

# covina

## active streets & multimodal connectivity plan



ADOPTED | MARCH 2024

January 2024

# Acknowledgements

## City of Covina

**Daniella Andrade**, Project Manager  
**Brian Lee**, Director of Community Development  
**Andy Bullington**, Director of Public Works  
**Alan Sands**, Finance Manager

## Consultant Team

### **Fehr & Peers**

Natalie Chyba  
Melody Wu  
Miguel Nuñez  
Sebastian Silva

### **MIG**

Ryan Kucinski  
Esmeralda García  
Sara Perez Rojas  
Jackie Martinez

### **CWE**

Dr. Narasimha Murthy

### **Kosmont**

Thomas Jirovsky  
Robert Valenti

This project was funded in part by:

**Caltrans Fiscal Year 2021-22 Sustainable  
Transportation Planning Grant Program**



# About the Plan

## The CASMCP embraces Covina’s vision of a comprehensive active transportation plan.

The Plan is rooted in mobility, first/last mile needs, and fully integrating the City’s long-term vision for economic development and urban design.

The CASMCP builds on the City’s solid planning foundation, including the Covina Bicycle Master Plan and the Covina Town Center Specific Plan, to create a feasible set of recommendations with clear steps to implementation.

### CHAPTER 1

## The Vision

Chapter 1 identifies the goals and objectives of the CASMCP. Within these goals and objectives are specific actions that address the City’s vision to create active, resilient, and vibrant streets.

### CHAPTER 2

## Covina Today

Chapter 2 lays the foundation of understanding existing opportunities and challenges for people walking, biking, and rolling in Covina and is the backbone for our recommendations established in Chapter 4. While much of this task is rooted in data and research, the findings were groundtruthed with the community through engagement activities referenced in Chapter 3. The findings are consolidated into a set of project goals and a list of project priorities in Chapter 4.

### CHAPTER 3

## Community Feedback

Chapter 3 summarizes the three rounds of engagement that were conducted over the course of the CASMCP. Engagement activities were designed to elevate awareness of the Plan and build an understanding of community priorities for active transportation in Covina. Over 10 events were held over the course of the project, as well as an online survey that captured 246 responses.

### CHAPTER 4

## Active Streets Recommendations

Chapter 4 introduces a refreshed bicycle network, crosswalk policy recommendations, pedestrian priority areas, and supporting economic development and urban design strategies. These recommendations build off the needs assessment conducted in Chapter 2 and community feedback summarized in Chapter 3. The Plan is rooted in mobility and first/last mile needs, and integrating into the City’s long-term vision for economic development and urban design.

### CHAPTER 5

## Design Guidelines

Chapter 5 establishes design guidelines for implementation of the Chapter 4 recommendations. Design guidance includes an active transportation and urban design toolkit, crosswalk policy, and intersection design primer to ensure that the CASMCP can be a go-to resource for City staff.

### CHAPTER 6

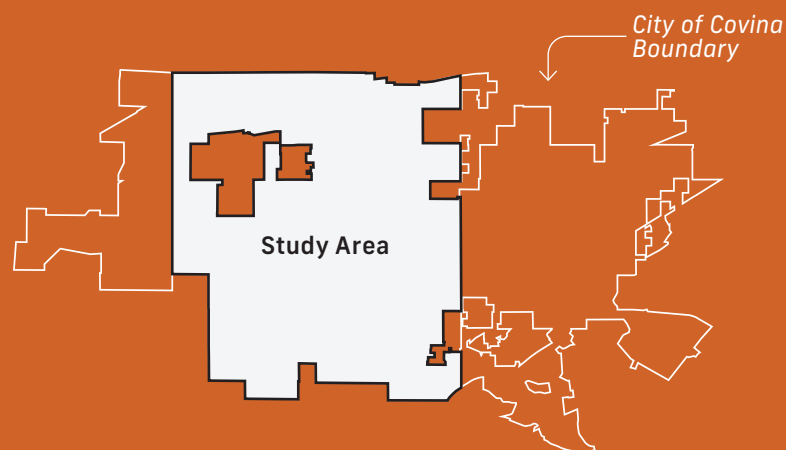
## Funding & Implementation Strategy

Chapter 6 includes a prioritized list of projects, capital improvement plan and funding strategy for the recommendations outlined in this Plan.

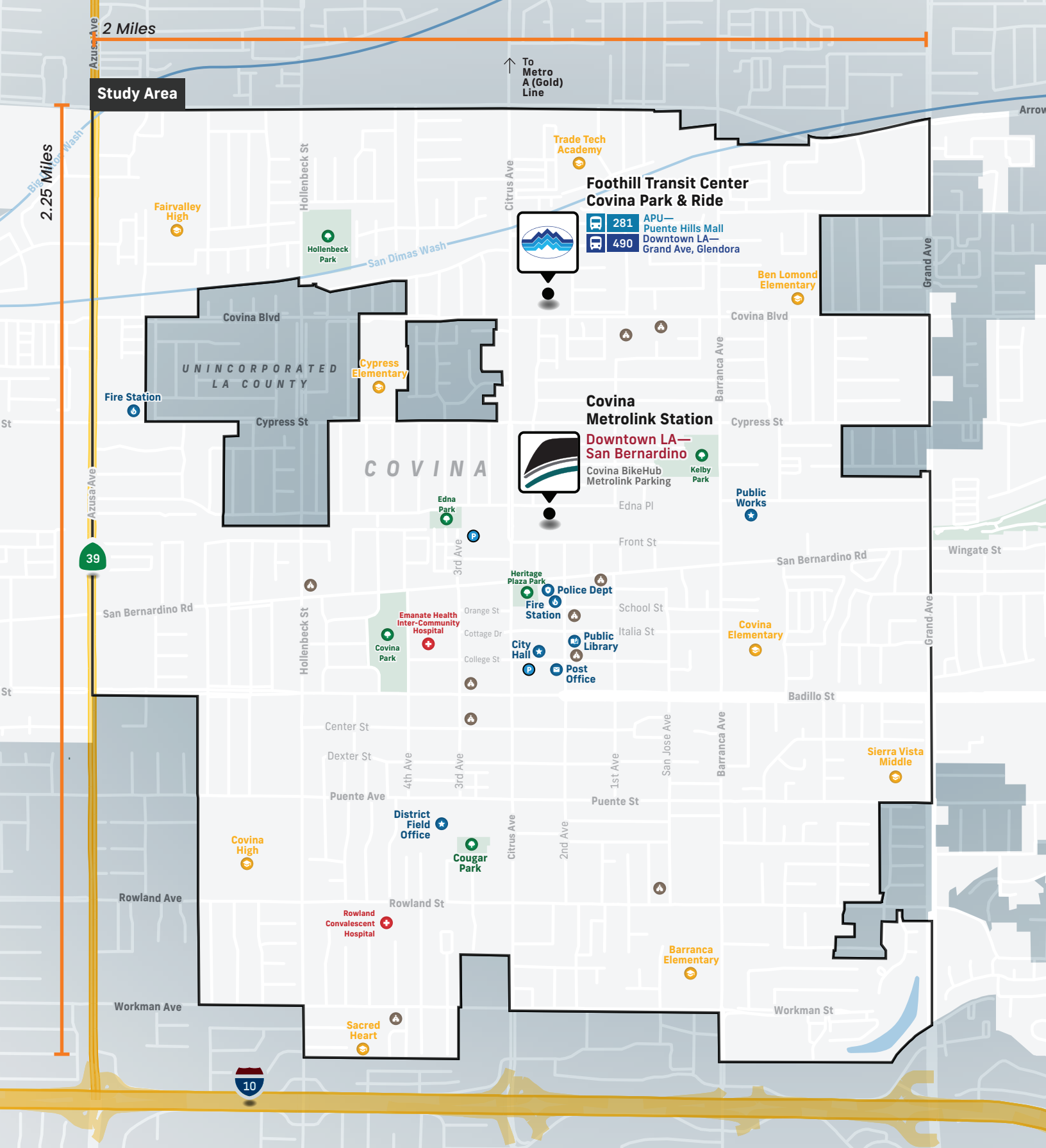
Covina is an active, vibrant city that caters to its diverse community through food, culture, and entertainment.

The hub of the City is it's downtown. Restaurants, residents, bars, businesses, and public space create an inviting space that locals and visitors gravitate toward.

The downtown and surrounding areas make up our **Study Area**. →







# Study Area





## IN THIS PLAN

---

# 1



### The Vision

PAGE 8

- › Plan Goals and Objectives

---

# 2



### Covina Today

16

- › Community Makeup
- › Major Destinations
- › Pedestrian Conditions
- › Bicycle Conditions
- › Transit Conditions

---

# 3



### Community Feedback

32

- › Engagement Timeline
- › Key Takeaways

---

# 4



### Active Streets Recommendations

40

- › Equity Priority Areas
- › Bike Network
- › Pedestrian Priority Areas
- › Urban Design Recommendations
- › Uncontrolled Crosswalk Recommendations





---

# 5



## Design Guidelines

52

- › Active Transportation Toolbox
- › Urban Design Primer
- › Intersection Design Primer
- › Uncontrolled Crosswalk Policy

---

# 6



## Funding & Implementation Strategy

112

- › Prioritized Project List
- › Right-of-Way Analysis
- › Funding Strategy
- › Cost Estimates
- › Priority Project Cutsheets

---

# A



## Appendices

- › Existing Conditions Report
- › Equity Study
- › Economic Development Study
- › Engagement Summary



## Chapter 1

# The Vision

---

The Covina Active Streets and Multimodal Connectivity Plan (CASMCP) is an extension of the City's strength and resilience, and a pivotal point for the City's transportation system.

This is an exciting time for the City of Covina. The City is coming out of the COVID-19 pandemic stronger and more resilient than ever, evident in the renewed vibrancy downtown, exciting new development opportunities, and commitment to creating beautiful public outdoor spaces.







ACTIVE  
GV

ACTIVE

SAFETY  
With Safety Siren



## GOAL #1



### Provide comfortable walking and biking facilities

Provide safe and comfortable mobility options for everyone through pedestrian- and bicycle-friendly streets.

## OBJECTIVE #1

**Implement a continuous network of bike boulevards, bike lanes, protected bike facilities, and shared-use paths that provide direct connections throughout the study area. Implement streetscape improvements in pedestrian priority areas.**

### Actions

- › **Implement the bike network.** Prioritize construction of bicycle infrastructure that eliminates gaps in the existing bicycle network to increase connectivity throughout the city. Actively pursue grants and other funding opportunities for bike network implementation.
- › **Implement the pedestrian priority area recommendations.** Integrate urban design and streetscape improvements into all city projects, considering street trees, landscaping, public art, wayfinding, and other urban design elements such as bus stop conditions. Bring all uncontrolled crosswalks into alignment with the crosswalk policy by 2029.
- › **Set context-sensitive speed limits.** A pedestrian or cyclist struck by a vehicle travelling at 40 miles per hour has just a 20% chance of survival. Conduct a speed reduction survey to identify locations that may be eligible for speed limit adjustments per California AB43 (2023).

## OBJECTIVE #2

**Improve safety at intersections and reduce the frequency and severity of collisions by implementing targeted improvements at marked crosswalks and enhancing bicycle facilities.**

### Actions

- › **Apply the crosswalk policy included in the Plan to uncontrolled crosswalk locations** to determine potential upgrades to existing marked crossings and identify treatment options for future marked crossings. Install recommended safety measures such as high-visibility signage and striping, pedestrian-activated warning systems, pedestrian refuge islands, improved street lighting, and intersection control.
- › **Implement traffic calming measures, such as reducing speed limits, installing raised crosswalks, and adding curb extensions** to create safer and more comfortable pedestrian environments.
- › **Meet bi-annually with relevant departments and agencies including Planning, Public Works, Police, Parks & Recreation, and Foothill Transit** to identify and discuss strategies to improve bicycle and pedestrian visibility and safety at intersections within the study area.



## GOAL #2



## Build climate resiliency

Reduce transportation-related climate impacts by encouraging the use of active modes. Build climate resiliency through increased green space.

## OBJECTIVE #1

**Expand the existing tree canopy and shade infrastructure to provide relief for people walking, biking, and waiting for transit.**

### Actions

- › **Plant 300 drought-tolerant shade trees per year**, resulting in 1,500 new trees by 2029. Coordinate with Los Angeles County and community partners to identify opportunities for collaboration.
- › **Work with Foothill Transit to install five new bus shelters annually**, resulting in 100% of bus stops having shelter by 2029.

## OBJECTIVE #2

**Implement, monitor, evaluate, and refine policies to encourage mode shift towards active transportation and transit, to reduce greenhouse gas emissions and localized pollution burden.**

### Actions

- › **Work with large employers to triple active transportation and transit commutes by 2029.** Build an incentive program and surveys to track progress for employers to pass on to staff. Incentives such as transit passes, route planning services, and e-bike subsidies have been shown to be effective at achieving mode shift in other cities.
- › **Partner with local organizations such as ActiveSGV and CicLAvia to host car-free events that encourage people to walk and ride their bikes.** These events could include additional services like bike maintenance and repair to support and facilitate active transportation.
- › **Develop a Safe Routes to School program to encourage walking, biking, and taking transit for school trips.** Building walking, biking, and taking transit into routines of young people can result in continued active commuting into adulthood.
- › **Implement parking maximums**, in accordance with AB-2097 (2022), to incentivize walking, biking, and taking transit. Parking maximums also lower overall development costs, creating opportunities for the integration of additional affordable housing units.
- › **Monitor emerging technologies** that may help to reduce greenhouse gases. This could include AI-driven technologies that minimize idling time for autos, or EV-readiness strategies.

### GOAL #3



## Encourage economic development

Support economic development and local businesses by providing increased access to neighborhood destinations.

### OBJECTIVE #1

**Increase multimodal transportation options along the identified Economic Development Corridors—Citrus Avenue, Badillo Street, and San Bernadino Road.**

#### Actions

- › **Improve the walkability of these corridors** by implementing streetscape and pedestrian infrastructure enhancements.
- › **Work with businesses** to optimize use of the curb through more efficient parking, loading zones, and parklets.
- › **Educate business owners** on the economic benefits of complete streets projects.

### OBJECTIVE #2

**Increase connectivity to the Town Center.**

#### Actions

- › **Connect the Covina Metrolink Station to the Town Center** via a “gateway” concept encouraging transit riders to walk from the station to the Town Center. (*action from [Covina Town Center Specific Plan](#)*)
- › **Capitalize on alley connections to increase accessibility and walkability between the Town Center and adjacent districts** through strategies such as lighting, signage, landscaping, and plazas and parklets for placemaking, where appropriate. (*from [Covina Town Center Specific Plan](#)*)
- › **Identify residents who live and work within the city** and offer personalized commute planning services to support their transition to active modes of transportation at least once a week. Consider partnering with ActiveSGV or advertising their e-bike rental program to provide access for Covina residents.

## GOAL #4



## Provide equitable, cost-effective transportation options

Reduce the burden of household transportation costs by providing affordable transportation options through walking, biking, and access to transit.

## OBJECTIVE #1

### Prioritize transportation investments in Equity Priority Areas to reduce the burden of transportation costs.

#### Actions

- › **Improve access to the Covina Metrolink Station and the Azusa A Line Station by building quality north-south bike facilities.** Work with the City of Azusa to identify route alignment and joint project development strategies. Work with City of Azusa by installing bikeways and walkways that provide first and last mile connections.
- › **Ensure that bikeway design prioritizes accessibility** and does not create additional barriers for people with disabilities.
- › **Implement anti-displacement policy measures in tandem with infrastructure investments** to minimize displacement in communities within Equity Priority Areas.
- › **Implement parking maximums**, in accordance with AB-2097 (2022), to incentivize walking, biking, and taking transit. Parking maximums also lower overall development costs, creating opportunities for the integration of additional affordable housing units.
- › **Develop and implement an inclusive public engagement policy for future planning efforts.** Work with community-based organizations to develop the policy.

## OBJECTIVE #2

### Provide subsidies to reduce the cost burden of alternative modes.

#### Actions

- › **Provide financial incentives** or rebates for the purchase of new bicycles, electric bicycles, and bicycles accessible for individuals with disabilities.
- › **Help residents play a role in creating shaded, walkable neighborhoods.** Organize free tree giveaways and other native plant landscaping rebates for residents.

## GOAL #5



### Implement and maintain

Invest in quality infrastructure through innovative design and creative funding approaches.

#### OBJECTIVE #1

**Identify funding sources that can be used for new infrastructure as well as improvements for existing infrastructure.**

##### Actions

- › **Investigate opportunities to leverage private developments**, such as impact fees, in-lieu parking fees, and requirements to implement elements of the Plan within a certain area of the development. Actively pursue technical assistance programs or program grants to assist in the implementation of programs/ special funds to fund active transportation and transit improvements.
- › **Strategically pursue grant opportunities and combine funding sources** to fund multi-benefit projects. For example, leverage Measures W, H, A, and M to fund a single project that incorporates transportation, open space, and climate resilience components.
- › **Ensure all capital improvement plan projects incorporate the recommendations in this Plan.**

#### OBJECTIVE #2

**Identify and leverage resources to implement improvements to bicycle and pedestrian networks.**

##### Actions

- › **Identify a staff person who leads active transportation planning and funding** by allocating at least half of their staff time on safety and active transportation by 2025.
- › **Develop a complete streets checklist for repaving** so active transportation and safety improvements are integrated into routine maintenance activities.
- › **Coordinate future Covina Town Center improvement projects** to maximize the use of public and private funding for infrastructure improvements.

#### OBJECTIVE #3

**Maintain bicycle and pedestrian infrastructure to provide continued comfort of users.**

##### Actions

- › **Set aside funding for landscape maintenance and tree watering.**
- › **Ensure the City's street sweeping contract includes street sweepers for separated facilities.**
- › **Incorporate bicycle and pedestrian network repair and maintenance needs into the regular roadway maintenance program**, paying particular attention to sweeping and pothole repair on bicycle facilities.



Page Intentionally Left Blank

Chapter 2

# Covina Today









# Covina Today

## STUDY AREA AT-A-GLANCE

### EXISTING INFRASTRUCTURE

**90**   
miles of roadway

**49**   
signalized intersections

**67**   
bus stops

**16%**   
tree canopy coverage

**292**   
crosswalks

**3.6**   
miles of bike lanes

**1.2**   
miles of bike routes with sharrows

### DEMOGRAPHICS AND MODE CHOICE

**48%**   
of residents speak a language other than English at home

**74%**   
of residents are people of color

**75%**   
of commuters choose to drive alone

**19%**   
have commute times less than 15 minutes





## The existing conditions process exposed several key areas that guided the CASMCP recommendations.

EXISTING NEEDS	OPPORTUNITIES
<p>The study area has <b>one “Disadvantaged Community”</b> as defined by SB 350/CalEnviroScreen and <b>two “Sensitive Communities”</b> as defined by UC Berkeley’s Urban Displacement Project.</p>	<p>🍎 Investments should be prioritized in these two communities to <b>limit the burden of pollution and climate change</b>. Infrastructure investments should be paired with policy adjustments to <b>minimize displacement</b> following increased investment.</p>
<p>A significant portion of Covina residents <b>live and work</b> in Covina, but still choose to drive to work.</p>	<p>🍎 Providing safe, comfortable, and reliable biking and transit options could lead to <b>mode shift</b> for those who have shorter commuting distances.</p>
<p><b>Crossing infrastructure is typically limited</b> to standard crosswalk striping.</p>	<p>🍎 There are opportunities to <b>enhance crosswalks</b> through tools such as intersection control, high-visibility signing and striping, and curb extensions.</p>
<p><b>Existing bicycle facilities are typically limited</b> to standard bike lanes with some additional features like buffers and green bike boxes at select locations.</p>	<p>🍎 There are opportunities to enhance both the connectivity and comfort of bike facilities by identifying a <b>low-stress network</b> throughout the study area.</p>
<p><b>Wide curb-to-curb widths and underutilized space</b> on major roads is typically entirely dedicated to auto uses.</p>	<p>🍎 There are opportunities to <b>rebalance the right-of-way</b> and create more space for dedicated pedestrian and bicycle infrastructure.</p>
<p>The City has a <b>tree canopy coverage of about 16%</b>.</p>	<p>🍎 With the average August temperature in Covina above 90 degrees and rising, there are opportunities to <b>expand the existing tree canopy and shade</b> to provide relief for people walking, biking, and waiting for transit.</p>
<p>The large majority of <b>bicycle and pedestrian injury collisions are occurring at intersections</b>.</p>	<p>🍎 Providing design treatments focused on <b>improving safety and comfort at intersections</b> could help reduce collision frequency and severity.</p>
<p><b>Commercial and retail development potential</b> along Citrus Avenue, San Bernardino Road, and Badillo Street and the <b>12 potential transit-oriented development sites in the study area</b> provide a look-ahead at major destinations and travel patterns in the coming years.</p>	<p>🍎 The multidisciplinary nature of the CASMCP provides an exciting opportunity to <b>align recommended investments with forecasted growth</b>.</p>

# Demographics

**Over 70% of Covina residents are people of color.**

**Almost half of residents speak a language other than English at home.**

Race	Covina	LA County
Hispanic or Latino	<b>49%</b>	<b>59%</b>
White alone	<b>26%</b>	<b>23%</b>
Asian & Pacific Islander alone	<b>15%</b>	<b>13%</b>
Black or African American alone	<b>8%</b>	<b>3%</b>
Two or More Races	<b>&lt;1%</b>	<b>2%</b>
American Indian & Alaska Native alone	<b>&lt;1%</b>	<b>&lt;1%</b>
Other Race	<b>&lt;1%</b>	<b>&lt;1%</b>

Languages Spoken at Home	Covina	LA County
English Only	<b>52%</b>	<b>43%</b>
Language other than English	<b>48%</b>	<b>57%</b>

Vehicle Availability	Covina	LA County
None	<b>3%</b>	<b>4%</b>
1 or more	<b>98%</b>	<b>96%</b>

Median Income	Covina	LA County
	<b>\$70,780</b>	<b>\$68,040</b>

Median Age	Covina	LA County
	<b>37</b>	<b>37</b>

Source: [2019 ACS 5-Year Estimates, US Census](#)  
 ACS Demographic and Housing Estimates (Race), Languages Spoken at Home, Age and Sex (Median Age), Median Income, Commuting Characteristics By Sex (Vehicle Availability)

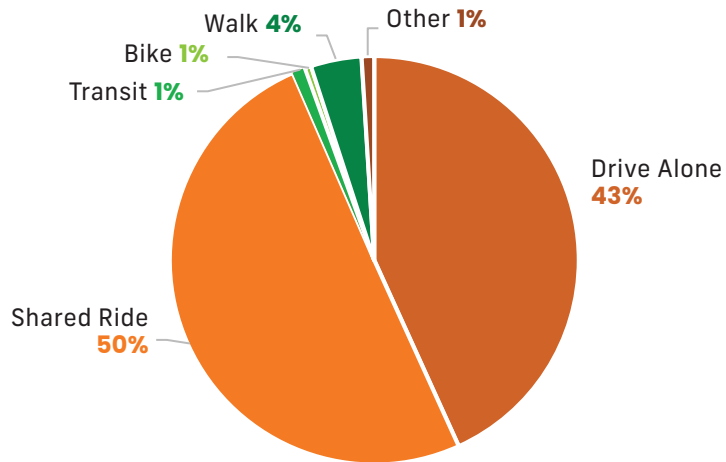


# Mode Choice

**75% of Covina's commuters choose to drive alone.**

Covina is a predominately auto-oriented community.

ALL TRIPS MODE SHARE

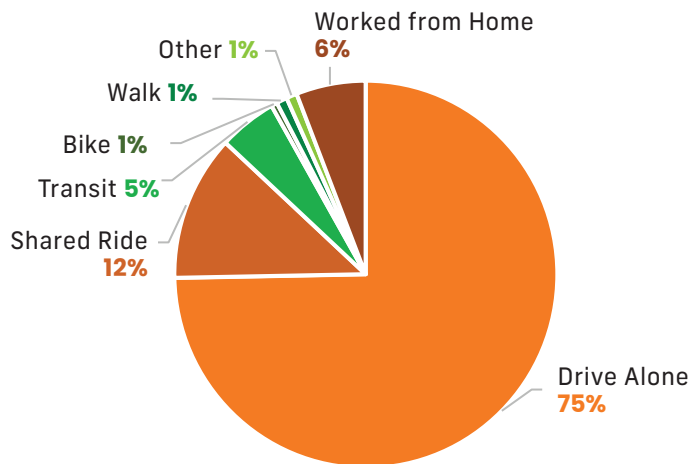


**Almost 20% of commute times in Covina are less than 15 minutes.**

These shorter trips could present an opportunity for mode shift if safe, comfortable, and reliable biking and transit options were provided.

People may also prefer not to drive for local trips to schools, parks, or shopping, but don't currently feel they have a viable alternative.

COMMUTE MODE SHARE



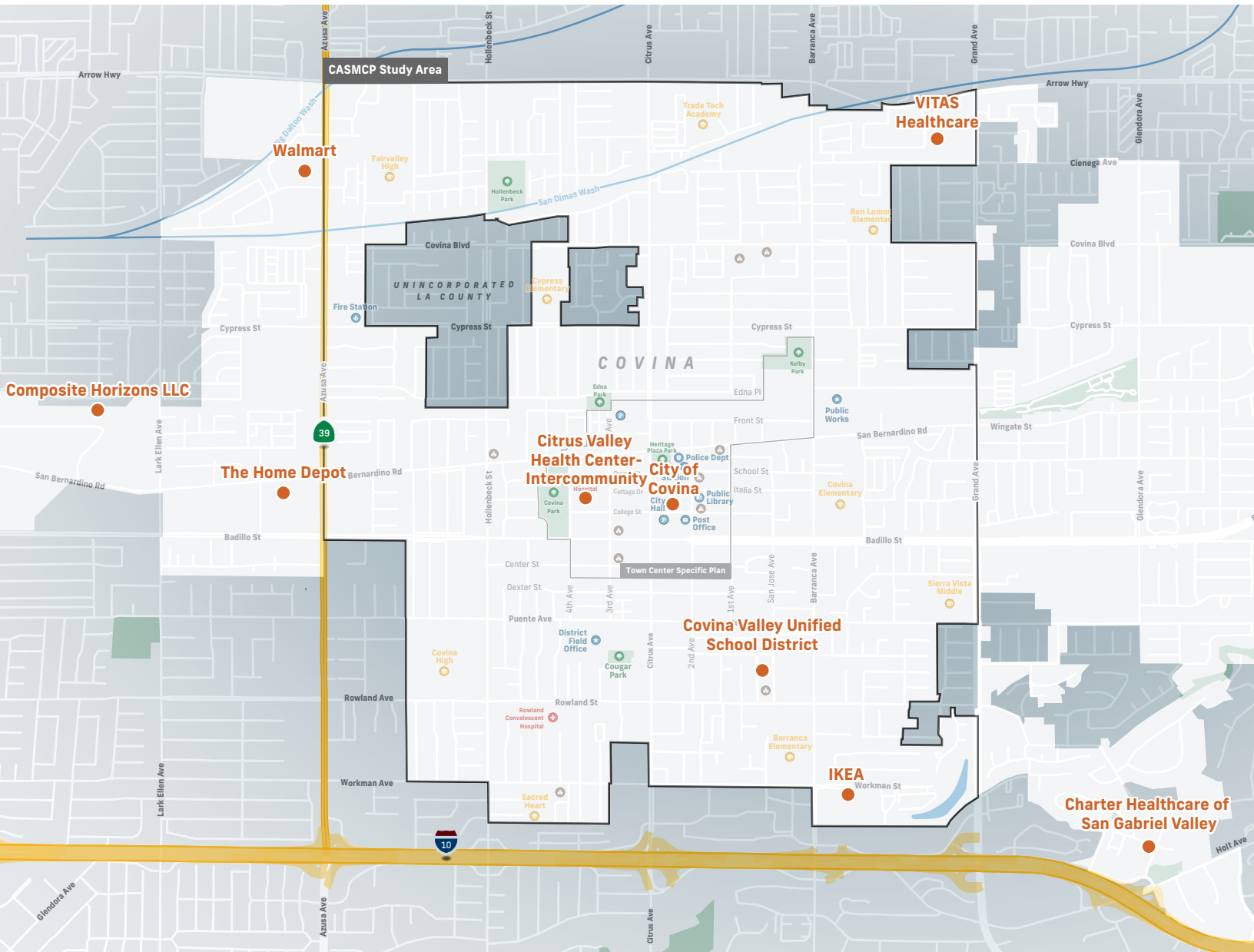
Source: Journey to work mode split, Census Households without vehicles, Census Overall mode split, California Household Travel Survey



# Top Employers

Among the top ten employers in the City, three are healthcare related, three are school districts/ local government, three are major big box retailers, and one is an aerospace components firm.

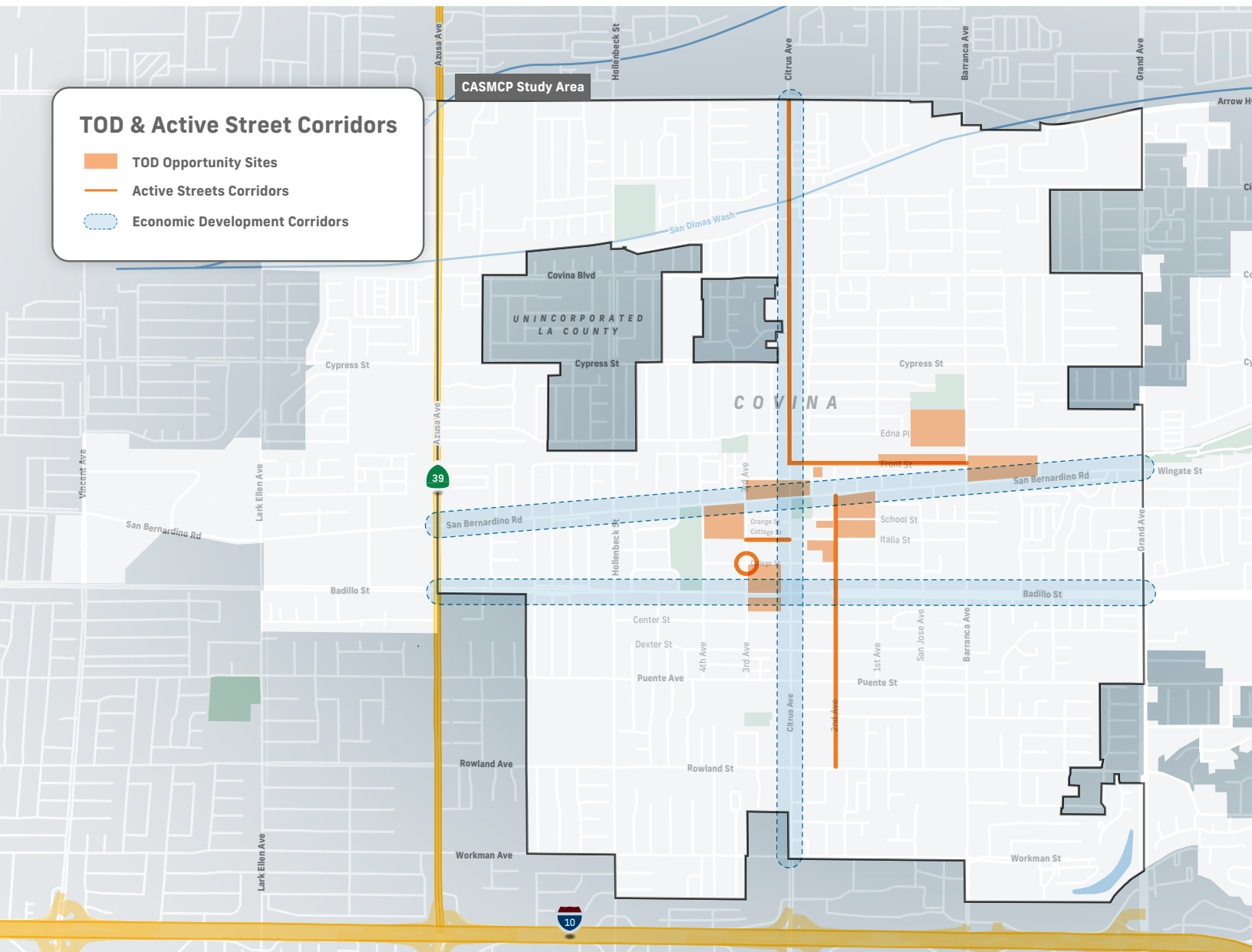
Five of these major employers have operations within the CASMCP area, with several others located just outside of CASMCP boundaries, suggesting workers at these companies could benefit from active transportation improvements.



# Key Corridors & TOD Sites

Multiple TOD (Transportation Oriented Development) opportunity sites can be found within the CASMCP area. Many of these sites lie directly adjacent to, or within economic development zones and active transportation corridors.

In conjunction with CASMCP, these potential **TOD sites could increase mobility and access to Covina for residents** and pave the way for the economic benefits of new development, especially in downtown Covina.

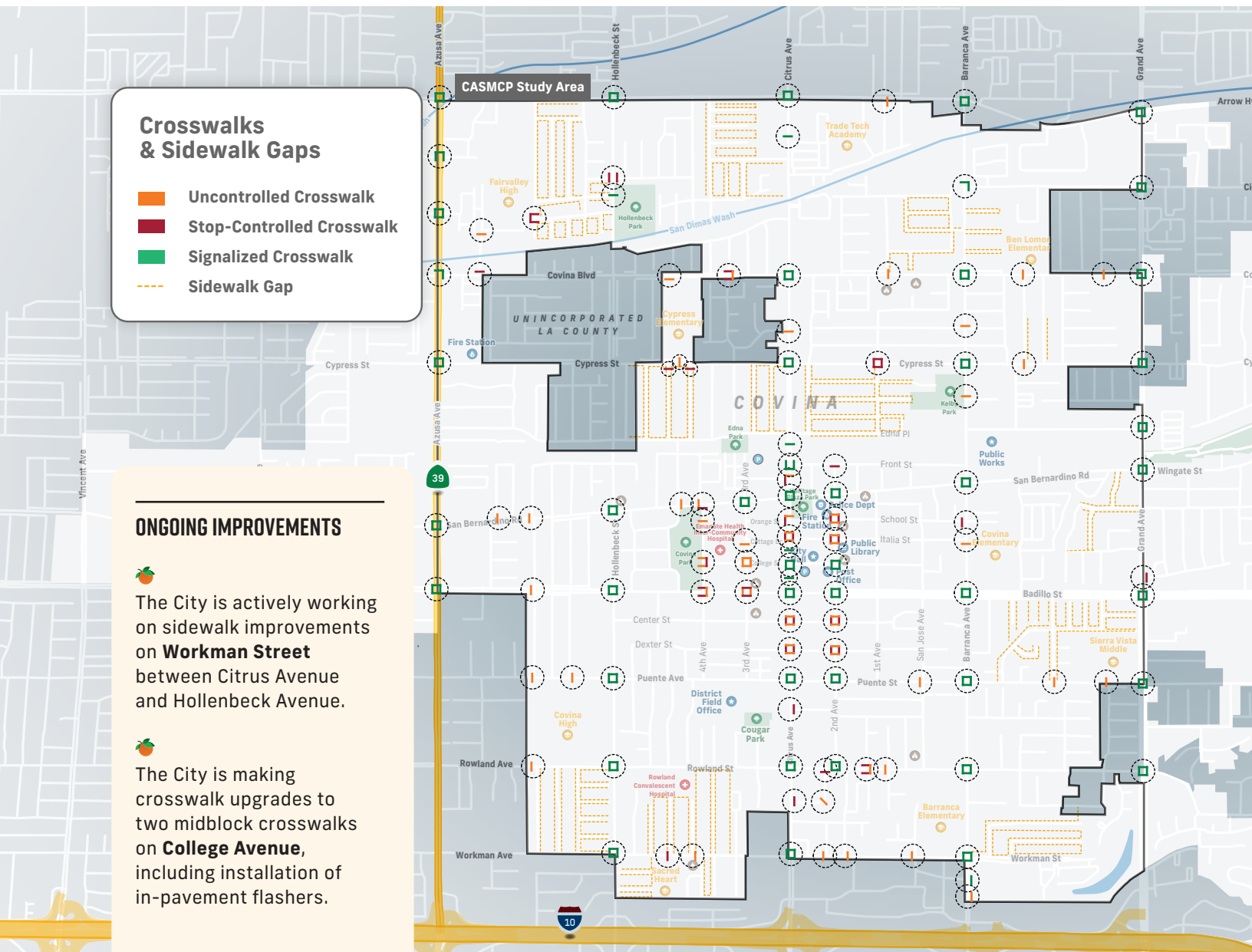


# Pedestrian Crosswalks & Sidewalk Gaps

**80%** (233 of 292 total) of crosswalks are controlled (either by stop control or signals)

**86%** (42 of 49 total) of signalized intersections with marked crosswalks on all legs

**100%** (49 of 49 total) of signalized intersections with marked crosswalks along at least one leg





# Typical Unsignalized Pedestrian Crosswalk Conditions



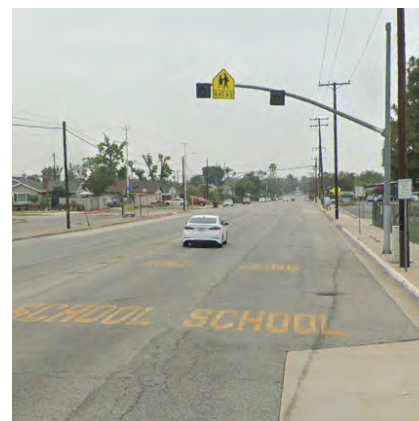
## Badillo Street /Amel Drive

Multi-lane uncontrolled crosswalk with high-visibility crosswalk striping



## College Street /3rd Avenue

All-way stop control with standard crosswalk striping



## Puente Street near Sierra Middle School

Pedestrian flashing beacons ahead of an unsignalized crosswalk



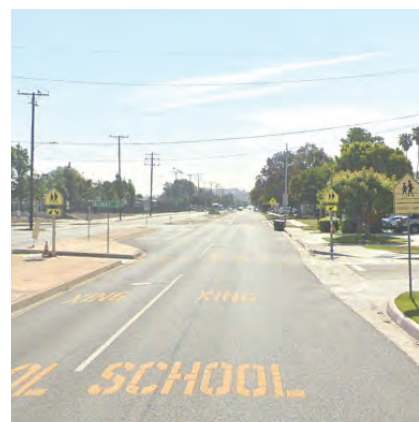
## Midblock on Citrus Avenue

Decorative uncontrolled midblock crosswalk near downtown



## Italia Street /2nd Avenue

Side-street stop controlled intersection with crossings on all approaches, including two that cross six lanes of traffic



## Midblock on Rowland Avenue

Pedestrian crossing signage in a school zone

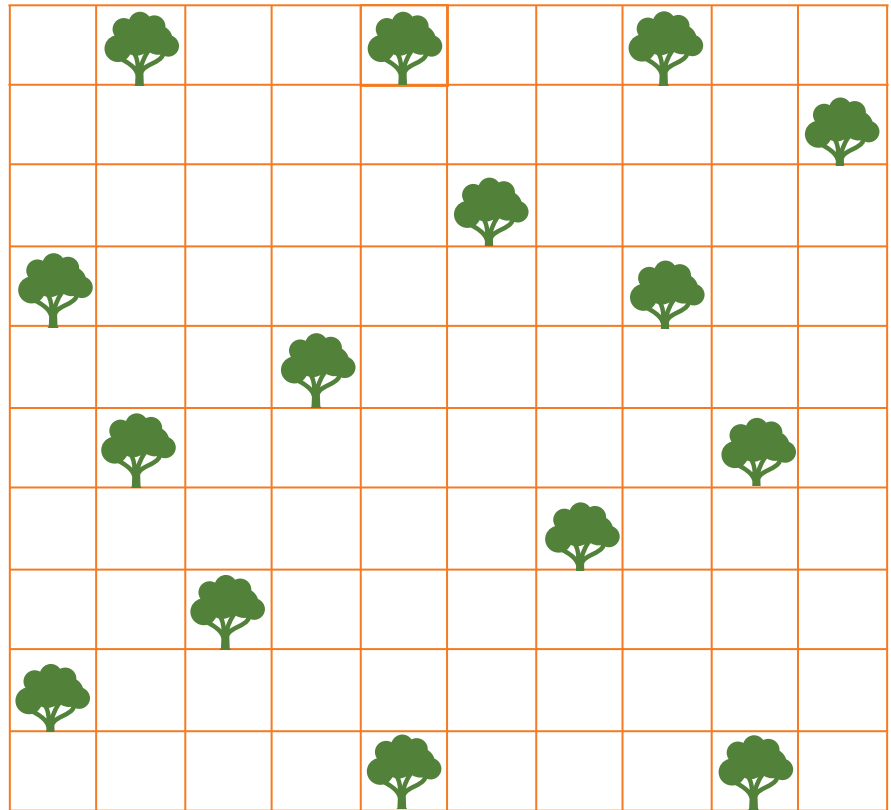
Image Sources: Google Earth

# Tree Canopy

The City of Covina has a 16% tree canopy coverage, compared to the County average of 20%.

