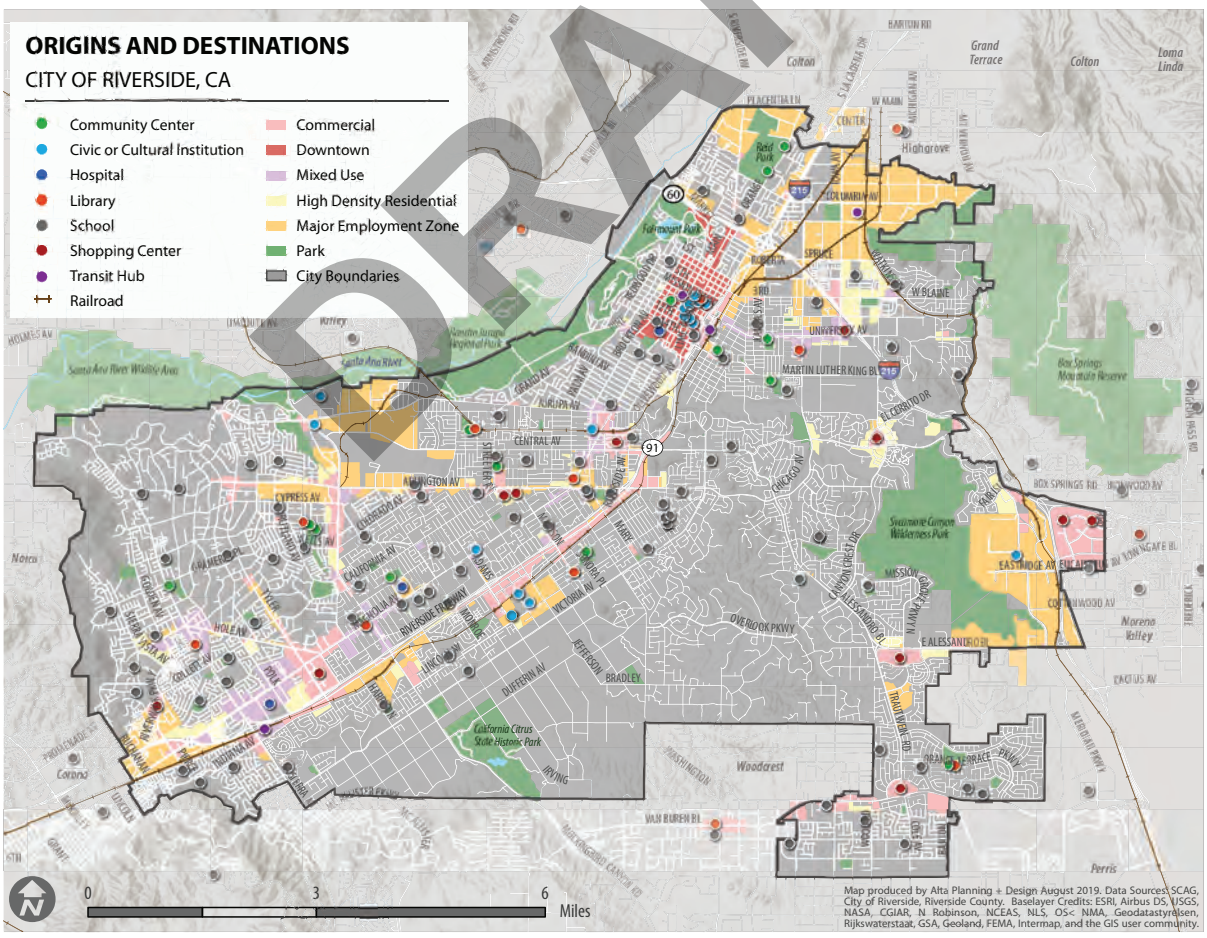


FIGURE 2-5 ORIGINS AND DESTINATIONS MAP

Bicycle - & Pedestrian - Involved Collisions

There are significant safety risks for those walking and biking in Riverside. From January 1, 2015 to December 31, 2018 there have been 350 bicycle-involved collisions and 398 pedestrian-involved collisions within the City. Twenty-one of those collisions have been fatal and 82 have resulted in severe injury.

Collisions have primarily occurred in the northern portion of the City, along major arterials such as Magnolia Avenue, Van Buren Boulevard, University Avenue, Iowa Avenue, and throughout downtown.

Figure 2-6 presents bicycle-involved collisions by primary collision factor. The majority of collisions (60 percent) were caused by a party (assumed the bicycle in most cases) traveling on the wrong side of the road, or the bicyclist violating the automobile's right of way. The absence of bicycle facilities on most of Riverside's streets may lead some bicyclists to violate the law as they attempt to navigate vehicle traffic, thus contributing to these collisions. Approximately 14 percent of bike-involved collisions were occurred at traffic signals and signs and 11 percent caused by improper turning, indicating a need for conflict mitigation at intersections as well.

Figure 2-7 breaks down pedestrian-involved collisions by the pedestrian's action at the time of the collision. Approximately 38 percent of pedestrians were hit by a vehicle while in a crosswalk and 31 percent were hit while crossing outside of a crosswalk, indicating a need for improvements to existing crosswalks and the addition of new crosswalks to provide safer opportunities for pedestrians to cross the street.

Figure 2-8 shows the locations of all bicycle- and pedestrian-involved collisions between 2015 and 2018. The color of each hexagon in the map represents the number of collisions that occurred in that area. The location of fatal collisions are also identified.

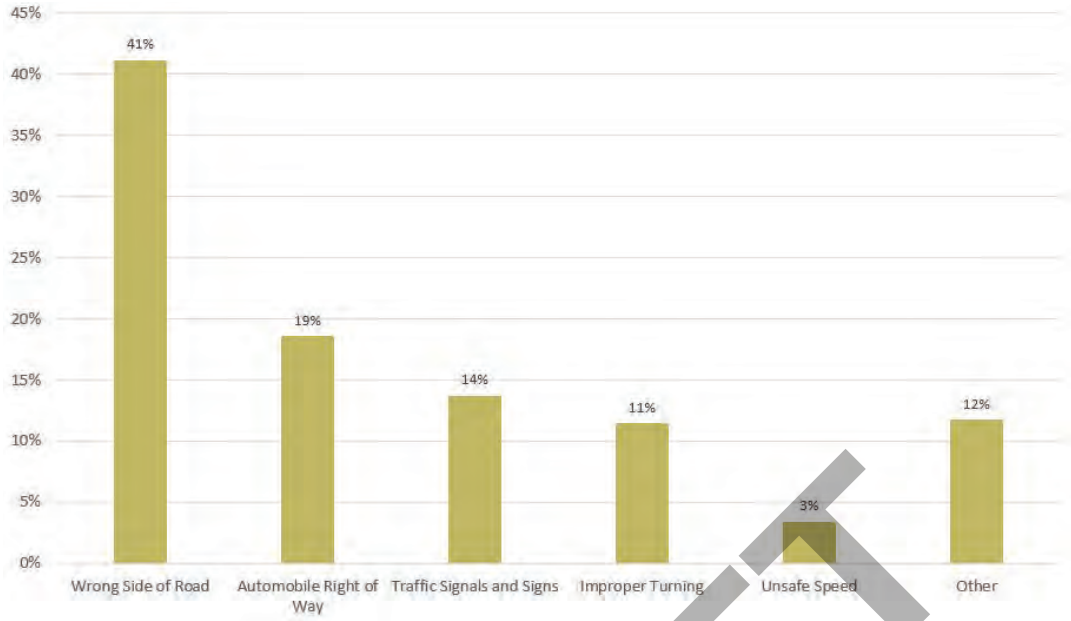


FIGURE 2-6 BICYCLE-INVOLVED COLLISIONS BY PRIMARY COLLISION FACTOR (2015 - 2018)

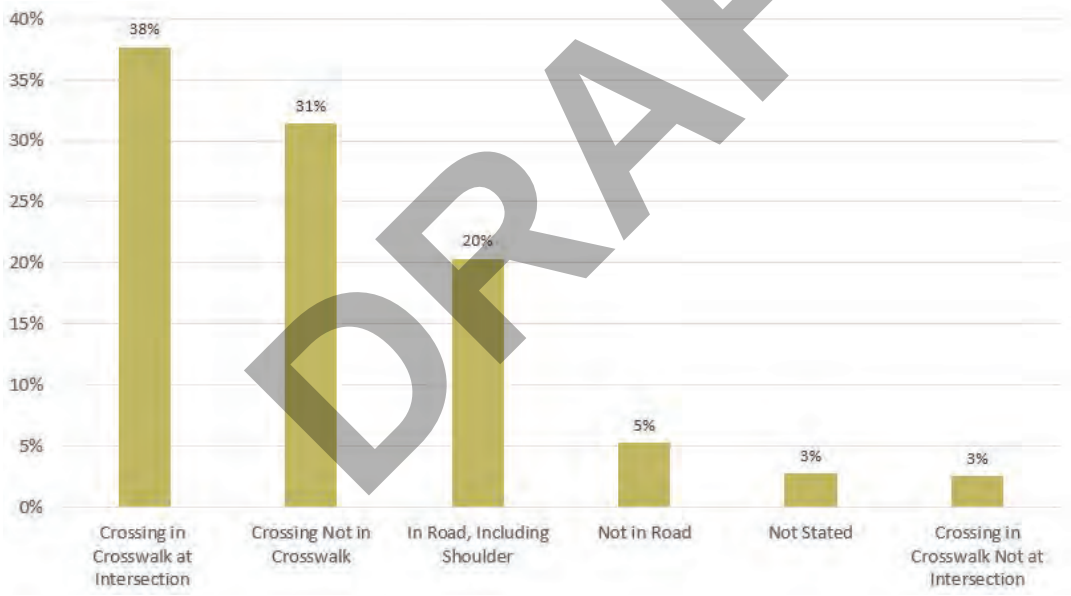


FIGURE 2-7 PEDESTRIAN-INVOLVED COLLISIONS BY PEDESTRIAN ACTION (2015 - 2018)

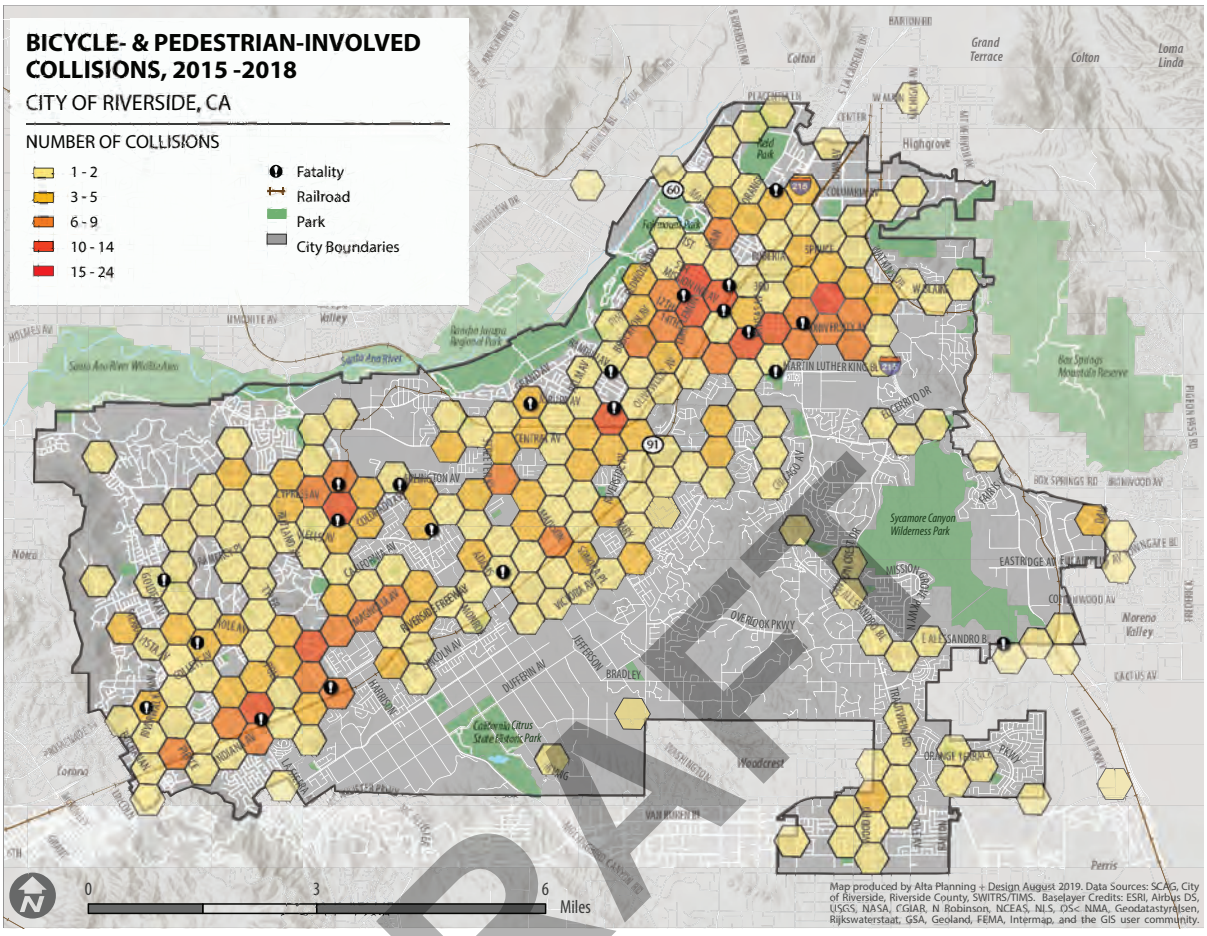


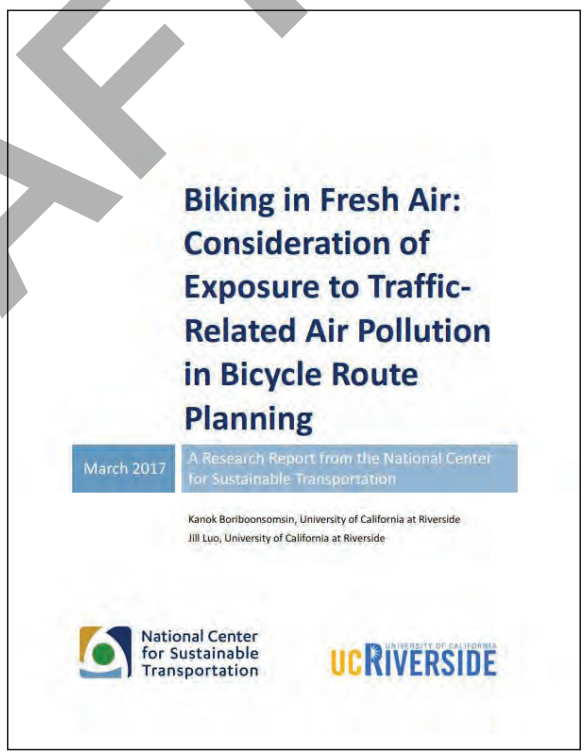
FIGURE 2-8 BICYCLE- AND PEDESTRIAN-INVOLVED COLLISIONS MAP

Air Quality

A report from the National Center for Sustainable Transportation "Biking in Fresh Air: Considerations of Exposure to Traffic-Related Air Pollution in Bicycle Route Planning" (Boriboonsomsin & Luo, 2017) and UC Riverside argued that exposure to air pollution is an important consideration when developing bicycle routes, as it puts bicyclists at risk for breathing in harmful particles. The report authors developed a method for integrating this exposure into bicycle route planning and collected air pollution data for the City of Riverside. Specifically, they estimated traffic-related concentrations of primary fine particle (PM2.5) concentrations based on traffic activity, traffic emissions, and air pollutant dispersion modeling. The concentration values were then weighted by level of bicycle activities by time of day (morning, midday, and afternoon) and by month of year (based on the GPS dataset in the 2010-12 California Household Travel Survey). This resulted in a map and interactive bicycle route planning tool that estimated bicyclist level of exposure to traffic-related air pollution for each roadway segment in the City.

Figure 2-9 displays the data collected by the researchers for the Biking in Fresh Air report. Exposure to air pollution is highest on roads closest to SR-91 and Interstate 215.

Major roads such as Magnolia Avenue and Arlington Avenue also have relatively high levels of pollution. Though identifying the ideal routes for bicycle facilities is based on many factors, some of which may be in conflict with the air quality data (for instance, many origins and destinations are located on or near streets with the highest exposure to air pollution), choosing routes with lower levels of air pollution when possible will be a benefit to people's health.



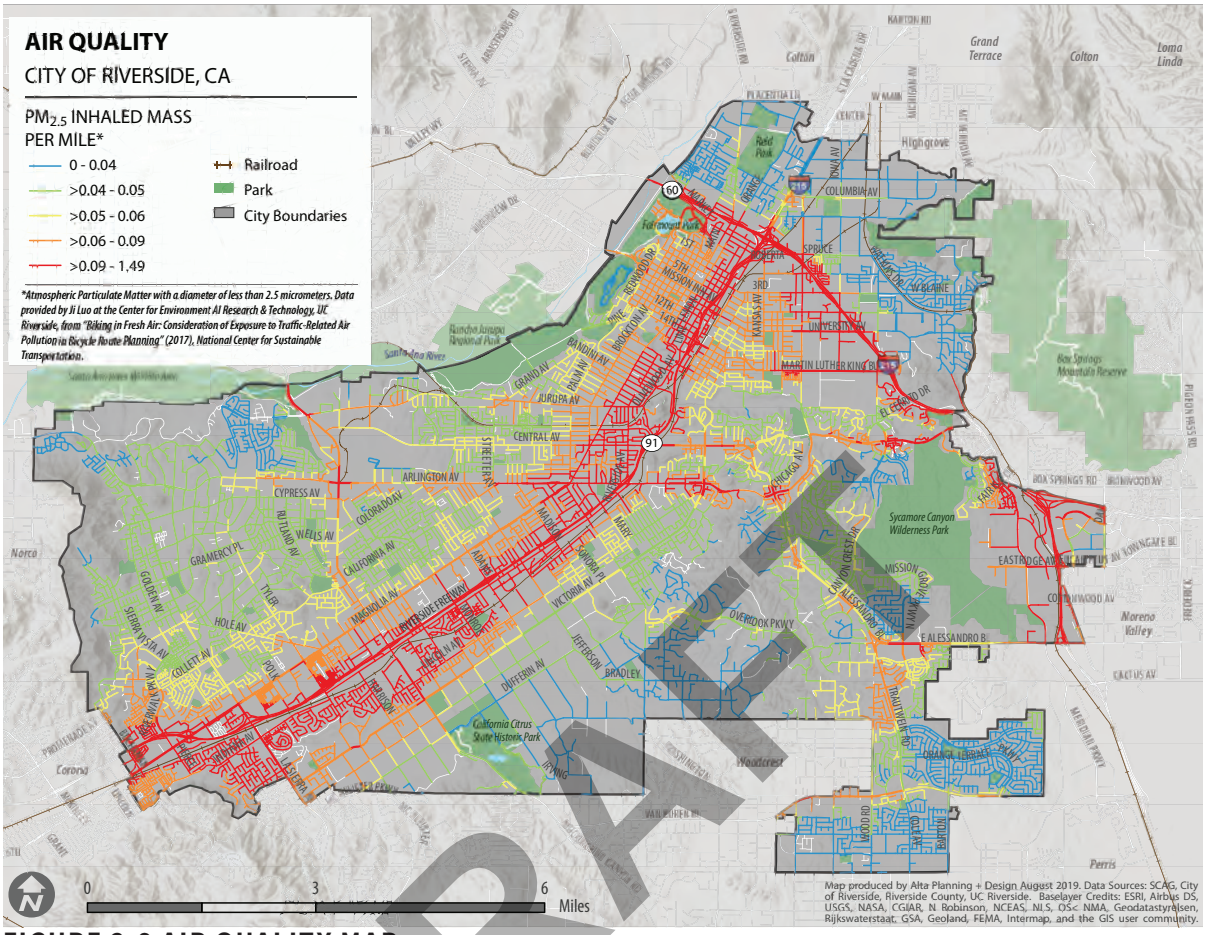


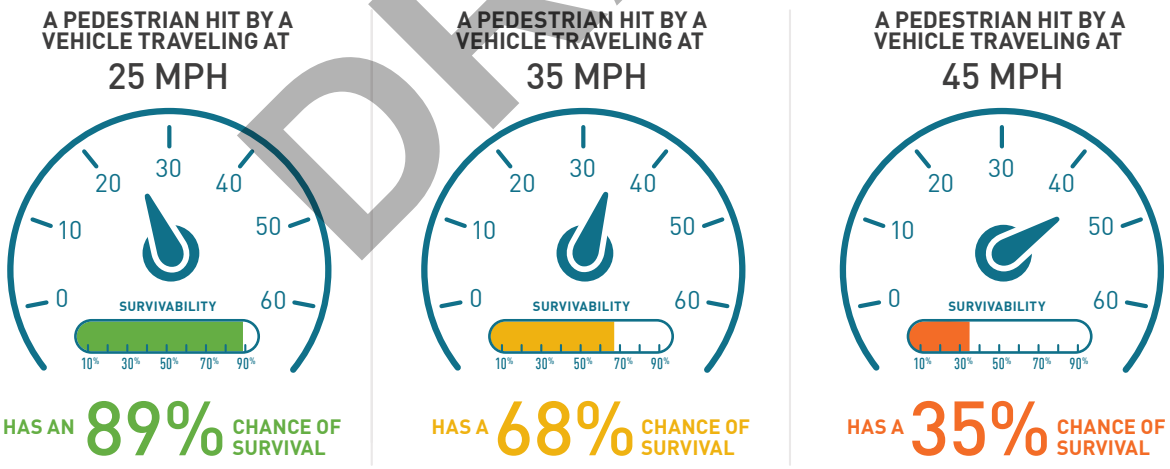
FIGURE 2-9 AIR QUALITY MAP

Roadway Conditions

The speed at which vehicles are traveling has a significant impact on the comfort and safety of pedestrians and bicyclists who are also using the same right-of-way. As Figure 2-10 below illustrates, a pedestrian's chance of survival after being hit by a vehicle at 25 mph is 89 percent but drops to only 35 percent if the vehicle is traveling at 45 mph.

Outside of highways, the highest posted speed limit in Riverside is 35 mph. According to research by Tefft (2013), pedestrians have a 68 percent chance of surviving when hit by a vehicle traveling at that speed. This emphasizes the importance of providing bicycle and pedestrian facilities that are appropriate for the existing roadway, or changing the design of the road to be safer for all road users. In addition, posted speeds are not necessarily the same as actual speeds. Therefore, roadway design and enforcement are also import factors contributing to vehicle speeds.

Posted speed limits for Riverside's streets are illustrated in Figure 2-11.



Tefft, B. C. *Impact speed and a pedestrian's risk of severe injury or death*. Accident Analysis & Prevention 50 (2013) 871-878.

FIGURE 2-10 PEDESTRIAN SURVIVABILITY BY SPEED

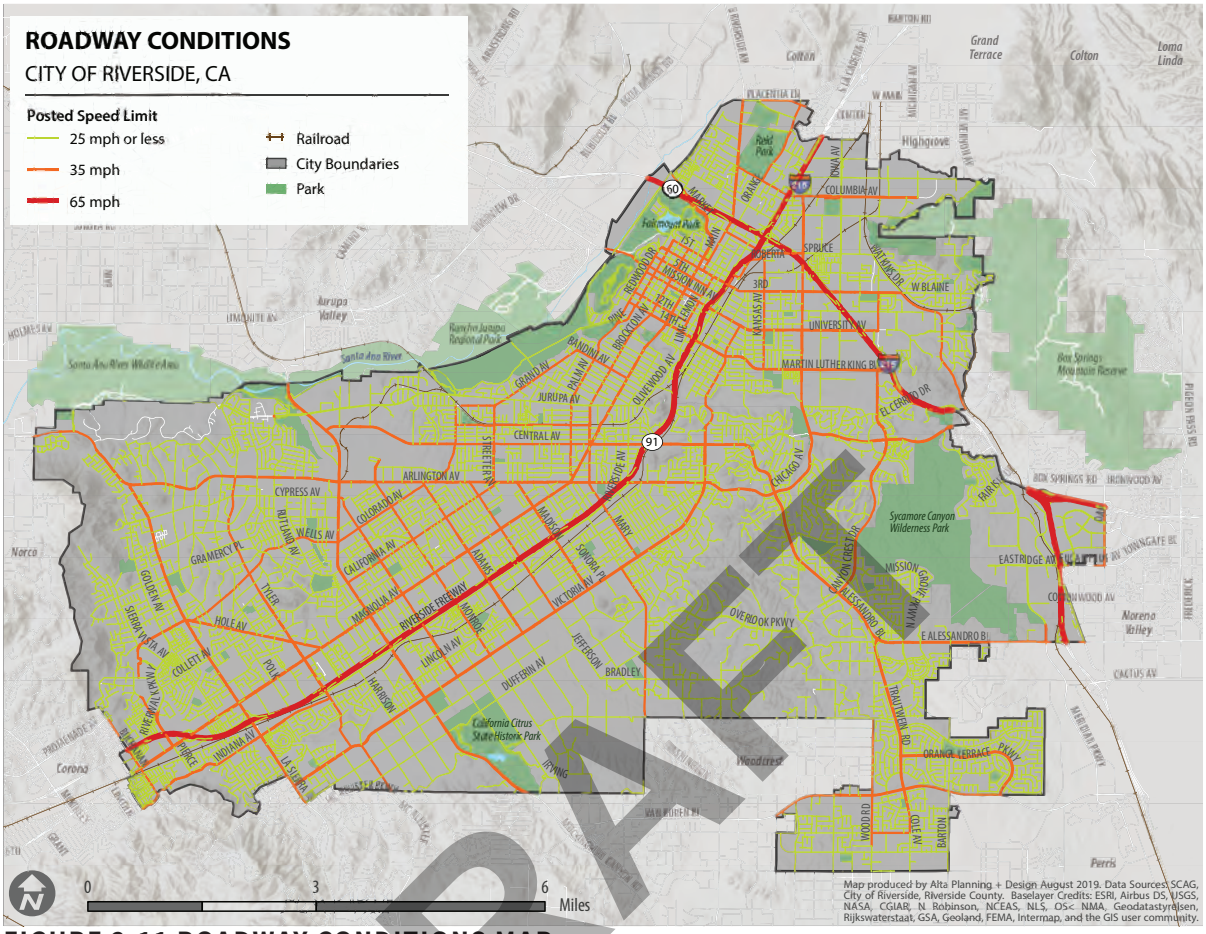


FIGURE 2-11 ROADWAY CONDITIONS MAP

Transit Network

The City of Riverside is served by three transit agencies, the Riverside Transit Agency (RTA), which provides local and regional bus service throughout Riverside County, Metrolink, which provides regional commuter rail service throughout Southern California, and Amtrak, the nationwide rail system.