The average August temperature in Covina is 91°.

90° is the threshold for "extreme heat conditions", requiring your body to work extra hard to maintain normal temperatures.



Source: Los Angeles County Tree Canopy Map Viewer (Tree People)  
Weather Spark Climate Comparison Ready.gov/heat

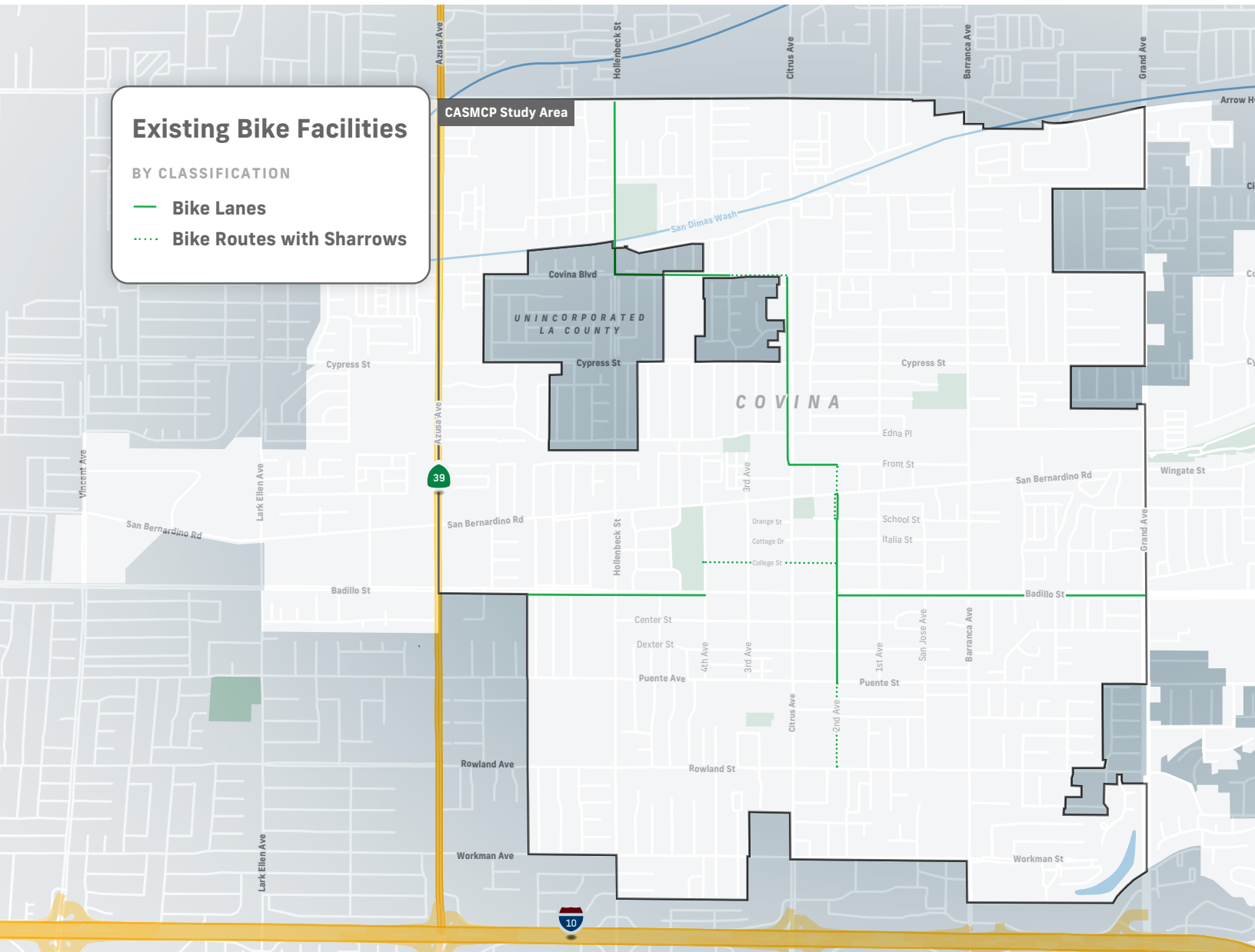
# Bike Facilities

**90**  
miles of roadway

**3.6**  
miles of Class II bike lanes

**1.2**  
miles of Class III bike routes with sharrows

**0.75**  
miles of planned Class II bike lanes on Citrus Avenue between Badillo Street and Workman Street

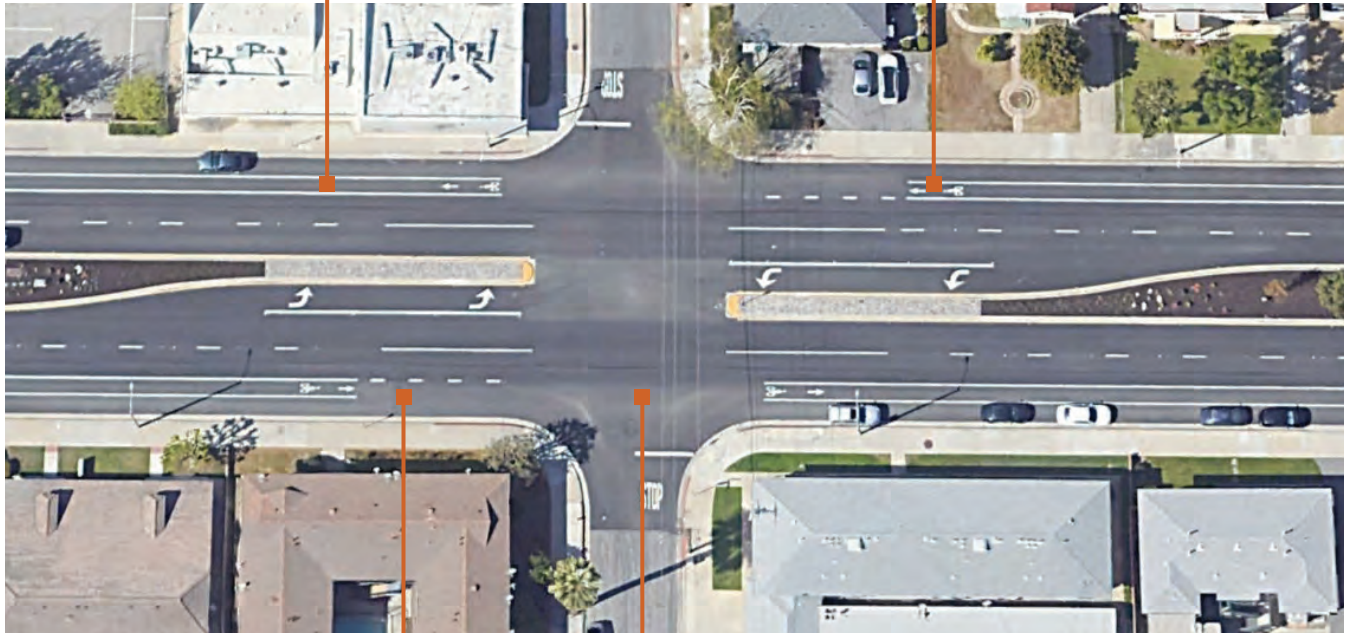




# Typical Bike Facility Treatments

Bike lanes in the study area are typically 5-6 feet in width and positioned between the parking lane and auto lanes.

Bike stencils are used at the intersection, but not typically used midblock.



Mixing zones to accommodate right turns are common throughout the study area.

Conflict striping and green paint are not typical.

## Other Bike Treatments in the Study Area



**Front St/Citrus Ave**  
Green bike boxes



**Badillo St**  
Buffered Bike Lanes



**2nd St**  
Bike Route signage

Image Source: Google Earth

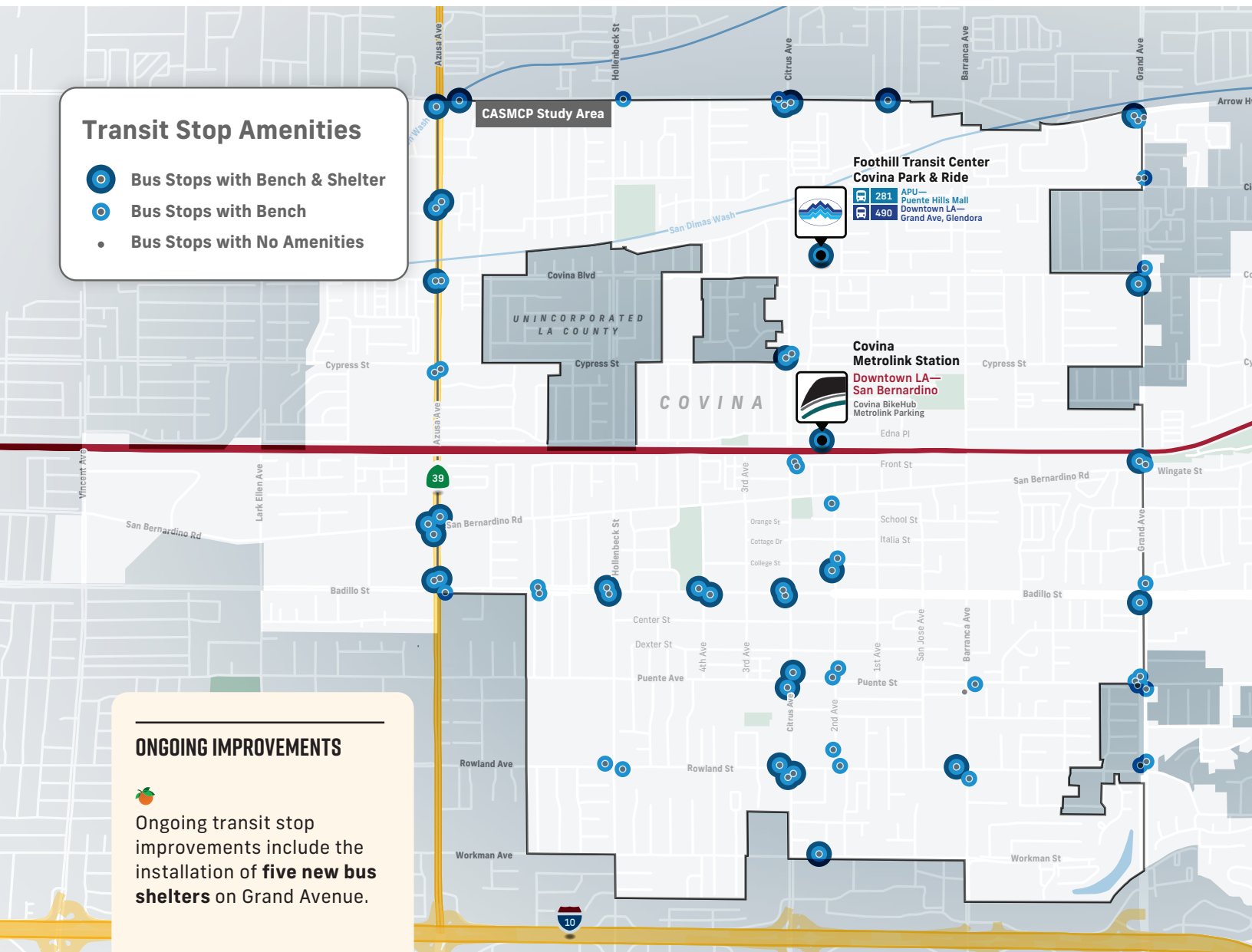


# Transit Stop Amenities




**97%** (65 out of 67) of stops have a place to sit (bench or shelter)

**<1%** (2 out of 67) of stop have no amenities


**51%** (34 out of 67) of stops have shade (shelter)



## Transit Stop Amenities

-  Bus Stops with Bench & Shelter
-  Bus Stops with Bench
-  Bus Stops with No Amenities

## ONGOING IMPROVEMENTS

 Ongoing transit stop improvements include the installation of **five new bus shelters** on Grand Avenue.

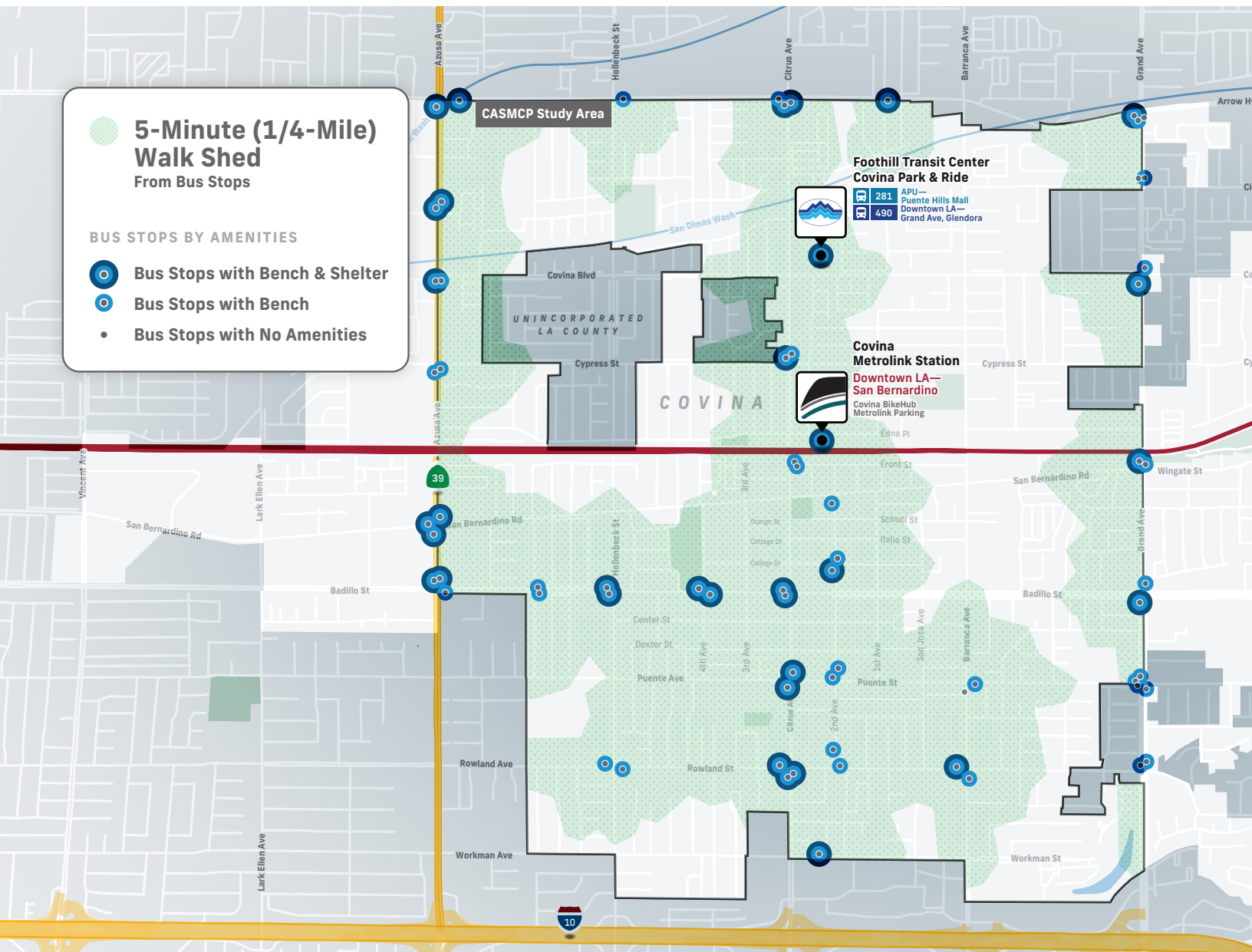


# Transit Accessibility

**70%**  
of the study area  
within a 5-minute  
walk of a bus stop

**3%**  
of bus stops are  
located midblock

**97%**  
of stops have a  
marked crosswalk  
within 250'



Chapter 3

# Community Feedback









# Outreach Timeline

246 

Online Survey Responses  
August 2022 - October 2023

2022

AUG




Groundtruthing  
Existing Conditions

August 23, 2022  
**Project Update**  
@ Covina Planning  
Commission

August 26, 2022  
**Pop-Up**   
@ Covina Farmers Market

OCT



October 4, 2022  
**Pop-Up**   
@ National Night Out

2023

APR



April 11, 2023  
**Project Update**  
@ Covina Transportation  
and Mobility Advisory  
Commission

 Public feedback was collected



**60** 

cyclists joined a 10-mile ride around the study area and to the Gold Line station

**8** 

participants explored and conducted a walk audit of Downtown Covina

**12** 

parents and staff joined a Parents & Educators Working Session



MAY

JUN

SEP- OCT


**Understanding Community Priorities**

May 6, 2023

**Community Bike Ride & Feedback Session** 

led by ActiveSGV

May 11, 2023

**Parents & Educators Working Session** 

with Covina Unified School District; led by Fehr & Peers and ActiveSGV

May 21, 2023

**Community Walk & Feedback Session** 

led by MIG

**Confirming Community Priorities**

June 13, 2023

**Project Update**

@ Covina Planning Commission

September 30, 2023

**Pop-Up** 

@ Sacred Heart Annual Festival

October 14, 2023

**Pop-Up** 

@ Thunderfest Car Show and Music Festival







**Improvements Covina stakeholders would like to see:**



"More lighting needed. Dangerous crossing uncontrolled intersections especially at dusk."

"Improve ped[estrian] crossings/connections to Covina Park."

"More controlled intersection around all parks."

"Improve access from Metrolink parking structure to station."

"More crosswalk enhancements."



"Traffic calming to make people feel more comfortable walking/ taking transit."

"Need Class 1 or 2 bike lanes [in] north/ south [direction]."

"Will bike ride more if it was safer to do so."

"Improve visibility of bike lane on Badillo."

"Prioritize bike lanes on larger, quiet streets."

"Need more bike parking."



"[Cars drive] fast on Citrus."

"Less potholes. Fix the streets."

"Addressing poor compliance with yielding and turn restrictions."



"More streetscape enhancements."

"[Shade] very limited, more tree canopy needed."

"Vacant lot at Citrus/ San Bernardino is an eyesore."











## Online Survey Takeaways

A community survey was developed to understand existing mobility patterns and preferences throughout the study area.

More details on the survey are included in the Appendices.

**246**

### Online Survey Responses

August 2022 - October 2023

### Primary Concerns



- › Safety (vehicle speeds & special conditions)
- › Inadequate crosswalks
- › Inadequate lighting
- › Comfort/lack of shade

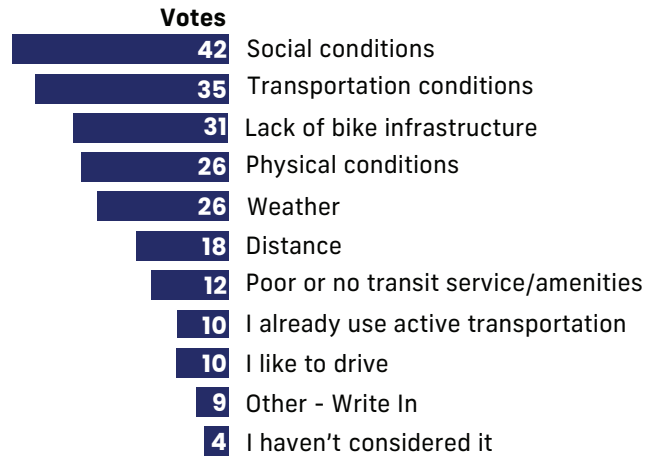


- › Safety
- › Security/ bike friendly infrastructure



- › Safety
- › Reliability/convenience

### Barriers to Walking & Biking



### Desired Improvements







Chapter 4

# Active Streets Recommendations









# Equity Priority Areas

Study area-specific equity priority areas were defined to understand existing disproportionate impacts of displacement and pollution burden.

The equity priority areas were developed by analyzing three data sources (CalEnviroScreen, Healthy Places Index, and UC Berkeley Urban Displacement Project) to assess what challenges each census tract experiences and whether certain census blocks experience more inequities than others.

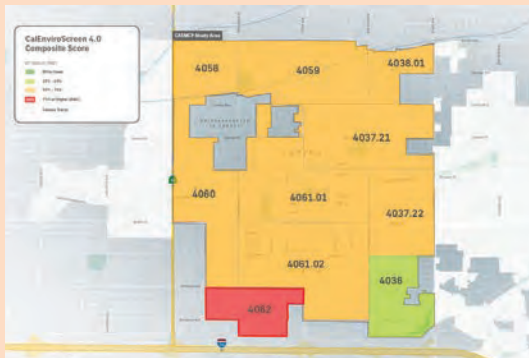
The highlighted areas represent the outcomes of this analysis and are defined as the equity priority areas for this Plan.

Equity priority areas were used to prioritize projects recommended in this Plan. The outcomes of that analysis are included in the [Funding & Implementation Strategy](#) chapter.



## CalEnviroScreen 4.0

Scores are composed of 21 indicators representing the product of pollution burdens and population characteristics, to produce an overall score for each census tract. A percentile ranking for a census tract above seventy-five means that the census tract is in the top 25% of all CalEnviroScreen scores statewide.



## Healthy Places Index

Scores are composed of 23 community characteristics to quantify various factors that shape health. These scores can be used to identify health inequities by comparing the well-being and health of communities.

## UC Berkeley Urban Displacement Project

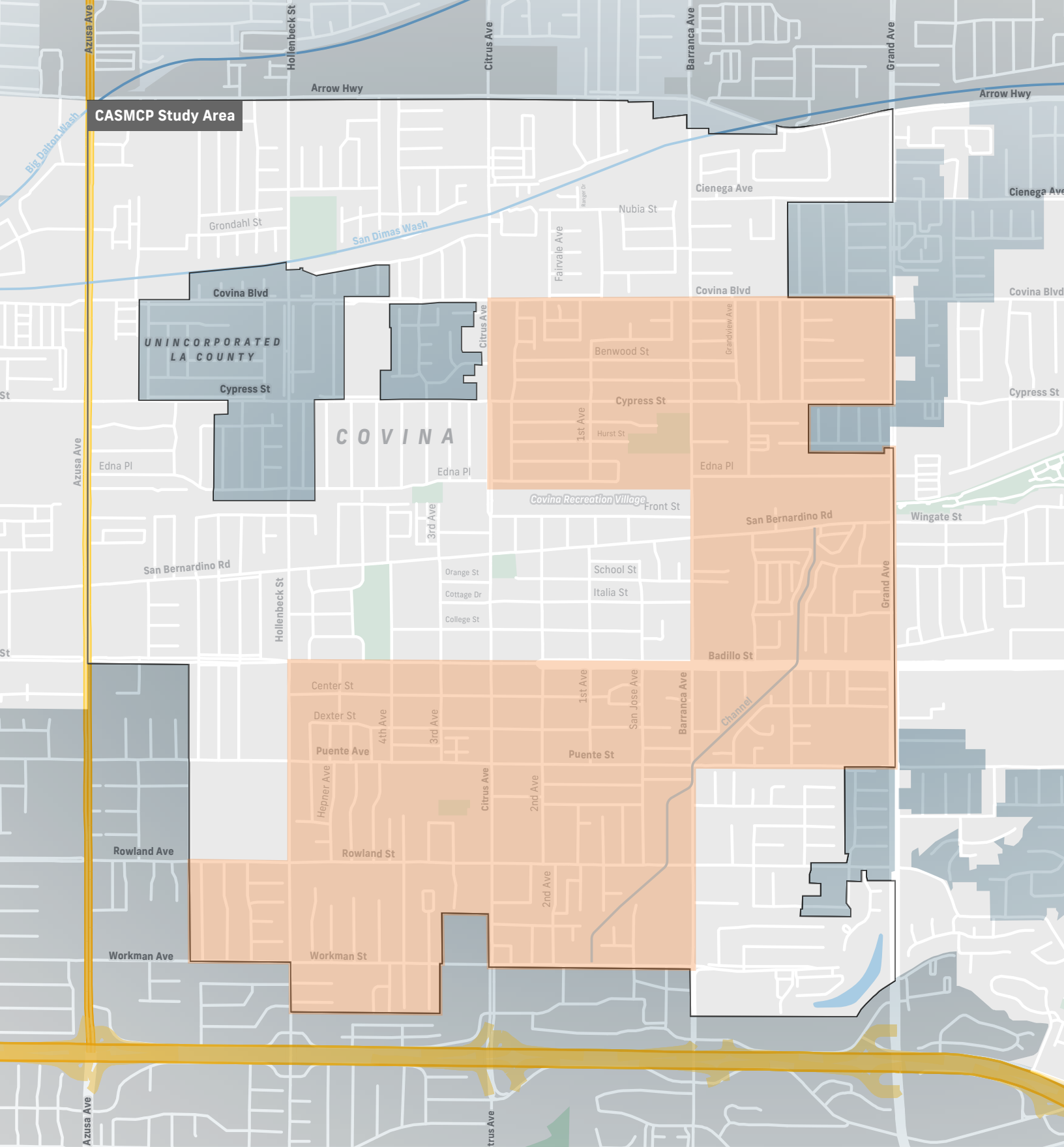
Analyzes a set of criteria that would make it difficult for a household to afford changes in housing costs in the event of increased development. These communities vulnerable to displacement are referred to as sensitive communities.



See Appendices for more information







**Equity Priority Area**

Identified Equity Priority Areas form a contiguous area stretching from the southwestern edge of the study area and city to the northeast.

# Bike Network

This bike network establishes a **low-stress<sup>1</sup>** network of bicycle facilities that provides:

- › Connections to parks and schools
- › Continuous connections on major corridors, including identified Economic Development Corridors
- › Connections on neighborhood streets wherever possible

Once implemented, the recommended bike network would be an almost six-fold increase in the bikeway miles in the study area, providing meaningful connections to the places people want to go.

The FHWA Bikeway Selection Guide was used as a starting point for establishing bikeway type recommendations for each street.

Refer to the **Chapter 5 Design Guidelines** for best practices on implementation.



## What do we mean by low-stress?

We mean bicycle facilities that are comfortable to everyone, regardless of age or ability. We considered auto speeds and volumes to identify the bikeway type that is most appropriate for each street. The higher the speeds and volumes, the more protection there should be. Separated bikeways are recommended on the streets with the highest combination of speed and volume.



### Separated Bikeways

- › **New** 20.0 mi
- › **Upgraded** 4.5 mi



### Bike Lanes

- › **New** 2.0 mi
- › **Upgraded** 0.5 mi
- › **Maintained** 0.6 mi



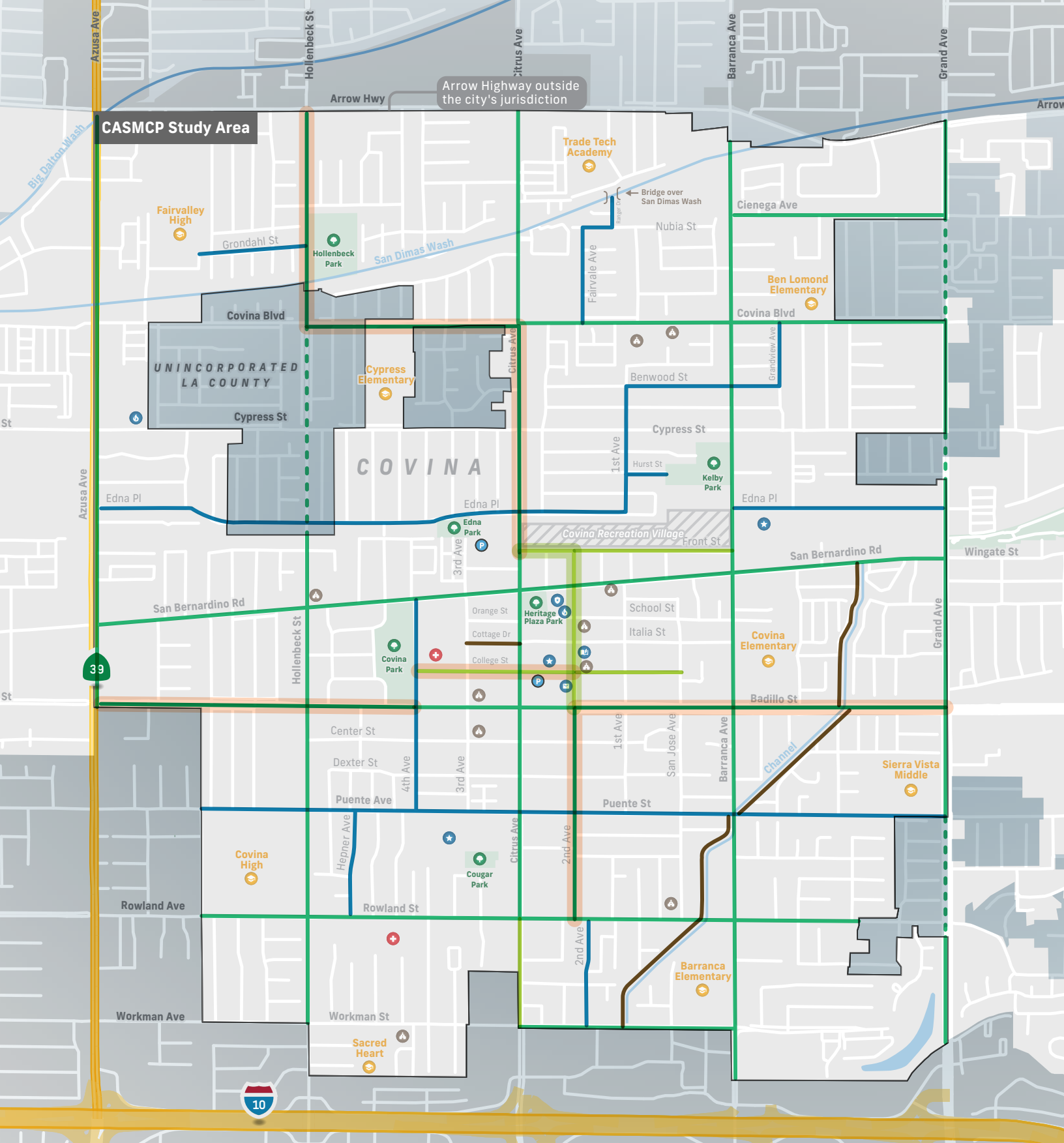
### Bike Boulevards

- › **New** 4.6 mi



### Shared Use/Bike Paths

- › **New** 1.6 mi



Arrow Highway outside the city's jurisdiction

**CASMCP Study Area**

- Separated Bikeways Class IV
- Bike Lanes Class II
- Bike Boulevards Class III
- Shared Use/Bike Paths Class I
- Upgrade Existing Facility
- Maintain Existing Bike Lanes



# Pedestrian Priority Areas

The pedestrian priority areas are areas with:

- › Overlap of major destinations, including parks and schools, major employers, churches, grocers, and transit stops
- › Fatal and severe pedestrian collision history
- › Equity Priority Areas

Streetscape projects were identified for each pedestrian priority area to enhance the walkability of these areas.

Refer to the [Chapter 5 Design Guidelines](#) for best practices on implementation.



## Sidewalk Zone Amenities

- › Lighting
- › Street furniture
- › Bicycle racks and corrals
- › Transit amenities
- › Permeable paving



## Sidewalk Expansion

- › New and widened sidewalks
- › Treelets
- › Curb extensions at intersections



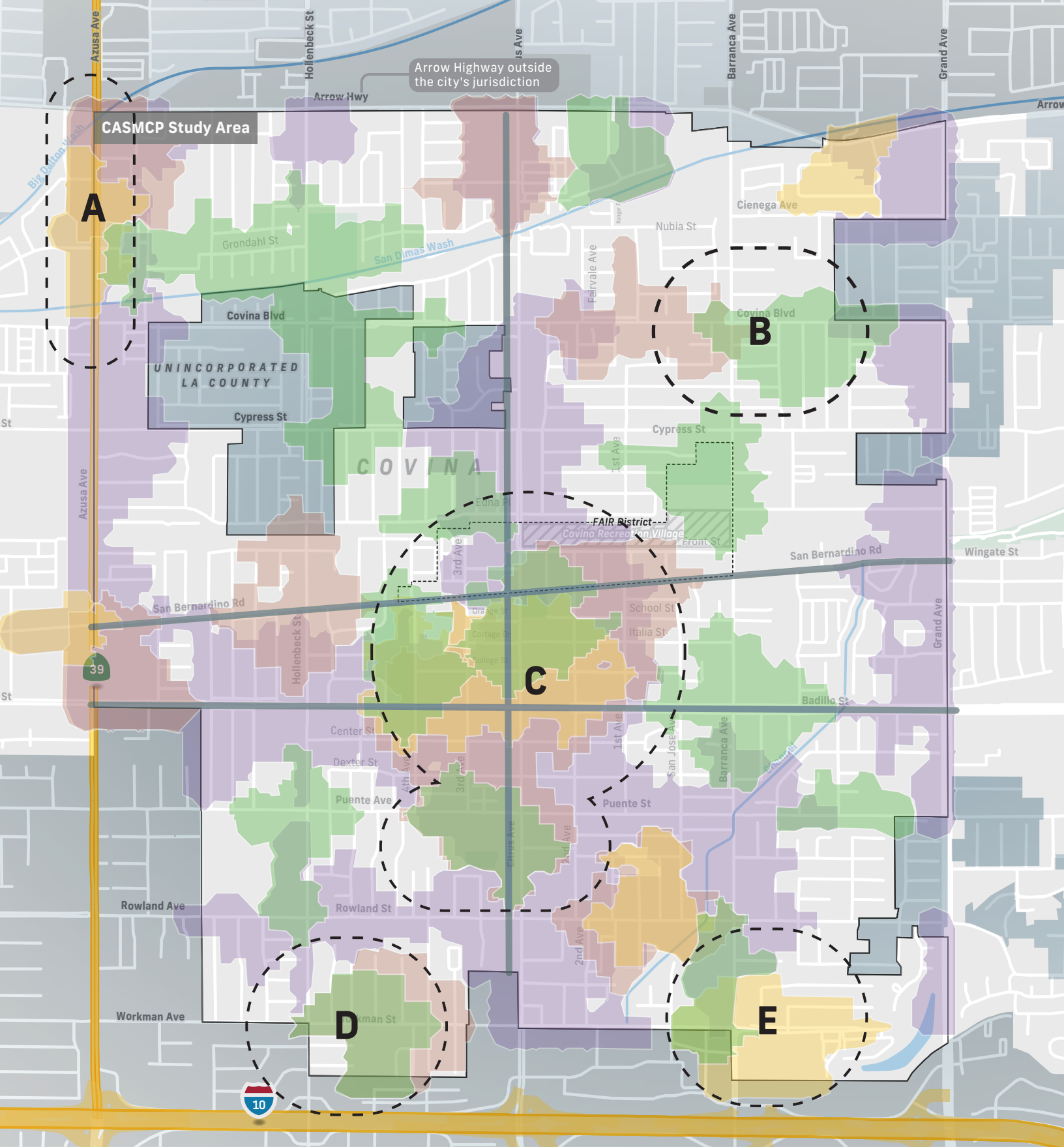
## Green Infrastructure

- › Street trees
- › Stormwater capture



## Curbspace Management

- › EV charging
- › On-street parking
- › Commercial/Service loading
- › Pick-up/drop-off zones
- › Micromobility parking



⊖ Pedestrian Priority Area (PPA)

— Economic Development Corridors

5-MINUTE WALK TO

■ Parks and Schools

■ Major Employers

■ Churches and Grocers

■ Transit Stops

# Urban Design Recommendations in Pedestrian Priority Areas

- Primary
- Secondary

Refer to the [Chapter 5 Design Guidelines](#) for best practices on implementation.

Pedestrian Priority Area A	From	To	
Azusa Avenue	Arrow Highway	Covina Boulevard	
Arrow Highway	Azusa Avenue	Hollenbeck Avenue	
Grondahl Street	Armel Drive	San Dimas Wash	
<b>Pedestrian Priority Area B</b>			
Residential Streets	Park Avenue, Reed Street	Edna Place, Kelby Park	
Barranca Avenue	Covina Boulevard	San Bernardino Boulevard	
Covina Boulevard	Grand Avenue	Citrus Avenue	
<b>Pedestrian Priority Area C</b>			
Second Avenue	San Bernardino Boulevard	Puente Street	
Badillo Street	Barranca Avenue	Hollenbeck Avenue	
Front Street	Citrus Avenue	Barranca Avenue	
<b>Pedestrian Priority Area D</b>			
Workman Street and Hollenbeck Avenue	Workman Elementary	Puente Avenue	
Residential Streets: Armel, Easbury, S. Heathdale	Rowland Street	Workman Street	
Rowland Street	Armel Drive	Citrus Avenue	
<b>Pedestrian Priority Area E</b>			
Rowland Street	Citrus Avenue	Delay Avenue	
Barranca Avenue	Puente Street	Workman Avenue	
Residential Streets	Workman Avenue, Rowland Street	Barranca Avenue, Oak Tree Drive	







# Uncontrolled Crosswalk Recommendations

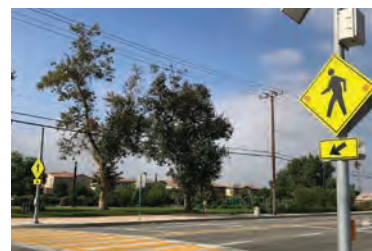
There are 58 uncontrolled crosswalks throughout the study area, many of which provide access to businesses, schools, parks, and transit stops. Improvements at these locations could dramatically increase pedestrian comfort when accessing these local destinations.

The FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations was used as a starting point for these recommendations. Each recommendation was established considering location context, auto speed, auto volumes, and number of lanes. [The Crosswalk Policy](#) provides the specific thresholds used for each treatment recommendation.

Refer to the [Chapter 5 Design Guidelines](#) for best practices on implementation.



**High-visibility Crosswalk Striping**



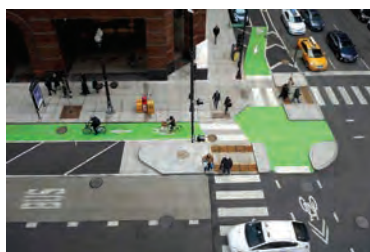
**Rectangular Rapid-Flashing Beacons (RRFBs)**



**Pedestrian Hybrid Beacons or Pedestrian Signals**



**Traffic Signals**



**Lane Reconfigurations<sup>i</sup>**



**Slip Lane Closures**



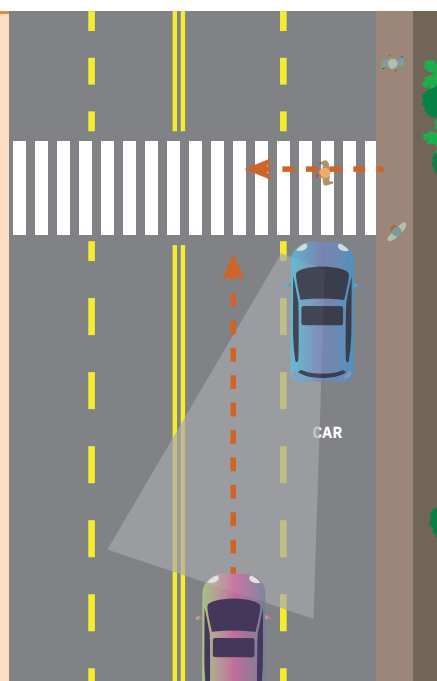
## What do lane reconfigurations have to do with pedestrian safety?

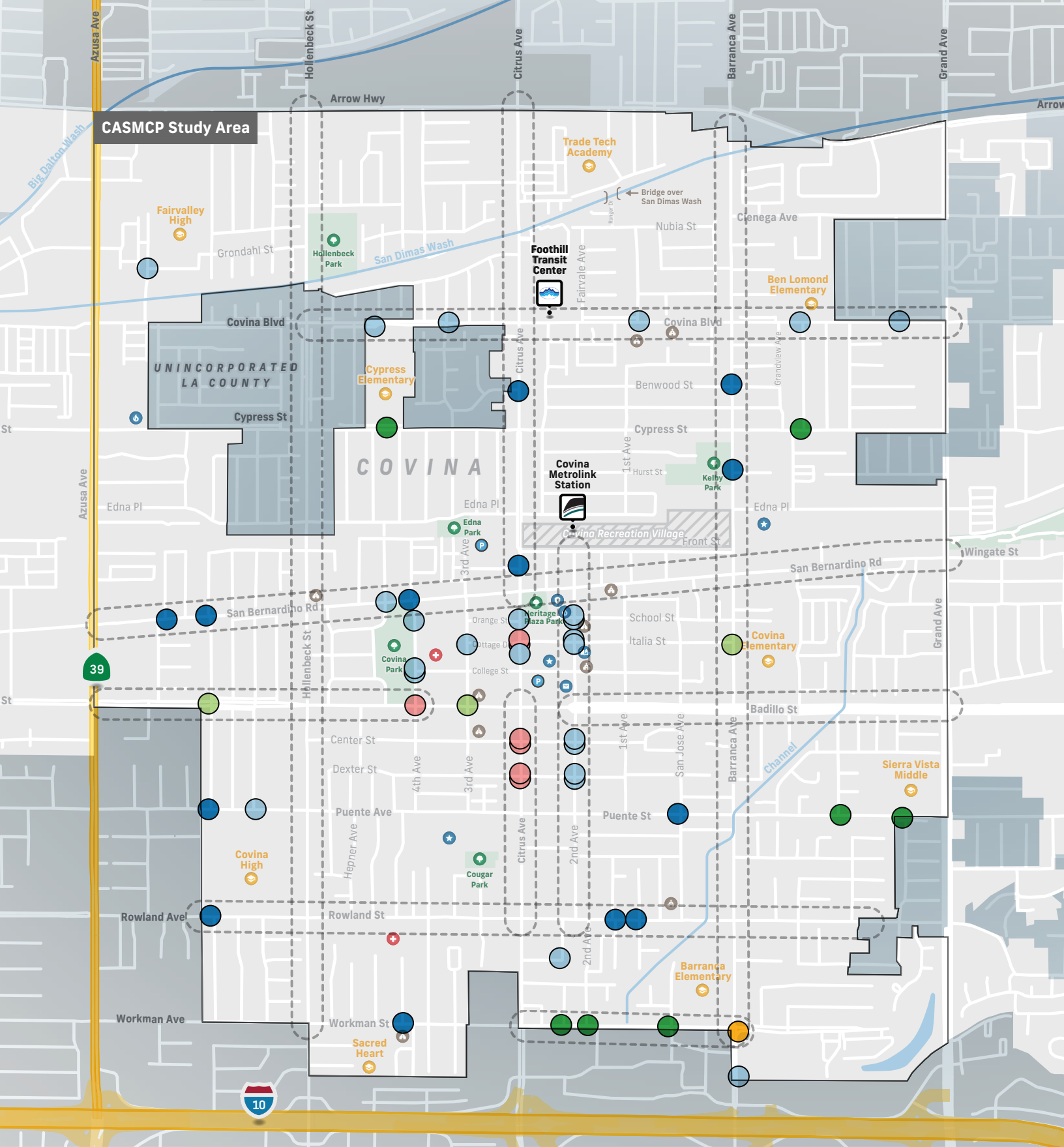
Research shows dropping from a 4-lane roadway to a 3-lane roadway can reduce crashes up to 47%<sup>1</sup>. There are several reasons why having multiple lanes in each direction makes for a uncomfortable pedestrian environment. The two primary reasons are speeding and the introduction of a “multiple threat condition”.

<sup>1</sup>(CMF Clearinghouse, CMF ID: 2841)

**Speeding:** When there is too much auto capacity for the demand on the roadway, it gives drivers a lot of room to pick up speed. High speeds lead to less time for drivers to react, smaller lines of sight, and higher severity of crashes.

**Multiple threat condition:** When the crosswalk is uncontrolled, one car may stop for a pedestrian in one lane and unintentionally block the line of sight of the pedestrian and oncoming traffic in the neighboring lane.





- Install High-Visibility Crosswalk
- Install RRFB
- Install PHB or Pedestrian Signal
- Lane Reconfiguration or PHB/Ped Signal
- Install Traffic Signal
- Close Slip Lane

These recommendations assume that the recommended bike network and associated lane reconfigurations will be installed in parallel with these recommendations. If the existing lane configuration will remain, more significant improvements may be needed at some locations. Utilize the **Crosswalk Policy** to determine the appropriate treatment.



Chapter 5

# Design Guidelines









# Active Transportation Toolbox

---

## BIKE FACILITIES

### Roadway

- › Bike Path
- › Separated Bikeway
- › Buffered Bike Lane
- › Bike Lane
- › Bike Boulevard

### Intersection/Crossings

- › Bicycle Crossing (Solid Green Paint)
- › Green Conflict Striping
- › Bike Box
- › Two-Stage Turn Queue Bike Box

### Signal Adjustments

- › Bicycle Signal/Exclusive Bike Phase
- › Bike Detection
- › Extend Green Time For Bikes
- › Separate Right-Turn Phasing
- › Protected Left Turns

### Other

- › Wayfinding
- › Bicycle Parking (Bicycle Racks and Corrals)

## PEDESTRIAN FACILITIES

### Roadway

- › New and Widened Sidewalk
- › Parkway/Landscaping
- › Paving Materials

### Intersection/Crossings

- › Pedestrian Hybrid Beacon
- › Rectangular Rapid Flashing Beacon
- › Curb Extension (Bulbout)
- › Refuge Island
- › High-Visibility Crosswalks with Advance Stop Bars/ Yield Markings
- › Slip Lane Closure
- › Raised Crosswalk
- › Raised Intersection

### Signal adjustments:

- › Pedestrian Countdown Signal Head
- › Leading Pedestrian Interval and Pedestrian Recall
- › Pedestrian Detection
- › Extended Pedestrian Crossing Time
- › Shorten Cycle Length
- › Pedestrian Scramble
- › Prohibit Right-Turn-on-Red
- › Separate Right-Turn Phasing
- › Protected Left Turns

### Other

- › Far-side Bus Stops
- › Roadway and Intersection Lighting
- › Pedestrian Lighting
- › Street Furniture
- › Transit Amenities
- › Street Trees





---

## SPEED MANAGEMENT

### Roadway

- › Speed Feedback Sign
- › Speed Limit Reduction
- › Centerline Hardening/  
Median Island
- › Curb Extension (Bulbout)
- › Speed Hump/Table
- › Lateral Shift
- › Mini Roundabout/ Traffic Circle

---

## STORMWATER CAPTURE

### Roadway

- › Flow-Through Planters
- › Infiltration Planter
- › Bioswales
- › Permeable Paving


---

## CURBSPACE MANAGEMENT

### Roadway

- › Treelet
- › Electric Vehicle (EV) Charging
- › On-Street Parking
- › Commercial/Service  
Loading Zones
- › Pick-up/Drop-off Zones
- › Shared Micromobility  
Parking Zones

# Suitability of Treatments

 Recommended

	<u>Intersection</u>		<u>Roadway</u>		
	Unsignalized	Signalized	Arterial	Collector	Local
<b>Bike Facilities</b>					
Bike Path					
Separated Bikeway					
Buffered Bike Lane					
Bike Lane					
Bike Boulevard					
Bicycle Crossing (Solid Green Paint)					
Green Conflict Striping					
Bike Box					
Two-Stage Turn Queue Bike Box					
Bicycle Signal/Exclusive Bike Phase					
Bike Detection					
Extend Green Time For Bikes					
Separate Right-Turn Phasing					
Protected Left Turns					
Wayfinding					
Bicycle Parking (Bicycle Racks and Corrals)					
<b>Pedestrian Facilities</b>					
New and Widened Sidewalk					
Parkway/Landscaping					
Paving Materials					
Pedestrian Hybrid Beacon					
Rectangular Rapid Flashing Beacon					
Curb Extension (Bulbout)					
Refuge Island					
High-Visibility Crosswalks with Advance Stop Bars/Yield Markings					
Slip Lane Closure					
Raised Crosswalk					
Raised Intersection					
Pedestrian Countdown Signal Head					
Leading Pedestrian Interval and Pedestrian Recall					
Pedestrian Detection					
Extended Pedestrian Crossing Time					
Shorten Cycle Length					
Pedestrian Scramble					
Prohibit Right-Turn-on-Red					
Separate Right-Turn Phasing					
Protected Left Turns					



	<u>Intersection</u>		<u>Roadway</u>		
	Unsignalized	Signalized	Arterial	Collector	Local
<b>Pedestrian Facilities</b>					
Far Side Bus Stops					
Roadway and Intersection Lighting					
Pedestrian Lighting					
Street Furniture					
Transit Amenities					
Street Trees					
<b>Speed Management</b>					
Speed Feedback Sign					
Speed Limit Reduction					
Centerline Hardening/ Median Island					
Curb Extension (Bulbout)					
Speed Hump/Table					
Lateral Shift					
Mini Roundabout/ Traffic Circle					
<b>Stormwater Capture</b>					
Flow-through Planters					
Infiltration Planter					
Bioswales					
Permeable Paving					
<b>Curbspace Management</b>					
Treelet					
Electric Vehicle (EV) Charging					
On-Street Parking					
Commercial/Service Loading Zones					
Pick-up/Drop-off Zones					
Shared Micromobility Parking Zone					



# EXAMPLE OF WHAT YOU'LL SEE IN THIS TOOLBOX

PHOTO



TITLE

**Bike Lane**

SUITABILITY  
*See right panel*

LOCAL

DESCRIPTION

A **bike lane** provides dedicated street space, typically adjacent to outer vehicle travel lanes, with designated lane markings, pavement legends, and signage. Bike lanes improve safety by reducing conflicts between bicycles and vehicles on the road and by creating a road-narrowing effect with buffers or vertical barriers, which may reduce vehicle speeds.

**REFER TO:**

- Caltrans DRAFT DIB-94 Complete Streets: Contextual Design Guidance
- MUTCD 2009 Edition Chapter 9C
- NACTO Urban Bikeway Design Guide

APPLICABLE  
RESOURCES

**SUITABLE STREET  
CONTEXTS**

*For Bikeways,  
Pedestrian Facilities &  
Speed Management*

UNSIGNALIZED

SIGNALIZED

ARTERIAL

COLLECTOR

LOCAL

**ALL ROADWAY CONTEXTS**

*includes all the above*

*While these tools are suitable for certain street contexts, the tool's viability may depend on several factors such as engineering feasibility, community preference, and surrounding land use*





**Bike Path**

ARTERIAL

COLLECTOR

LOCAL

A **bike path** provides a completely separate right of way that is designated for the exclusive use of people riding bicycles and walking with minimal cross-flow traffic. Paths and trails offer opportunities for the lowest stress bicycle travel.

**REFER TO:**

- Caltrans DRAFT DIB-94 Complete Streets: Contextual Design Guidance

Image Source: [City of Orlando](#)



**Separated Bikeway**

ARTERIAL

COLLECTOR

A **separated bikeway** provides dedicated street space, typically adjacent to outer vehicle travel lanes, with physical separation from vehicle traffic, designated lane markings, pavement legends, and signage. Physical separation may consist of plastic posts, parked vehicles, or a curb. Separated bikeways improve safety by reducing conflicts between bicycles and vehicles on the road and by creating a road-narrowing effect with buffers or vertical barriers, which may reduce vehicle speeds.

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)
- Caltrans DRAFT DIB-89-02 Class IV Bikeway Guidance
- Caltrans DRAFT DIB-94 Complete Streets: Contextual Design Guidance
- NACTO Urban Bikeway Design Guide
- FHWA Separated Bike Lane Planning and Design Guide

Image Source: [Denver North Star](#)



### Buffered Bike Lane

#### ALL ROADWAY CONTEXTS

A **buffered bike lane** is a conventional bike lane paired with a designated buffer space, typically marked with pavement markings or physical barriers, separating the bike lane from the adjacent vehicle travel lane and/or parking lane. The buffer space provides greater shy distance between motor vehicles, reducing the risk of collisions with vehicles, opening car doors, or encroachments in to the bike lane by parked cars.

#### REFER TO:

- Caltrans DRAFT DIB-94 Complete Streets: Contextual Design Guidance
- NACTO Urban Bikeway Design Guide

Image Source: [NACTO Covina](#)



### Bike Lane

#### LOCAL

A **bike lane** provides dedicated street space, typically adjacent to outer vehicle travel lanes, with designated lane markings, pavement legends, and signage. Bike lanes improve safety by reducing conflicts between bicycles and vehicles on the road and by creating a road-narrowing effect with buffers or vertical barriers, which may reduce vehicle speeds.

#### REFER TO:

- Caltrans DRAFT DIB-94 Complete Streets: Contextual Design Guidance
- MUTCD 2009 Edition Chapter 9C
- NACTO Urban Bikeway Design Guide

Image Source: [NACTO](#)





**Bike Boulevard**

LOCAL

A **bike boulevard** is a street with low vehicle traffic volumes and speeds, designated to give bicyclists travel priority and create a low-stress cycling experience. Bike boulevards typically feature various traffic calming measures to reduce vehicle speeds and prioritize bicycles, such as branded wayfinding, pavement markings, traffic diverters, and landscaping. Sharrows are the most common pavement marker used on bike boulevard. They should be centered in the travel lane, at least three feet away from parked cars (outside the "door" zone). Implement traffic calming features every 250 feet to encourage slow, attentive driving.

**REFER TO:**

- Caltrans DRAFT DIB-94 Complete Streets: Contextual Design Guidance
- NACTO Urban Bikeway Design Guide
- FHWA Small Town and Rural Multimodal Networks

Image Source: [Los Angeles Eco-Village](#)



**Bicycle Crossing (Solid Green Paint)**

ALL ROADWAY CONTEXTS

**Solid green paint** across an intersection that signifies the path of the **bicycle crossing**. Increases visibility and safety of bicyclists traveling through an intersection.

**REFER TO:**

- NACTO Urban Bikeway Design Guide
- FHWA Separated Bike Lane Planning and Design Guide
- MUTCD Interim Approval IA-14

Image Source: [NACTO](#)



### Green Conflict Striping

ALL ROADWAY CONTEXTS

**Dashed green markings** in bike lanes through **conflict areas** such as at turn pockets, driveways, and intersections. Signals to drivers and bikers to take caution and look for conflicts.

**REFER TO:**

- NACTO Urban Bikeway Design Guide

Image Source: [City of Covina](#)



### Bike Box

SIGNALIZED

ARTERIAL

COLLECTOR

LOCAL

A **bike box** is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase.

**REFER TO:**

- NACTO Urban Bikeway Design Guide
- FHWA Separated Bike Lane Planning and Design Guide

Image Source: [NACTO](#)



### Two-Stage Turn Queue Bike Box

SIGNALIZED ARTERIAL COLLECTOR

A **two-stage turn queue bike box** is a designated area marked at the head of the intersection, just in front of the motor vehicle stop line, for cyclists to position themselves ahead of the motor vehicles. The two-stage turn queue bike box provides bicyclists with a means of safely making a left turn at a multi-lane signalized intersection from a bike lane or cycle track.

**REFER TO:**

- NACTO Urban Bikeway Design Guide
- FHWA Separated Bike Lane Planning and Design Guide

Image Source: [NACTO](#)



### Bicycle Signal/ Exclusive Bike Phase

SIGNALIZED ARTERIAL COLLECTOR LOCAL

A **bicycle signal/exclusive bike phase** is specifically designed to control the movement of bicycles at intersections, operating either independently or in coordination with traffic signal. It separates bicycle movements from conflicting motor vehicle, streetcar, light rail, or pedestrian movements enhancing safety and visibility for cyclist navigating through an intersection.

**REFER TO:**

- CA MUTCD Chapter 4D
- NACTO Don't Give Up at the Intersection
- NACTO Urban Bikeway Design Guide
- FHWA Separated Bike Lane Planning and Design Guide

Image Source: [Bike Portland](#)





### Bike Detection

SIGNALIZED ARTERIAL COLLECTOR LOCAL

**Bike detection** is a technology used to identify the presence of a bicycle at signalized intersections or along roadways, either through use of push-buttons, in-pavement loops, or by video or infrared cameras, to call a green light for bicyclists and reduce delay for bicycle travel. Provides appropriate signal timing or priority for bicyclists, which can discourage red light running, increase convenience, and safety.

#### REFER TO:

- NACTO Urban Bikeway Design Guide
- MUTCD 2009 Edition Chapter 9C
- FHWA Separated Bike Lane Planning and Design Guide

Image Source: [Victoria News](#)



### Extend Green Time For Bikes

SIGNALIZED ARTERIAL COLLECTOR LOCAL

**Extending green time for bikes** prolongs the green phase when bicyclists are present to provide additional time for bicyclists to clear the intersection. Longer green times reduce risk of conflicts between bicyclists and turning vehicles, improve visibility of bicyclists and pedestrians, and reduce the need for rushed maneuvering that could lead to unsafe behavior.

#### REFER TO:

- MUTCD IA-16
- NACTO Urban Bikeway Design Guide
- ITE Signal Timing and Phasing for Bicycles

Image Source: [Irvine Standard](#)



### Separate Right-Turn Phasing

SIGNALIZED    ARTERIAL    COLLECTOR

A **separate right-turn phasing** provides a green arrow phase for right-turning vehicles. Avoids conflicts between right-turning traffic and bicyclists or pedestrians crossing the intersection on their right. **See the [intersection design primer](#) for more details on when to apply.**

**REFER TO:**

- NCHRP Document 284: Decision-Making Guide for Traffic Signal Phasing
- NCHRP Report 812: Signal Timing Manual (Second Edition)

Image Source: [Gaston Gazette](#)



### Protected Left Turns

SIGNALIZED    ARTERIAL    COLLECTOR

A **protected left-turn** shields the left turning movement from oncoming traffic at signalized intersections (with existing left turns pockets). The purpose of a protected left turn is to improve safety by preventing conflicts between turning vehicles and oncoming traffic, allowing for smoother and more efficient traffic flow at intersections. **See the [intersection design primer](#) for more details on when to apply.**

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)
- MUTCD 2009 Edition Chapter 4C
- FHWA Signalized Intersections Information Guide Second Edition

Image Source: [City of Surrey](#)



### Wayfinding

ALL ROADWAY CONTEXTS

A network of signs providing clear navigation information, typically highlighting nearby pedestrian and bicycle facilities. Effective **wayfinding** can reduce confusion among all road users, help to reduce crossings at locations with poor sight distance or limited crossing enhancements, and guide pedestrians in high pedestrian traffic areas.

**REFER TO:**

- NACTO Urban Bikeway Design Guide
- MUTCD 2009 Edition Chapter 9B

Image Source: [Solano Transportation Authority](#)



### Bicycle Parking (Bicycle Racks and Corrals)

ALL ROADWAY CONTEXTS

**Bicycle parking** provide a dedicated secure space for people to store their bicycles. They are meant for short stays and usually located in the sidewalk, but can also be installed in the roadway adjacent to the curb.

**DESIGN CONSIDERATIONS:**

- Place bicycle racks near the entrance of buildings and other high visibility areas.
- Install bicycle racks that support the frame of the bicycle, not just the wheel.
- Where sidewalk space is limited and bicycle activity is strong, place bike corrals in the street area adjacent to the curb.
- The style of bicycle racks should be intuitive to use. Inverted U racks are a simple and common style that provide two-point contact.
- Prioritize siting bicycle racks at key community serving destinations (e.g. medical services, grocery stores, and schools) and near transit.

Image Source: [Solano Transportation Authority](#)







### New and Widened Sidewalk

ALL ROADWAY CONTEXTS

**New and widened sidewalks** provide a more comfortable space for pedestrians, particularly in locations with high volumes of pedestrians, and provide space to accommodate people in wheelchairs. New and widened sidewalks improve safety by minimizing collisions with pedestrians walking in the road.

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)
- Caltrans DRAFT DIB-94 Complete Streets: Contextual Design Guidance
- FHWA Small Town and Rural Multimodal Networks

Image Source: [NACTO](#)



### Parkway/Landscaping

ALL ROADWAY CONTEXTS

Separating drivers from bicyclists and pedestrians using **parkways and/or landscaping** provides more space between modes produce a traffic calming effect and beautify a corridor. **See [Stormwater Capture treatments](#) for opportunities to integrate climate resilience into parkways.**

**REFER TO:**

- FHWA Small Town and Rural Multimodal Networks
- Caltrans DRAFT DIB-94 Complete Streets: Contextual Design Guidance

Image Source: [Planetizen](#)



### Paving Materials

ALL ROADWAY CONTEXTS

Pavements are part of the hardscape and are used on sidewalks and road surfaces. Pavements can come in a variety of materials and can be used for decorative purposes and creating a sense of place. **See [Permeable Paving](#) for stormwater runoff benefits.**

**DESIGN CONSIDERATIONS:**

- Use decorative paving materials in areas with high volumes of pedestrian activity, such as along plazas, major transit stops, schools, and commercial centers.
- Incorporate recycled content into the paving materials to enhance sustainability.
- Paving materials should accommodate all users, including wheel chairs and scooters, paying special attention to ADA-compliant accessibility.

Image Source: [American Society of Landscape Architects](#)



### Pedestrian Hybrid Beacon

ARTERIAL UNSIGNALIZED COLLECTOR

A **pedestrian-hybrid beacon (PHB)** is used at unsignalized intersections or mid-block crosswalks to notify oncoming motorists to stop with a series of red and yellow lights. Unlike a traffic signal, the PHB rests in dark until a pedestrian activates it via pushbutton or other form of detection providing enhanced pedestrian visibility. **See the [The Crosswalk Policy](#) for more guidance on when to apply.**

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)
- MUTCD 2009 2009 Edition Chapter 4F
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)
- FHWA Small Town and Rural Multimodal Networks

Image Source: [City of San Luis Obispo](#)





### Rectangular Rapid Flashing Beacon

UNSIGNALIZED

COLLECTOR

LOCAL

A **rectangular rapid flashing beacon (RRFB)** is a pedestrian-activated flashing light with additional signage to alert motorists of a pedestrian crossing. An RRFB improves safety by increasing the visibility of marked crosswalks and provides motorists a cue to slow down and yield to pedestrians at uncontrolled intersections. **See the [The Crosswalk Policy](#) for more guidance on when to apply.**

**REFER TO:**

- FHWA Small Town and Rural Multimodal Networks
- MUTCD Interim Approval IA-21
- NACTO Urban Bikeway Design Guide

Image Source: [City of Covina](#)



### Curb Extension (Bulbout)

ALL ROADWAY CONTEXTS

A **curb extension** is a traffic calming measure which widens the sidewalk for a short distance to enhance the pedestrian crossing and reduce vehicle speeds. For the pedestrian, this reduces the crossing distance and improves pedestrian visibility. For the vehicle, this visual narrowing encourages drivers to reduce speed when approaching intersection and modifies the turning movement geometry to encourage sharper, slower turns.

**REFER TO:**

- NACTO Don't Give Up at the Intersection
- FHWA Small Town and Rural Multimodal Networks
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)

Image Source: [City of Covina](#)





## Curb Extension (Bulb)

ALL ROADWAY CONTEXTS

In addition to using **curb extensions** for traffic calming purposes, they can also increase the space available to accommodate various amenities.

### DESIGN CONSIDERATIONS:

- Include landscape planting, bioswale planting, bike parking, or seating within the curb extension as space permits.
- Ensure that street furnishings or other above-grade objects within the curb extension do not obstruct pedestrian through travel on sidewalks and interfere with intersection sight lines.
- Engage community members to identify what elements should be incorporated in the curb extension design.
- Participate in Park(ing) Day, which is a global, public, participatory project where residents can be provided the opportunity to re-design parking spaces into temporary green, open, and social spaces.

### POTENTIAL CONFIGURATIONS





### Refuge Island

ALL ROADWAY CONTEXTS

A **raised median, or refuge island**, is a raised barrier in the center of the roadway that can restrict certain turning movements and provide a place for pedestrians to wait if they are unable to finish crossing the intersection. A **raised median** improves safety by reducing the number of potential conflict points with designated zones for vehicles to turn, and a **pedestrian refuge island** improves safety by reducing the exposure time for pedestrians crossing the intersection.

**REFER TO:**

- CA 2014 MUTCD Chapter 2B and 3B
- NACTO Don't Give Up at the Intersection
- NACTO Urban Bikeway Design Guide
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)
- FHWA Small Town and Rural Multimodal Networks

Image Source: [NACTO](#)



### High-Visibility Crosswalks with Advance Stop Bars/ Yield Markings

ALL ROADWAY CONTEXTS

A **high-visibility crosswalk** has a striped pattern with ladder markings made of high-visibility material, such as thermoplastic tape, instead of paint. A high-visibility crosswalk improves safety by increasing the visibility of marked crosswalks and provides motorists a cue to slow down and yield to pedestrians. **Advance stop bars** are used on the approaches to a signalized intersection. **Advance yield lines** are used on the approaches to an unsignalized intersection.

**REFER TO:**

- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)

Image Source: [NACTO](#)





### Slip Lane Closure

SIGNALIZED   ARTERIAL   COLLECTOR

A **slip lane closure** modifies the corner of an intersection to remove the sweeping right turn lane for vehicles. This results in shorter crossings for pedestrians, reduced speed for turning vehicles, better sight lines, and space for landscaping and other amenities.

**REFER TO:**

- NACTO Urban Street Design Guide

Image Source: [Streetsblog USA](#)



### Raised Crosswalk

UNSIGNALIZED   SIGNALIZED   COLLECTOR   LOCAL

A **raised crosswalk** is a pedestrian crosswalk that is typically elevated 3-6 inches above the road or at sidewalk level. A Raised Crosswalk improves safety by increasing crosswalk and pedestrian visibility and slowing down motorists.

**REFER TO:**

- Caltrans DRAFT DIB-94 Complete Streets: Contextual Design Guidance
- NACTO Don't Give Up at the Intersection
- FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations

Image Source: [New York City Street Design Manual](#)







### Raised Intersection

- UNSIGNALIZED
- SIGNALIZED
- COLLECTOR
- LOCAL

A **raised intersection** elevates the intersection bringing vehicles to sidewalk level. Serves as a traffic calming measure by creating a visual and physical reminder for drivers to reduce their speed.

**REFER TO:**

- Caltrans DRAFT DIB-82 Pedestrian Accessibility Guidelines for Highway Projects
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)
- NACTO Urban Street Design Guide

Image Source: [NACTO](#)



### Pedestrian Countdown Signal Head

- SIGNALIZED
- ARTERIAL
- COLLECTOR
- LOCAL

A **pedestrian countdown signal** displays “countdown” of seconds remaining on the pedestrian signal. Countdown indications improve safety for all road users providing pedestrians real-time information about the time remaining to safely cross an intersection, and are required for all newly installed traffic signals where pedestrian signals are installed.

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)
- MUTCD 2009 Edition Chapter 4E

Image Source: [The Spokesman-Review](#)



### Leading Pedestrian Interval and Pedestrian Recall

- SIGNALIZED
- ARTERIAL
- COLLECTOR
- LOCAL

At intersection locations that have a high volume of turning vehicle and have high pedestrian versus vehicle crashes, a **leading pedestrian interval** gives pedestrians the opportunity to enter an intersection 3-7 seconds before vehicles are given a green indication. With this head start, pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn left or right.

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)
- MUTCD 2009 Edition Chapter 4E
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)



### Pedestrian Detection

- SIGNALIZED
- ARTERIAL
- COLLECTOR
- LOCAL

**Pedestrian detection** is an intersection treatment that relies on sensors to detect when a pedestrian is waiting at a crosswalk and automatically triggers the pedestrian "WALK" phase.

**REFER TO:**

- MUTCD 2009 Edition Chapter 4E
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)"





### Extended Pedestrian Crossing Time

SIGNALIZED ARTERIAL COLLECTOR LOCAL

**Extended pedestrian crossing time** reduces crossings at inappropriate times, ensures that pedestrians have enough time to safely cross the roadway, and improves pedestrians visibility.

**REFER TO:**

- MUTCD 2009 Edition Chapter 4E
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)"

Image Source: [LA Walks](#)



### Shorten Cycle Length

SIGNALIZED ARTERIAL COLLECTOR LOCAL

Traffic signal cycle lengths have a significant impact on the quality of the urban realm and consequently, the opportunities for bicyclists, pedestrians, and transit vehicles to operate safely along a corridor. Long signal cycles, compounded over multiple intersections, can make crossing a street or walking even a short distance prohibitive and frustrating. **Shortening cycle lengths** decrease exposure to conflicts, reduce wait time, and improve intersection capacity.

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)

Image Source: [City of San Gabriel](#)





### Pedestrian Scramble

SIGNALIZED ARTERIAL COLLECTOR

A **pedestrian scramble** is a form of pedestrian "WALK" phase at a signalized intersection in which all vehicular traffic is required to stop, allowing pedestrians to safely cross through the intersection in any direction, including diagonally. The pedestrian exclusive phase significantly reduces conflicts at intersections and provides maximum pedestrian visibility.

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)
- MUTCD 2009 Edition Chapter 3B
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)

Image Source: [Rebuilding Place in the Urban Space \(Pasadena, CA\)](#)



### Prohibit Right-Turn-on-Red

SIGNALIZED ARTERIAL COLLECTOR LOCAL

**Prohibiting right-run-on-red** movements should be considered at skewed intersections, or where exclusive pedestrian "WALK" phases, Leading Pedestrian Intervals (LPIs), sight distance issues, or high pedestrian volumes are present. Can help prevent crashes between vehicles turning right on red from one street and through vehicles on the cross street, and crashes involving pedestrians.

**REFER TO:**

- MUTCD 2009 Edition Chapter 2B
- NACTO Don't Give Up at the Intersection
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)

Image Source: [UNC at Chapel Hill](#)





### Separate Right-Turn Phasing

SIGNALIZED ARTERIAL COLLECTOR

A **separate right-turn phasing** provides a green arrow phase for right-turning vehicles. The separate phasing avoids conflicts between right-turning traffic and bicyclists or pedestrians crossing the intersection on their right. **See the [intersection design primer](#) for more details on when to apply.**

**REFER TO:**

- NCHRP Document 284: Decision-Making Guide for Traffic Signal Phasing
- NCHRP Report 812: Signal Timing Manual (Second Edition)

Image Source: [Gaston Gazette](#)



### Protected Left Turns

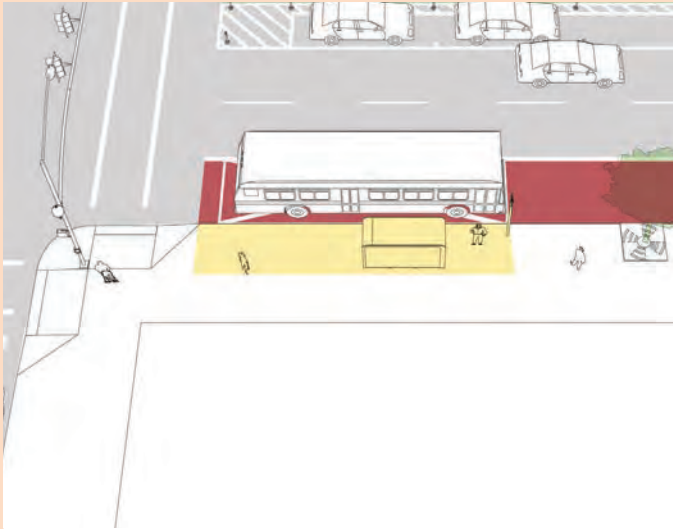
SIGNALIZED ARTERIAL COLLECTOR

A **protected left turn** is a traffic signal configuration that allows vehicles to make a left turn at an intersection while being shielded from conflicting traffic. Left turns are widely recognized as the highest-risk movements at signalized intersections, so providing protected left-turn phases for signalized intersections significantly improves the safety for vehicles making the left-turn maneuver and the conflicting pedestrians. **See the [intersection design primer](#) for more details on when to apply.**

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)
- MUTCD 2009 Edition Chapter 4C
- FHWA Signalized Intersections Information Guide Second Edition

Image Source: [City of Surrey](#)



### Far-side Bus Stops

ALL ROADWAY CONTEXTS

**Far-side bus stops** allow the bus to stop after the crosswalk, improving visibility of pedestrians at the intersection. The bus stop length should be long enough to allow at least 10' of clear space between the stopped bus and the crosswalk.

**REFER TO:**

- NACTO Transit Street Design Guide

Image Source: [NACTO](#)



### Roadway and Intersection Lighting

ALL ROADWAY CONTEXTS

**Adding intersection and/or pedestrian-scale lighting** at intersections improves safety by increasing visibility of all road users. This design treatment improves safety for all users by increasing the visibility of pedestrians at intersections at night.

**REFER TO:**

- Caltrans Local Roadway Safety Manual (Version 1.6)
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)

Image Source: [Fehr & Peers](#)







## Pedestrian Lighting

ALL ROADWAY CONTEXTS

**Pedestrian lighting** is directed toward the sidewalk. It is positioned lower than roadway lighting and is more closely spaced. Pedestrian lighting improves the visibility of pedestrians, enhances the feeling of personal security, and can beautify a corridor.

### DESIGN CONSIDERATIONS:

- Provide pedestrian lighting in addition to overhead lighting for vehicles.
- Space light fixtures to provide uniform illumination of roadways and sidewalks.
- Focus lighting from fixtures directly onto the street to minimize glare and light pollution.
- The style of the street fixtures should complement other streetscape elements.
- Prioritize siting pedestrian lighting near schools, parks, senior centers, and other areas frequented by vulnerable user groups (e.g. women, children, and seniors).

Image Source: [NACTO](#)



## Street Furniture

ARTERIAL

COLLECTOR

**Street furniture** are amenities located in the public right-of-way that provide a functional service to pedestrians. Furnishings may include elements such as benches, trash and recycling receptacles, landscaped planters, and kiosks.

### DESIGN CONSIDERATIONS:

- Street furniture should encourage pedestrian activity while maintaining physical and visual access to buildings.
- Street furniture should be made of durable, high-quality materials and should complement the design of other streetscape elements.
- Regularly-spaced street furniture should be placed adjacent to pedestrian lighting.
- Ensure that street furniture is comfortable and practical for all users. Avoid employing defensive architecture which is hostile towards youth, transit riders, and unhoused individuals.

Image Source: [Benchmark Street Furniture](#)



### Transit Amenities

ALL ROADWAY CONTEXTS

**Transit amenities** are features that enhance user experience and support an increased use of transit. Basic amenities include shade structures, seating, and trash receptacles. Enhanced features include WiFi, phone charging stations, etc.

**DESIGN CONSIDERATIONS:**

- Seating, trash cans, and lighting should be provided at all bus stops, as feasible.
- Trees and other green elements should be integrated into the stop area to provide shade.
- At major transfer stops, stop design should provide a clear/unobstructed path of travel between stops and visual cues (e.g. wayfinding signs, consistent paving treatment, etc.) to link transit facilities.
- Ensure language accessibility for critical information displayed at stops.

Image Source: [NACTO](#)



### Street Trees

ARTERIAL COLLECTOR LOCAL

**Street trees** are located within the sidewalk area. Healthy street trees not only provide shade and aesthetic value, they can also contribute significantly to green stormwater management and biodiversity.

**DESIGN CONSIDERATIONS:**

- Design tree pits and trenches with adequate root space for the tree species underneath the sidewalk or street.
- Plant native, climate-appropriate tree species that will be able to withstand the likely stormwater runoff and detained ponding depth, and that will support infiltration and transpiration.
- Select tree species that will not lift or damage sidewalks to maintain consistent sidewalk access for persons with disabilities.

Image Source: [Cherokee Tree Care](#)





### Speed Feedback Sign

- ARTERIAL
- COLLECTOR
- LOCAL

A **speed feedback sign** notifies drivers of their current speed, usually followed by a reminder of the posted speed limit. A speed feedback sign improves safety by providing a cue for drivers to check their speed and slow down, if necessary.