Metrolink service in Riverside includes two lines, the Inland Empire line with service to San Bernardino and Oceanside and the Riverside Line with service to downtown Los Angeles. There are two Metrolink Stations, La Sierra located in the southwest part of the City on the Riverside Line, and the Downtown Riverside Station on the edge of downtown opposite SR-91; both rail lines service this station. Amtrak's Southwest Chief Line with service to Chicago also utilizes this station.

There are currently 32 RTA bus routes that provides service throughout the City. The majority of routes travel along or near SR-91 and I-215 corridors and terminate or pass through downtown. These corridors correlate relatively closely with SCAG's High Quality Transit Areas, or areas within one-half mile of major transit stops and frequent transit service.[1] Though most of the City 's area is not served by high quality transit, the densest and most diverse parts of the City, land-use wise, are.

Figure 2-12 shows Riverside's existing transit network.

RTA Bus-Downtown Riverside

Riverside-Dowtown Metrolink Station. Source: RCTC

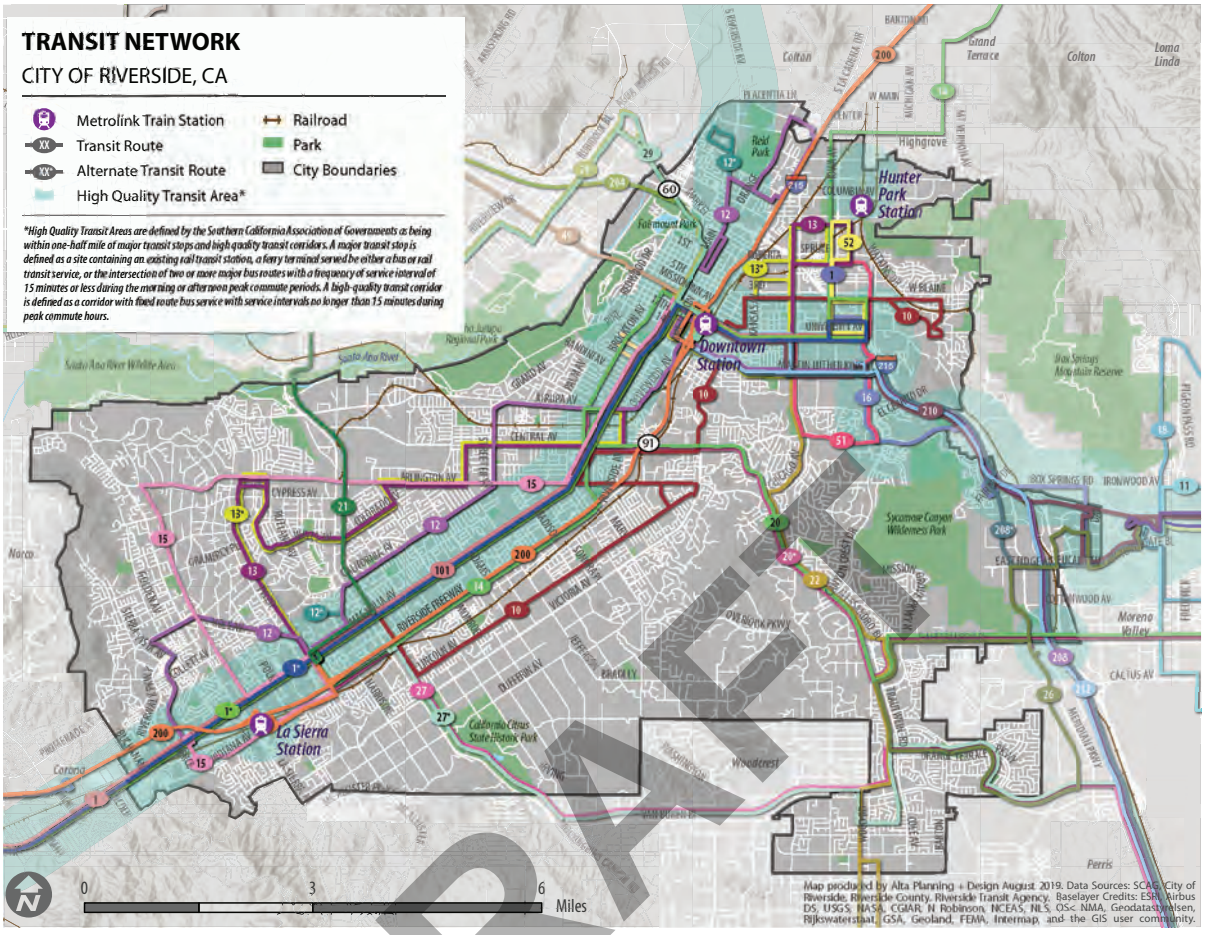
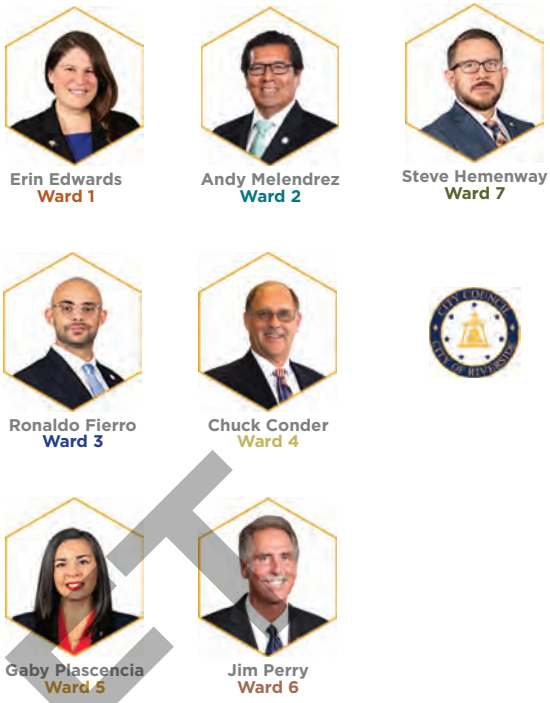


FIGURE 2-12 TRANSIT NETWORK MAP

Wards

The City of Riverside is divided into seven wards, each represented by a councilperson. The following section summarizes the existing conditions of each ward.

Wards are depicted in Figure 2-13.



RIverside City Council Members and their represented Wards as of 2021.

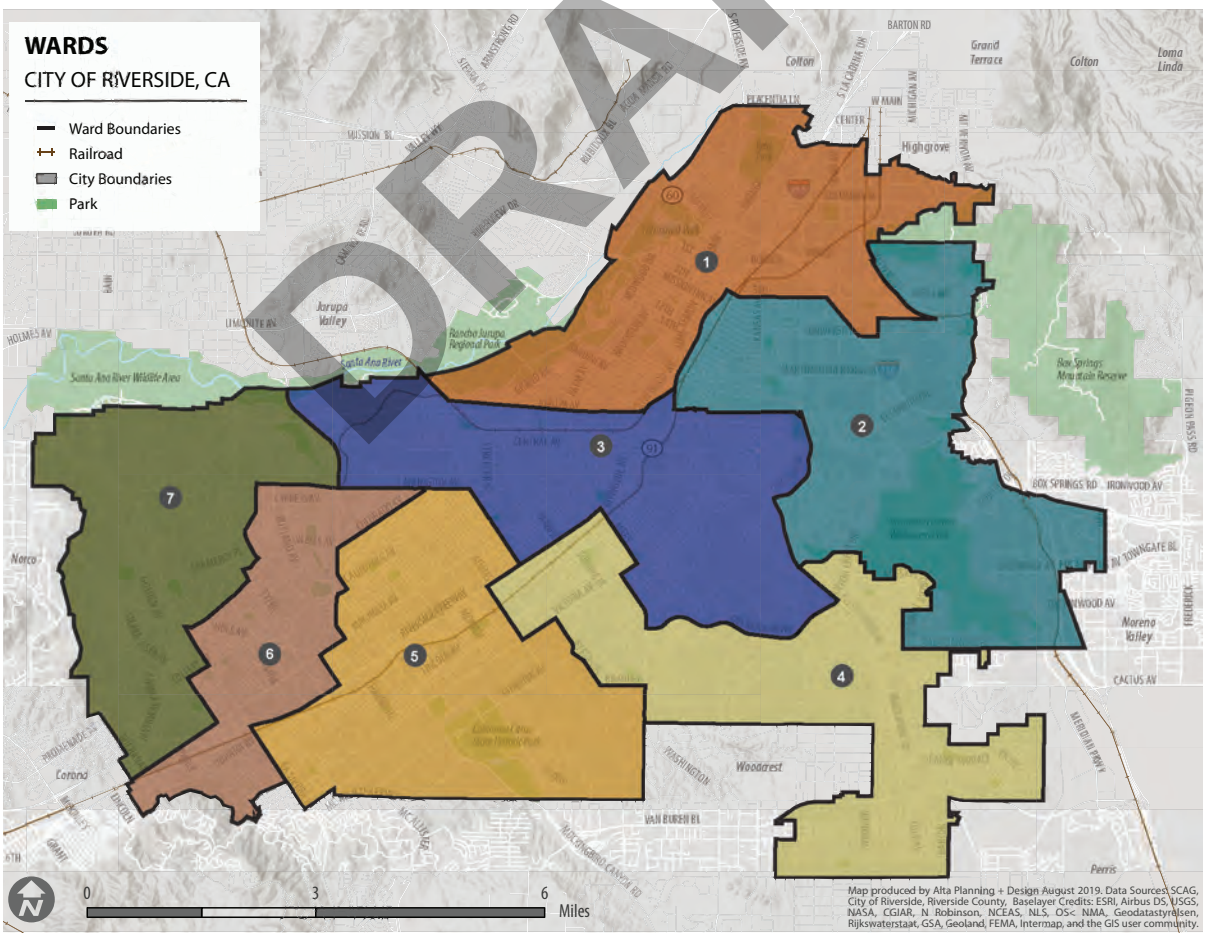


FIGURE 2-13 WARDS MAP

Ward 1 Characteristics

Ward 1 is the northernmost Ward in the City of Riverside, covering 11.8 square miles, and sharing the city border with the City of Jurupa Valley and the unincorporated community of High Grove. It is bisected by SR-91 and SR-60, which are the main arteries for vehicular travel to and through Riverside.

DEMOGRAPHICS

According to 2017 American Community Survey data, Ward 1 within the City of Riverside is home to approximately 63,200 people and is 53% of Hispanic or Latino origin and 47% of residents not of Hispanic or Latino origin. Ward 1 consists largely of working age individuals and young families, 27% of individuals being within the age range of 30-39 while the second largest group was 21% consisting of individuals within the range of 20-29 years of age. The education level in Ward 1 is made up mostly of High School graduates at 28% as well as "Some College" at 23%. The income distribution of Ward 1 is representative of middle-class working salaries with approximately 68% of households reportedly having an income of less than $75,000.

ORIGINS AND DESTINATIONS

Ward 1 is the economic and cultural hub of Riverside. It has a diverse mix of land uses and encompasses the downtown core, where most of the City's civic and cultural buildings reside. Downtown is situated around the Main Street pedestrian mall, which is closed to vehicle traffic and is bordered by retail shops, restaurants, and other attractions.

Ward 1 is also home to several of the City's most visited destinations, including Riverside City College, Riverside Convention Center, and Mission Inn. There are several parks, most notably Fairmount Park, Mt. Rubidoux Park, and a portion of Rancho Jurupa Regional Park, which stretch along the ward's entire western boundary South of SR-60.

ACTIVE TRANSPORTATION NETWORK

The existing active transportation network in Ward 1 is relatively well-connected, particularly the west side due in large part to the rectilinear street grid and extensive sidewalk infrastructure. These amenities are less extensive outside of the downtown core, north of SR-60 and east of SR-91, and access to downtown is limited due to the highways.

The regional Santa Ana River Trail follows the Santa Ana River along Ward 1's western border, providing connectivity to San

Bernardino to the northeast and Norco to the southwest. There are several existing Class II bike lanes, the most significant being the Magnolia Avenue bike lane which provides access through downtown and to southeast Riverside. A number of Class III bike routes are planned for the downtown area, as are several Class II bike lanes in the eastern portion of the ward. The regional Juan Batista De Anza Trail will eventually travel through the ward to connect to the Santa Ana River Trail in Ryan Bonaminio Park.

Figure 2-14 is a map of Ward 1's existing conditions, including origins and destinations and the active transportation network.

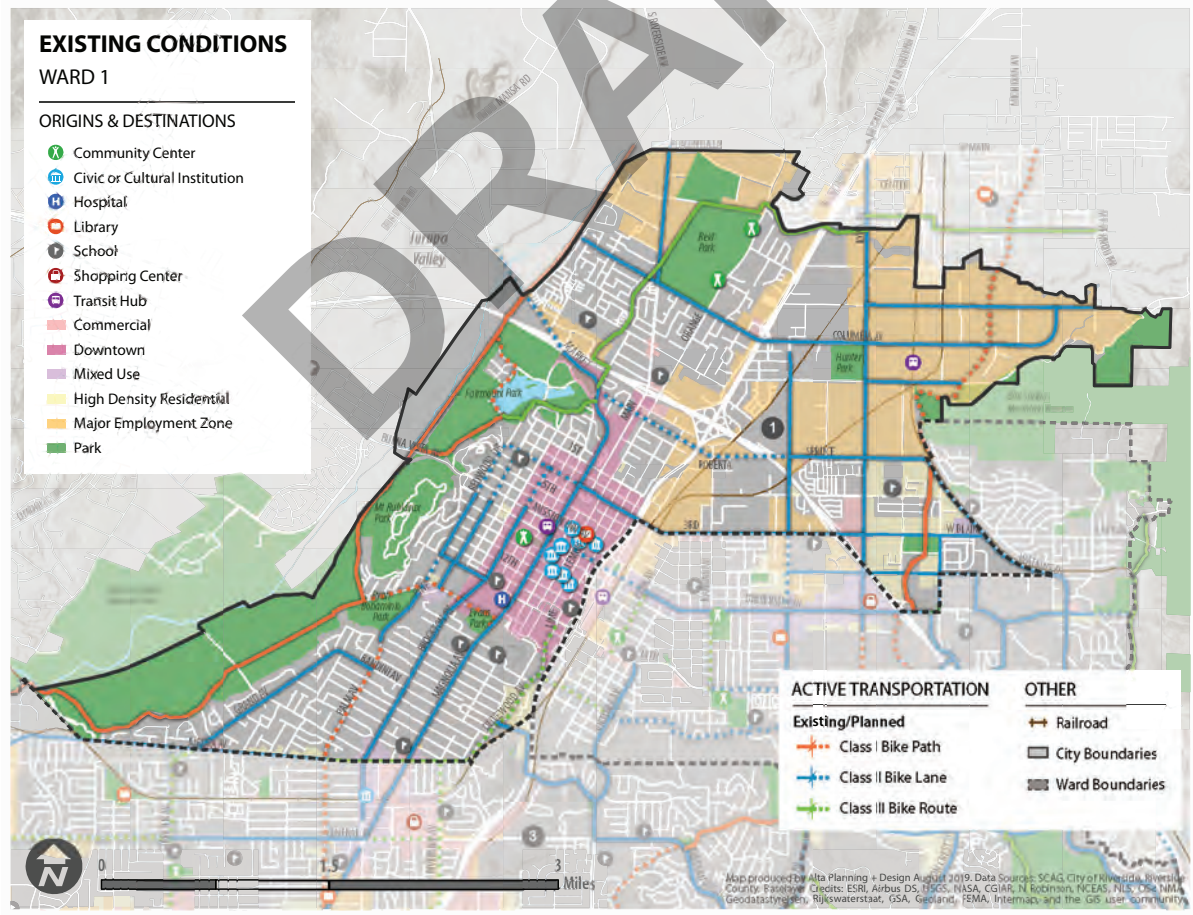


FIGURE 2-14 WARD 1 EXISTING CONDITIONS MAP

Bicycle- and Pedestrian-Involved Collisions

Ward 1 had the greatest concentration of bicycle- and pedestrian-involved collisions. Approximately one-quarter (186 collisions), of all bicycle- and pedestrian collisions between 2015 and 2018 occurred in Ward 1. Six of those collisions were fatal and 19 resulted in severe injury.

Most of these collisions occur in downtown, where people are more likely to walk and bike than anywhere else in the City. 40-percent (75 collisions) of all Ward 1 bicycle- and pedestrian-involved collisions occurred in downtown Riverside or within the immediate vicinity, most commonly along 14th Street and Market Street.

Outside of downtown, collisions are concentrated along Iowa Avenue (13 collisions), Blaine Street (10 collisions), and Jurupa Avenue (10 collisions). Eight of the collisions on Iowa Avenue and Blaine Street occurred at the intersection of the two streets. Two fatal collisions occurred on Jurupa Avenue, one at Magnolia Avenue, the other at Meadowbrook Lane.

Table 2-1 lists the five intersections with the highest number of bicycle- and pedestrian-involved collisions in Ward 1. Table 2-2 lists the five streets with the highest number of collisions, and Table 2-3 lists the locations of the fatal collisions. Figure 2-15 shows the locations of all bicycle- and pedestrian-involved collisions between 2015 and 2018 in Ward 1. The color of each hexagon in the map represents the number of collisions that occurred in that area. The location of fatal collisions and those resulting in severe injury are also identified.

TABLE 2-1 - WARD 1: INTERSECTIONS WITH THE MOST COLLISIONS

Intersection	Number of Collisions
Iowa Ave & Blaine St	8
3rd St & Trade Center Dr	4
Main St & Strong St	4
Mission Inn Ave & Main St	4
University Ave & Orange St	4

TABLE 2-2 - WARD 1: STREETS WITH THE MOST COLLISIONS

Street	Number of Collisions
Market St	17
Iowa Ave	13
Main St	12
14th St	11
Blaine St	10
Jurupa Ave	10

TABLE 2-3 - WARD 1: INTERSECTIONS WITH FATAL COLLISIONS

Intersection	Fatal Collisions
Brockton Ave & Bandini Ave	1
Columbia Ave & Mulberry St	1
Jurupa Ave & Magnolia Ave	1
Jurupa Ave & Meadowbrook Ln	1
Market St & University Ave	1
SR-91 Eastbound & 3rd St	1

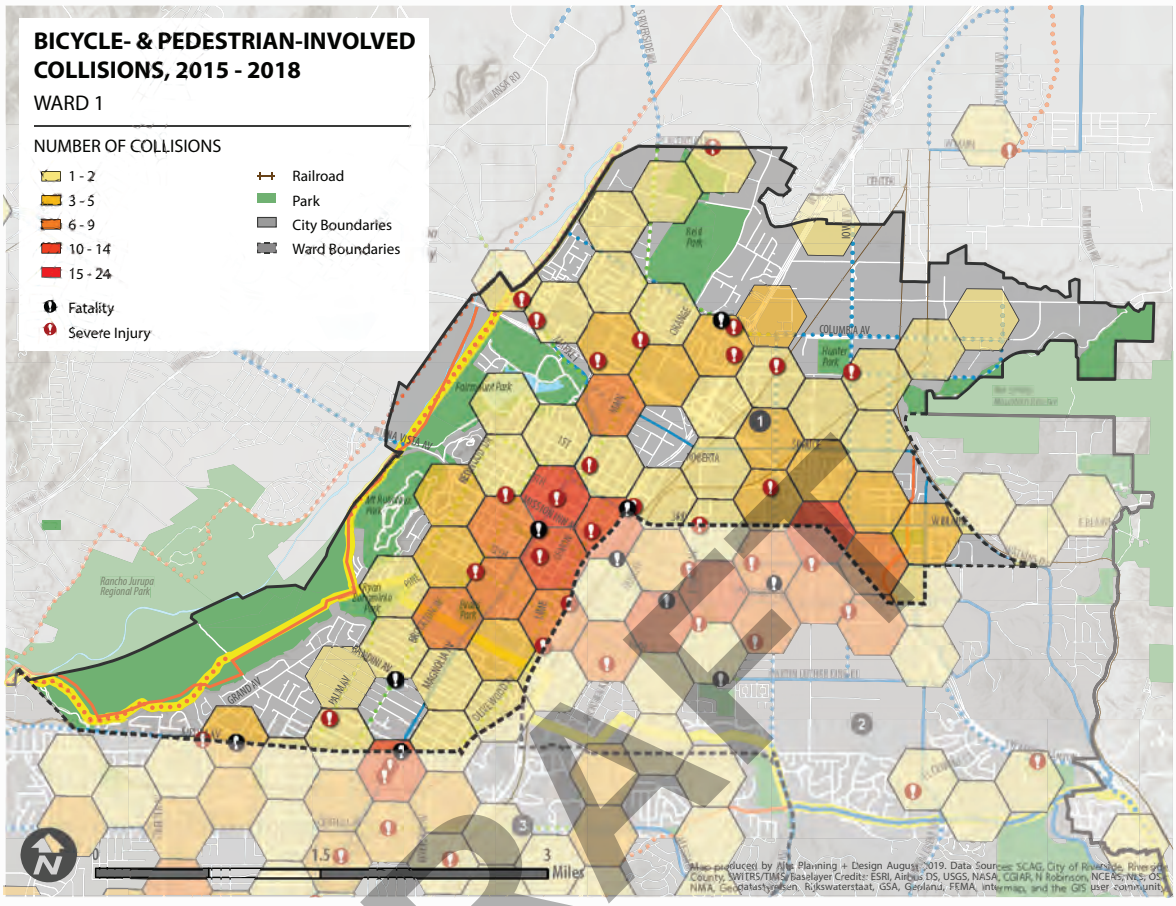


FIGURE 2-15 WARD 1 BICYCLE- AND PEDESTRIAN-INVOLVED COLLISIONS (2015-2018) MAP

Ward 2 Characteristics

Ward 2 is located in the eastern sector of Riverside and is approximately 14.5 square miles in size. It borders downtown and SR-91 to the west. Its shares its eastern border with the City, where it abuts the City of Moreno Valley and unincorporated Riverside County. I-215 crosses the ward in the northeast and again in the southeast corners of the ward.

DEMOGRAPHICS

Ward 2 within the City of Riverside is home to approximately 49,789 people and is 57% of Hispanic or Latino origin and 43% of residents not of Hispanic or Latino origin. Ward 2 consists largely of working age individuals and young families, 25% of individuals being within the age range of 30-39 while the second largest group was 23% consisting of individuals within the range of 20-29 years of age. Similar to Ward 1 the education level in Ward 2 is made up mostly of High School graduates at 22% as well as “Some College” at 23%, differing however with 17% of people obtaining a Bachelor’s Degree and 10% of people obtaining a Master’s Degree. The income distribution of Ward 2 is bottom heavy with 21% of individuals having an income of less than $25,000, which decreases by a few percentage points the larger the income quantity. This trend is representative of approximately 58% of households reportedly having an income of less than $75,000 and approximately 30% of households reportedly having an income $100,000 or more.

ORIGINS AND DESTINATIONS

Ward 2 is home to the 1,200 acre University of California Riverside located on the east side of I-215. Multi-family housing and local amenities are concentrated along University Avenue to the south of the campus. Just west of I-215 opposite the main campus, is University Village, a popular open-air retail and dining destination.

The Downtown Riverside Metrolink station is located in the northwest corner of Ward 2 near the border with Ward 1. Otherwise, amenities are fairly sparse, and development is of low-density, particularly south of Central Avenue, where large tract single-family housing and curvilinear streets predominate. The area on the eastern end of Martin Luther King Boulevard is predominately agricultural.