**REFER TO:**

- CA MUTCD 2014 Chapter 2B

Image Source: [City of Covina](#)



### Speed Limit Reduction

- ARTERIAL
- COLLECTOR
- LOCAL

Setting speed limits to reflect the surrounding context of the roadway and that meet with driver expectations can help improve driver respect for speed limits. **Lower speed limits** allow for shorter stopping distances, reduce the likelihood of collisions, decrease the severity of crashes, and enhance the overall experience for pedestrian and bicyclists.

**REFER TO:**

- Assembly Bill 43

Image Source: [San Francisco Chronicle](#)





### Centerline Hardening/Median Island

ALL ROADWAY CONTEXTS

**Centerline hardening** is the installation of physical barriers or delineators separating two opposing traffic lanes. The enhanced visibility and lane narrowing reduces lane departure crashes and head on-crashes.

**REFER TO:**

- NACTO Don't Give Up at the Intersection

Image Source: [IIHS](#)



### Curb Extension (Bulbout)

ALL ROADWAY CONTEXTS

A **curb extension** is a traffic calming measure which widens the sidewalk for a short distance to enhance the pedestrian crossing and reduce vehicle speeds. For the pedestrian, this reduces the crossing distance and improves pedestrian visibility. For the vehicle, this visual narrowing encourages drivers to reduce speed when approaching intersection and modifies the turning movement geometry to encourage sharper, slower turns.

**REFER TO:**

- NACTO Don't Give Up at the Intersection
- FHWA Small Town and Rural Multimodal Networks
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)

Image Source: [SF Better Streets](#)





### Speed Hump/Table

LOCAL COLLECTOR

A **speed hump/table** is a traffic calming device that uses vertical deflection to raise the entire wheelbase of a vehicle and encourage motorists to travel at slower speeds to avoid damage to the undercarriage of an automobile.

**REFER TO:**

- CA MUTCD 2014 Chapter 2C and 3B

Image Source: [PEDBIKESAFE](#)



### Lateral Shift

LOCAL

A **lateral shift** consists of curb extensions, or edge islands, along a straight roadway that causes vehicles to jog. Multiple lateral shifts can be applied to form an "S" shaped curve, referred to as a chicane. Chicanes are designed to improve safety by reducing vehicle speeds, increasing drivers attentiveness, and promoting a more organized flow of traffic.

**REFER TO:**

- FHWA Small Town and Rural Multimodal Networks

Image Source: [FHWA](#)



## Mini Roundabout/Traffic Circle

UNSIGNALIZED

COLLECTOR

LOCAL

**Traffic circles**, also referred to as **mini roundabouts**, are a type of roundabout typically small in diameter, with on-lane and a fully traversable central island. Traffic circles decrease vehicle speeds and severity of collisions, while reducing congestion and improving traffic flow.

### REFER TO:

- FHWA Small Town and Rural Multimodal Networks
- FHWA Selecting Pedestrian Safety Improvements (Crash Types/ Countermeasure Matrix)
- NACTO Urban Streets Design Guide

Image Source: [NACTO](#)





## Integrating Stormwater Capture into Active Transportation Treatments

Conventional stormwater controls move stormwater off-site and into storm drains as quickly as possible, but stormwater capture strategies aim to provide on-site retention and treatment to reduce urban runoff and naturally reduce contaminants. Common treatments in the public right-of-way include planters, bioswales, filter strips, and infiltration trenches.

Traffic calming measures, such as separated bikeways, curb extensions, new and widened sidewalks, pinch points, lateral shifts, median islands, and mini roundabouts/ traffic circles, provide opportunities for ecological and aesthetic enhancements.

### General Guidance

- Prioritize using native and drought tolerant plantings as much as possible.
- Regularly maintain green elements to avoid obstructing travel paths.
- Green elements should not obstruct sightlines, traffic signage, and other traffic control devices.
- For separated bikeways, prioritize using green elements to create a physical barrier between automobiles and bicyclists.
- Pinch point infrastructure is best suited for collecting stormwater on streets that are crested, or highest at the middle of the street, and that carry stormwater along the curb.
- Ensure the boundaries of the vegetated basin are well marked and visible to all road users with the use of flashing/reflective markers.

Image Source: [NACTO; Be Heard Vancouver](#)

Image Source: ??



### Flow-Through Planters

ALL ROADWAY CONTEXTS

**Flow-through planters** are contained in an impermeable structure and do not allow for infiltration into surrounding natural soils.

**DESIGN CONSIDERATIONS:**

- Locate flow-through planters on non-infiltration areas, constrained sites next to buildings, areas with setback limitations, poorly draining soils, steep slopes (>4%), or areas with contaminated soils.
- Ensure appropriate media composition for soil construction.
- Use native plantings that can handle seasonal flooding and require minimal irrigation.

Image Source: [IHS](#)



### Infiltration Planter

ALL ROADWAY CONTEXTS

**Infiltration planters** have impermeable sides to keep water from saturating nearby topsoil, while the bottom is open to allow for water to percolate the surrounding subsoil.

**DESIGN CONSIDERATIONS:**

- Infiltration planters are placed where site conditions are appropriate for allowing water to infiltrate surrounding native soils.
- Infiltration planters requires geotechnical investigation and soil feasibility studies.
- Utility boxes adjacent to infiltration planters may require waterproofing or watertight installation.
- Vegetation used should grow taller than the planter's walls for aesthetic purposes, but not tall enough to block sight lines.

Image Source: [SF Better Streets](#)





### Bioswale

COLLECTOR LOCAL

A **bioswale** is a broad, shallow channel with dense, low-lying vegetation and a very gradual downstream slope.

**DESIGN CONSIDERATIONS:**

- Bioswales are most appropriate in areas with lower-density development such as residential neighborhoods and on streets with gradual slopes.
- Vegetation should be composed of diverse and native plantings and compatible with the local environment.
- Ensure appropriate media composition for soil construction.
- Do not place bioswales in areas with low filtration rates.

Image Source: [NACTO](#)



### Permeable Paving

ARTERIAL COLLECTOR LOCAL

**Permeable paving** is pavement made of pervious materials that allows stormwater to seep through the surface down to the underlying layers of soil and gravel. This helps manage stormwater runoff from paved surfaces and supports recharging groundwater aquifers.

**DESIGN CONSIDERATIONS:**

- Implement permeable pavements within the roadway or sidewalk to reduce impervious surfaces and manage runoff from adjacent impervious areas.
- Prioritize placing permeable paving in areas where there is limited space in the right-of-way for more intensive stormwater infrastructure.
- Paving materials should accommodate all users, including wheel chairs and scooters, paying special attention to ADA-compliant accessibility

Image Source: [Bosnu](#)





### Treelet

- ARTERIAL
- COLLECTOR
- LOCAL

**A treelet** is a curbed tree well that is extended into the parking lane. Treelets are typically used as an alternative to planting when the sidewalk is narrow.

**DESIGN CONSIDERATIONS:**

- Placement should be between parallel parking spaces. Consider treelets in curb space that are too small for on-street parking, such as between curb cuts.
- Treelet island length and width shall vary with on-street parking conditions and existing utilities. Typically the treelet should extend the full width of the existing parking lane without conflicting with the existing curb and gutter and bicycle lanes.
- Treelets should not obstruct sight-lines for drivers, pedestrians, or bicyclists.
- Incorporate green elements wherever possible to address urban heat island effect and other climate change related issues.

Image Source: [Bike Portland](#)



### Electric Vehicle (EV) Charging

- ARTERIAL
- COLLECTOR
- LOCAL

**EV charging** stations are equipment that supply electrical power for plug-in electric vehicles or e-bikes. Curbside charging stations can provide a useful amenity and encourage longer stays in commercial areas.

**DESIGN CONSIDERATIONS:**

- Drivers side charge ports are the most common amongst automakers. Provide ample width in the parking lane to allow drivers to comfortably plug in from the drivers side (which is often adjacent to the traffic lane).
- Consider e-bike charging along with vehicle charging.
- Provide clear visual cues (e.g. striping and signage) for EV charging spaces.
- Prioritize EV charging infrastructure adjacent to close key destinations such as schools, medical and employment centers, and commercial areas.
- EV charging is an investment that can further lock cities into the existing curb line. Consider any long term investments in transit, bike, or pedestrian infrastructure that may impact the existing curb line before placing EV charging stations.

Image Source: [plugNYC](#)





### On-Street Parking

- ARTERIAL
- COLLECTOR
- LOCAL

On-street parking has typically served a variety of purposes between short- or long-term timelines, for visitors or local residents and is often free. Best practice for on-street parking is dynamic pricing to distribute on-street parking utilization and complement off-street parking structures.

**DESIGN CONSIDERATIONS:**

- Manage curb space by clearly marking on-street parking spaces with “L” or “T” shaped striping.
- Employ tools to utilize on-street parking as short-term parking with pricing or time limits.
- Plant treelets between parallel parking spaces to address urban heat island effect and other climate change related issues.
- Install accessible parking stalls in alignment with state and federal requirements.

Image Source: [Seattle DOT](#)



### Commercial/Service Loading Zones

- ARTERIAL
- COLLECTOR
- LOCAL

Designated commercial/service loading areas are helpful for accomodating business operations and provide flexibility for other parking needs such as postal workers and public safety. These areas could often share locations with ride-share pick-up/drop-off zones.

**DESIGN CONSIDERATIONS:**

- Limit commercial loading time to 30 minutes or less.
- Utilize dynamic curbspace management techniques and implement consider implementing operational hours as necessary (i.e. commercial loading allowed only during peak hours). Allow passenger loading when outside of commercial loading operating hours.
- Establish loading zones in areas that are as close to the receiving areas of shipping/ receiving businesses as possible.
- Enforce proper use of commercial loading zones so that trucks do not block bicyclist or pedestrian infrastructure.

Image Source: [Live 5 News WSCS](#)





### Pick-Up/Drop-Off Zones

ARTERIAL COLLECTOR

**Pick-up/drop-off zones** are designated areas to load/unload passengers, including those using ride sharing services. They are meant to prioritize pedestrian safety while also managing roadway congestion and improving traffic flow by allowing loading to happen at the curb rather than in the travel lane.

**DESIGN CONSIDERATIONS:**

- Place pick-up/drop-off areas in areas with high passenger loading activities.
- Limit passenger loading time to 10 minutes or less and restrict loading to passengers only.
- In areas with high pick-up/drop-off activity and high parking demand, consider converting parking spots into designated pick-up and drop-off zones during high-traffic hours.
- Paint the curb a different color to indicate the space is not solely for parking. Provide clear signage that is visible to passengers and drivers.
- Place pick-up/drop-off areas where there are accessible paths of travel and ample space to get into and out of a vehicle with a mobility device.

Image Source: [Curb IQ](#)



### Shared Micromobility Parking Zones

ARTERIAL COLLECTOR

**Shared micromobility devices** are small mobility devices, such as e-scooters and bicycles, that typically operate at a speed of 15 mph or lower. Designated parking zones for these devices can minimize clutter on the sidewalk.

**DESIGN CONSIDERATIONS:**

- Prioritize siting shared micromobility parking zones along streets with bicycle lanes or where there are gaps in transit.
- Geofenced parking is preferred wherever space permits. Provide visible markings on the ground surface. Cap the capacity to avoid overcrowding, typically a maximum of 10 scooters in one space.
- When shared micromobility operators rebalance devices to meet demand, require a percentage of their fleet is rebalanced in equity priority areas or where transit service gaps exist.

Image Source: [LAist](#)





Page Intentionally Left Blank

# URBAN DESIGN PRIMER

## Design Principles

This design primer demonstrates how walking, biking, and transit facilities can be integrated with green infrastructure and curbspace management strategies.

1

### Arterial with Frontage Road

80' to 126' concept



2

### Collector Road

60' concept



3

### Local Street without Sidewalk

36' concept



These renderings provide just one example of how a typical arterial, collector, and local street in the study area can be reimagined. There are countless ways to combine treatments to create multi-benefit projects. Figuring out the right combination will require engineering feasibility and community engagement.

# Arterial with Frontage Road

80' to 126' Concept



## Design Considerations

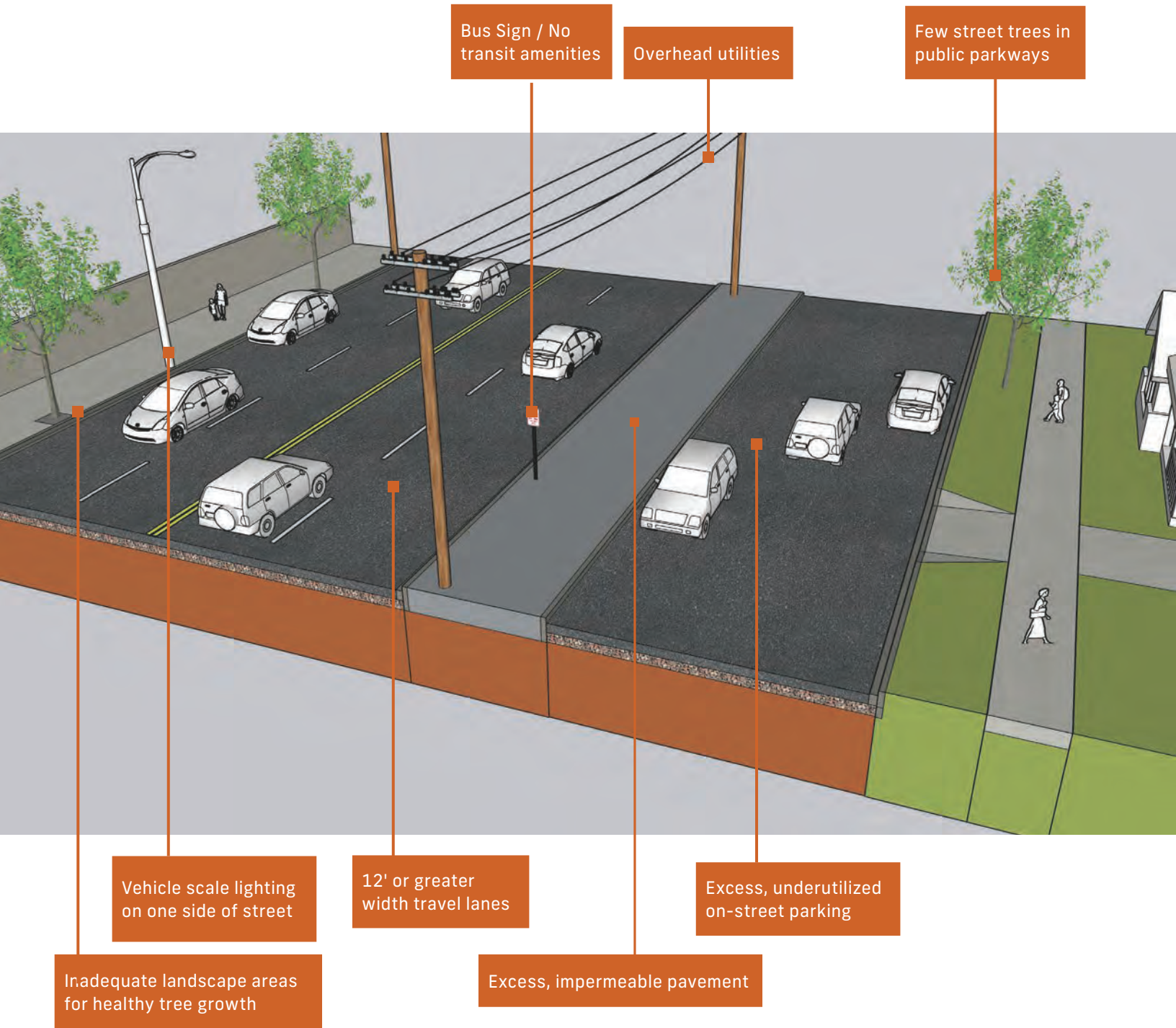
- › Align pedestrian lighting, public signage/art, trash, and other amenities with crossings
- › Introduce treelets to breakup long parking sections
- › Pedestrian crossing across non-frontage road (depends upon road speed, adjacent uses, and distances to nearest crossing)

One of the most significant opportunities to improve a community-wide growth in active transportation mindset and sustainability performance is through local placemaking that can be found in the frontage roads and medians along Arterial and Collector streets. These frontage roads and medians throughout the city create excessively wide roadways, provide excess parking that is not utilized on residential streets, and provides no landscaping. These spaces should reclaim the median-side parking lane and be transformed into neighborhood assets that create publicly available open spaces, which the specific program can be determined by the neighborhood. These spaces can hold walking paths, small playgrounds, bioswales and butterfly gardens, community gardens, large transit shelters, and many other programs in addition to supporting the undergrounding of utilities. All of these improvements can be made without corresponding updates to arterials/collectors.



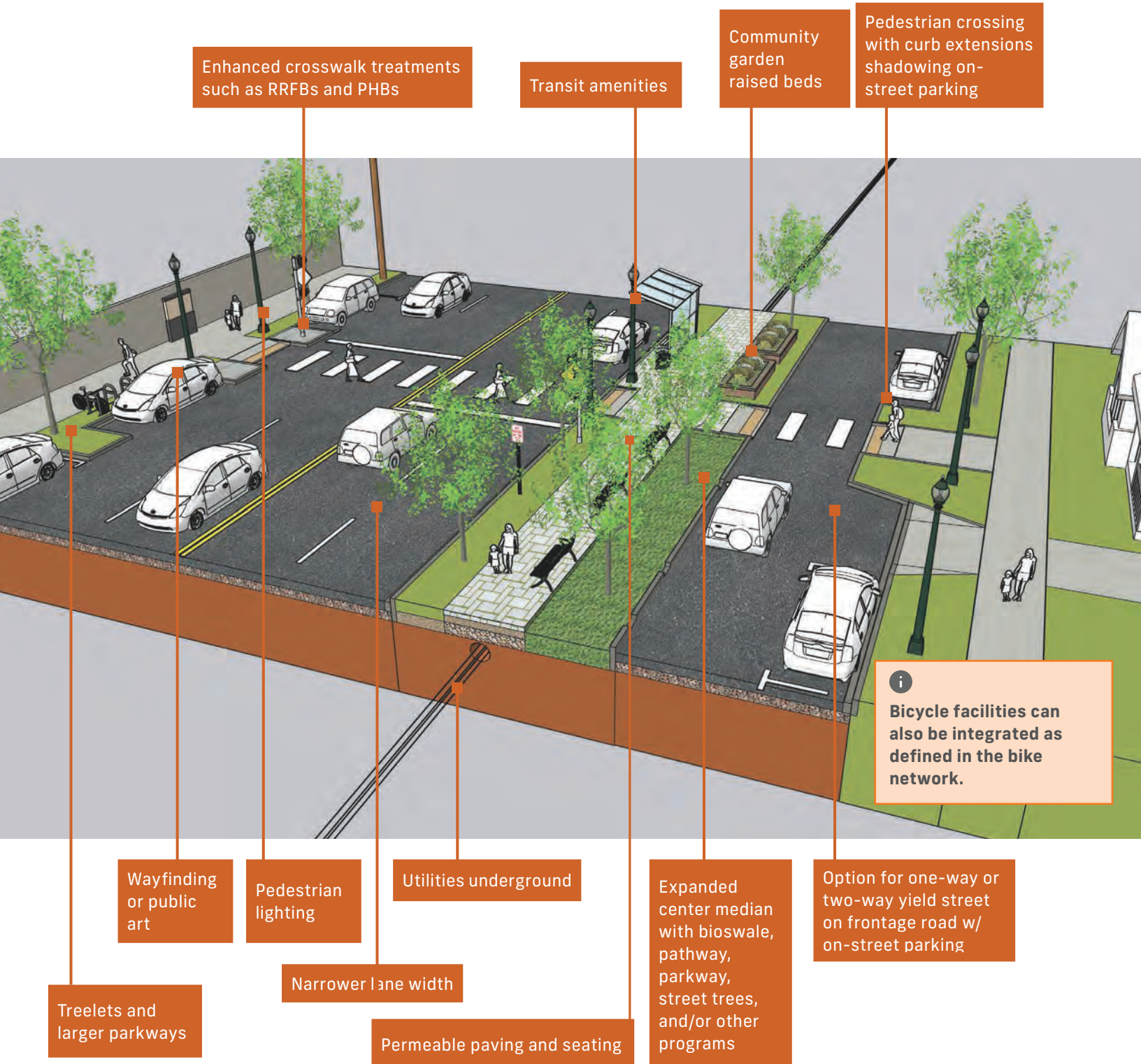
# Existing

## Arterial with Frontage Road 80' to 126' Concept



# Potential

## Arterial with Frontage Road 80' to 126' Concept



Page Intentionally Left Blank





## 2 | Collector Road

### 60' Concept



### Design Considerations

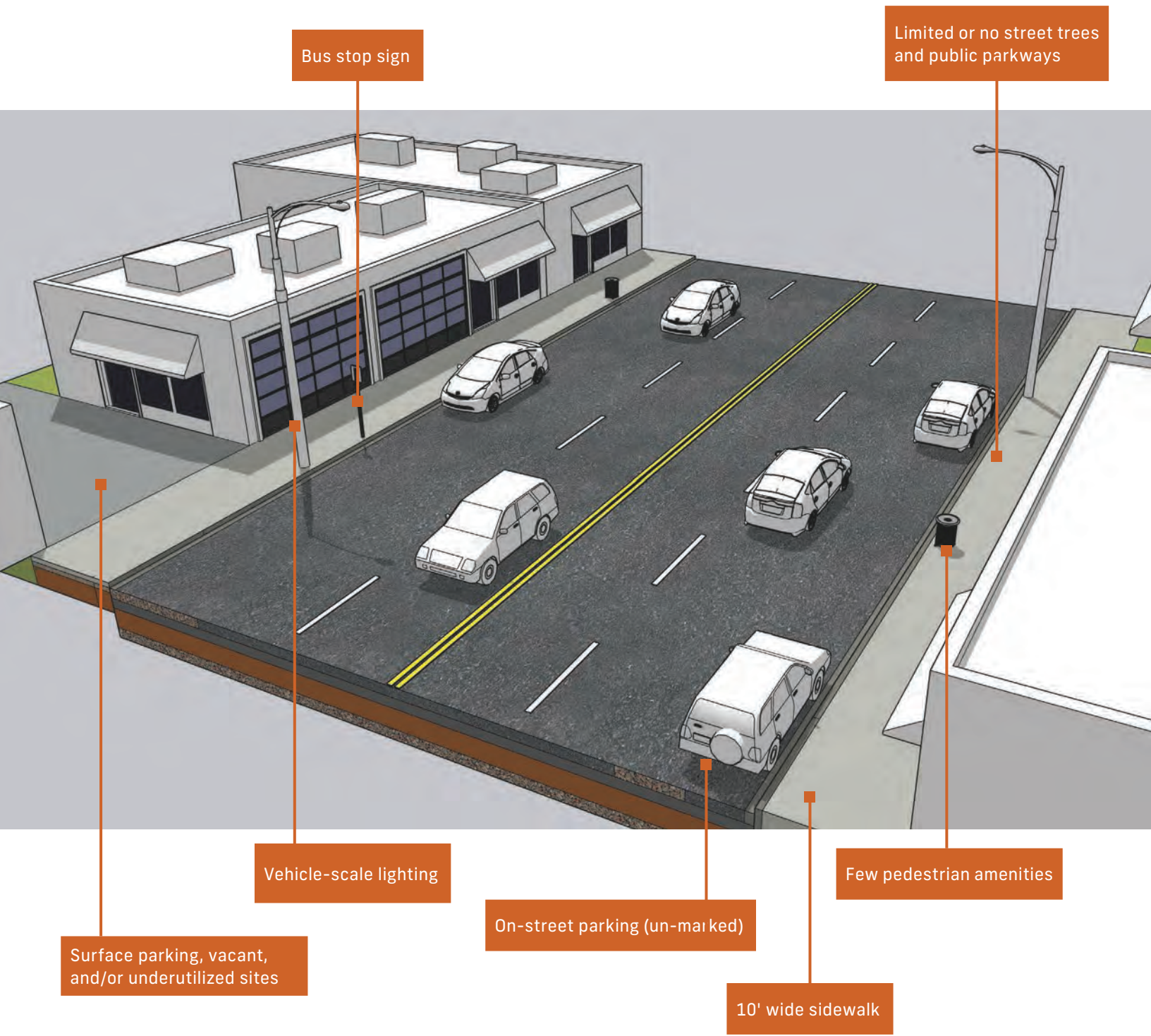
- › Program the bicycle buffer spaces for multiple elements to free up space on the sidewalk
- › Align pedestrian lighting, public signage/art, trash, and other amenities with crossings
- › Incorporate speed management treatments to improve safety for all users

Collector streets vary in their general typology (residential, commercial, or mixed), speeds, traffic volumes, and bike facilities. Where supported by traffic volumes, the placemaking, economic development potential, safety, and sustainability can all be significantly improved by repurposing a travel lane for a separated bikeway. Doing so would allow the bike lane buffer space to be designed in many variations that could all act as an extension of the sidewalk and pedestrian realm, host a variety of curbspace management elements, and provide general traffic calming. Raising the bike lane to the same level of the sidewalk, providing buffer space, and creating demarcations through changes in pavement material and small landscape areas would provide the most flexibility and ADA accessibility. Elements like transit amenities, bike-share stations, and pedestrian crossings should be co-located to provide connections to options between active and transit transportation modes.

# Existing

## Collector Road

60' Concept



Bus stop sign

Limited or no street trees and public parkways

Vehicle-scale lighting

Surface parking, vacant, and/or underutilized sites

On-street parking (un-marked)

10' wide sidewalk

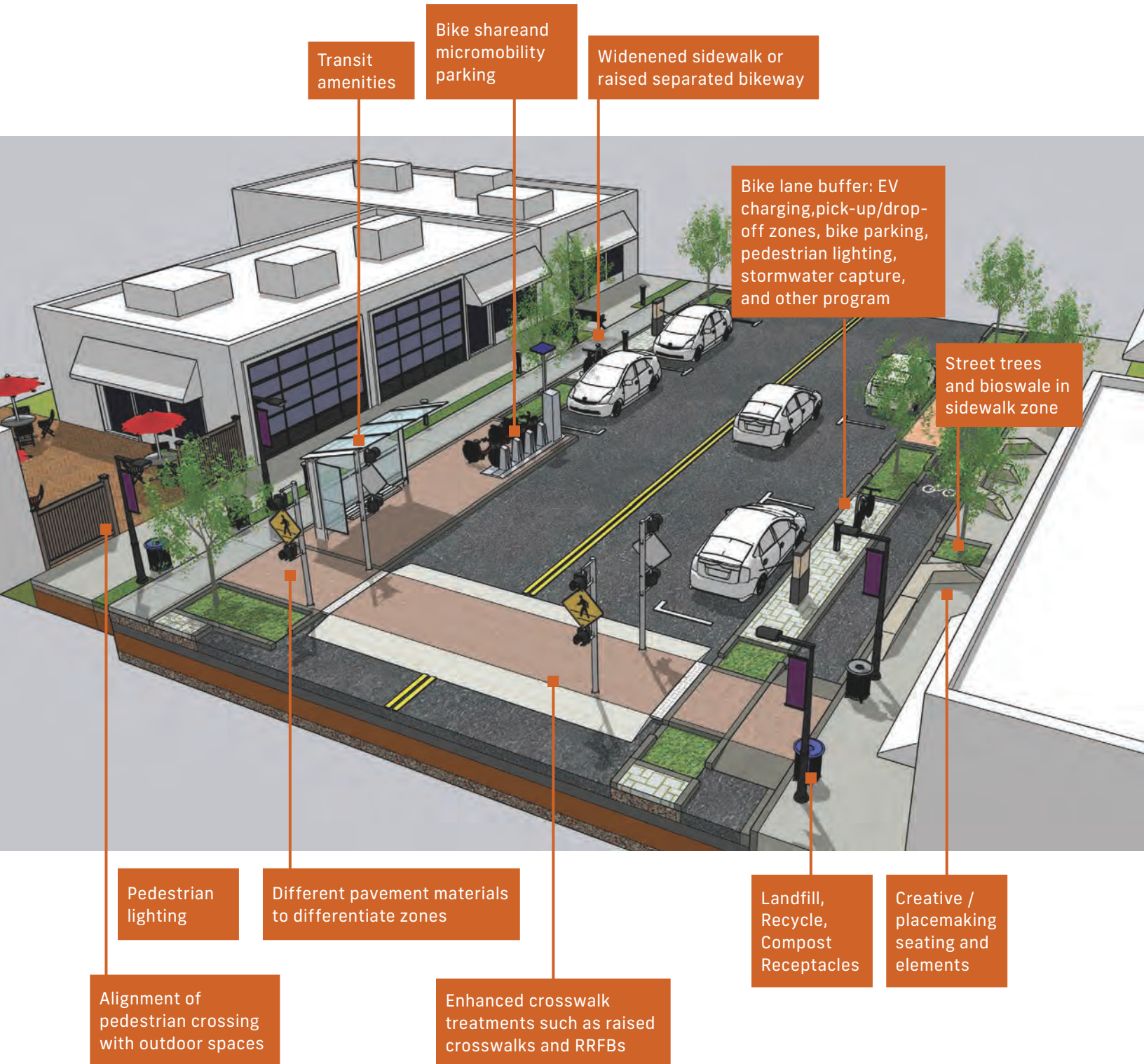
Few pedestrian amenities



# Potential

## Collector Road

60' Concept





Page Intentionally Left Blank



# 3 | Local Street without Sidewalk

## 36' Concept



## Design Considerations

- Provide a balance between regular rhythms (e.g., street trees and lighting at regular intervals) with elements in varying locations
- Reduce asphalt material within the roadway for permeable and sustainable materials
- Implement bike boulevard elements, with traffic calming features every 250 feet.

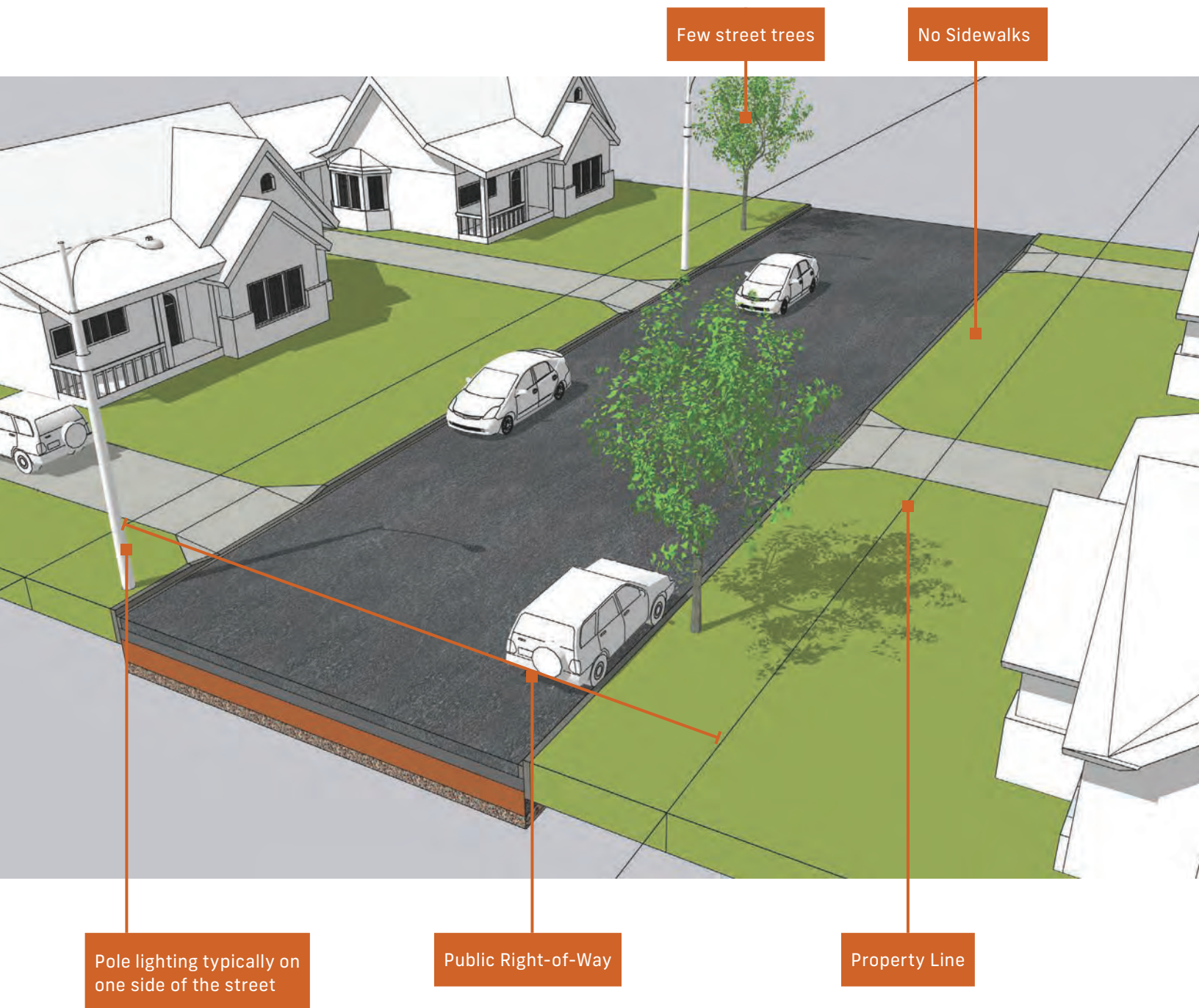
Local streets provide opportunities for active transportation and sustainability elements due to lower demand for traffic and parking, that can provide significant benefits to safety and quality of life for local residents. Many local streets within the study area do not currently have sidewalks. Additionally, vehicle-oriented street lights are often located only on one side of the street and street trees are infrequent. Permeable paving should be considered for sidewalks, which will eliminate sidewalks raised by tree roots and provide more sustainable materials than concrete. New lighting should be at pedestrian scale. Electric lines can be placed under permeable sidewalks for easy maintenance, which can provide opportunities to add public EV charging. Street trees should be planted in continuous parkway strips that could provide small bioswale areas, or they could be planted in bioswale treelets as a way to separate on-street parking spaces.



# Existing

## Local Street without Sidewalk

36' Concept

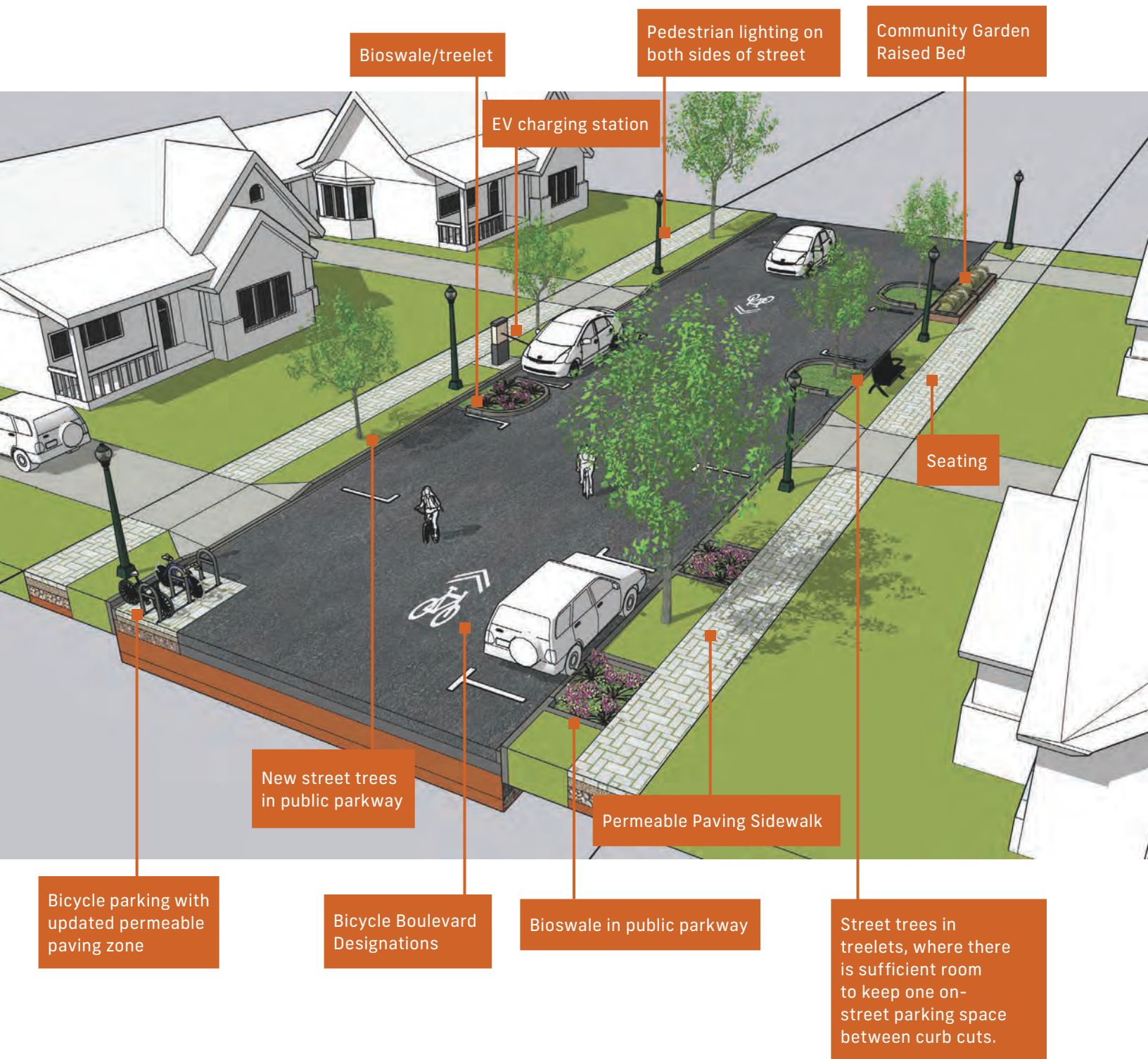




# Potential

## Local Street without Sidewalk

36' Concept



# INTERSECTION DESIGN PRIMER

## Design Principles

There are three core design principles to keep in mind when designing safe, comfortable, and intuitive intersections. These design principles are rooted in the Caltrans-adopted Federal Highway Administration (FHWA) Safe System framework.

---

1

MANAGE  
SPEEDS

Kinetic energy (the combination of speed and mass) is the primary indicator of the severity of a crash. Managing speeds is critical to reducing the likelihood and severity of crashes. Manage speeds through intersections through context-appropriate speed limit setting, centerline hardening, intersection tightening, roundabouts, and raised crosswalks or intersections.

---

---

2

SEPARATE USERS  
IN TIME

Separate major movements and mitigate conflict points through signal phasing. Provide separate phasing for high-volume movements through protected left and right turns, bicycle signals, exclusive pedestrian or bike phases, extended green/crossing times for bicyclists and pedestrians, leading pedestrian intervals, and pedestrian scrambles.

---

---

3

SEPARATE USERS  
IN SPACE

Organize the intersection so it is clear where everyone should queue and proceed through the intersection. Provide dedicated, separated space by user groups (pedestrians, bicyclists, and autos) through treatments such as protected intersections, bus boarding islands, striped bicycle crossings, bike boxes, two-stage turn bike boxes, curb extensions, refuge islands, and high-visibility crosswalks.