Sycamore Canyon Wilderness Park is a large park located in the southern half of the ward. Immediately to the east of the park is a considerable employment zone where a number of national corporations have distribution centers. East of I-215 is the Canyon Crossings Mall and a number of big box stores.

ACTIVE TRANSPORTATION NETWORK

The area around the UC Riverside campus has several Class II bike lanes, most of which travel east to west along major thoroughfares. Central Avenue, running east to west, also has bike lanes. However, there are no facilities that connect to downtown Riverside. North-south bicycle connections are also lacking, particularly those that cross I-215.

Planned Class III bike routes would fill the gaps in the network connecting to downtown. Planned bike lanes on Canyon Crest Drive and Sycamore Canyon Boulevard would provide connections to the southern reaches of the ward where there are currently none. Once built, the regional Juan Batista De Anza trail will bisect the ward, enabling access to downtown Riverside, the Santa Ana River Trail to the northwest, and eastern Riverside County.

Figure 2-16 is a map of Ward 2's existing conditions, including origins and destinations and the active transportation network.

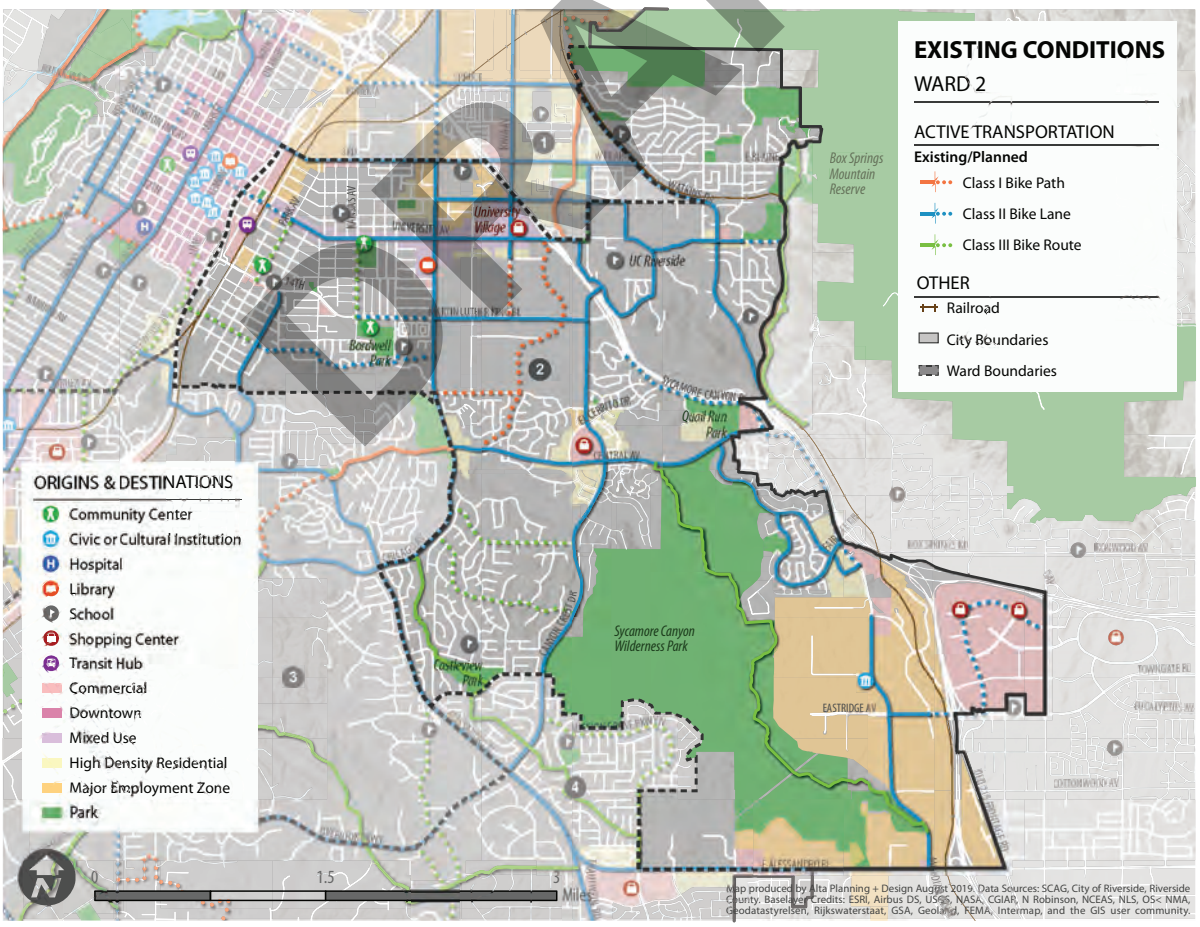


FIGURE 2-16 WARD 2 EXISTING CONDITIONS MAP

Bicycle- and Pedestrian-Involved Collisions

Ward 2 had 109 bicycle- and pedestrian-involved collisions between 2015 and 2018 (15% of citywide bicycle- and pedestrian-involved collisions). They were concentrated in the northern part of the ward, north of Martin Luther King Boulevard, where the street grid is densest. Five of the collisions were fatal; 12 resulted in severe injury.

Collisions are particularly concentrated on University Avenue; 24 collisions occurred on University Avenue between 2015 and 2018, six at the intersection with Interstate-215, five at the intersection with Iowa Avenue, and four at the intersection with Cranford Avenue. A fatal pedestrian-involved collision occurred at University Avenue and Comer Avenue.

Table 2-4 lists the five intersections with the highest number of bicycle- and pedestrian-involved collisions in Ward 2 from 2015 and 2018. Table 2-5 lists the five streets with the highest number of collisions, and Table 2-6 lists the locations of the fatal collisions. Figure 2-17 shows the locations of all bicycle- and pedestrian-involved collisions between 2015 and 2018 in Ward 2. The color of each hexagon in the map represents the number of collisions that occurred in that area. The location of fatal collisions and those resulting in severe injury are also identified.

TABLE 2-4 - WARD 2: INTERSECTIONS WITH THE MOST COLLISIONS

Intersection	Number of Collisions
University Ave & I-215	6
University Ave & Iowa Ave	5
University Ave & Cranford Ave	4
Chicago Ave & Linden St	4
Day St & Canyon Springs Pkwy	4

TABLE 2-5 - WARD 2: STREETS WITH THE MOST COLLISIONS

Street	Number of Collisions
University Ave	24
Chicago Ave	8
14th St	7
Linden St	5
Day St	5

TABLE 2-6 - WARD 2: INTERSECTIONS WITH FATAL COLLISIONS

Intersection	Fatal Collisions
Chicago Ave & 7th St N	1
Mission Inn Ave & Commerce St	1
University Ave & Comer Ave	1
Alessandro Blvd & Gem Ln	1
Martin Luther King Blvd & Douglass Ave	1

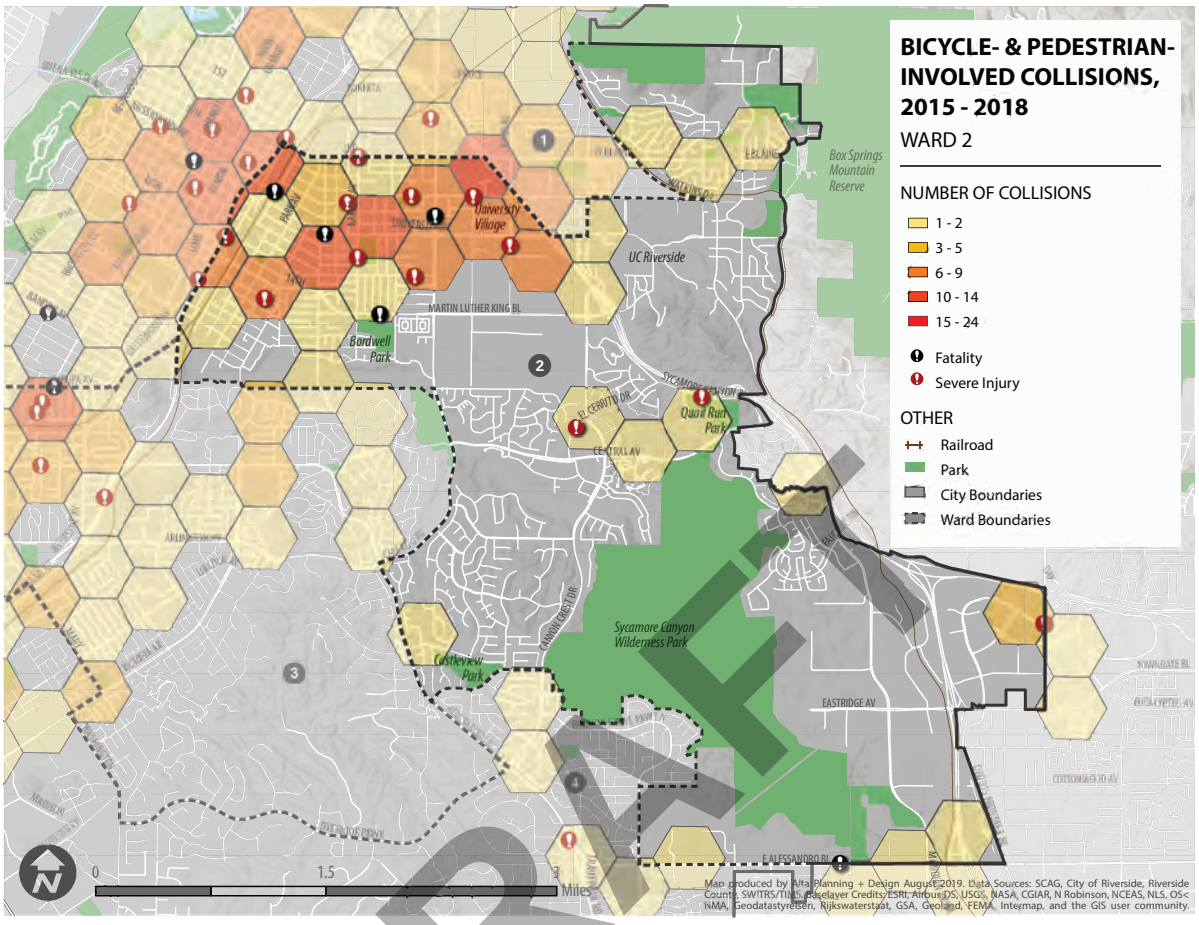


FIGURE 2-17 WARD 2 BICYCLE- AND PEDESTRIAN-INVOLVED COLLISIONS (2015 - 2018) MAP

Ward 3 Characteristics

Ward 3 is centrally located within the City of Riverside and is 12.6 square miles. The ward is bisected by SR-91.

DEMOGRAPHICS

Ward 3 within the City of Riverside is home to approximately 90,711 people and is 49% of Hispanic or Latino origin and 51% of residents not of Hispanic or Latino origin. Ward 3 consists largely of working age individuals and young families, 25% of individuals being within the age range of 30-39 while the second largest group was 16% consisting of individuals within the range of 20-29 and 10-19 years of age. Similar to Ward 1 the education level in Ward 2 is made up mostly of High School graduates at 26% as well as "Some College" at 24%, differing however with 17% of people obtaining a Bachelor's Degree and 10% of people obtaining a Master's Degree. The income distribution of Ward 3 is representative of middle-class working salaries with the largest percentage at 21% for the $25,000-$49,000 income range and the second largest income share at 18% for the $50,000-$100,00 income range.

ORIGINS AND DESTINATIONS

West of SR-91, development is primarily residential with concentrations of commercial and retail establishments following the main corridors of Central Avenue and Magnolia Avenue. Two large shopping centers, Arlington Square and Riverside Plaza, are located at Arlington Avenue and Madison Street, and Arlington Avenue and Central Avenue, respectively. The characteristics of this ward include smaller lots and orthogonal blocks and streets. There are several community centers, schools, and the Department of Motor Vehicles are also located in this area. The far western portion of the ward encompasses the Riverside Municipal Airport.

East of SR-91, development is more suburban in nature with a mix of rectilinear and curvilinear streets. There is a concentration of commercial land use along the highway, otherwise residential neighborhoods predominate with the exception of one commercial land use cluster along the highway

ACTIVE TRANSPORTATION NETWORK

The existing active transportation network in Ward 3 contains some bicycle facilities but is largely underserved. There is one north-south Class II bike lane that connects to downtown along Magnolia Ave, and one

east-west Class II bike lane along Arlington Ave. Several bike lanes and bike routes are planned according to the City of Riverside Bicycle Master Plan, that will improve both north-south and east-west connectivity.

Figure 2-18 is a map of Ward 3's existing conditions, including origins and destinations and the active transportation network.

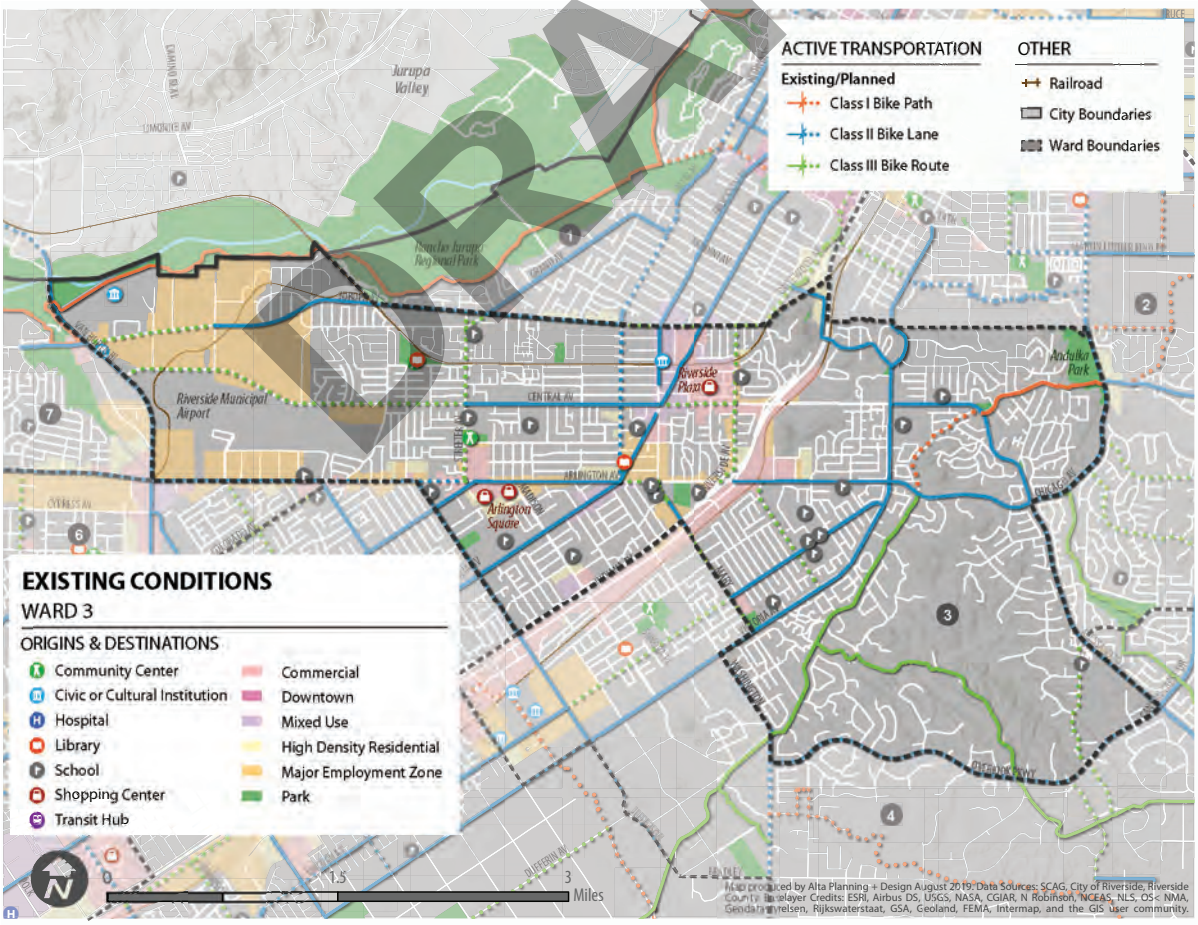


FIGURE 2-18 WARD 3 EXISTING CONDITIONS MAP

Bicycle- and Pedestrian-Involved Collisions

Ward 3 had 103 bicycle- and pedestrian-involved collisions between 2015 and 2018, (14% of citywide bicycle- and pedestrian-involved collisions). Eight collisions resulted in a severe injury; one collision at Arlington Avenue and Weaver Street resulted in a fatality.

Collisions are concentrated in the central part of the ward where development is densest, particularly along Arlington Avenue, Central Avenue, and Magnolia Avenue.

Table 2-7 lists the five intersections with the highest number of bicycle- and pedestrian-involved collisions in Ward 3. Table 2-8 lists the five streets with the highest number of collisions, and Table 2-9 lists the location of the single fatal collision in Ward 3. Figure 2-19 shows the locations of all bicycle- and pedestrian-involved collisions between 2015 and 2018 in Ward 3. The color of each hexagon in the map represents the number of collisions that occurred in that area. The location of collisions resulting in severe injury are also identified.

TABLE 2-7 - WARD 3: INTERSECTIONS WITH THE MOST COLLISIONS

Intersection	Number of Collisions
Magnolia Ave & Elizabeth St	5
Central Ave & SR-91	4
Central Ave & Streeter Ave	4
Central Ave & Victoria Ave	4
Magnolia Ave & Madison St	3

TABLE 2-8 - WARD 3: STREETS WITH THE MOST COLLISIONS

Street	Number of Collisions
Arlington Ave	22
Central Ave	15
Magnolia Ave	12
Brockton St	5
Madison St	4
Victoria Ave	4

TABLE 2-9 - WARD 3: INTERSECTIONS WITH FATAL COLLISIONS

Intersection	Fatal Collisions
Arlington Ave & Weaver St	1

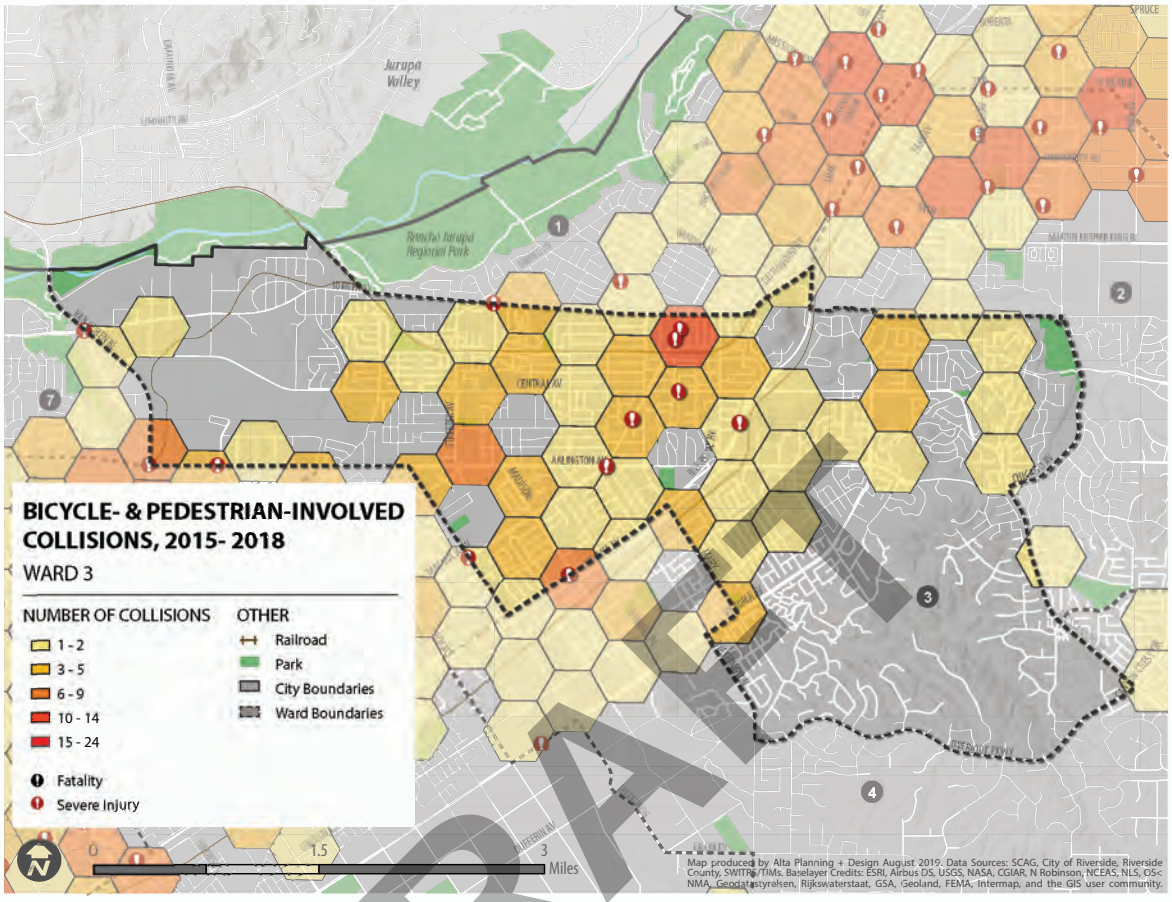


FIGURE 2-19 WARD 3 BICYCLE- AND PEDESTRIAN-INVOLVED COLLISIONS (2015 - 2018) MAP

Ward 4 Characteristics

Ward 4 is located on the southern border of the City of Riverside and is 12.9 square miles in size. SR-91 forms its northwest border with Ward 3.

DEMOGRAPHICS

Ward 4 within the City of Riverside is home to approximately 72,570 people and is 62% of Hispanic or Latino origin and 38% of residents not of Hispanic or Latino origin. Similar to Ward 3, Ward 4 consists largely of working age individuals and young families, 22% of individuals being within the age range of 30-39, however with an increased population share of the 40-59 years of age range which accounts for roughly 30% of the Ward population. The education level in Ward 4 is made up mostly of "Some College" at 25%, this Ward has a largely educated base with only approximately 15% of individuals who have received less education than a High School Diploma. The income distribution of Ward 4 is relatively evenly distributed with the largest share percentage being 15% at $50,00-$74,000, while the lowest share percentage is 10% at the $125,000-$150,00 range.

ORIGINS AND DESTINATIONS

Ward 4 is predominately suburban and rural/agricultural. The central portion of the ward is characterized by large-lot residences and open space. The eastern and southern portions of the ward have denser suburban neighborhoods. Commercial areas are concentrated at East Alessandro Boulevard and Trautwein Road, and along the Van Buren Boulevard corridor. The northwest portion of the ward that abuts SR-91 is primarily commercial and employment zones, many of them car dealerships and auto-centric businesses.

ACTIVE TRANSPORTATION NETWORK

The existing active transportation network in Ward 4 contains some bicycle facilities but is largely underserved. Existing facilities include one Class II bike lane along Victoria Avenue that bisects the western most portion of the ward and a Class I bike path loop within the suburban development in the eastern-most area of the ward. There are a few planned bike lanes and bike routes according to the City of Riverside Bicycle Master Plan, that will improve connectivity in the area, but the active transportation network will remain fairly sparse.

Figure 2-20 is a map of Ward 4's existing conditions, including origins and destinations and the active transportation network.

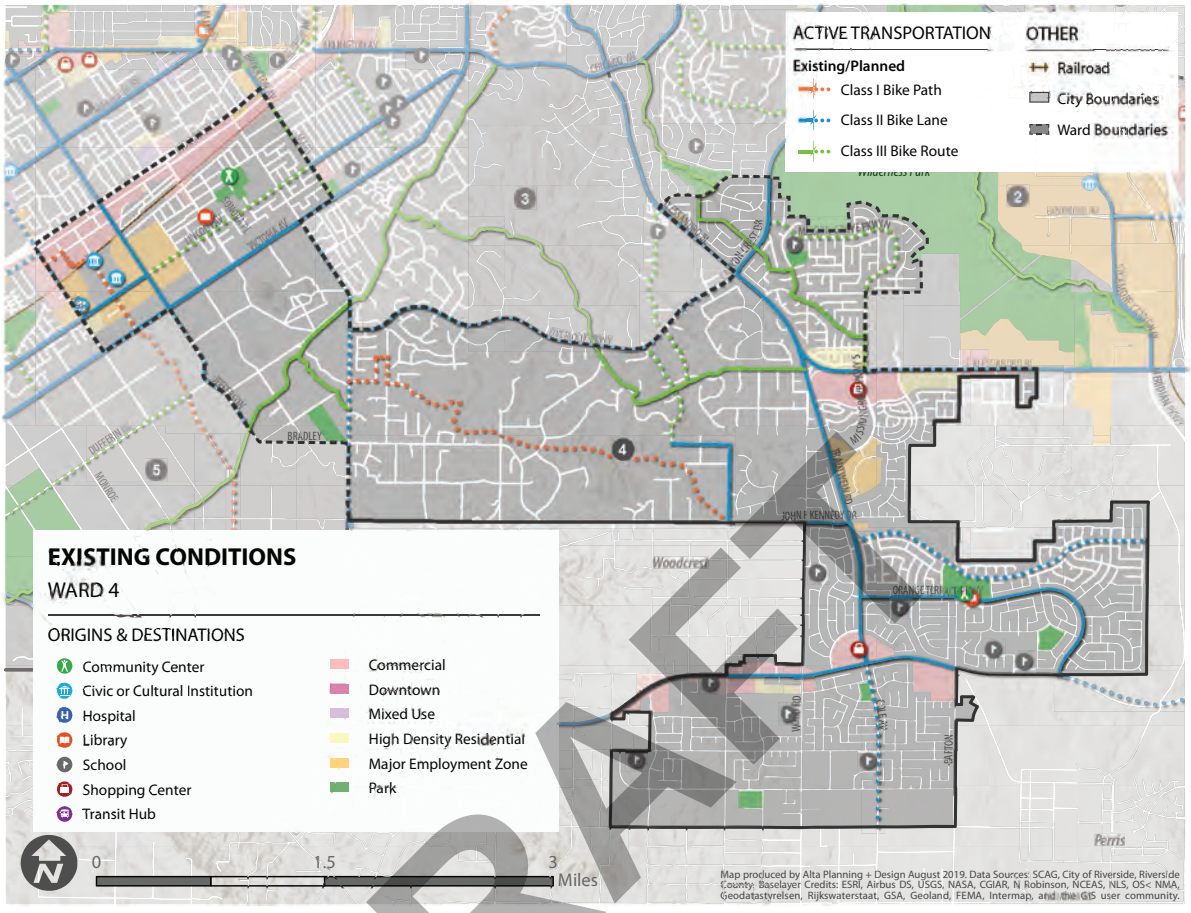


FIGURE 2-20 WARD 4 EXISTING CONDITIONS MAP

Bicycle- and Pedestrian-Involved Collisions

Ward 4 had 49 bicycle- and pedestrian-involved collisions between 2015 and 2018, (7% of citywide bicycle- and pedestrian-involved collisions). This relative dearth of collisions is likely due to the nature of the ward's development, which is relatively low-density with few amenities.