---

The right combination of these tools will vary by intersection and will be dependent on several factors, including how much right-of-way is available, existing intersection control, surrounding land use, turning movement volumes, pedestrian and bicycle activity, and collision history. Consult the **Design Guidelines (Chapter 5, CASMCP)** for further descriptions and design guidance for these treatments.



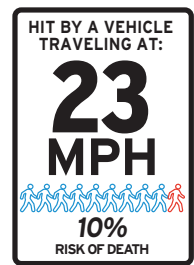
**MANAGE SPEEDS**

# Effects of Speeding

**Speed is a fundamental predictor of crash survival.**

Increasing vehicle speeds from **23 mph to 58 mph** increases the likelihood of a pedestrian death when hit from **10% to 90%**.

Lower speeds increase a driver's **field of vision** and allows for more time to react to unexpected situations in the roadway. The yellow circles above show how a driver's field of vision changes when they travel at various speeds



Sources: Fatality Analysis Reporting System; Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories in 2020, DOT HS 813 118, June 2021; AAA Foundation for Traffic Safety, Impact Speed and a Pedestrian's Risk of Severe Injury or Death; National Traffic Speeds Survey III: 2015, DOT HS 812 485, March 2018



## SEPARATE USERS IN TIME

# Bike Control Types

## Bike Signal Heads



**Bike signal heads** are an electrically powered traffic control device that provide guidance to bikes at an intersection when it is their turn to cross. CAMUTCD requires that bike signal heads only be used to indicate a protected movement for bikes similar to how a left turn arrow for cars operates. Because there can be no conflicting auto movement during the bike signal phase, often an additional right turn lane and separate phase is required.

### Typical Applications

- Where auto-turn movements are high
- Where there are spatial constraints to applying protected intersection design
- Complex intersections that otherwise may be difficult to navigate
- Where there are transitions between bike facilities, such as a two-way separated facility transitioning to bike lanes

## “Bikes Use Ped Signal” Signage



“Bikes Use Ped Signal” signage instructs cyclists to cross the intersection with pedestrians during the pedestrian crossing phase. This control option does not have the same protected phase requirements as a bike signal head and can be used in low volume scenarios when cost, auto delay, or right of way constraints are barriers to applying bike signal heads. If using this control option, it should be paired with protected intersection design to increase visibility of people riding bikes and allocate space at the intersection for them to queue. This control option is most applicable with curb-adjacent bike facilities that can easily see the pedestrian signal in their sight lines. In low auto turn volume conditions it can be used as-is, but should be paired with protected intersection design and separate signal phasing for medium- to high-turn volume conditions. The next page shows suggested volume thresholds for signal treatments.

### Typical Applications

- Multimodal corridors where auto or transit delay must also be considered
- Locations where the existing right of way does not allow for turn pockets for protected auto movements required in the application of bike signals
- In quick-build or lower-cost intersection design projects

SEPARATE USERS IN TIME

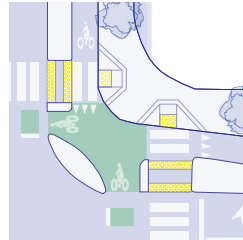
# Protected Turn Phasing



Protected Left Turn



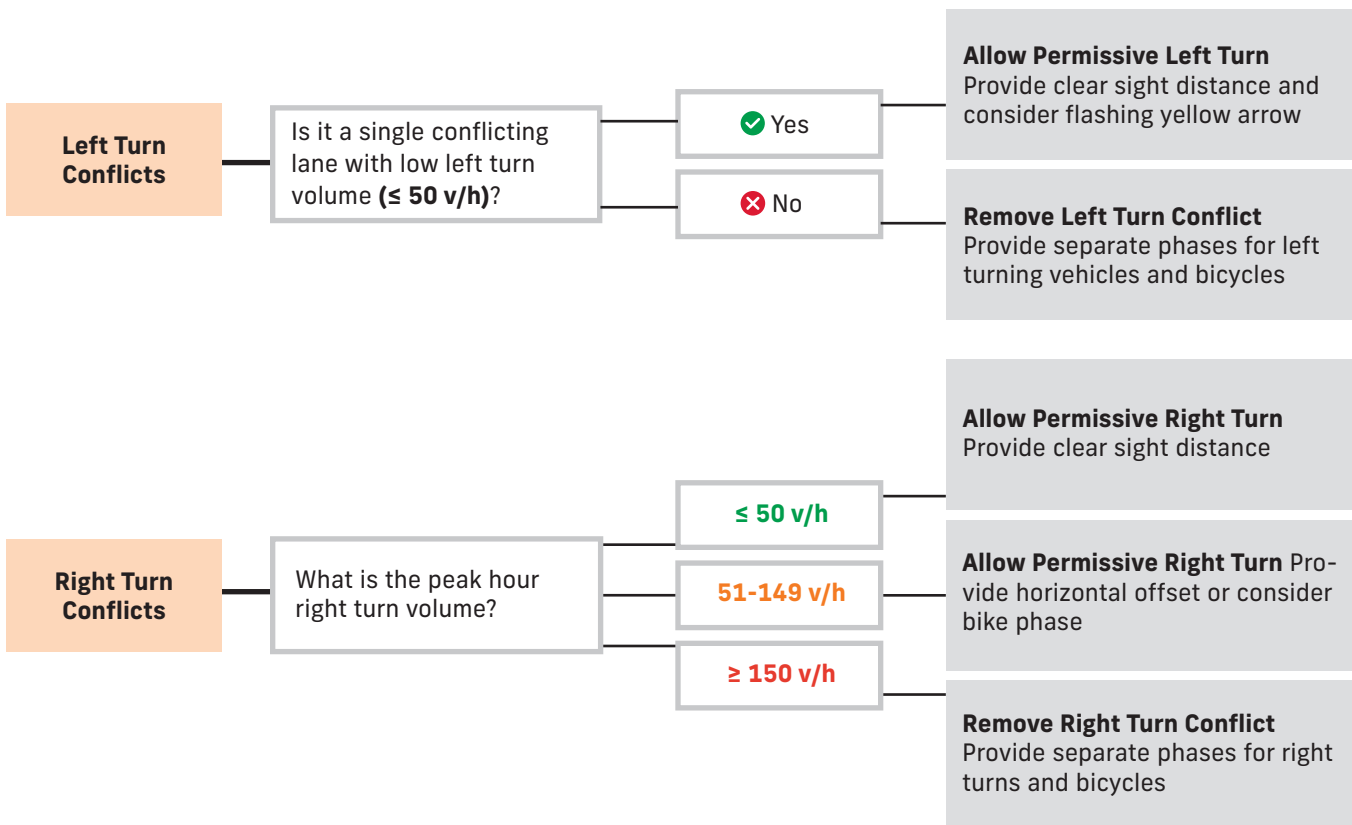
Protected Right Turn



Horizontal Offset (Protected Corner)

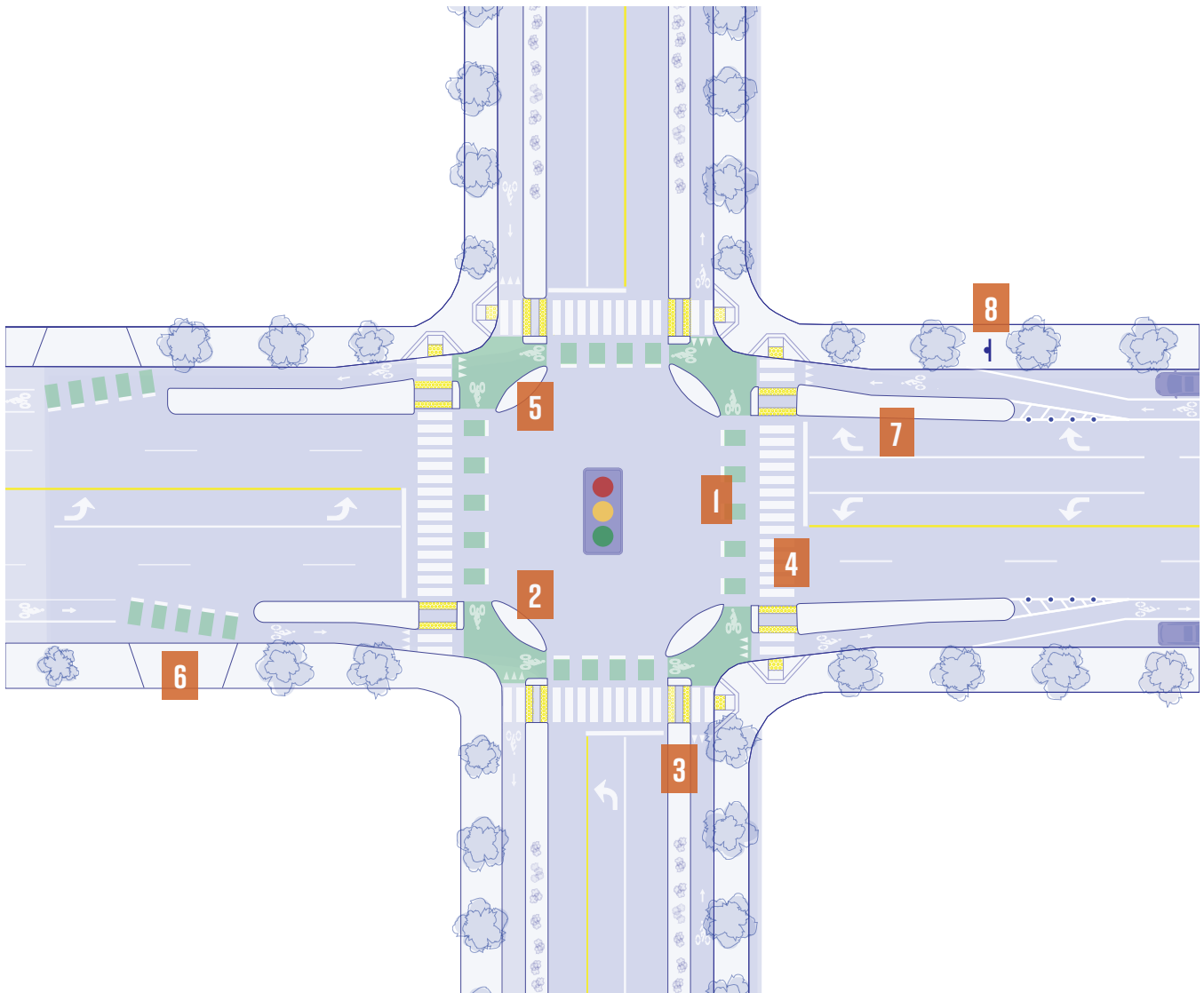
## Separation guidance for one-way separated bikeways at signalized locations

The thresholds shown in the flow chart are helpful rules of thumb for when to consider providing protected left and right turns for separated bikeways. Protected left and right turns may also be warranted if there is high pedestrian activity or collision history involving turning vehicles.



SEPARATE USERS IN SPACE

# Applying the Design Principles





## Intersection Design Considerations

- 1

**Provide Transitions between Facilities**

Consider major destinations and common auto, bike, and pedestrian movements when designing an intersection. In this example, a protected intersection is used to facilitate bicycle movements between the two perpendicular bicycle facilities and crosswalks are provided across all approaches.

Protected intersections are most effective at locations where two bicycle facilities intersect, at wide and complex intersections, or at intersections with high bicycle and pedestrian volumes. Installing protected intersections provides dedicated spaces for cyclists, but also provides greater separation and protection between pedestrians and vehicles. Staging areas are provided in all four corners of the intersection so that cyclists can make two-stage turn movements in a counter-clockwise direction around the intersection. Refuge islands between the bike lane and auto lane provide additional space for pedestrians to queue, shortening their crossing distance across auto traffic. Protected intersections are compatible with all bicycle facility types.
- 2

**Calming Turning Vehicles**

Lower speeds of turning vehicles to lower the likelihood of injury collisions. In this example, horizontal offsets are used to protect the bike staging area and slow turning vehicles. Consider turn radii no greater than 15 feet. Other treatments include centerline hardening.
- 3

**Provide Clear Sightlines**

Provide clear sight lines by maintaining landscaping and parking restrictions. In this example, landscaping in the bike buffer is removed closer to the intersection. Maintain at least 40' of red curb in advance of the crosswalk or intersection.
- 4

**Provide The Appropriate Pedestrian Crossing Treatment**

Ensure that pedestrian crossing treatments are context sensitive. In this example, high-visibility crosswalks are used to indicate pedestrian right-of-way and median refuges between the bike facility and auto lanes are provided. For uncontrolled crosswalk locations, follow guidance included in the Uncontrolled Crosswalk Policy.
- 5

**Maintain Emergency Vehicle Access**

Solutions for designing with emergency access in mind include utilizing flexible physical barriers or mountable curbs accommodating size and increase maneuverability, implementing signal preemption systems, and limiting visual obstructions at the intersection to enhance line of sight. These measures aim to ensure that emergency vehicles can reach their destinations efficiently while maintaining the safety and functionality of protected intersection.

In this example, horizontal offsets/corner radii are set with a passenger car as the design vehicle, but can be constructed as mountable curb to accommodate larger vehicles. The benefit is slowing turning vehicles down through the tighter curb radii, while maintaining emergency access.
- 6

**Manage Driveway and Loading Conflict Points**

Conflicts between driveways or passenger loading zones and bicycle facilities pose safety risks for pedestrians and cyclists. Provide clear line of sight at driveways, ensure driveways are well-lit, provide conflict striping through the bike facility, and use signage for all modes.
- 7

**Accommodate a Right Turn Pocket**

If right turn volumes are high, a protected right turn phase may be required. In this example, the bike lane-adjacent auto lane is used as a trap-right. Advanced signage and pavement markings in advance of the intersection would be required.

If a protected intersection is not provided and a right turn pocket is still needed, maintain the bicycle travel lane to the intersection by providing a 'bicycle pocket' to the left of the right turn lane and reinforce the bicycles right of way with conflict striping to signify the vehicle merge and signage.
- 8

**Provide Clear Way-finding**

Wayfinding helps everyone navigate the intersection more efficiently. Provide wayfinding in advance of the intersection and at key decision points to provide users with enough time to safely transition to the appropriate turn lane or staging area.



# Recommended Crosswalk Treatments

Roadway Configuration	Posted Speed Limit & ADT								
	ADT <9,000			ADT 9,000-15,000			ADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 Lanes	1	1	2	1	1	2	1	2	3
3 Lanes with raised median	1	1	2	2	2	3	2	3	3
3 Lanes without raised median	1	2	3	2	2	3	2	3	3
4+ lanes with raised median	4*	4*	4	4*	4	4	3	3	3
4+ lanes without raised median	4*	4*	4	4*	4	4	3	3	3

**1**  
**Install high-visibility crosswalk striping and advanced yield markings and signage.** Provide at least 20' of red curb on the approaches. If width allows, install curb extensions on both sides.

**2**  
**Install a Rectangular Rapid-Flashing Beacon plus all #1 improvements.** If space allows, install a median if none present.

**3**  
**Install a Pedestrian Hybrid Beacon or Pedestrian Signal plus all #1 improvements.** If space allows, install a median if none present.

**4**  
**Existing average daily traffic (ADT) does not support the current lane configuration. Implement a lane reconfiguration plus all #1 improvements.** If a lane reconfiguration is infeasible, install a Pedestrian Hybrid Beacon or Pedestrian Signal plus all #1 improvements.  
 \*For lower volume, lower speed contexts, an RRFB may be considered instead of a PHB or Pedestrian Signal.

**i**  
**If a PHB or RRFB is recommended and there are two uncontrolled crosswalks in the same direction at the same intersection, consider installing a full signal instead.** In these locations, a full traffic signal will likely be more cost efficient and intuitive to users than installing two separate RRFBs or PHBs.

**i**  
**1s may be bumped to 2 if there is pedestrian collision history at that location.**



Chapter 6

# Funding & Implementation Strategy







Casa Moreno

Mexican Restaurant & Grill

CASA MORENO





# Prioritized Project List

Bike network, pedestrian priority area, and urban design recommendations were consolidated into corridor projects for the purpose of prioritization. Corridors were then prioritized based on the criteria in the table below.

<b>Expands opportunity for investment in historically marginalized communities</b>	A corridor project received one point if the project is within an equity priority area, as mapped in the <a href="#">Active Streets Recommendations</a> chapter.
<b>Provides immediate benefits to safety and comfort</b>	A corridor project received one point if the project includes targeted bicycle and pedestrian safety benefits.
<b>Improves access to transit</b>	A corridor project received one point if the project is located within ¼ mile of or provides direct connection to a transit station or bus stop. Transit stops are mapped in the <a href="#">Covina Today</a> chapter.
<b>Provides access to local destinations</b>	A corridor project received one point if it is located within or provides connection to schools, parks and major employers/retail centers. These destinations are mapped in the <a href="#">Covina Today</a> chapter.
<b>Increases climate resiliency</b>	A corridor project received one point if it includes green infrastructure amenities that provide water and air quality benefits beyond those related to reductions in vehicle-miles-travelled (VMT).
<b>Implementation can be streamlined</b>	A corridor project received one point if it could be accommodated within the existing right of way with no changes to existing auto capacity or parking, or if the city felt it had significant community support.
<b>Can be funded through existing city sources</b>	A corridor project received one point if it could be implemented with repaving or other routine maintenance activities.
<b>Increases access in a community with high pollution burden, limited park access, and/or limited automobile access</b>	A corridor project received up to three points, one point for each criteria, if it falls within census tracts that meet these equity criteria.

The following table presents the prioritized project list. The highlighted corridors are the highest priority for the city. Planning level concepts for these corridors are presented later in this chapter.





Page Intentionally Left Blank

# Prioritized Project List

Project Geographic Extents				Project Components		
E/W or N/S	Corridor/Project Name	From	To	Bike	Pedestrian	Urban Design
-	Workman Street and Hollenbeck Avenue (PPA A)	Workman Elementary	Puente Avenue		X	X
N/S	2nd Avenue (PPA C)	San Bernardino Road	Rowland Street	X	X	
E/W	Covina Boulevard (PPA B)	Hollenbeck Avenue	Grand Avenue	X	X	X
E/W	Edna Bicycle Boulevard	Azusa Avenue	Covina Blvd			X
N/S	4th Avenue (PPA C)	San Bernardino Road	Puente Street	X		
N/S	Barranca Avenue (PPA B/PPA E)	City Boundary (North)	City Boundary (South)	X	X	X
N/S	Hollenbeck Avenue (PPA D)	Arrow Highway	Workman Avenue		X	X
E/W	Puente Street	Armel Drive	Grand Avenue	X		
-	Residential Streetscape Project (PPA E)	Workman Avenue, Rowland Street	Barranca Avenue, Oak Tree Drive		X	X
E/W	Rowland Street (PPA D/PPA E)	Armel Drive	De Lay Avenue	X	X	X
-	Workman Avenue/Aldenville Avenue (PPA D)	-	-	X		
N/S	Grand Avenue	Arrow Highway	City Boundary (South)			
-	Residential Streetscape Project (PPA D)	Armel Drive, Rowland Street	Heathdale Avenue, Workman Street		X	X
-	S Shoppers Lane	-	-	X		
E/W	Badillo Street (PPA C)	Azusa Avenue	Grand Avenue	X	X	X
N/S	Azusa Avenue (PPA A)	Arrow Highway	Badillo Street		X	X
-	Channel Oak Creek Trail (PPA E)	San Bernardino Road	Workman Avenue	X	X	X
N/S	Citrus Avenue (PPA C)	Arrow Highway	Workman Avenue	X		
E/W	Edna Place (PPA B)	Barranca Avenue	Grand Avenue			
-	Frontage Roads (Study Area Wide)	-	-		X	X
N/S	Hepner Avenue (PPA D)	Puente Street	Rowland Street			
-	Residential Streetscape Project (PPA B)	Park Ave, Reed St	Edna Place, Kelby Park		X	X
N/S	2nd Avenue	Workman Avenue	Rowland Street			
E/W	College Street (PPA C)	4th Avenue	San Jose Avenue	X		
N/S	Fairvale/Ranger Bicycle Boulevard	Covina Boulevard	Fairvale High School			
E/W	Grondahl Street (PPA A)	Hollenbeck Avenue	San Dimas Wash	X	X	X
E/W	Workman Avenue (PPA E)	Citrus Avenue	Barranca Avenue	X		
E/W	Cienega Avenue	Barranca Avenue	Grand Avenue			
E/W	Front Street (PPA C)	Citrus Avenue	Barranca Avenue		X	X
E/W	San Bernardino Road (PPA C)	Azusa Avenue	Grand Avenue	X		
E/W	Cottage Drive (PPA C)	3rd Avenue	Citrus Avenue	X	X	X
-	Cypress Street/Prospero Drive	-	-		X	
-	Cypress Street/4th Avenue	-	-		X	



	Prioritization Metrics							Census Tracts with:			Total Points
	Investment in historically marginalized communities	Safety and comfort	Improves access to transit	Provides access to local destinations	Increases climate resiliency throughout the city	Implementation can be streamlined	Can be funded through existing sources	Low Park Access	Low Automobile Access	High Pollution Burden	
	1	1	1	1	1	1	0	1	1	1	9
	1	1	1	1	1	1	0	0	1	1	8
	1	1	1	1	1	1	0	1	1	0	8
	1	1	1	1	1	1	1	0	1	0	8
	1	1	1	1	0	1	1	0	1	1	8
	1	1	1	1	1	0	0	1	1	1	8
	1	1	1	1	1	0	0	1	1	1	8
	1	1	1	1	0	1	0	1	1	1	8
	1	0	1	1	1	1	0	1	1	1	8
	1	1	1	1	1	0	0	1	1	1	8
	1	1	0	1	0	1	1	1	1	1	8
	1	1	1	1	0	1	0	1	1	0	7
	1	0	1	0	1	1	0	1	1	1	7
	1	0	1	1	0	1	1	0	1	1	7
	1	1	1	1	1	0	0	0	1	1	7
	0	1	1	1	1	1	0	1	0	0	6
	1	0	1	1	1	0	0	0	1	1	6
	1	1	1	1	0	0	0	0	1	1	6
	1	0	1	1	0	1	1	0	1	0	6
	1	0	1	1	1	0	0	1	1	0	6
	1	0	1	1	0	1	1	0	0	1	6
	1	0	1	1	1	1	0	0	1	0	6
	1	0	1	0	0	1	1	0	0	1	5
	0	1	1	1	0	1	1	0	0	0	5
	0	0	1	1	1	1	1	0	0	0	5
	0	0	1	1	1	1	0	1	0	0	5
	1	1	1	1	0	0	0	0	0	1	5
	0	1	1	0	0	1	0	1	0	0	4
	0	0	1	1	1	1	0	0	0	0	4
	1	1	1	1	0	0	0	0	0	0	4
	0	0	1	1	1	0	0	0	0	0	3
	1	0	0	0	0	1	0	0	1	0	3
	0	0	0	1	0	1	0	0	0	0	2



# Bike Network Recommendations Right-of-Way Analysis

A planning-level feasibility check was conducted to determine right-of-way trade-offs that may be necessary in order to implement the recommended bike network. The existing auto and parking capacity was compared to the existing curb-to-curb width to determine if the recommended bike facility could fit without any changes to capacity. Average daily traffic (ADT) was also analyzed determine if a lane reconfiguration is feasible. This is a planning-level feasibility analysis to help inform the trade-offs that may be required to implement the bike network. Additional engineering feasibility review and stakeholder engagement will be required to move these projects forward. The minimum width assumptions and ADT thresholds applied are presented in the tables below. The analysis is presented on page 120.

## Applied Preferred Minimum Widths

Facility	Preferred Min Width (ft)
General Purpose Through Lane	11
Center Turn Lane	10
Parking Lane	8

Facility	Min Width (ft)		Total Minimum Right-of-way Required (ft)
	Buffer	Bike Lane	
Bike Lane	3	5	16
Separated Bikeway (Parking-Protected)	5	5	20
Separated Bikeway (No Parking Present)	3	5	16

These are the minimum bike facility widths considered in this analysis. The preferred minimum width for a bike lane is 6 feet, excluding the gutter.

## Applied Lane Reconfiguration Volume Thresholds

Average Daily Traffic Volumes	Lane Reconfiguration Assumption
<18,000	Lane reconfiguration is feasible
18,000-25,000	Proceed with caution
>25,000	Additional analysis required

FHWA cites 25,000 ADT as the upper limit for a 4 to 3 lane reconfiguration.



Page Intentionally Left Blank

# Bike Network Recommendations Right-of-Way Planning-Level Analysis

Roadway	Recommended Bike Facility	Existing typical curb-to-curb (feet)	# of General Purpose Lanes	# of Parking Lanes	Raised Median Width (feet)	Required Minimum Curb-to-Curb for Auto Lanes (feet)	Remaining Curb-to-Curb for Bike Facility (feet)	Does the bike facility fit?
<b>2nd Avenue</b>	Separated Bikeway	82	5	2	0	70	12	No
<b>Azusa Avenue</b>	Separated Bikeway	82	4	2	14	74	8	No
<b>Badillo Street</b>	Separated Bikeway	80	5	2	0	70	10	No
<b>Barranca Avenue</b>	Separated Bikeway	60	4	2	0	60	0	No
<b>Cienega Avenue</b>	Separated Bikeway	60	2	1	0	30	30	Yes
<b>Citrus Avenue</b>	Separated Bikeway	84	4	2	16	76	8	No
<b>Covina Boulevard</b>	Separated Bikeway	60	4	2	0	60	0	No
<b>Front Street</b>	Bike Lane	50	2	2	0	38	12	Yes
<b>Grand Avenue</b>	Separated Bikeway	80	4	2	16	76	4	No
<b>Hollenbeck Avenue</b>	Separated Bikeway	60	4	2	0	60	0	No
<b>Rowland Street</b>	Separated Bikeway	80	4	2	20	80	0	No
<b>San Bernardino Road</b>	Separated Bikeway	60	4	2	0	60	0	No
<b>Workman Avenue</b>	Separated Bikeway	50	3	1	0	41	9	No

This is a planning-level feasibility analysis to help inform the trade-offs that may be required to implement the bike network. Additional engineering feasibility review and stakeholder engagement will be required to move these projects forward.





Maximum Observed Average Daily Traffic (2021)	Max Posted Speed	Based on ADT, is this a lane reconfiguration candidate?	Bike facility fits (no trade-offs)	Move forward with lane reconfiguration feasibility analysis and engagement	Conduct further analysis and consider parking removal
6,000	35	Yes		✓	
27,200	40	Additional analysis required			✓
14,500	30	Yes		✓	
17,400	40	Yes		✓	
3,300	40	Already one lane in each direction	✓		
17,000	40	Yes		✓	
8,400	40	Yes		✓	
-	25	Already one lane in each direction	✓		
28,100	40	Additional analysis required			✓
14,900	40	Yes		✓	
12,300	40	Yes		✓	
11,200	35	Yes		✓	
9,400	35	Already one lane in each direction		✓	

# Funding Strategy

The project list included in this Plan will require strategic funding approaches to implement within a reasonable time horizon. Funding streams available to the City include grants, regularly funding maintenance work, development permits, and the City's Capital Improvement Program.

## Grants

The table on the next page includes outside funding sources at the local, state, and federal level that may be applicable

## Maintenance Work

In most instances, signage and restriping improvements can be carried out sooner and at lower costs if the work coincides with scheduled maintenance work on the roadways. This is often the most efficient way to build out the active transportation network as funds are already assigned to maintaining the existing roadway network. Developing a complete streets checklist for repaving can help ensure active transportation and safety improvements are integrated into routine maintenance activities.

## Development Permits

The City may, consistent with application legal requirements, collect funds or require construction of frontage improvements or dedication of right-of-way from permittees where improvements are identified in the CASMCP and other planning documents.

## Capital Improvement Program

The City's Capital Improvement Program (CIP) is a planning tool used to identify and implement short term and long-term capital needs. Revisit the CIP list to ensure planned projects incorporate the recommendations in this Plan. in future CIPs, incorporate the project list.



# Competitive Grant Programs for Transportation and Green Infrastructure

Grant Name	Eligible Project Types
<b>Federal Grants</b>	
<b>Rebuilding American Infrastructure with Sustainability and Equity (RAISE)</b>	Surface transportation projects that have a significant local or regional impact.
<b>Safe Streets and Roads 4 All</b>	Planning, infrastructure, behavioral, and operational initiatives to prevent death and serious injury on roads and streets.
<b>Reconnecting Communities</b>	Community-centered transportation connection projects, with a priority for projects that benefit disadvantaged communities.
<b>National Fish and Wildlife Foundation Five Star and Urban Waters Restoration</b>	Projects that include ecological improvements along with targeted community outreach, education and stewardship, such as green infrastructure and tree canopy.
<b>Strengthening Mobility and Revolutionizing Transportation (SMART)</b>	Projects that utilize technology to improve transportation efficiency and safety.
<b>Charging and Fueling Infrastructure</b>	Public electric vehicle charging infrastructure.
<b>State Grants</b>	
<b>Active Transportation Program</b>	Projects that to encourage an increased use of active modes of transportation, such as biking and walking.
<b>Highway Safety Improvement Program</b>	Infrastructure projects with nationally recognized crash reduction factors (CRFs).
<b>California Urban Greening Program</b>	Projects that result in the conversion of an existing built environment into green space (e.g., parks, street trees, bioswales, green streets, urban trails).
<b>Caltrans Sustainable Communities Grants</b>	Planning activities to evaluate project concepts based on technical analysis and community engagement activities.
<b>Proposition 1 - Stormwater Grant Program</b>	Multi-benefit storm water management projects which may include green infrastructure, rainwater and storm water capture projects and storm water treatment facilities.
<b>Clean California</b>	Projects that beautify and improve local streets and roads, tribal lands, parks, pathways, and transit centers.
<b>Affordable Housing and Sustainable Communities</b>	Typically, affordable housing projects are the primary project seeking AHSC funding and transit and active transportation improvements can improve competitiveness of the funding pursuit. Coordination with community development and land development projects can provide an opportunity to incorporate active transportation projects into AHSC pursuits.

Table is continued on next page.



Grant Name	Eligible Project Types
<b>Regional Grants</b>	
<b>LA Metro Active Transport, Transit and First/Last Mile Program (MAT) (Measure M)</b>	Projects that improve and grow the active transportation network and expand the reach of transit.
<b>SCAG Regional Early Action Planning (REAP)</b>	Projects that reduce vehicle-miles-travelled and support the region's housing goals by providing affordable, multimodal transportation options.
<b>San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy Programs</b>	Planning and implementation projects that create, expand, and/or improve public open space throughout the region by improving access, habitat quality, water security, and wildfire resilience. Eligible project examples include urban greening, park expansion, and trails.
<b>LA County Regional Parks &amp; Open Space District Regional Recreation, Multi-Use Trails and Accessibility (Measure A)</b>	Projects that improve, connect, and protect regional recreational facilities, trails, and accessibility.
<b>LA County Safe Clean Water Program (Measure W)</b>	Multi-benefit stormwater capture projects and programs, with an emphasis on projects that improve green space and recreational opportunities.



# Capital Improvement Plan

This Plan includes a wide range of projects with varying degrees of cost. Project cost estimates were developed to give a general idea of the anticipated cost for the projects. Soft costs, including permitting and environmental support, design and preliminary engineering, specifications and estimates, utility coordination, drainage and Storm Water Pollution Prevention (SWPP), construction management and inspection, mobilization, traffic control, and general contingencies, were considered.

Soft costs are typically calculated as a percent of construction costs but can vary depending on the type, size, and complexity of the project. The table to the right shows the breakdown of soft costs as a percentage of construction costs applied to these planning-level cost estimates.

The costs in this Plan are for informational purposes only. More detailed cost estimates should be developed for each project in the design phase.

Typical Soft Cost Assumptions Applied	
<b>Construction Allowances</b>	
Mobilization	10%
Traffic Control	5%
Stormwater Pollution Prevention Plans	5%
Utilities	15%
Drainage	30%
Contingency	25%
<b>Program/Project Soft Costs</b>	
Preliminary Engineering	10%
Environmental Clearance	10%
Final Design/ PS&E	15%
Construction Management	15%

## What is a Quick-Build vs. Permanent Build?

### Quick-Build



Quick-build is an approach to building infrastructure using low-cost, shorter-term materials to lessen construction impacts and implementation timelines. Bicycle facilities and pedestrian crossing improvements can be installed with quick-build materials to provide near-term safety benefits while waiting for funding for the permanent project.

### Permanent-Build



Permanent-build projects typically include modifications to the curb line, utility work, and/or durable materials such as concrete. Project elements could include street trees, stormwater retention features, lighting, and sidewalk improvements. Bicycle facilities and pedestrian crossing improvements are built using more durable materials than quick-build projects, such as concrete barriers. Permanent improvements can replace quick-build elements over time as the project evolves and based on public input, interest, and use.

## Bike Network Recommendations Capital Improvement Plan

Corridor/Project Name	From	To	Permanent Build Cost	Quick Build Cost*	
Workman Street and Hollenbeck Avenue (PPA D)	Workman Elementary	Puente Avenue	\$4.75-7.5M	-	
2nd Avenue (PPA C)	San Bernardino Road	Rowland Street	\$4.75-7.75M	\$0.75-1.25M	
Covina Boulevard (PPA B)	Hollenbeck Avenue	Grand Avenue	\$6.5-10.75M	\$1-1.5M	
Edna Bicycle Boulevard	Azusa Avenue	Covina Blvd	\$2.5-4M	\$1.25-2.25M	
4th Avenue (PPA C)	San Bernardino Road	Puente Street	\$1.5-2.5M	\$375-600K	
Barranca Avenue (PPA B/PPA E)	City Boundary (North)	City Boundary (South)	\$10.5-17.5M	\$1.5-2.25M	
Hollenbeck Avenue (PPA D)	Arrow Highway	Workman Avenue	\$8.5-14M	\$1.25-2M	
Puente Street	Armel Drive	Grand Avenue	\$4-6.5M	\$1.25-2.25M	
Residential Streetscape Project (PPA E)	Workman Avenue, Rowland Street	Barranca Avenue, Oak Tree Drive	\$1.25-2M	-	
Rowland Street (PPA D/PPA E)	Armel Drive	De Lay Avenue	\$11.25-18.75M	\$1.25-2M	
Workman Avenue/ Aldenville Avenue (PPA D)	-	-	\$100-175K	\$100-175K	
Grand Avenue	Arrow Highway	City Boundary (South)	\$8.5-13.75M	\$1.25-2M	
Residential Streetscape Project (PPA D)	Armel Drive, Rowland Street	Heathdale Avenue, Workman Street	\$1.25-2M	-	
S Shoppers Lane	-	-	\$25-50K	\$25-50K	
Badillo Street (PPA C)	Azusa Avenue	Grand Avenue	\$12-19.75M	\$1.25-2M	
Azusa Avenue (PPA A)	Arrow Highway	Badillo Street	\$8.5-13.75M	\$0.75-1.25M	
Channel Oak Creek Trail (PPA E)	San Bernardino Road	Workman Avenue	\$10-16.25M	-	
Citrus Avenue (PPAC)	Arrow Highway	Workman Avenue	\$11-18.25M	\$1.5-2.5M	
Edna Place (PPA B)	Barranca Avenue	Grand Avenue	\$0.6-1M	\$325-525K	
Hepner Avenue (PPA D)	Puente Street	Rowland Street	\$375-625K	\$200-325K	
Residential Streetscape Project (PPA B)	Park Ave, Reed St	Edna Place, Kelby Park	\$1-2M	-	
2nd Avenue	Workman Avenue	Rowland Street	\$300-500K	\$150-250K	
College Street (PPA C)	4th Avenue	San Jose Avenue	\$325-525K	\$100-175K	
Fairvale/Ranger Bicycle Boulevard	Covina Boulevard	Fairvale High School	\$400-675K	\$225-350K	
Grondahl Street (PPA A)	Hollenbeck Avenue	San Dimas Wash	\$1.5-2.5M	\$175-275K	
Workman Avenue (PPA E)	Citrus Avenue	Barranca Avenue	\$4.5-7.5M	\$250-500K	
Cienega Avenue	Barranca Avenue	Grand Avenue	\$2-3.5M	\$275-450K	
Front Street (PPA C)	Citrus Avenue	Barranca Avenue	\$3.5-5.5M	\$75-125K	
San Bernardino Road (PPA C)	Azusa Avenue	Grand Avenue	\$8-13.25M	\$1.5-2.25M	
Cottage Drive (PPA C)	3rd Avenue	Citrus Avenue	\$1.25-1.75M	-	
Cypress Street/Prospero Drive	-	-	\$1-1.5M	-	
Cypress Street/4th Avenue	-	-	\$1-1.5M	-	

\*Quick-build costs include all in-road bicycle and pedestrian project elements, and exclude all streetscape improvements.





	Miles of New Bike Facilities	Miles of Streetscape Improvements	Shared Use/ Bike Path	Separated Bikeway	Bike Lane	Bike Boulevard	Traffic Signal/ PHB/Ped Signal	RRFB	Signing & Striping Upgrades	Close Slip Lane	Street Trees	Landscaping/ Stormwater Retention	Pedestrian-Scale Lighting	New/Widened Sidewalk
	-	0.9									✓		✓	✓
	0.9	0.4		✓					✓		✓	✓		✓
	1.5	-		✓					✓			✓		
	2.1	-				✓								
	0.5	-				✓	✓		✓					
	2.1	0.6		✓			✓	✓		✓	✓			
	2.1	0.2		✓							✓	✓		
	1.8	-				✓	✓	✓						
	-	1.0									✓			✓
	1.6	-		✓				✓			✓	✓	✓	
	-	-						✓						
	2.2	-		✓										
	-	1.0									✓			✓
	-	-							✓					
	2.0	0.6		✓			✓				✓		✓	
	1.4	0.5		✓							✓	✓	✓	
	1.3	-	✓											
	2.2	-		✓			✓	✓	✓					
	0.5	-				✓								
	0.3	-				✓								
	-	1.0									✓			✓
	0.2	-				✓								
	0.6	-			✓									
	0.3	-				✓								
	0.2	0.2				✓			✓		✓		✓	
	0.5	-		✓			✓							
	0.5	-		✓										
	0.5	0.5			✓						✓	✓	✓	
	2.0	-		✓				✓	✓					
	0.1	-	✓						✓					
	-	-					✓							
	-	-					✓							

# Workman Street & Hollenbeck Avenue

## Pedestrian and Streetscape Enhancements

### Purpose

Provide a more comfortable route to school for Workman Elementary School and Covina High School students and faculty by increasing tree canopy and green infrastructure, providing pedestrian-scale lighting, and installing crosswalk enhancements.

### Planning-level Cost Estimate (Construction & Design)

Permanent Build

**\$4.75-7.5M**

### Benefits

- Investment in historically marginalized community
- Improves safety and comfort
- Improves access to transit on Rowland Avenue
- Provides increased access to schools
- Builds climate resilience through green infrastructure and tree canopy



Project implementation will require further engineering feasibility, design, and community engagement





# 4th Avenue

## Bicycle Boulevard

### Purpose

Provide a bicycle boulevard and improve pedestrian safety along 4th Avenue. Incorporate landscaping and green infrastructure into curb extensions and traffic circles.

### Planning-level Cost Estimate (Construction & Design)

Permanent Build

**\$1.5-2.5M**

Quick Build

**\$375-600K**

### Benefits

- Investment in historically marginalized community
- Improves safety and comfort for all users
- Improves access to transit on Badillo Street
- Provides increased access to Covina Park, Emanate Health Inter-Community Hospital, downtown Covina, and Covina Valley USD District Field
- Can be implemented through repaving and other quick-build methods

### Considerations

- Sharrows should be installed at least every 250' and be spaced in the center of the lane out of the door zone
- Traffic calming elements (traffic circle, speed humps) should be spaced every 250'-400' to effectively manage speeds



### Design Treatments

- Speed Hump
- High Visibility Crosswalk
- Traffic Circle
- Curb Extension
- Traffic Signal
- Bicycle Crossing
- Bike Facilities

Project implementation will require further engineering feasibility, design, and community engagement



# Barranca Avenue

Pedestrian, Bicycle, and Streetscape (Sheet 1 of 2)

## Purpose

Improve comfort and safety of people walking, biking, and driving, and beautify the corridor through active transportation and streetscape investments.

## Planning-level Cost Estimate (Construction & Design)

### Permanent Build

**\$10.5-17.5M**

### Quick Build

**\$2.25-3.75M**

## Benefits

- Investment in historically marginalized community
- Improves safety and comfort of all users-Improves access to transit on Puente Avenue and Rowland Avenue
- Provides increased access to local destinations, including Kelby Park, Ben Lomond Elementary School, Covina Elementary School, Sofive Covina, and Ikea.
- Builds climate resilience through green infrastructure and tree canopy

## Considerations

- Where feasible, incorporate landscaping into bikeway buffer
- Will likely require coordination with California Public Utilities Commission at railroad crossing
- Consider a bicycle signal and all-bike phase at Puente when the bike path along the wash is complete
- Bicycle facility start and end points should be further evaluated to ensure it is adequately connected to the broader network
- Refer to the Right-of-Way Analysis for more details on lane conversion feasibility



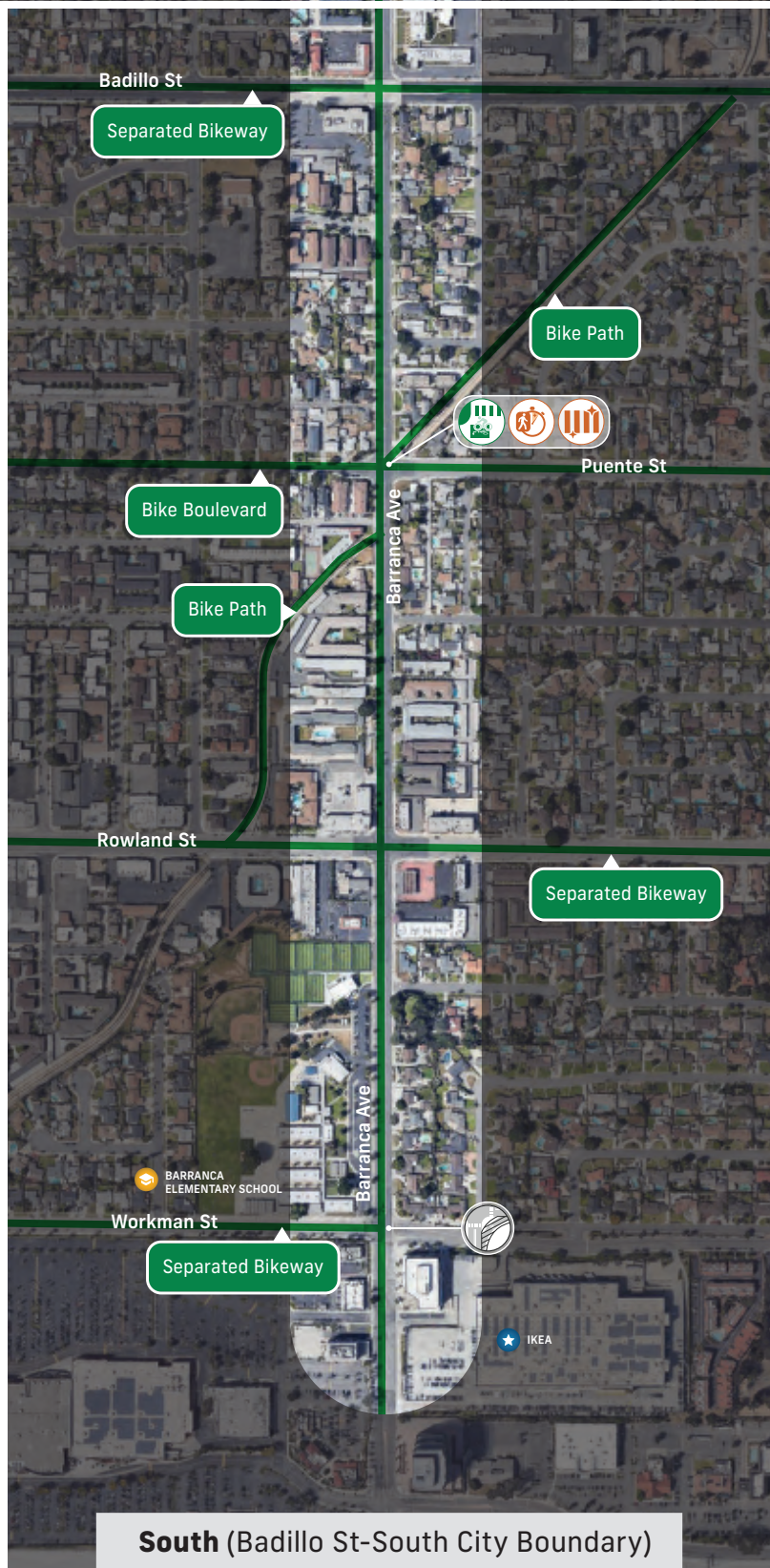
Project implementation will require further engineering feasibility, design, and community engagement





# Barranca Avenue

Pedestrian, Bicycle, and Streetscape (Sheet 2 of 2)



	<b>Pedestrian Hybrid Beacon</b>		<b>Transit Shelter</b>		<b>Bike Facilities</b>
	<b>Stormwater Capture</b>		<b>Street Trees, Storm Water Capture and Greening</b>		

Project implementation will require further engineering feasibility, design, and community engagement



# Hollenbeck Avenue

Pedestrian, Bicycle, and Streetscape (Sheet 1 of 2)

## Purpose

Improve comfort and safety of people walking, biking, and driving, and beautify the corridor through active transportation and streetscape investments.

## Planning-level Cost Estimate (Construction & Design)

**Permanent Build**

**\$8.5-14M**

**Quick Build**

**\$1.25-2M**

## Benefits

- Investment in historically marginalized community
- Improves safety and comfort for all users
- Improves access to transit on Badillo Avenue and Rowland Avenue
- Provides increased access to Hollenbeck Park, Cypress Park, and Covina High School
- Builds climate resilience through green infrastructure and tree canopy

## Considerations

- Consider green infrastructure and opportunities along frontage roads
- Where feasible, incorporate landscaping into bikeway buffer
- Will likely require coordination with California Public Utilities Commission at railroad crossing
- Bicycle facility start and end points should be further evaluated to ensure it is adequately connected to the broader network.
- Refer to the Right-of-Way Analysis for more details on lane conversion feasibility



## Design Treatments



**Bicycle Crossing**



**Two-Stage Turn Queue Box**



**Leading Pedestrian Interval**



**Bike Facilities**



**High-Visibility Crosswalk**



**Street Trees, Storm Water Capture and Greening**

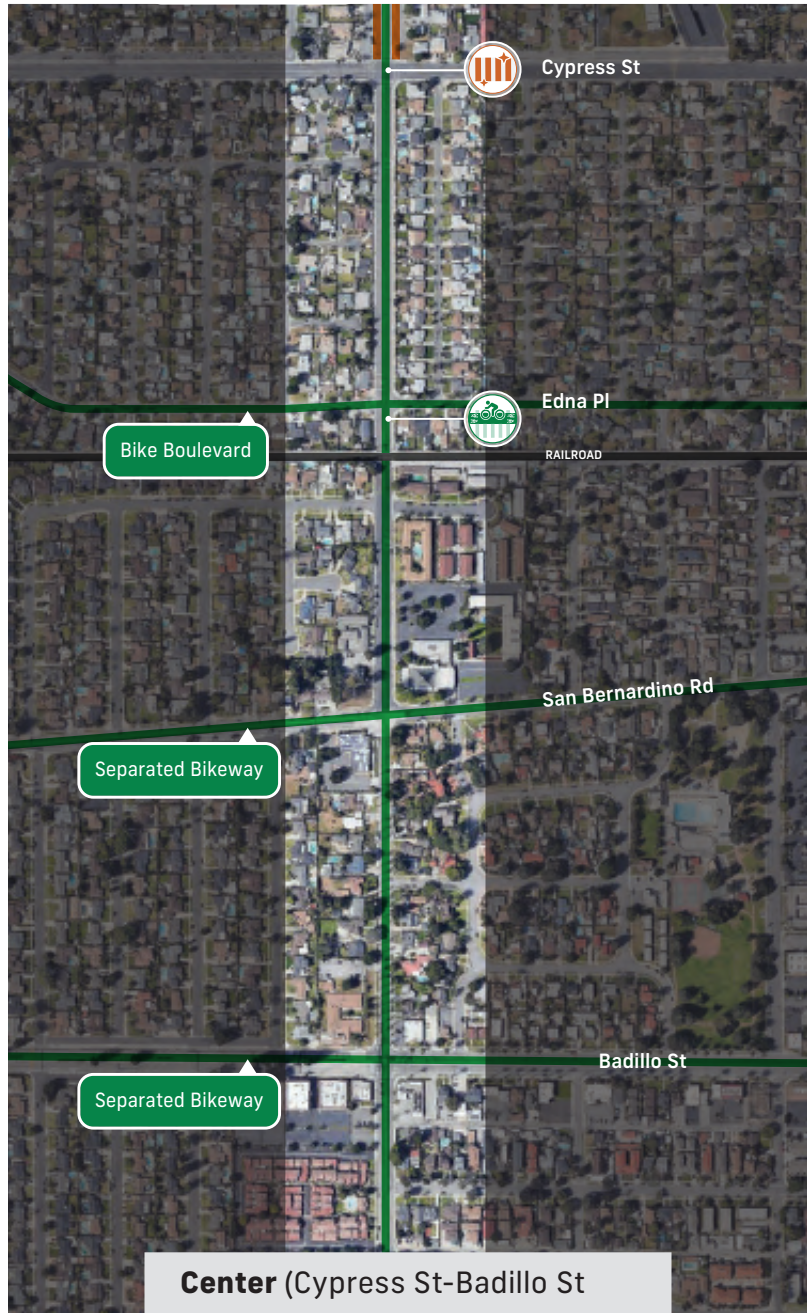
Project implementation will require further engineering feasibility, design, and community engagement



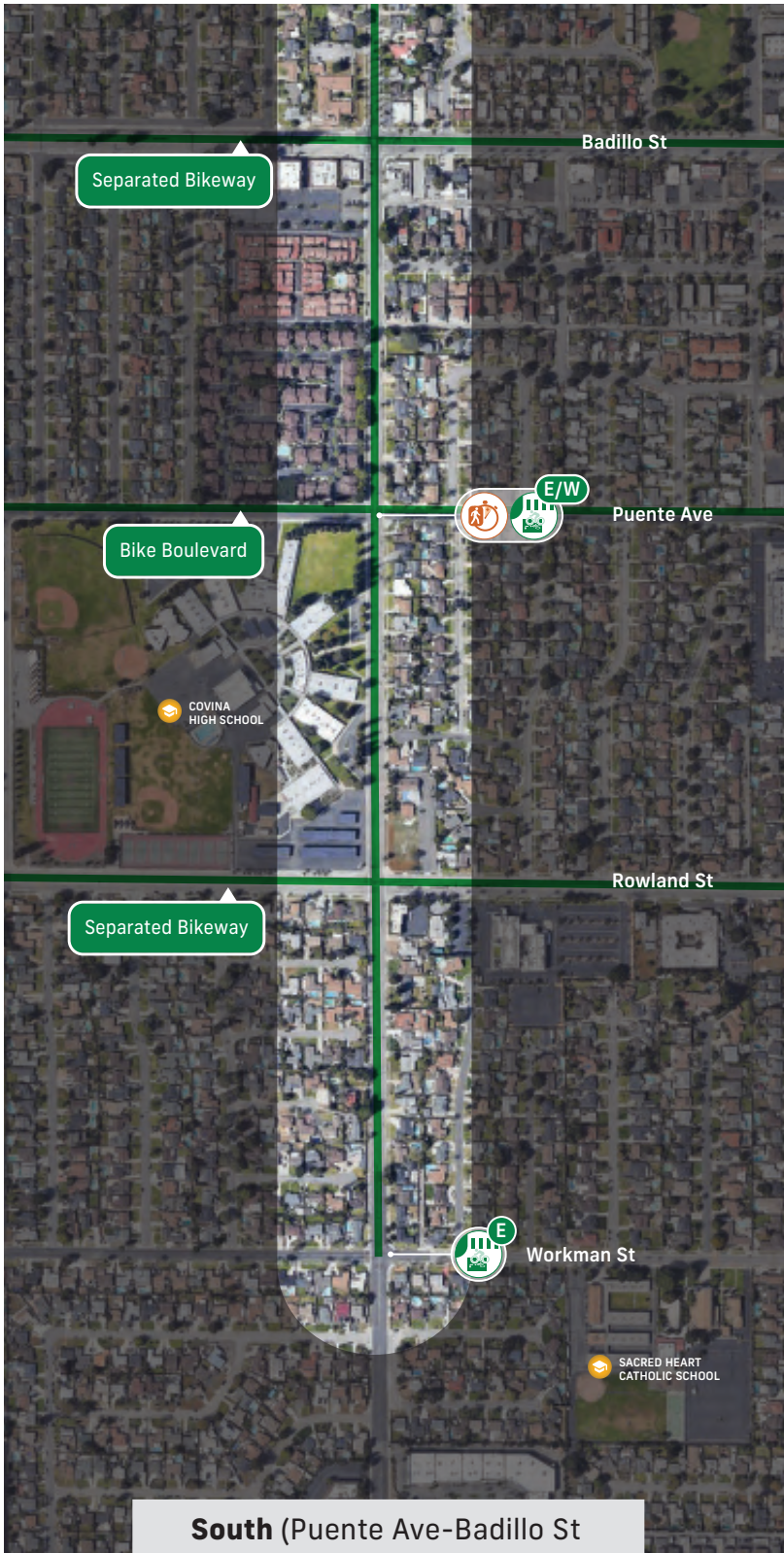


# Hollenbeck Avenue

Pedestrian, Bicycle, and Streetscape (Sheet 2 of 2)



**Center** (Cypress St-Badillo St)



**South** (Puente Ave-Badillo St)

**Corridor-wide Treatments**

- 

**Conflict Zone Marking**
- 

**Wayfinding**
- 

**Intersection Tightening**
- 

**Bike Detection**
- 

**Daylighting**

Project implementation will require further engineering feasibility, design, and community engagement



# Puente Street

Bicycle Boulevard (Sheet 1 of 2)

## Purpose

Provide a bicycle boulevard and improve pedestrian safety along Puente Street. Utilize excess width in lane reconfiguration candidate segments to install green infrastructure and landscaping.

## Planning-level Cost Estimate (Construction & Design)

### Permanent Build

**\$4-6.5M**

### Quick Build

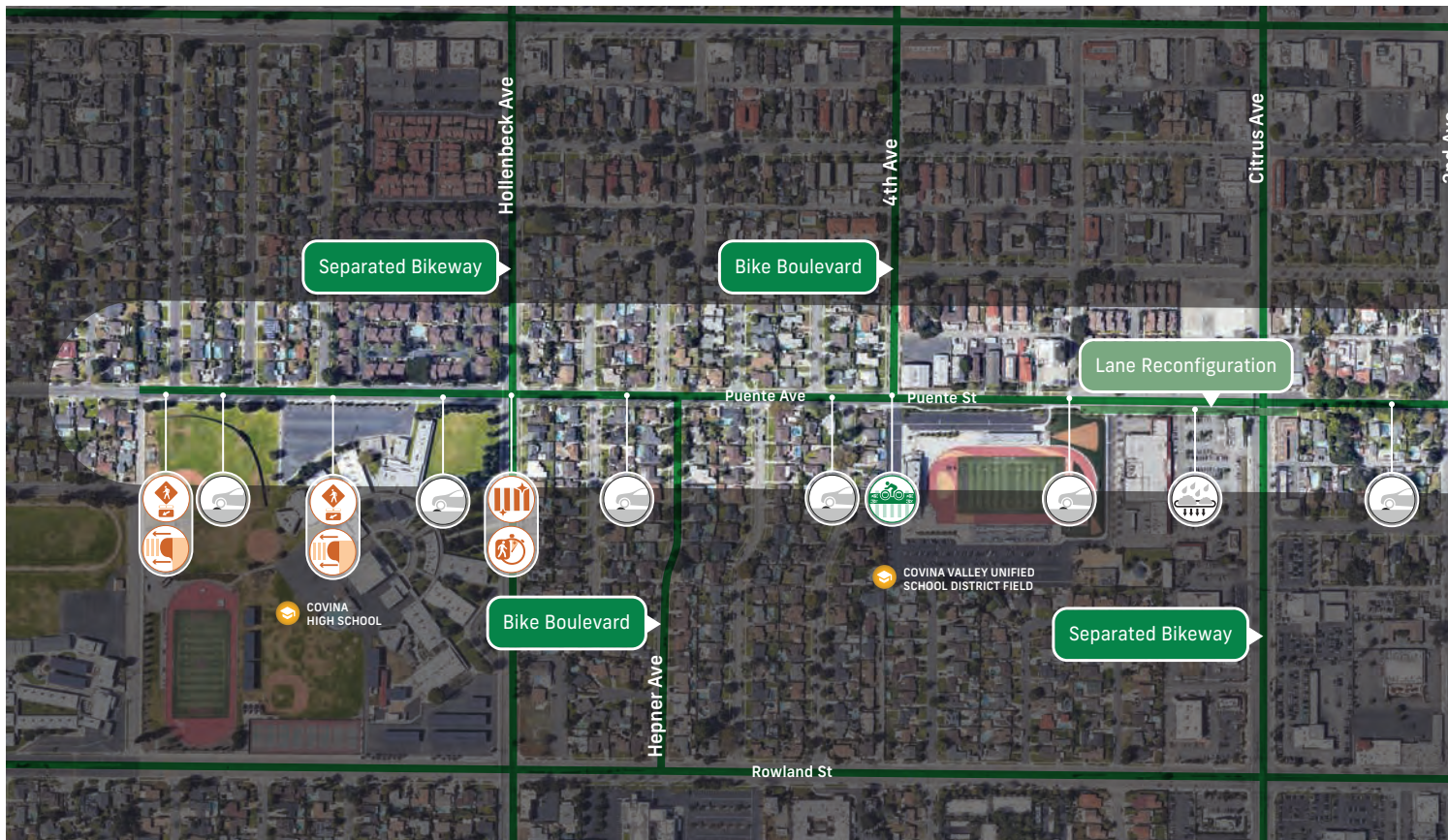
**\$3-5M**

## Benefits

- Investment in historically marginalized community
- Improves safety and comfort for all users
- Improves access to transit on Citrus Avenue, 2nd Avenue, Barranca Avenue, and Grand Avenue
- Provides increased access to Covina High School, Sierra Madre Middle School, and Covina Valley USD District Field
- Wide right-of-way in some segments provides opportunities for green infrastructure, increasing tree canopy, and providing landscaping

## Considerations

- Sharrows should be installed at least every 250' and be spaced in the center of the lane out of the door zone
- Traffic calming elements (speed humps) should be spaced every 250'-400' to effectively manage speeds
- Consider a bicycle signal and all-bike phase at Barranca Avenue when the bike path along the wash is complete
- Bicycle facility start and end points should be further evaluated to ensure it is adequately connected to the broader network



Project implementation will require further engineering feasibility, design, and community engagement









# Puente Street

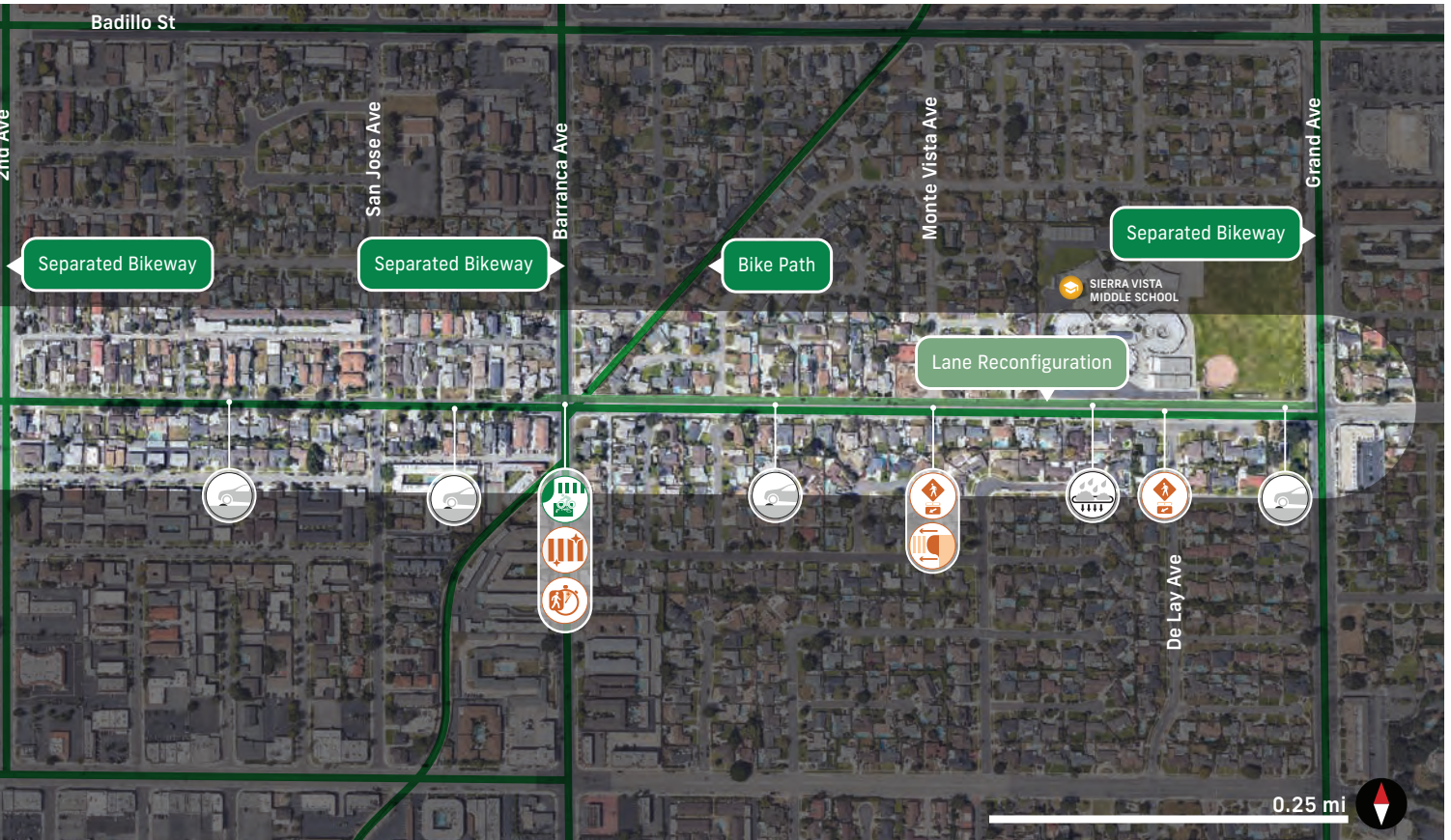
Bicycle Boulevard (Sheet 2 of 2)

### Design Treatments

	<b>Speed Hump</b>		<b>Curb Extension</b>
	<b>Traffic Circle</b>		<b>Bicycle Crossing</b>
	<b>Rectangular Rapid Flashing Beacon</b>		<b>Bike Facilities</b>
	<b>Leading Pedestrian Interval</b>		<b>Lane Reconfiguration</b>
	<b>High Visibility Crosswalk</b>		<b>Stormwater Capture</b>

### Corridor-wide Treatments

-  **Wayfinding**
-  **Bike Detection**
-  **Intersection Tightening**
-  **Daylighting**



Project implementation will require further engineering feasibility, design, and community engagement



# Covina Boulevard

Separated Bikeway (Sheet 1 of 2)

## Purpose

Re-envision Covina Boulevard as a vibrant active transportation corridor providing direct access to Foothill Transit Center with integrated storm water capture and investments in the tree canopy.

## Benefits

- Investment in historically marginalized community
- Improves safety and comfort for all users
- Improves access to Foothill Transit Center, a major transit hub in the city
- Provides increased access to Cypress Park and Ben Lomond Elementary School
- Lane reconfiguration provides opportunities for green infrastructure, increasing stormwater capture and tree canopy

## Considerations

- Where feasible, incorporate landscaping into bikeway buffer
- Bicycle facility start and end points should be further evaluated to ensure it is adequately connected to the broader network
- Refer to the Right-of-Way Analysis for more details on lane conversion feasibility

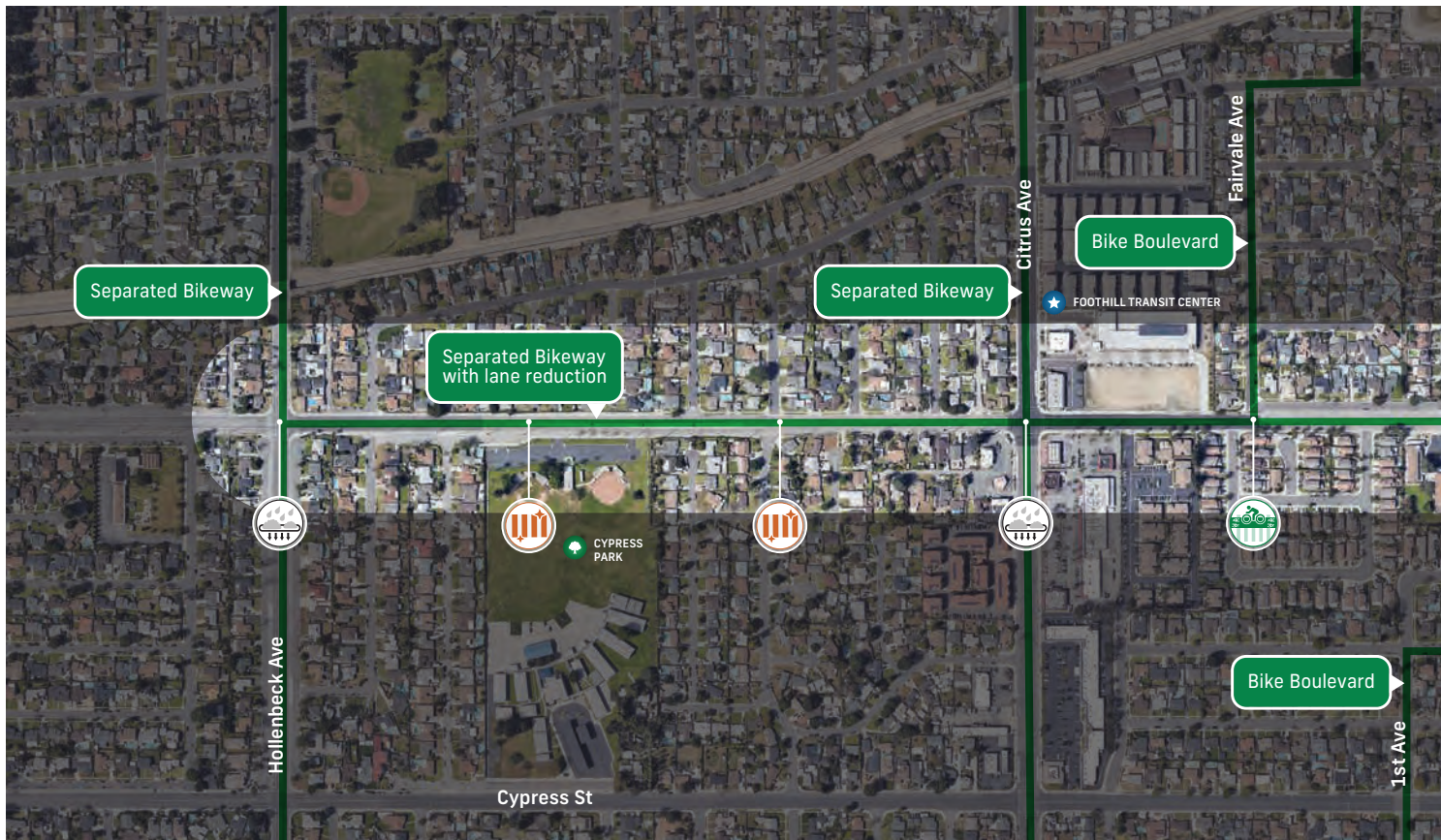
## Planning-level Cost Estimate (Construction & Design)

Permanent Build

**\$6.5-10.75M**

Quick Build

**\$1-1.5M**



Project implementation will require further engineering feasibility, design, and community engagement









# Covina Boulevard

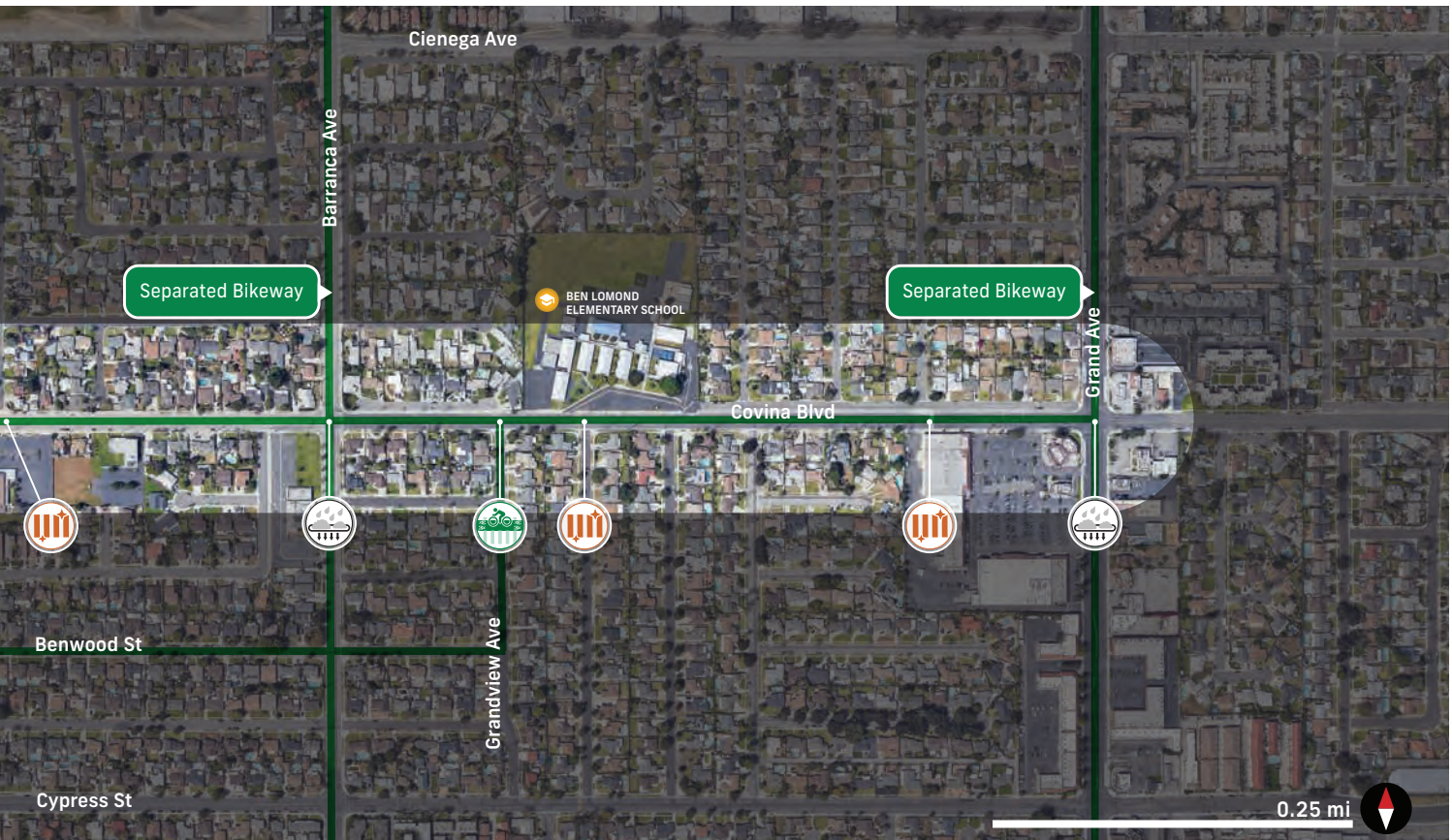
Separated Bikeway (Sheet 2 of 2)

## Design Treatments

-  Stormwater Capture
-  High Visibility Crosswalk
-  Bicycle Crossing
-  Bike Facilities

## Corridor-wide Treatments

-  Wayfinding
-  Bike Detection
-  Conflict Zone Marking
-  Intersection Tightening
-  Daylighting



Project implementation will require further engineering feasibility, design, and community engagement

# Edna Place

Bicycle Boulevard (Sheet 1 of 2)

## Purpose

Design a high-quality, region-leading bicycle boulevard that provides a low-stress connection between Northview High School, the Metrolink Station, Kelby Park, and Ben Lomond Elementary. Improve property values and increase climate resiliency through investments in quality landscaping in traffic circles

## Planning-level Cost Estimate (Construction & Design)

Permanent Build

**\$2.5 - 4M**

Quick Build

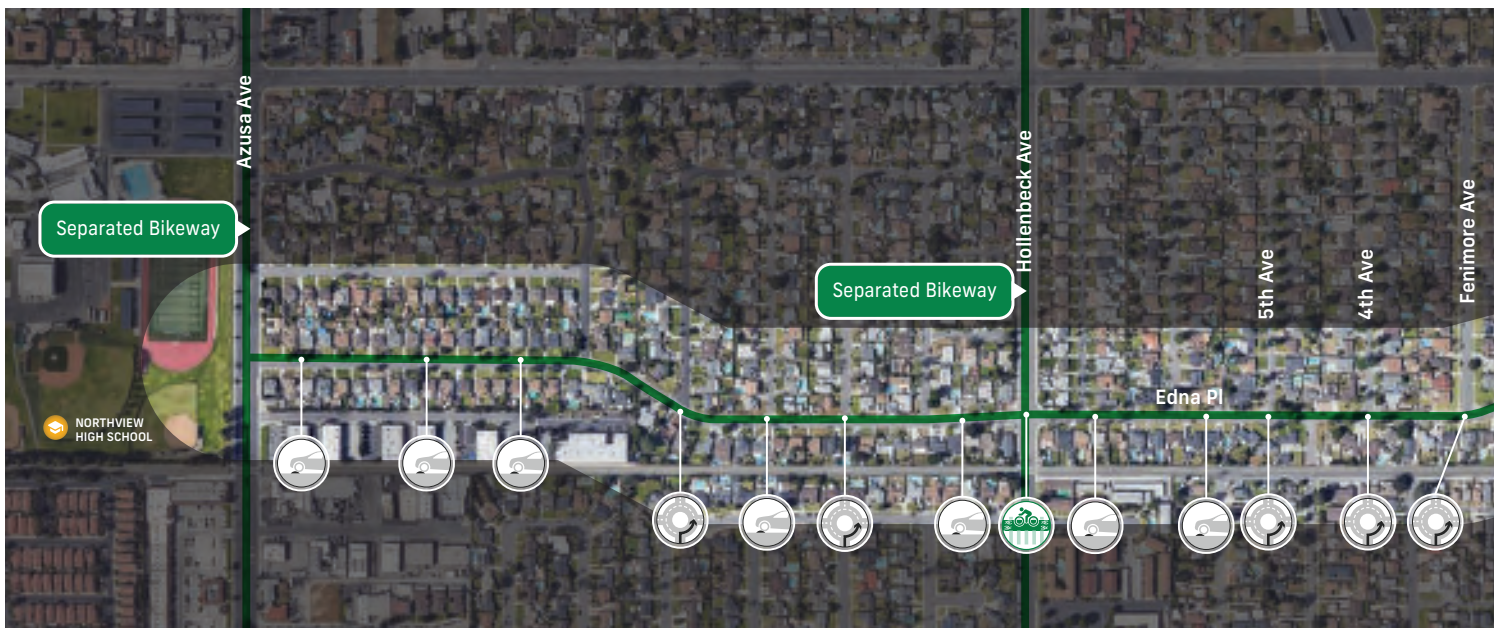
**\$1.25-2.25M**

## Benefits

- Investment in historically marginalized community
- Improves safety and comfort for all users
- Improves access to the Covina Metrolink Station, Northview High School, the Metrolink Station, Kelby Park, and Ben Lomond Elementary
- Transportation improvements can be implemented through repaving and other quick-build methods. Landscaping would require concrete traffic circles.

## Considerations

- Sharrows should be installed every 250' and be spaced in the center of the lane out of the door zone
- Traffic calming elements (traffic circle, speed humps) should be spaced every 250'-400' to effectively manage speeds
- As a long-term investment, explore the feasibility of a pedestrian/bicycle bridge over the railroad at Valencia Place to increase the accessibility of the Edna Bike Boulevard.