Collisions are concentrated in the denser portions of the ward, in the northern-most section along Madison Street near SR-91, and the southern-most section centered around the intersection of Van Buren Boulevard and Wood Road. None of the collisions were fatal and only two resulted in severe injury, one at Trautwein Road and Berry Road and the other at Victoria Avenue and Saint Lawrence Street.

Table 2-10 lists the two intersections with the highest number of bicycle- and pedestrian-involved collisions in Ward 4 and Table 2-11 lists the three streets with the highest number of collisions. Figure 2-21 shows the locations of all bicycle- and pedestrian-involved collisions between 2015 and 2018 in Ward 4. The color of each hexagon in the map represents the number of collisions that occurred in that area. The location of fatal collisions and those resulting in severe injury are also identified.

TABLE 2-10 - WARD 4: INTERSECTIONS WITH THE MOST COLLISIONS

Intersection	Number of Collisions
Van Buren Blvd & Wood Rd	4
Madison & Indiana	3

TABLE 2-11 - WARD 4: STREETS WITH THE MOST COLLISIONS

Street	Number of Collisions
Madison St	10
Van Buren Blvd	5
Wood Rd	4

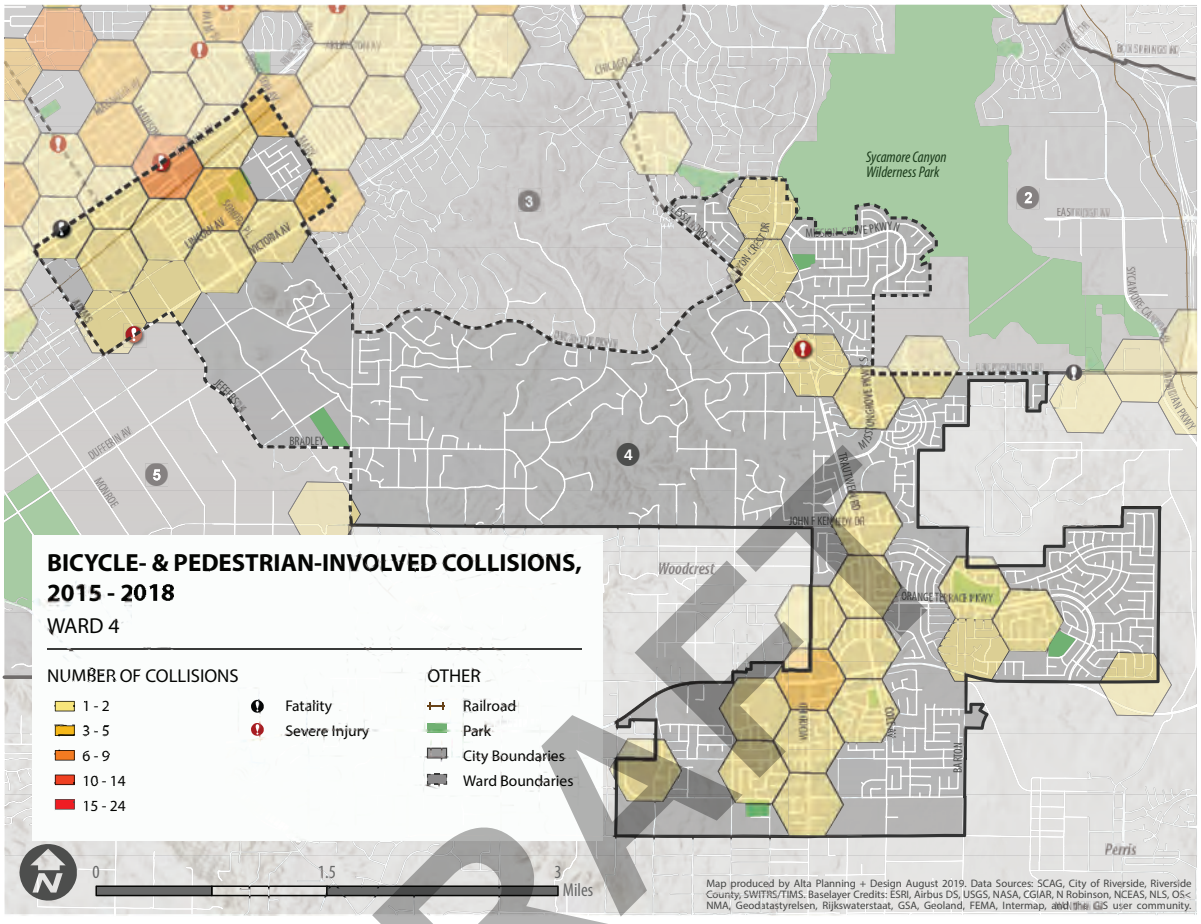


FIGURE 2-21 WARD 4 BICYCLE- AND PEDESTRIAN-INVOLVED COLLISIONS (2015 - 2018) MAP

Ward 5 Characteristics

Ward 5 is located on the southwestern border of the City of Riverside and is 12.8 square miles in size. This ward is bisected by SR-91.

DEMOGRAPHICS

Ward 5 within the City of Riverside is home to approximately 75,794 people and is 52% of Hispanic or Latino origin and 48% of residents not of Hispanic or Latino origin. Much like the previous four Wards, Ward 5 also consists largely of working age individuals and young families, 27% of individuals being within the age range of 30-39 while the second largest group was 15% consisting of individuals within the range of 20-29 and 10-19 years of age. The education level in Ward 5 is made up mostly of High School graduates at 27% as well as “Some College” at 25%. The income distribution of Ward 5 is representative of middle-class working salaries with the three lowest income ranges all having the same percentage share of 19%: Less than $25,000, $25,000-$50,000, and $50,000-$75,000.

ORIGINS AND DESTINATIONS

The northern half of Ward 5 is fairly dense, with large office and industrial uses along the highway, less dense commercial centers north of the highway, and a prominent commercial intersection at Magnolia Avenue and Van Buren Boulevard. The area closest to the highway contains the highest concentrations of amenities including several schools and institutions, such as California Baptist University. La Sierra Metrolink Station is located in the ward’s western-most corner.

The southern half of the ward is primarily rural and agricultural in nature with a street system that is characterized by large blocks. Other than the California Citrus State Historic Park and the Arlington Heights Sports Park, there are relatively few amenities in this section of the ward.

ACTIVE TRANSPORTATION NETWORK

The existing active transportation network in Ward 5 has four existing east-west bicycle facilities but no north-south facilities connecting across SR- 91. Existing facilities include Class II bike lanes on Victoria Avenue and Magnolia Avenue. There are several planned bicycle facilities that will improve the connectivity of the ward, such as the facilities along Dufferin Ave, Van Buren Blvd, and Jackson St that will provide greater access to amenities like the Arlington Sports Complex and California Citrus State Historic Park.

Figure 2-22 is a map of Ward 5's existing conditions, including origins and destinations and the active transportation network.

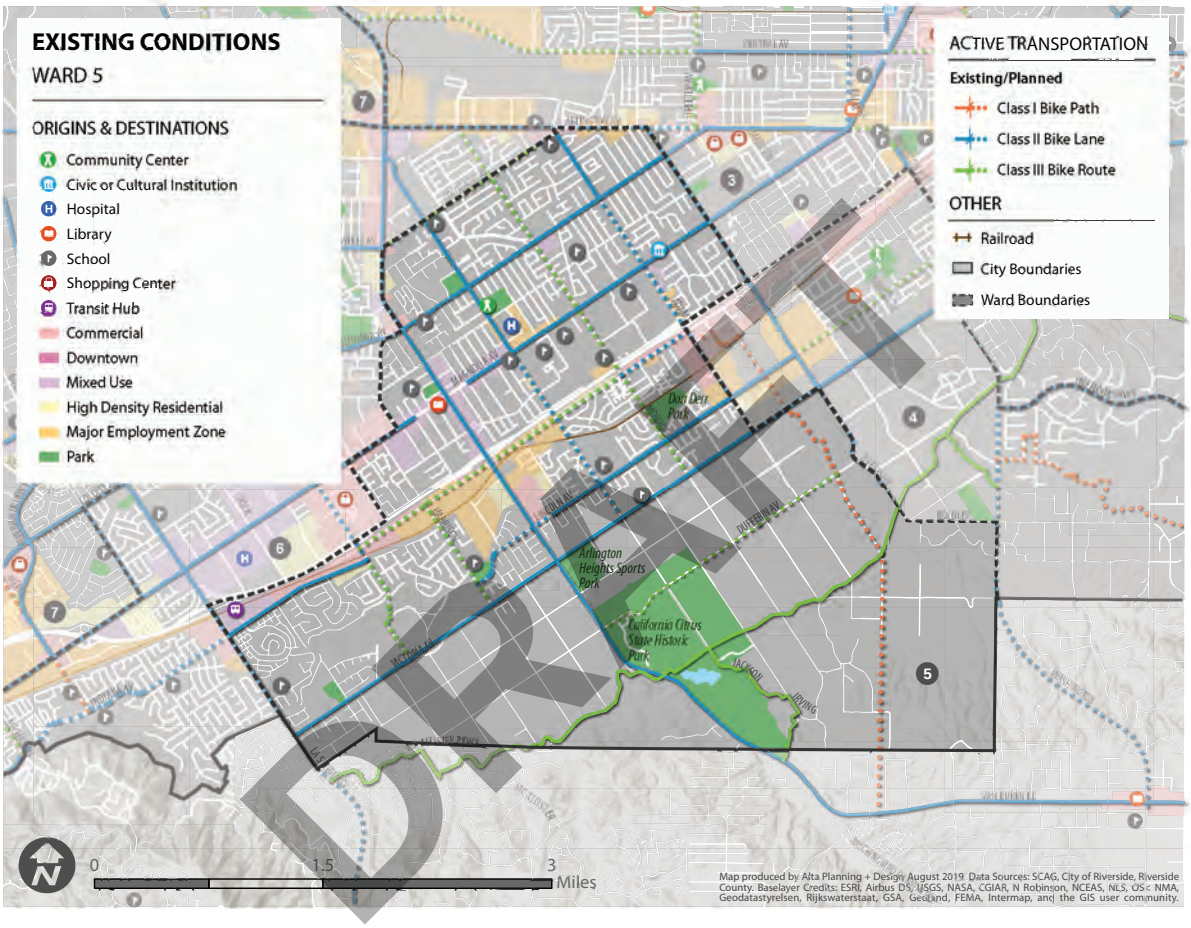


FIGURE 2-22 WARD 5 EXISTING CONDITIONS MAP

BICYCLE- AND PEDESTRIAN-INVOLVED COLLISIONS

Ward 5 had 65 bicycle- and pedestrian-involved collisions between 2015 and 2018, (9% of citywide bicycle- and pedestrian-involved collisions.) This relative dearth of collisions is likely due, at least in part, to the more rural character of the southern portion of the ward where amenities are sparse and development is low-density.

Collisions are concentrated in the northern half of the ward where development is densest, particularly along the Magnolia Avenue corridor. Three collisions were fatal and nine resulted in severe injury from 2015-2018.