Project implementation will require further engineering feasibility, design, and community engagement





# Edna Place

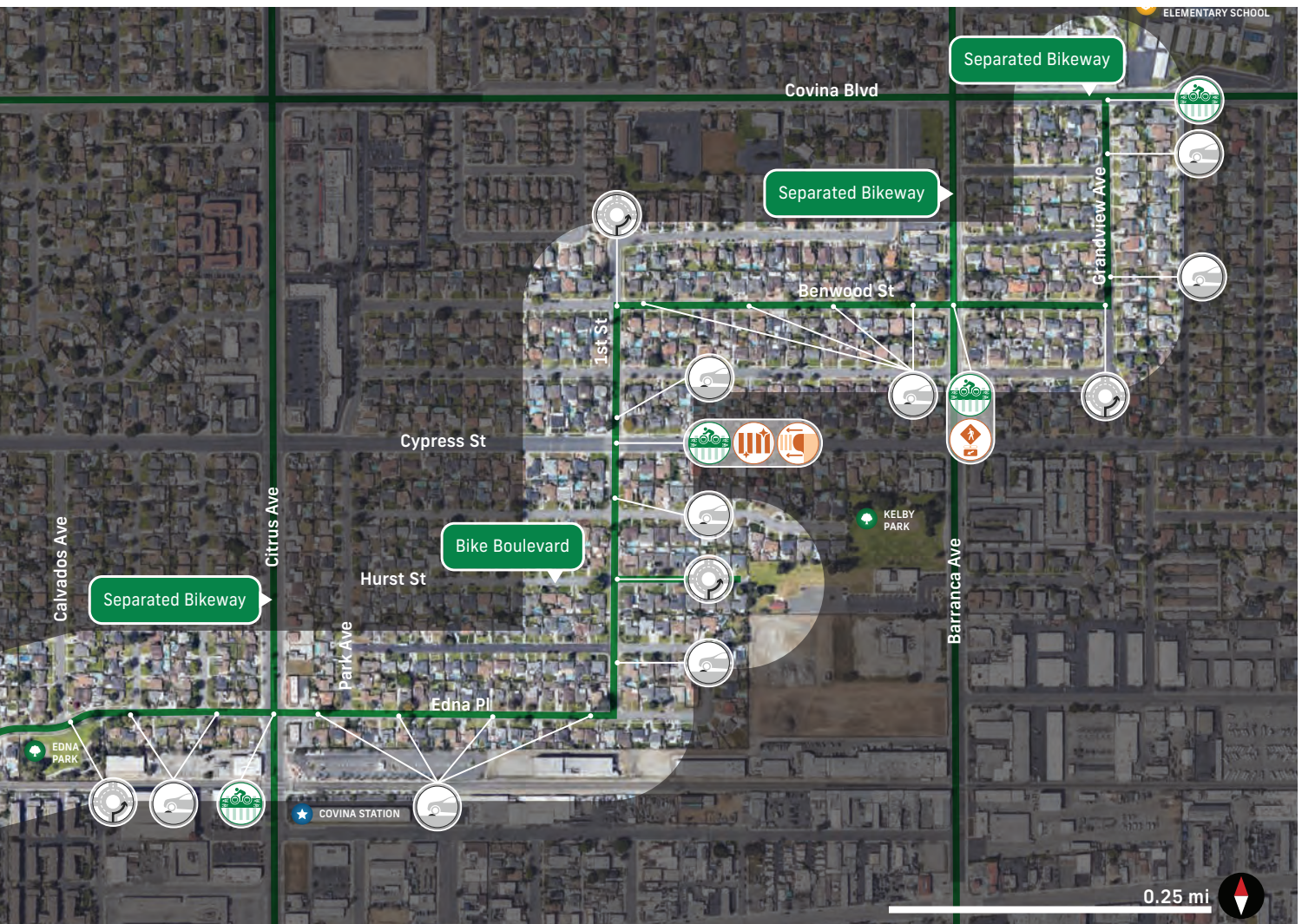
Bicycle Boulevard (Sheet 2 of 2)

### Design Treatments

- Speed Hump
- Traffic Circle
- High Visibility Crosswalk
- Curb Extension
- Bicycle Crossing
- Bike Facilities

### Corridor-wide Treatments

- Wayfinding
- Bike Detection
- Intersection Tightening
- Daylighting



Project implementation will require further engineering feasibility, design, and community engagement



# 2nd Avenue

## Pedestrian, Bicycle, and Streetscape Project

### Purpose

Install a separated bikeway on 2nd Avenue. Between Badillo and Front, widen sidewalks, install green infrastructure, and add to the tree canopy to create a gateway to Recreation Village.

### Planning-level Cost Estimate (Construction & Design)

#### Permanent Build

**\$4.75M-7.75M**

#### Quick Build

**\$0.75-1.25M**

### Benefits

- Investment in historically marginalized community- Improves safety and comfort for all users
- Improves access to transit along 2nd Avenue
- Improves access to Civic Center Park, Covina Public Library, and the future Recreation Village
- Wide right-of-way provides opportunities for climate resilient infrastructure beyond the transportation improvements, including enhanced tree canopy and stormwater capture features

### Considerations

- Where feasible, incorporate landscaping into bikeway buffer
- Bicycle facility start and end points should be further evaluated to ensure it is adequately connected to the broader network
- Refer to the Right-of-Way Analysis for more details on lane reconfiguration feasibility

Design Treatments	
	High Visibility Crosswalk
	Bus boarding island
	Bike Facilities
	Sidewalk Widening, Stormwater Retention, Street Trees

Corridor-wide Treatments	
	Wayfinding
	Bike Detection
	Conflict Zone Marking
	Intersection Tightening
	Daylighting



Project implementation will require further engineering feasibility, design, and community engagement



Page Intentionally Left Blank



# Appendix

- › Existing Conditions Report
- › Equity Study
- › Economic Development Study
- › Engagement Summary





# covina

## active streets & multimodal connectivity plan

FEHR & PEERS

MIG  
Kosmont  
CWE



# Existing Conditions Report

**City Mobility Snapshot**  
**Existing Transportation Facilities**  
**Pedestrian and Bicycle Safety and Comfort**  
**Major Destinations and Accessibility**

Appendix A: Equity Technical Study  
Appendix B: Urban Design Technical Study  
Appendix C: Market Study  
Appendix D: Infrastructure Technical Study

The **Covina Active Streets and Multimodal Connectivity Plan (CASMCP)** will develop active transportation recommendations for the core of the City surrounding downtown.

This **existing conditions report** lays the groundwork for understanding the existing opportunities and needs of mobility in the study area through the lens of first/last mile access to transit, equity, urban design, infrastructure, and market trends.

As part of this existing conditions process, **technical studies were completed for each of these disciplines**. Key takeaways from each technical study have been woven into the body of the report. The equity, urban design, infrastructure, and market trends technical studies are included as an appendix. The first/last mile and mobility needs study is fully embedded into the body of this report.

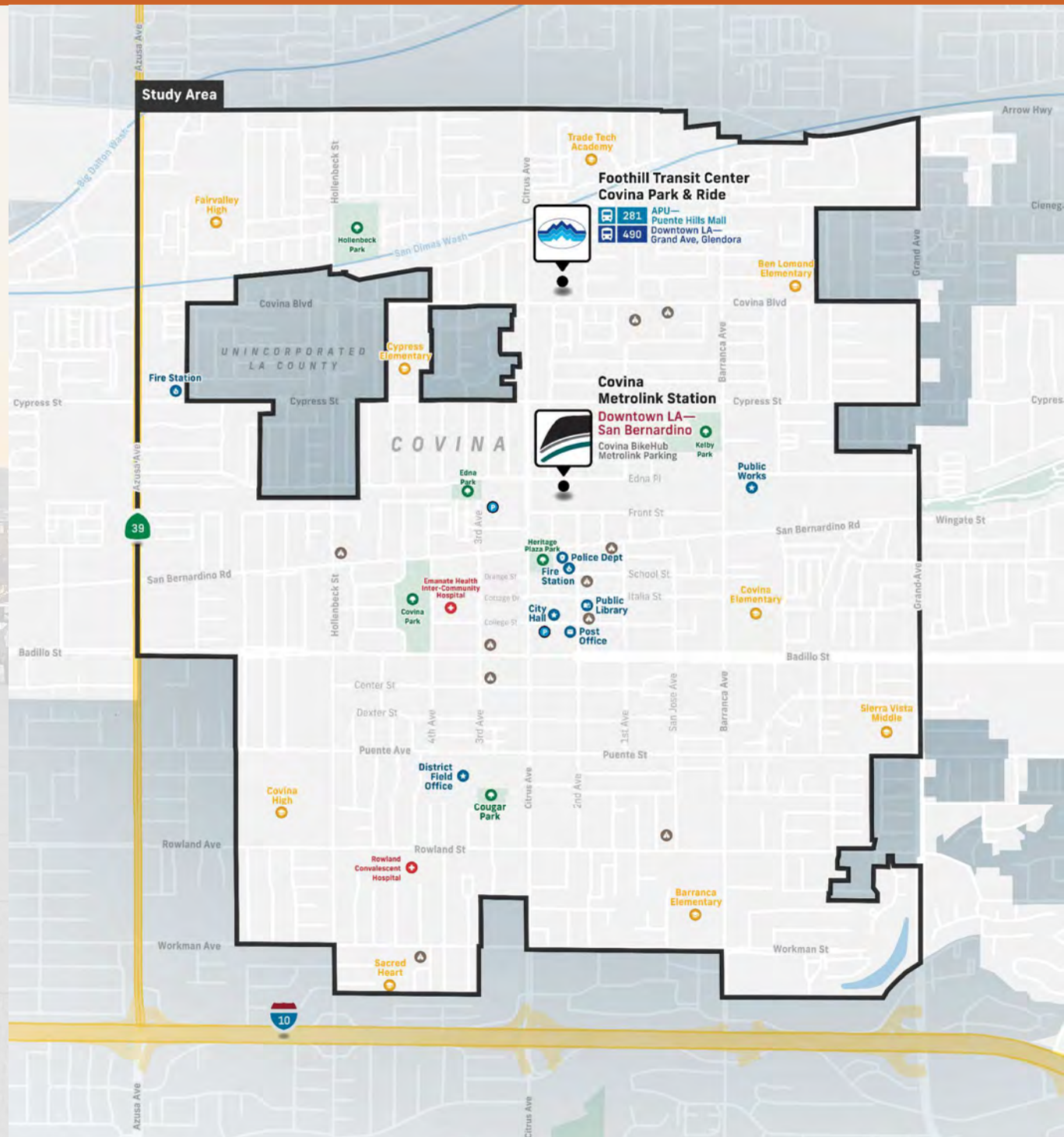
This report is broken into four key sections:

- **City Mobility Snapshot** provides a brief overview of key demographics and travel patterns throughout the City.
- **Existing Transportation Facilities** presents an overview of existing transit, bike, and pedestrian facilities provided throughout the study area.
- **Pedestrian and Bike Comfort and Safety** analyzes speed and collision history in the study area.
- **Major Destinations and Accessibility** provides an overview of key points of interest in the City and their accessibility via transit and active transportation.

**Covina is an active, vibrant city** that caters to its diverse community through food, culture, and entertainment.

The hub of the City is its downtown. Restaurants, bars, businesses, and public space create an inviting space that residents gravitate toward.

The downtown and surrounding areas make up our **study area**.





The existing conditions process helped expose several key areas that could become the focus of the CASMCP recommendations. The following are the key needs and opportunities:

- The study area has one “Disadvantaged Community” as defined by SB 350/CalEnviroScreen and two “Sensitive Communities” as defined by UC Berkeley’s Urban Displacement Project. Investments should be prioritized in these two communities to **limit the burden of pollution and climate change**. Infrastructure investments should be paired with policy adjustments to **minimize displacement** following increased investment.
- A significant portion of Covina residents live and work in Covina, but still choose to drive to work. Providing safe, comfortable, and reliable biking and transit options could lead to **mode shift** for those who have shorter commuting distances.
- Crossing infrastructure is typically limited to standard crosswalk striping. There are opportunities to **enhance crosswalks** through tools such as intersection control, high-visibility signing and striping, and curb extensions.
- Existing bicycle facilities are typically limited to Class II bike lanes with some additional features like buffers and green bike boxes at select locations. There are opportunities to enhance both the connectivity and comfort of bike facilities by identifying a **low-stress network** throughout the study area.

- Wide curb-to-curb widths and underutilized space currently dedicated to autos provide an opportunity to **rebalance the right-of-way** and create more space for dedicated pedestrian and bicycle infrastructure.
- The City has a tree canopy coverage of about 16%. With the average August temperature in Covina above 90° and rising, there are opportunities to **expand the existing tree canopy and shade** to provide relief for people walking, biking, and waiting for transit.
- The large majority of bicycle and pedestrian injury collisions are occurring at intersections. Providing design treatments focused on **improving safety and comfort at intersections** could help reduce collision frequency and severity.
- Commercial and retail development potential along Citrus Avenue, San Bernardino Road, and Badillo Street and the 12 potential transit-oriented development sites in the study area provide a look-ahead at major destinations and travel patterns in the coming years. The multidisciplinary nature of the CASMCP provides an exciting opportunity to **align recommended investments with forecasted growth**.

# City Mobility Snapshot

**Demographics**

**Journey to work mode breakdown**

**CHTS all trips breakdown**

**Worker inflow/outflow**

**Commute times**

**Existing transit ridership**



**The City of Covina is diverse.** Almost half of residents speak a language other than English at home and over 70% of residents are people of color.

RACE		
	Covina	LA County
Hispanic or Latino	49%	59%
White alone	26%	23%
Asian & Pacific Islander alone	15%	13%
Black or African American alone	8%	3%
Two or More Races	<1%	2%
American Indian & Alaska Native alone	<1%	<1%
Other Race	<1%	<1%

LANGUAGES SPOKEN AT HOME		
	Covina	LA County
English Only	52%	43%
Language other than English	48%	57%

MEDIAN INCOME	
Covina	LA County
\$70,780	\$68,044

MEDIAN AGE		
	Covina	LA County
English Only	37.3	36.5

VEHICLE AVAILABILITY		
	Covina	LA County
None	2.5%	3.9%
1 or more	97.5%	96.1%

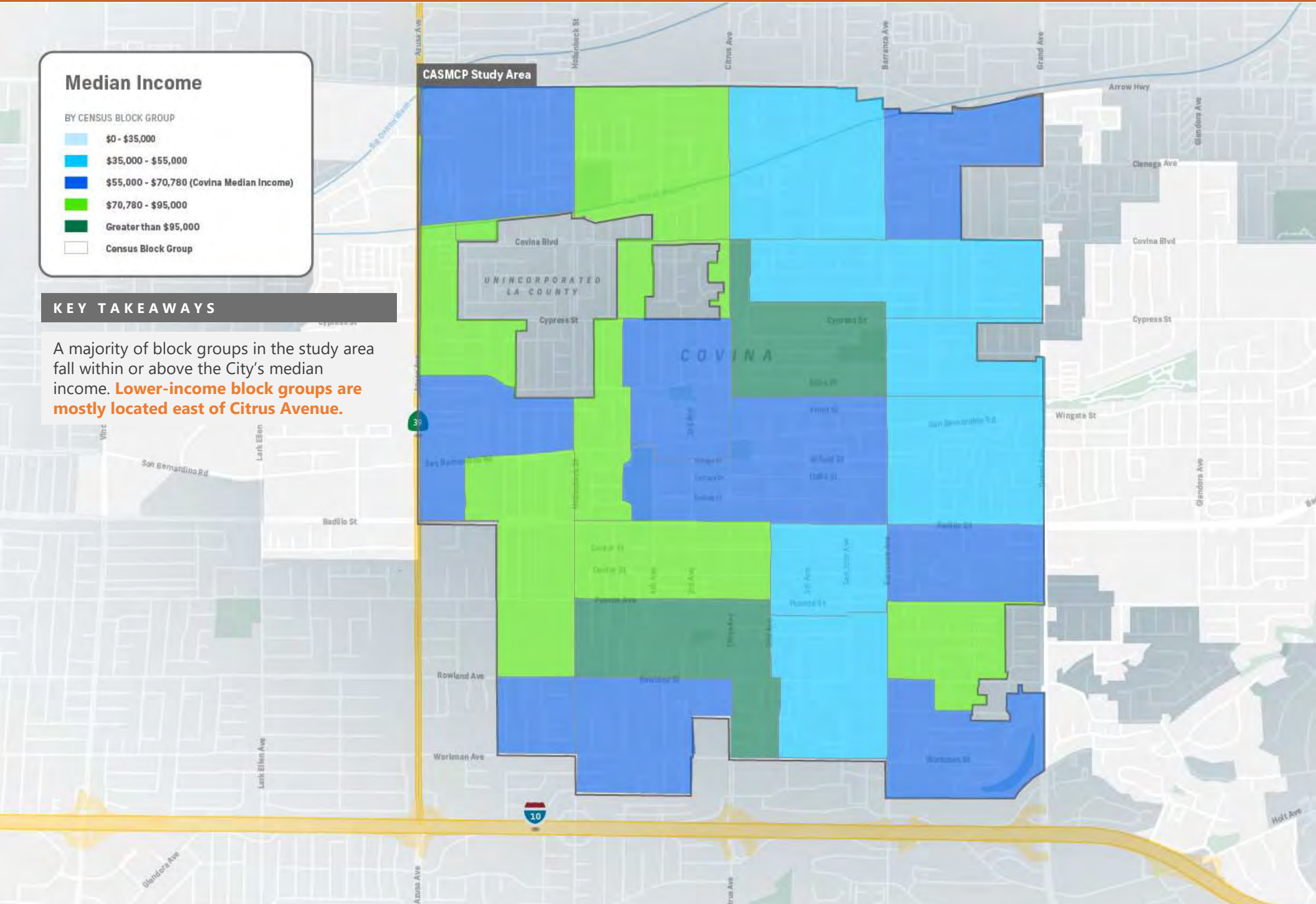
## Median Income

BY CENSUS BLOCK GROUP

- \$0 - \$35,000
- \$35,000 - \$55,000
- \$55,000 - \$70,780 (Covina Median Income)
- \$70,780 - \$95,000
- Greater than \$95,000
- Census Block Group

### KEY TAKEAWAYS

A majority of block groups in the study area fall within or above the City's median income. **Lower-income block groups are mostly located east of Citrus Avenue.**



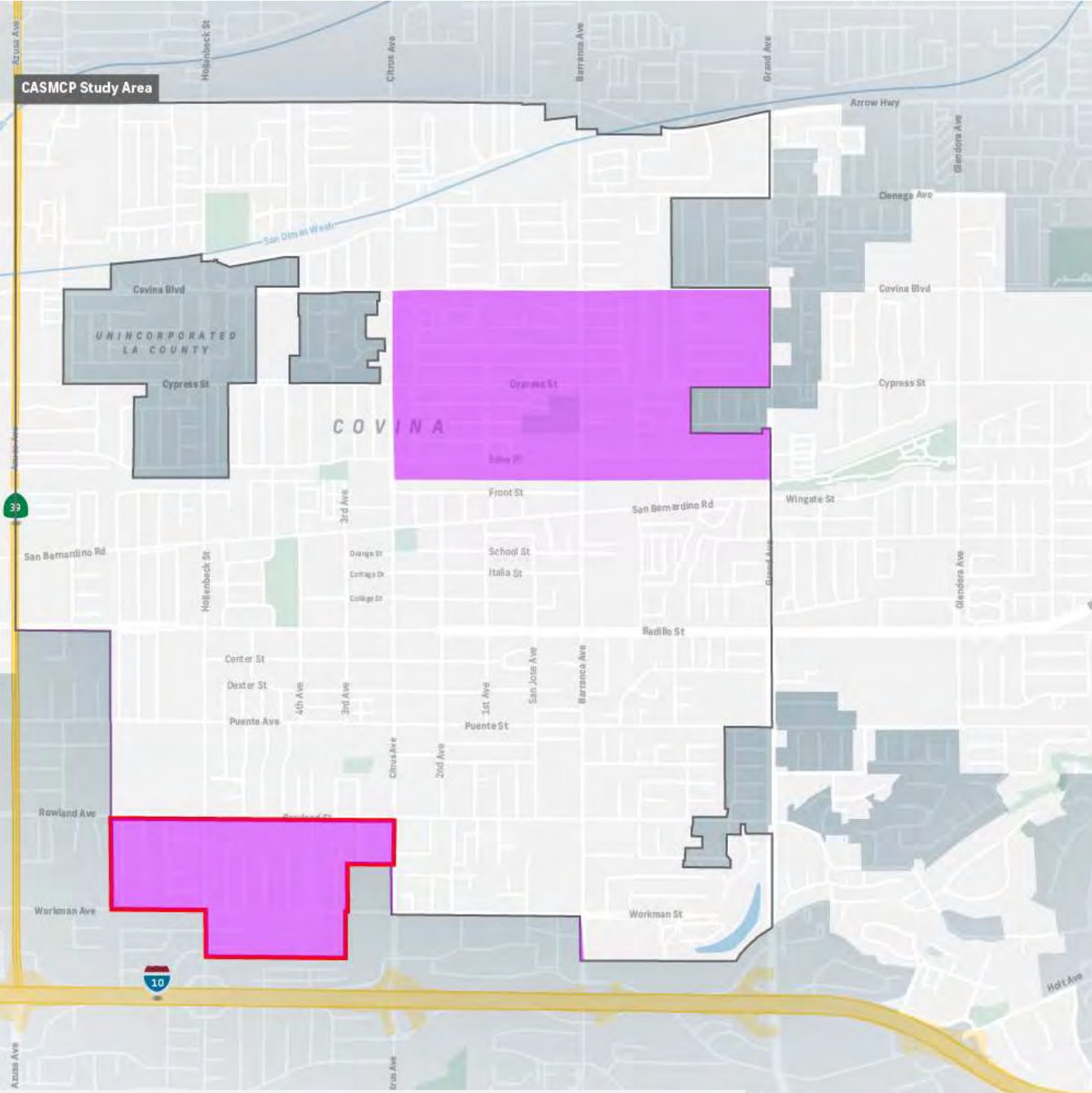


### Sensitive Communities (Urban Displacement Project)

BY CENSUS TRACT

- Vulnerable to Displacement
- Disadvantaged Community

CASMCP Study Area



#### KEY TAKEAWAYS

**Two census tracts in the study area contain "Sensitive Communities".** A "Sensitive Community" is defined as having a large proportion of very low-income residents, renters, people of color, and rent increases above the county median.

**One census tract is a designated "Disadvantaged Community".** "Disadvantaged Communities" are defined as those disproportionately affected by a combination of economic, health, and environmental burdens. These communities have a CalEnviroScreen score in the 75th percentile or higher.

For more information on these data sources and their associated indicators, please see the Equity Technical Study included as an appendix.

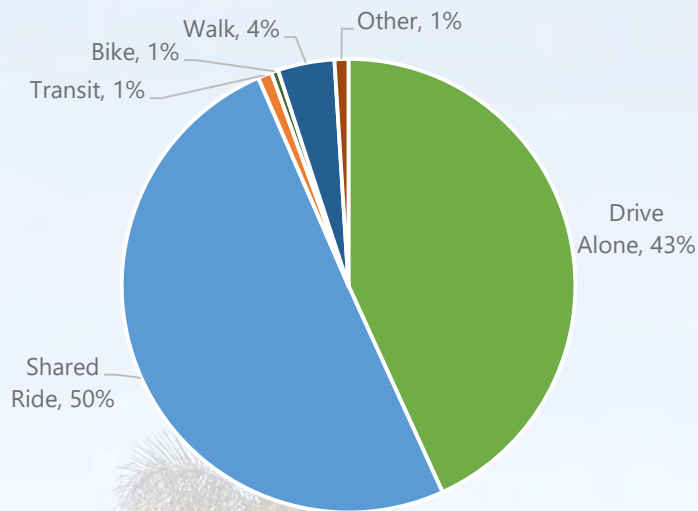


Covina is an **auto-oriented community**, with 75% of commuters choosing to drive alone.

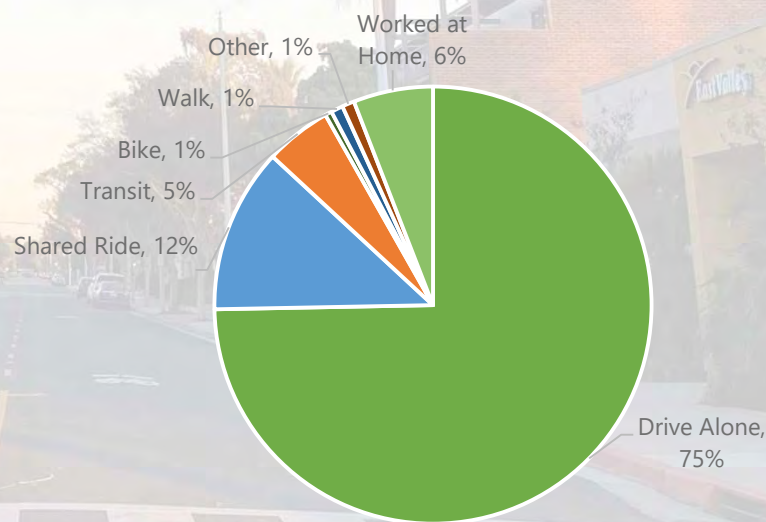
However, almost 20% of commute times in Covina are less than 15 minutes. These shorter trips could present an **opportunity for mode shift** if safe, comfortable, and reliable biking and transit options were provided.

People may also prefer not to drive for local trips to schools, parks, or shopping, but don't currently feel they have a viable alternative.

### All Trips Mode Share

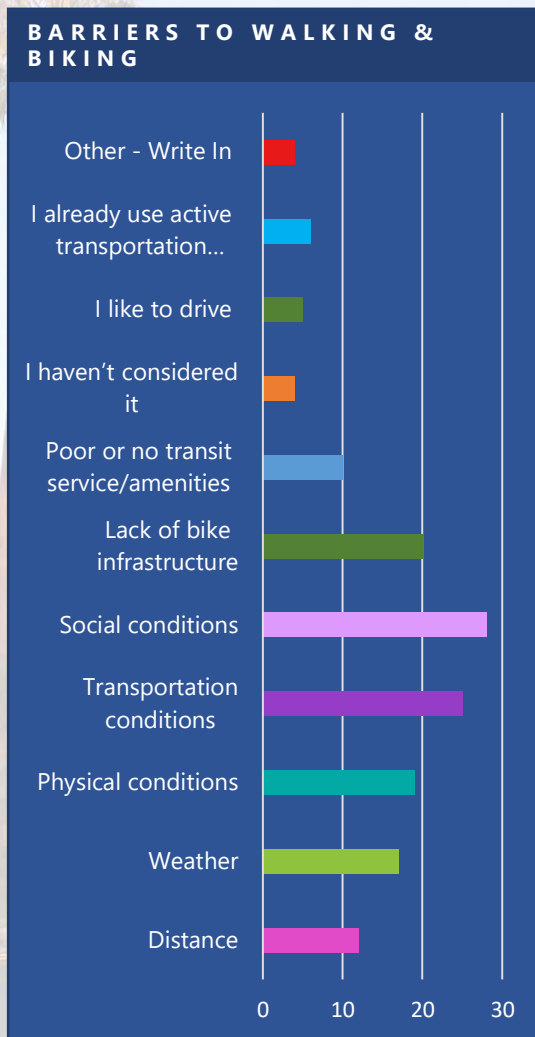
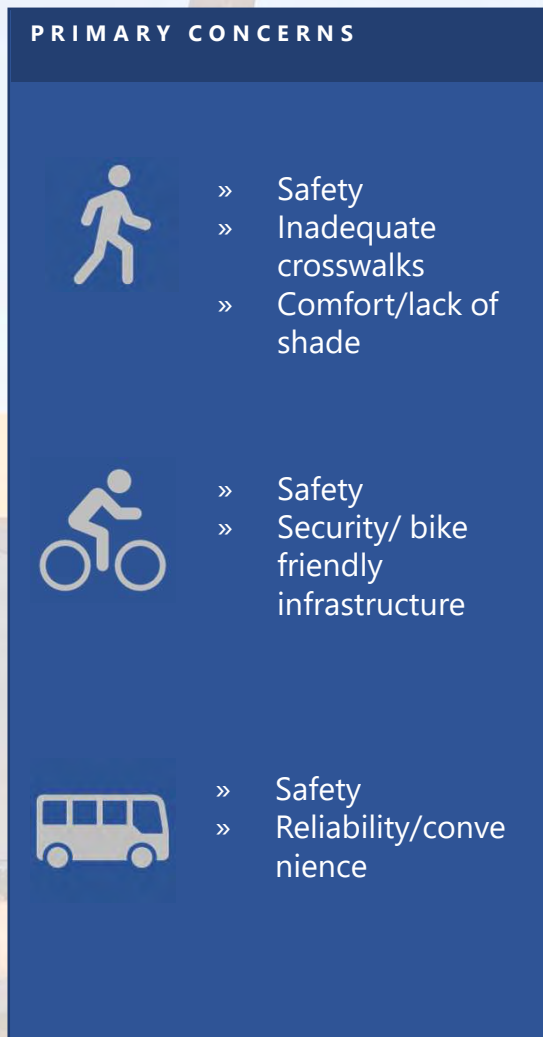


### Commute Mode Share



**Source:**  
Journey to work mode split, *Census*  
Households without vehicles, *Census*  
Overall mode split, *California Household Travel Survey*

A community survey was developed to understand existing mobility patterns and preferences throughout the study area. The survey was live from August through October 2022. 58 responses were received. Key takeaways from the survey are included below. More details on the survey are included in Appendix A and B.





Covina has a very **balanced employment ratio**, with almost just as many workers commuting into Covina as out.

Approx. **7% of residents/workers stay within the City**, while the vast majority commute to/from other locations

### Worker Inflow/Outflow (2019)



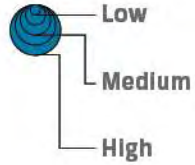
**Source:**  
U.S. Census Bureau Center for Economic Studies (2019)  
More information on commute travel patterns can be found in the Market Technical Study.



### Ridership On

- Bus Stops

#### On/Off Ridership



### KEY TAKEAWAYS

The study area's most **active bus stops** are along its periphery on Azusa Avenue and Arrow Highway. The Azusa Avenue corridor provides direct access to the Azusa L (Gold) Line Station to the north.

CASMCP Study Area

**Foothill Transit Center  
Covina Park & Ride**

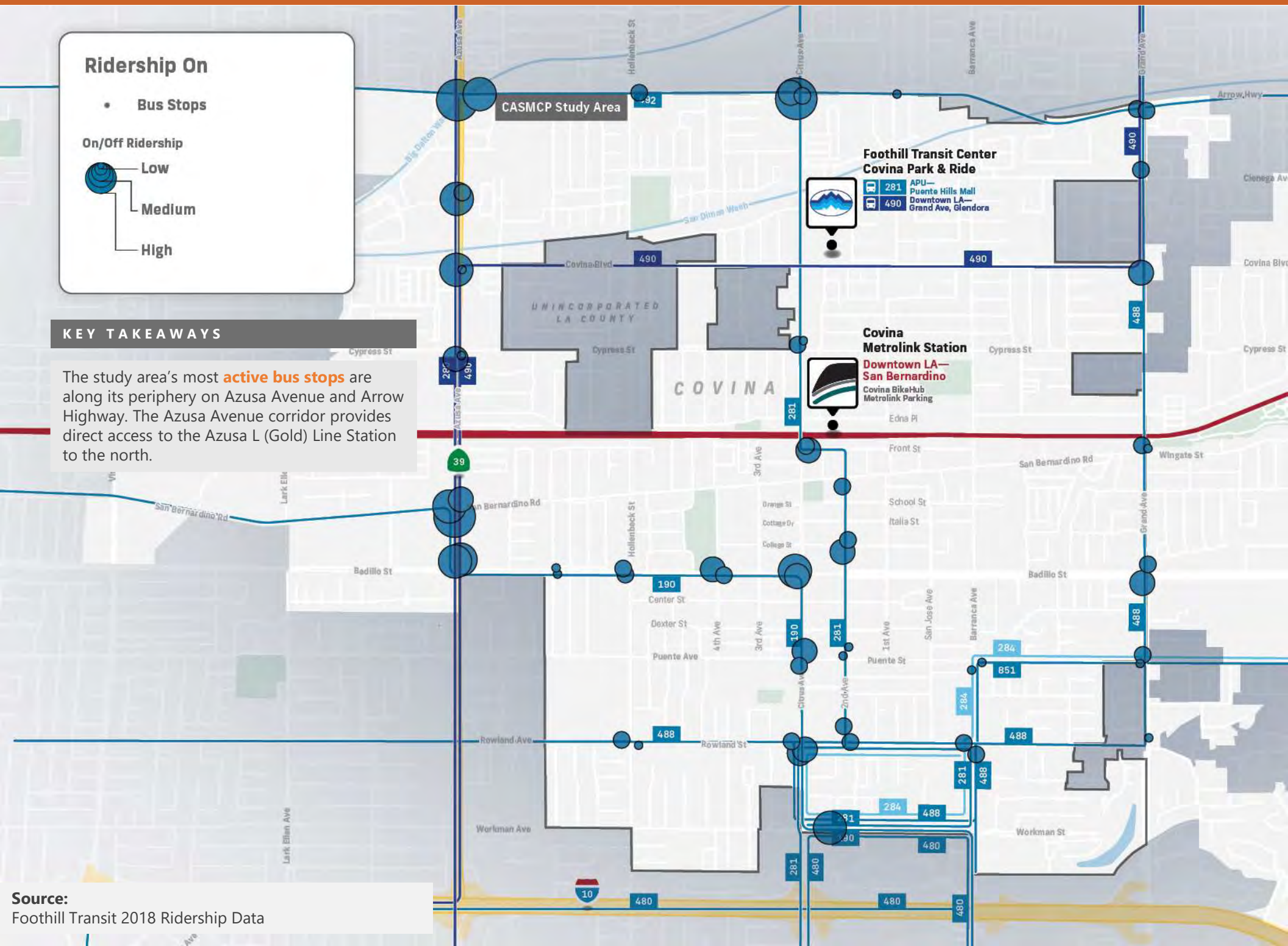


- 281 Puente Hills Mall
- 490 Downtown LA—Grand Ave, Glendora

**Covina  
Metrolink Station**



**Downtown LA—  
San Bernardino**  
Covina BikeHub  
Metrolink Parking



# Existing Transportation Facilities

Pedestrian facilities

Bike facilities

Transit lines/stops

Tree canopy

Major road right-of-way (ROWs)



**Crosswalks & Sidewalk Gaps**

- Uncontrolled Crosswalk
- Stop-Controlled Crosswalk
- Signalized Crosswalk
- - - Sidewalk Gap

**KEY TAKEAWAYS**

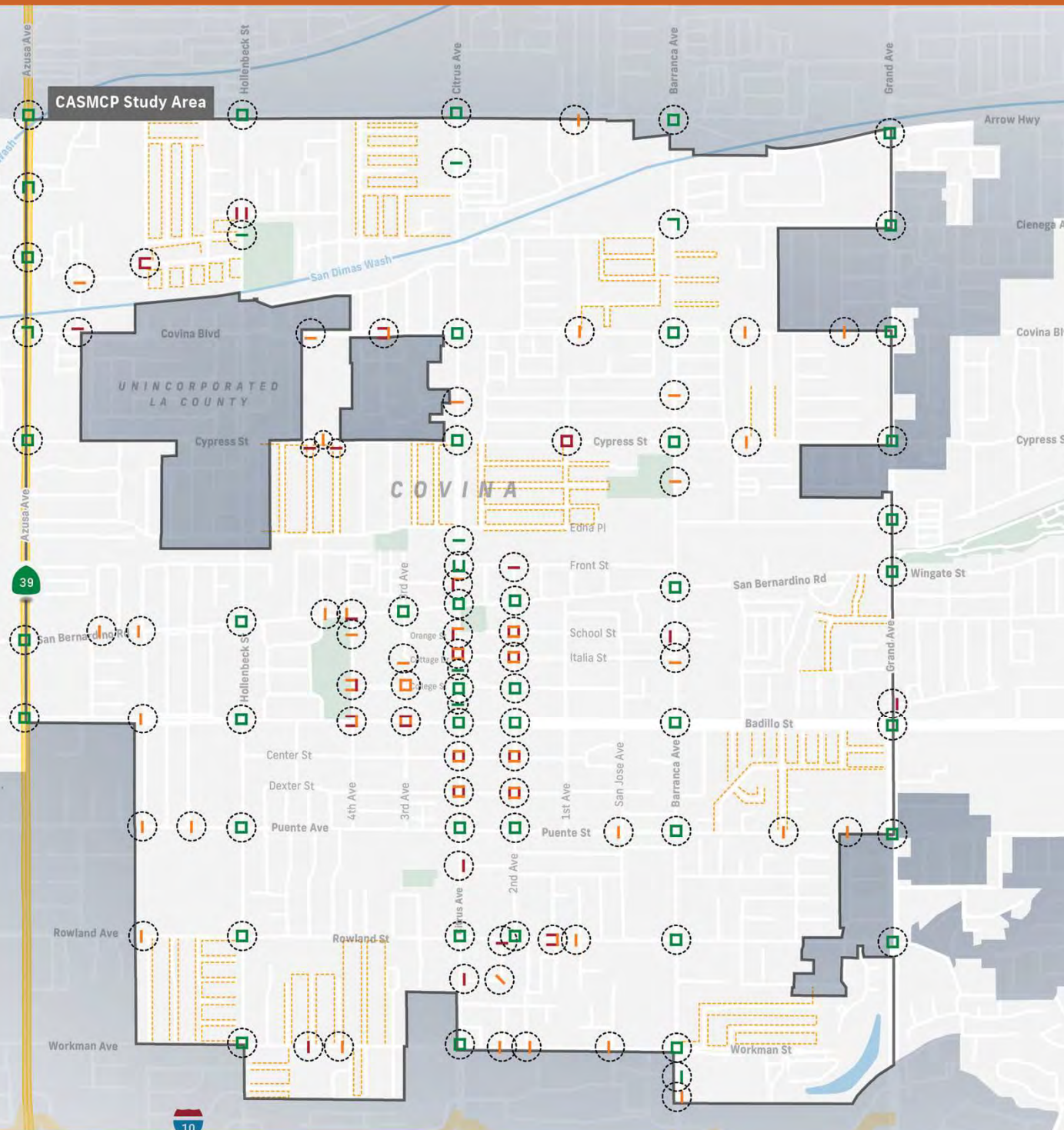
**80%** 233 of 292 total  
Of crosswalks are controlled (either by stop control or signals)

**100%** 49 of 49 total  
Of signalized intersections with marked crosswalks along at least one leg

**86%** 42 of 49 total  
Of signalized intersections with marked crosswalks on all legs

Ongoing sidewalk and crosswalk improvements include:

- **Sidewalk improvements** on Workman Street between Citrus Avenue and Hollenbeck Avenue
- **Crosswalk upgrades** at two midblock crosswalks on College Avenue (near Badillo Street and Orange Street), including installation of in-pavement flashers







**Badillo Street/Amel Drive**  
Multi-lane uncontrolled crosswalk with high-visibility crosswalk striping



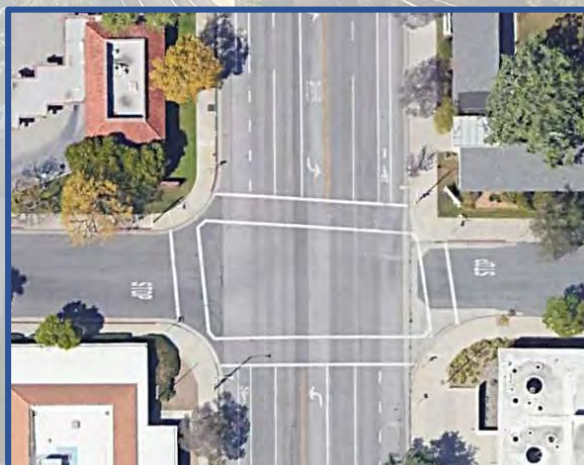
**College Street/3<sup>rd</sup> Avenue**  
All-way stop control with standard crosswalk striping



**Puente Street near Sierra Middle School**  
Pedestrian flashers ahead of an unsignalized crosswalk. Limited visibility of the specific crosswalk location due to faded pavement markings.