Table 2-12 lists the five intersections with the highest number of bicycle- and pedestrian-involved collisions in Ward 5 and Table 2-13 lists the four streets with the highest number of collisions. Locations of fatal collisions are listed in Table 2-14. Figure 2-23 shows the locations of all bicycle- and pedestrian-involved collisions between 2015 and 2018 in Ward 5. The color of each hexagon in the map represents the number of collisions that occurred in that area. The location of fatal collisions and those resulting in severe injury are also identified.

TABLE 2-12 - WARD 5: INTERSECTIONS WITH THE MOST COLLISIONS

Intersection	Number of Collisions
Magnolia Ave	15
Van Buren Blvd	8
Jackson St	6
Indiana Ave	5
Monroe St	4

TABLE 2-13 - WARD 5: STREETS WITH THE MOST COLLISIONS

Street	Number of Collisions
Magnolia Ave & Jackson St	4
Van Buren Blvd & Magnolia Ave	4
Indiana Ave & Van Buren Blvd	3
SR-91 & Tyler St	3

TABLE 2-14 - WARD 5: INTERSECTIONS WITH FATAL COLLISIONS

Intersection	Fatal Collisions
California Ave & Heidi Rd	1
SR-91 & Tyler St	1
SR-91 Westbound & Adams St	1

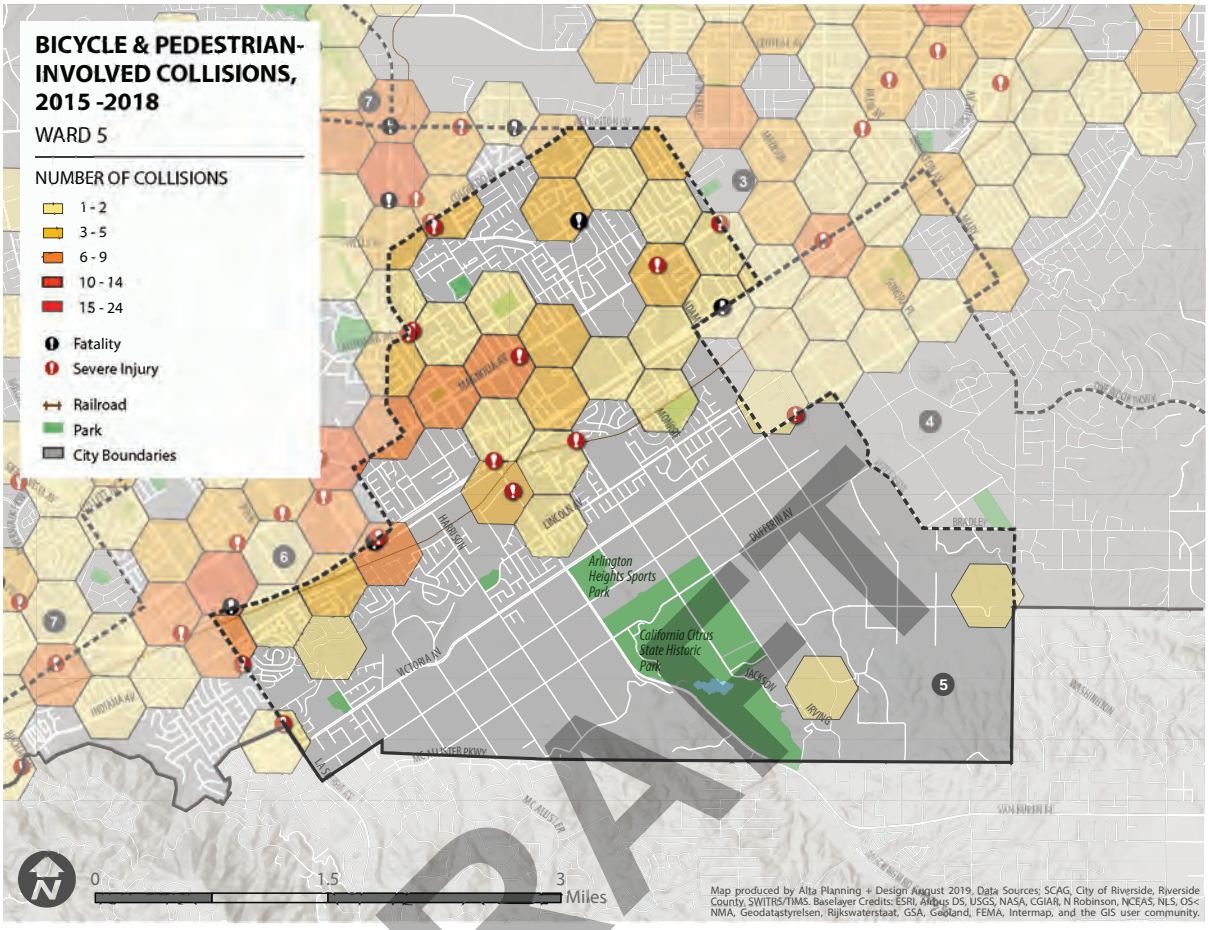


FIGURE 2-23 WARD 5 BICYCLE- AND PEDESTRIAN-INVOLVED COLLISIONS (2015 - 2018) MAP

Ward 6 Characteristics

Ward 6 is located on the southwestern border of the City of Riverside and is 6.3 square miles in size, making it the smallest ward in the City.

DEMOGRAPHICS

Ward 6 within the City of Riverside is home to approximately 92,694 people and is 64% of Hispanic or Latino origin and 36% of residents not of Hispanic or Latino origin. Ward 6 consists largely of working age individuals and young families, 26% of individuals being within the age range of 30-39 with approximately 88% of the Ward 6 population is 49 years of age and under. The education level in Ward 6 is made up mostly of High School graduates at 28% as well as "Some College" at 23%, while roughly 33% of the Ward 6 population has less than a High School education. The income distribution of Ward 6 is representative of lower middle-class working salaries with approximately 43% of households reportedly having an income of less than $50,000.

ORIGINS AND DESTINATIONS

Ward 6 encompasses a relatively broad variety of land uses. Commercial activity is concentrated along several corridors: Magnolia Avenue, which traverses the center of the ward and part of its border, and Tyler Street, Hole Avenue, and Van Buren Boulevard, which all intersect Magnolia Avenue. Notable destinations include the Riverside Medical Center at Magnolia Avenue between Park Sierra Drive and Polk Street, and the Galleria at Tyler shopping mall at Magnolia Avenue between Tyler Street and Hughes Alley. Beyond these corridors are relatively dense single-family suburban residential neighborhoods.

ACTIVE TRANSPORTATION NETWORK

The only existing bicycle facilities in Ward 6 are Class II bike lanes along Magnolia Avenue, California Avenue, and La Sierra Avenue. Several planned facilities will improve connectivity upon completion, but overall orientation and pattern of the street system poses a challenge for the active transportation network.

Figure 2-24 is a map of Ward 6's existing conditions, including origins and destinations and the active transportation network.

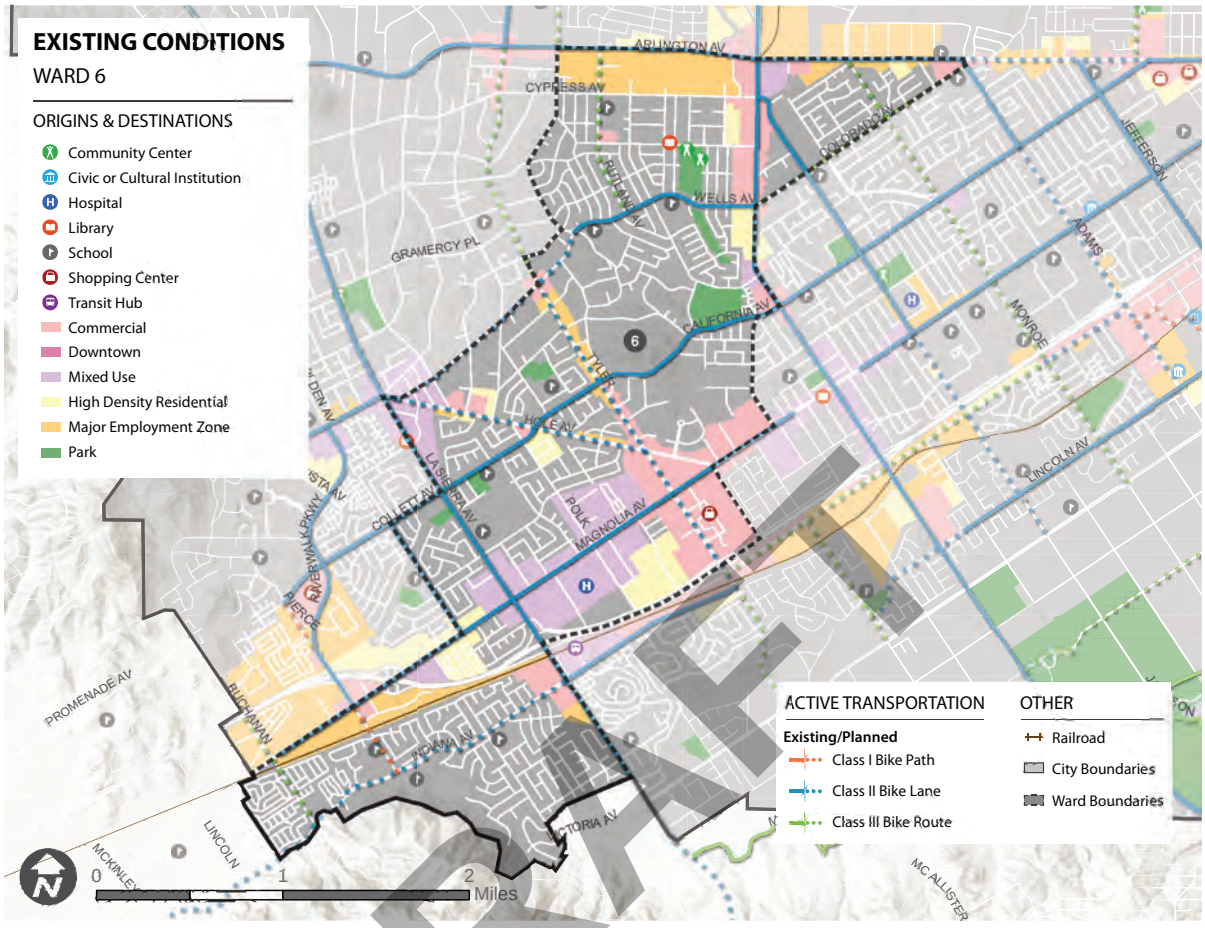


FIGURE 2-24 WARD 6 EXISTING CONDITIONS MAP

Ward 6 Bicycle- and Pedestrian-Involved Collisions

Ward 6 had 121 bicycle- and pedestrian-involved collisions between 2015 and 2018, (16% of citywide bicycle- and pedestrian-involved collisions). Fifteen of these collisions resulted in severe injury and two collisions were fatal, one at SR-91 and La Sierra Avenue and one at Van Buren Boulevard and Philbin Avenue.

Collisions are concentrated on the main arterials throughout the ward, such as Magnolia Avenue, La Sierra, Avenue, Van Buren Boulevard, and Tyler Street. The stretch of Magnolia Avenue between La Sierra Avenue and Harrison Street is particularly hazardous for bicyclists and pedestrians. There have been 29 bicycle- and pedestrian-involved collisions on this 1.6 mile section of road, 11 of which occurred at the intersection with Tyler Street.

Table 2-15 lists the four intersections with the highest number of bicycle- and pedestrian-involved collisions in Ward 6 and Table 2-16 lists the five streets with the highest number of collisions over the period of 2015-2018. Locations of fatal collisions are listed in Table 2-17. Figure 2-25 shows the locations of all bicycle- and pedestrian-involved collisions between 2015 and 2018 in Ward 6. The color of each hexagon in the map represents the number of collisions that occurred in that area. The location of fatal collisions and those resulting in severe injury are also identified.

TABLE 2-15 - WARD 6: INTERSECTIONS WITH THE MOST COLLISIONS

Intersection	Number of Collisions
Magnolia Ave & Tyler St	11
La Sierra Ave & Indiana Ave	7
La Sierra Ave & SR-91	5
Magnolia Ave & Banbury Dr	4

TABLE 2-16 - WARD 6: STREETS WITH THE MOST COLLISIONS

Street	Number of Collisions
Magnolia Ave	29
La Sierra Ave	21
Van Buren Blvd	12
Tyler St	9
Hole Ave	6
Indiana Ave	6

TABLE 2-17 - WARD 6: INTERSECTIONS WITH FATAL COLLISIONS

Intersection	Fatal Collisions
SR-91 & La Sierra Ave	1
Van Buren Blvd & Philbin Ave	1