**Midblock on Citrus Avenue**  
Decorative uncontrolled midblock crosswalk near downtown



**Italia Street/2<sup>nd</sup> Avenue**  
Side-street stop control with standard crosswalk striping. Pedestrians cross six lanes of traffic.



**Midblock on Rowland Avenue**  
Pedestrian crossing signage in a school zone with limited visibility of the specific crosswalk location due to faded pavement markings.



## Existing Bike Facilities

### BY CLASSIFICATION

-  Bike Lanes
-  Bike Routes with Sharrows

### KEY TAKEAWAYS

**90** miles of roadway

**3.6** miles of Class II bike lanes

**1.2** miles of Class III bike routes with sharrows

**0.75** miles of planned Class II bike lanes on Citrus Avenue between Badillo Street and Workman Street

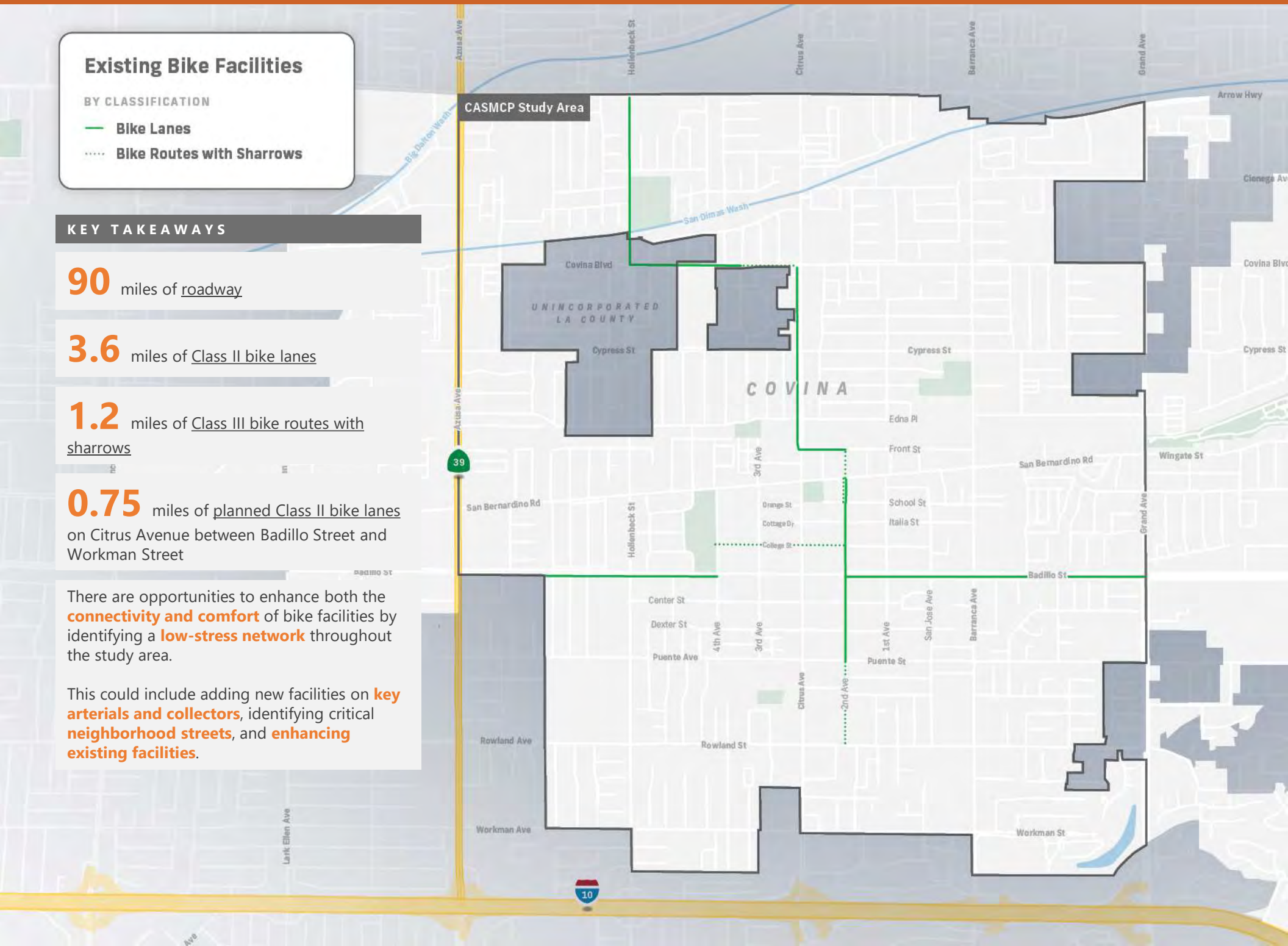
There are opportunities to enhance both the **connectivity and comfort** of bike facilities by identifying a **low-stress network** throughout the study area.

This could include adding new facilities on **key arterials and collectors**, identifying critical **neighborhood streets**, and **enhancing existing facilities**.

CASMCP Study Area

39

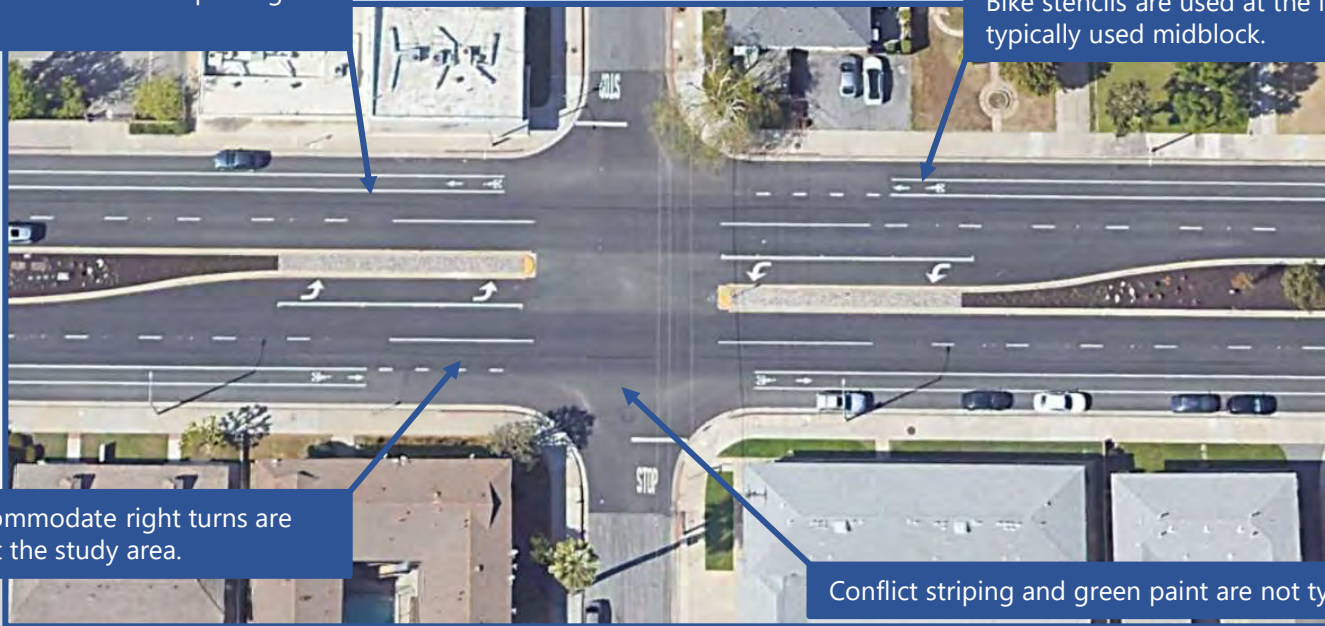
10





Bike lanes in the study area are typically 5-6 feet in width and positioned between the parking lane and auto lanes.

Bike stencils are used at the intersection, but not typically used midblock.



Mixing zones to accommodate right turns are common throughout the study area.

Conflict striping and green paint are not typical

### Other Bike Treatments in the Study Area



Front Street/2<sup>nd</sup> Street  
Green bike boxes



Badillo Street  
Buffered Bike Lanes



2<sup>nd</sup> Street  
Bike Route signage



### Transit Facilities

-  **Metrolink**  
Downtown LA—San Bernardino
-  **Covina Metrolink Station**    
includes bike parking, station parking lot & parking structure
-  **Foothill Transit Center**   
includes parking structure

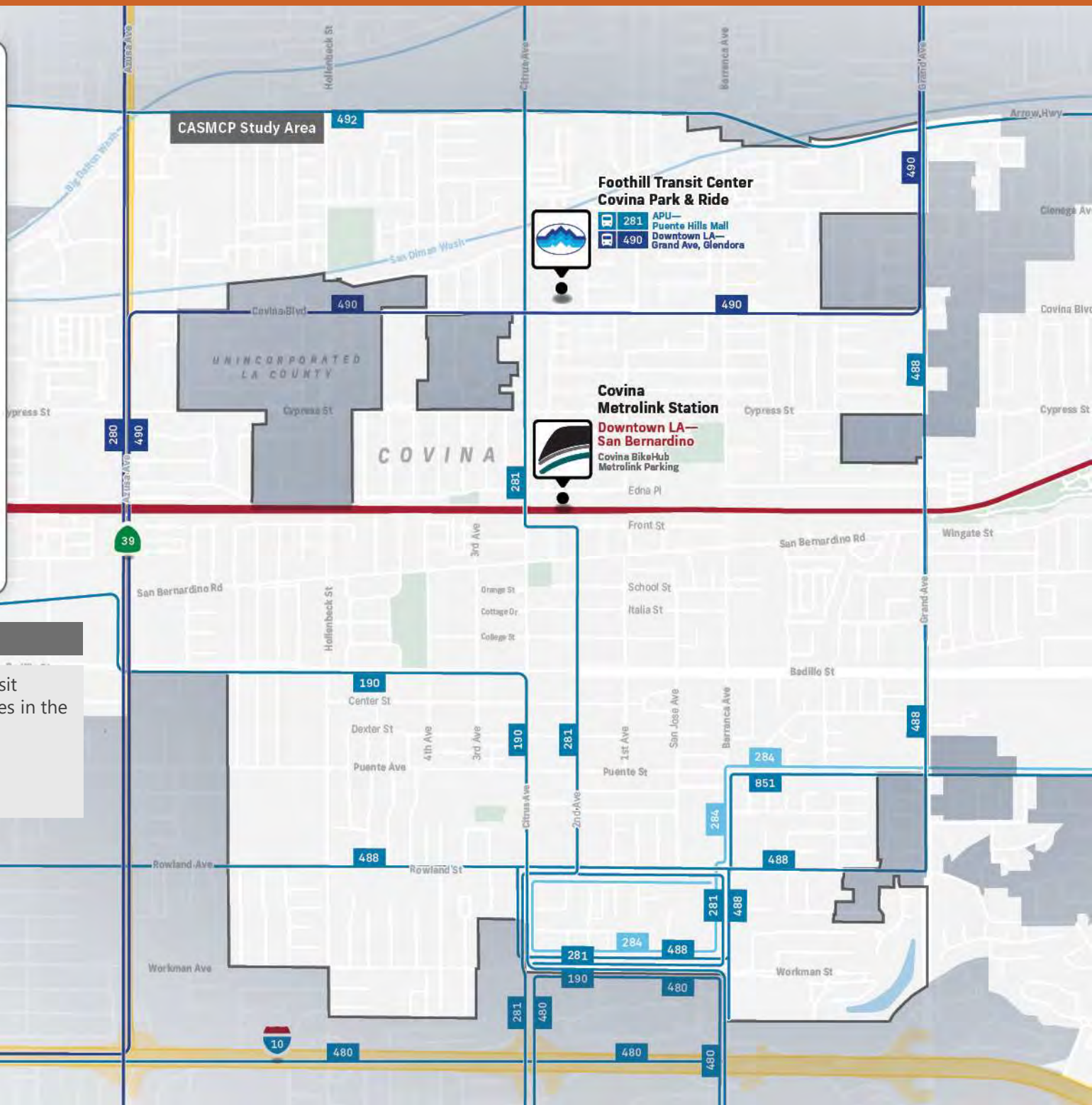
### FOOTHILL TRANSIT ROUTES BY FREQUENCY

-  **15 minutes**  
280 490
-  **20-30 minutes**  
190 281 480 488 492  
851 *851 operates peak hours only*
-  **60 minutes**  
284

### KEY TAKEAWAYS

**Foothill Transit** is the primary bus transit operator in Covina, operating nine routes in the study area.

**Metrolink** also serves Covina; the San Bernardino line stops in the study area.



## Existing Transportation Facilities Transit Service Headways and Hours of Operation

Route	Route Name	Weekday			Weekend/Holiday		
		Peak	Off-Peak	Hours	Peak	Off-Peak	Hours
<a href="#">190</a>	El Monte - West Covina - Pomona	20	30	<b>5am-1am</b>	30-60	60	<b>6am-1am</b>
<a href="#">280*</a>	Azusa - Puente Hills Mall via Azusa Ave	<b>15*</b>	20	<b>5am-12pm</b>	30	30	<b>6am-11pm</b>
<a href="#">281</a>	Glendora - Azusa - West Covina - Puente Hills Mall	30	30	<b>5am-10pm</b>	60	60	<b>6am-8pm</b>
<a href="#">284</a>	West Covina - Covina - San Dimas - Glendora	60	60	<b>6am-9pm</b>	45	90	<b>6am-6pm</b>
<a href="#">480</a>	Montclair - Pomona - West Covina via Mission Blvd	20	30	<b>5am-12am</b>	30	60	<b>5am-12am</b>
<a href="#">488</a>	Glendora - West Covina - El Monte	25	60	<b>4am-10pm</b>	60	60	<b>7am-11pm</b>
<a href="#">490*</a>	Grand Ave. Park & Ride - Covina Transit Center - Downtown Los Angeles Express Service	<b>15*</b>	30	<b>5am-8pm</b>		n/a	
<a href="#">492</a>	Montclair - Arcadia - El Monte via Arrow Hwy	20	30	<b>5am-11pm</b>	30	30	<b>6am-11pm</b>
<a href="#">851</a>	Covina - Glendora	30 – peak only	n/a	<b>7am-4pm</b>		n/a	
<a href="#">Metrolink</a>	San Bernardino	25	60	<b>5am-10pm</b>	60	120	<b>7am-10pm</b>

Source: Foothill Transit November 2021 Timetables; Metrolink April 2022 Timetables

\***High Frequency Routes** are routes with 15 minutes or better frequency during weekday service



### Transit Stop Amenities

-  Bus Stops with Bench & Shelter
-  Bus Stops with Bench
-  Bus Stops with No Amenities

### KEY TAKEAWAYS

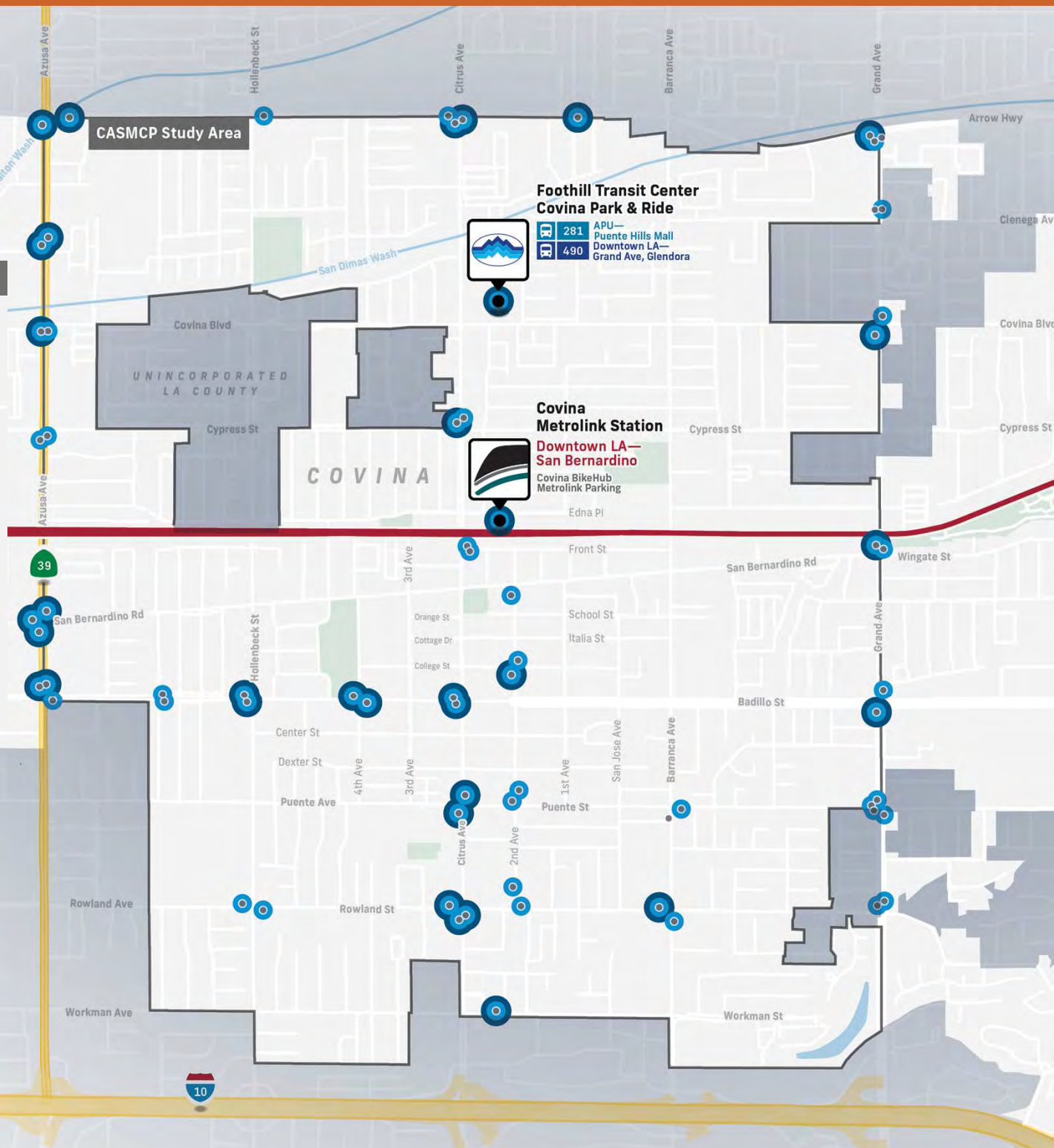
**97%** 65 of 67 total  
Of Stops have a **place to sit** (bench or shelter)

**51%** 34 of 67 total  
Of stops have **shade** (shelter)

**<1%** 2 of 67 total  
Of stops have no amenities

Ongoing transit stop improvements include:

- Installation of **five new bus shelters** on Grand Avenue





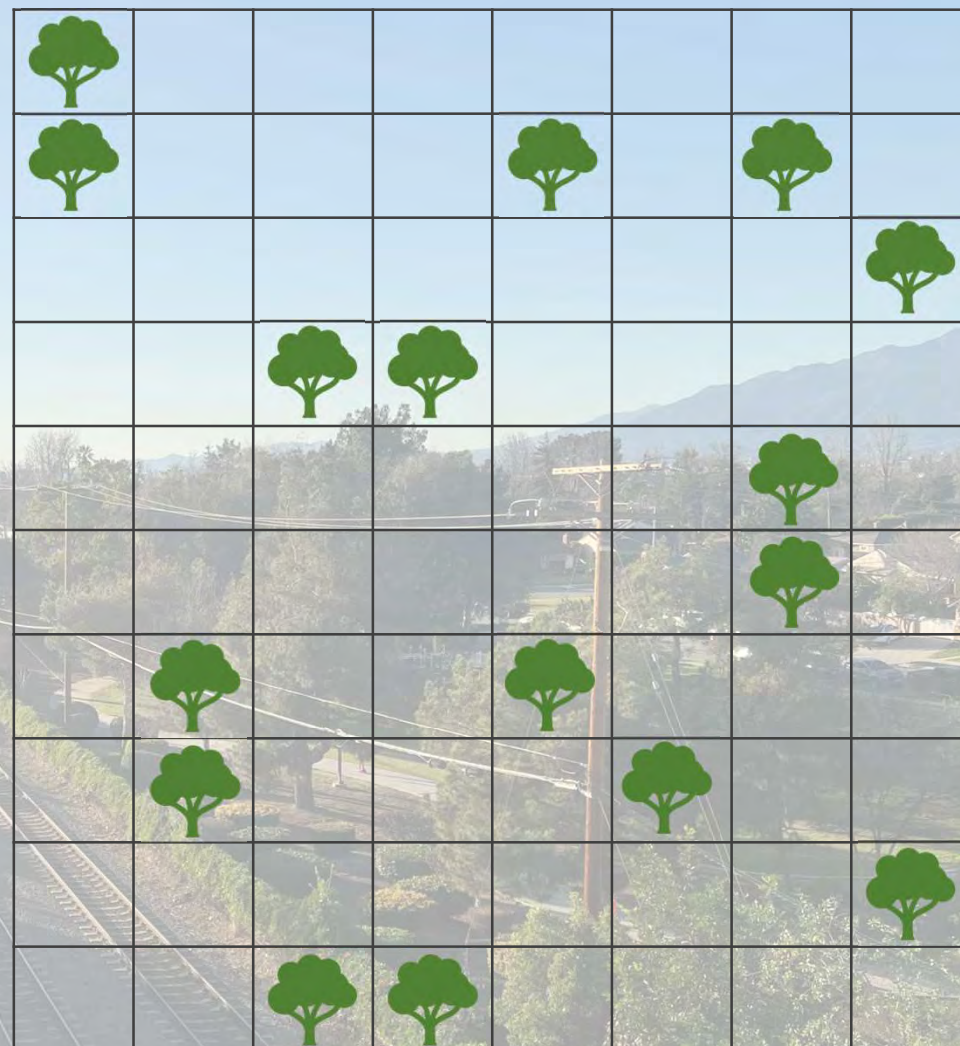
The City of Covina has a **16% tree canopy coverage**, compared to the County average of 20%.

The **average August temperature** in Covina is 91°.

90° is the threshold for “**extreme heat conditions**”, requiring your body to work extra hard to maintain normal temperatures.

There is a critical opportunity to **expand shade coverage** to provide relief for people walking, biking, and waiting for transit.

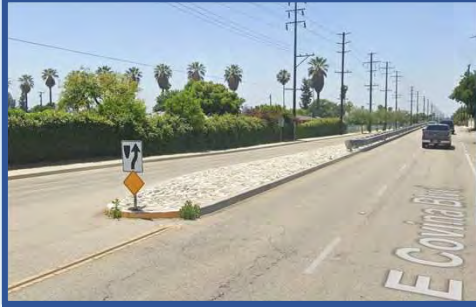
Planting new trees would require **utility and maintenance** coordination to ensure new trees don't conflict with existing utility locations and can be watered regularly.







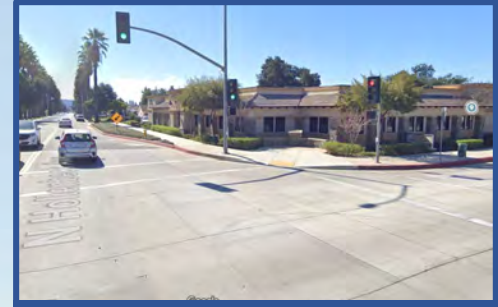
Excess roadway capacity along major arterials can lead to increased speeds and limited spaces for people to walk and bike.



Concrete center medians typically lack green space or placemaking and increase the impermeable surface of the roadway, placing an increased burden on stormwater systems.



Similarly, frontage roads tend to lack green space and placemaking amenities.



Right-turn merge lanes and wide curb radii increase crossing distances for pedestrians and allow for high speeds of turning vehicles.



Rebalancing the right-of-way can help create protected facilities and increased green infrastructure.



Center medians can be redesigned to provide natural habitat, placemaking, and green stormwater infrastructure.



Small, narrow spaces can be repurposed to provide pedestrian walking paths, tree canopy, and open space.



Curb extensions can be added to shorten pedestrian crossing distances, slow vehicle turning movements, and provide green infrastructure.



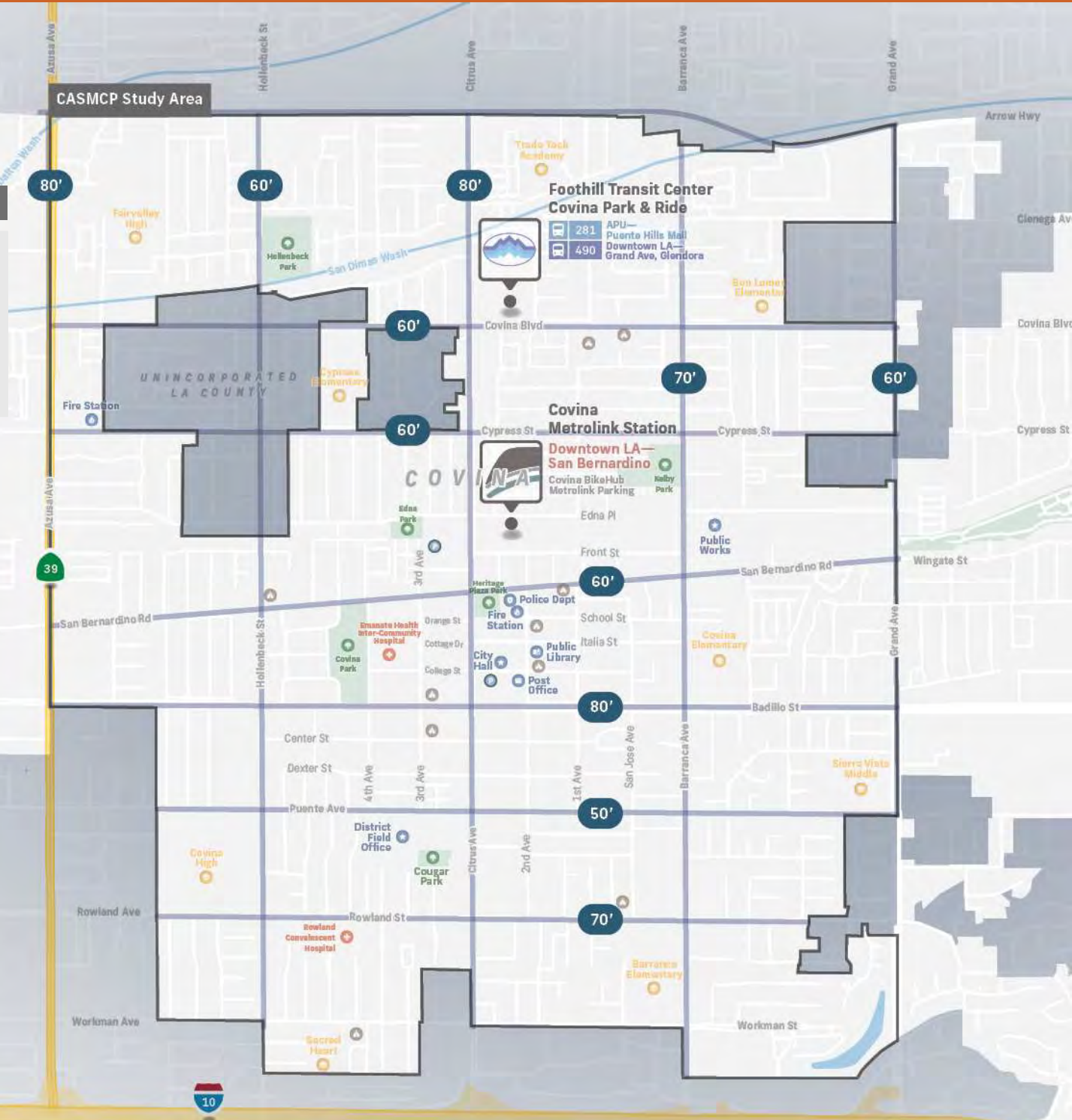


## Curb-to-curb Widths on Major Roads

### KEY TAKEAWAYS

The **curb-to-curb** in the study area varies from 50 to 80 feet.

These wide roads present an opportunity to **rebalance the right-of-way** to provide dedicated space for people walking, biking, and on transit.





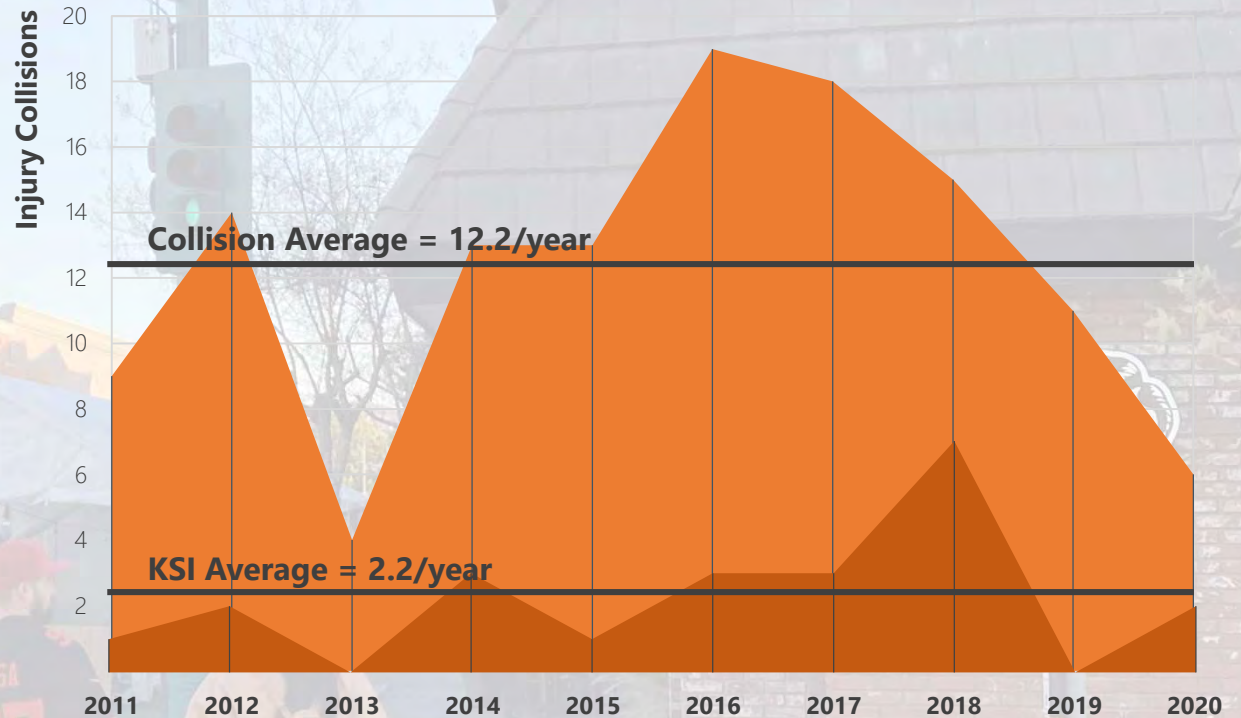
# **Pedestrian and Bike Comfort and Safety**

**Pedestrian safety**  
**Bike safety**  
**Wejo speed data**

There were 122 reported **pedestrian injury collisions** in the study area between 2011 and 2020.

Killed and Severely Injured (KSI) collisions are collisions that resulted in a fatality or life-altering injury.

While there has been a downward trend in total injury collisions since 2016, KSI collision trends have not seen that same trend.



Existing Facilities

**Source:**

Transportation Injury Mapping System (TIMS), 2011-2020  
Note that 2020 data is provisional.

## Pedestrian Collisions

BY SEVERITY, 2011-2020

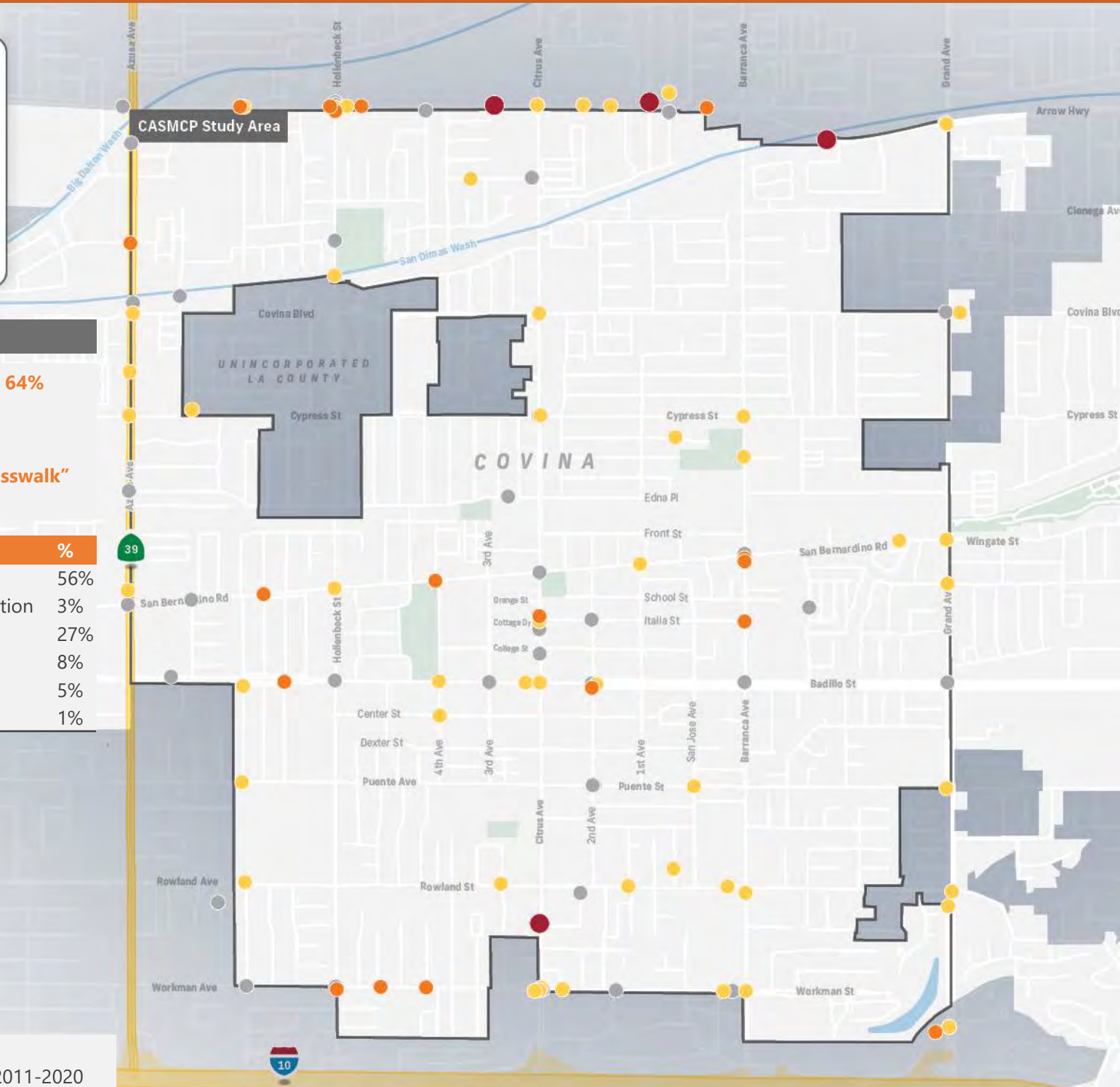
- Fatal
- Severe Injury
- Other Visible Injury
- Complaint of Pain

### KEY TAKEAWAYS

Of the 122 injury pedestrian collisions, **64% occurred at an intersection.**

9 of the 29 injury collisions where the pedestrian was **"crossing not in a crosswalk" occurred at an intersection.**

Pedestrian Action	%
Crossing in Crosswalk at Intersection	56%
Crossing in Crosswalk not at intersection	3%
Crossing Not in Crosswalk	27%
In Road, Including Shoulder	8%
Not in Road	5%
Not Stated	1%



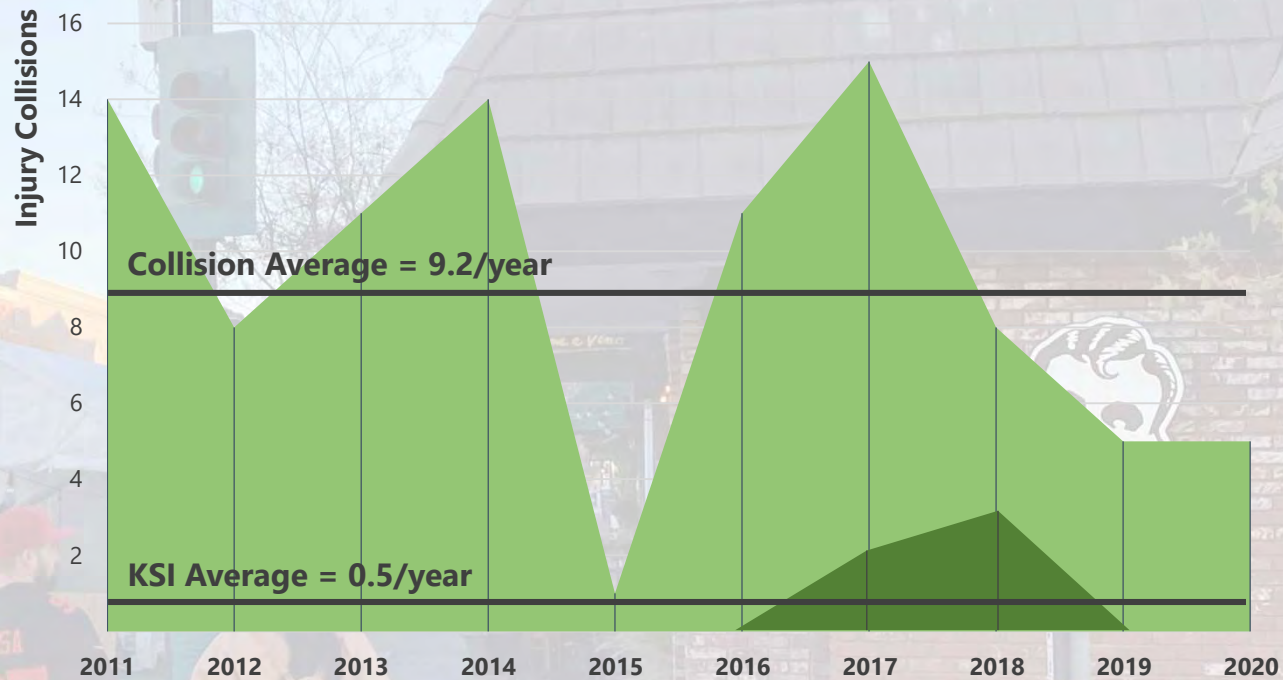
**Source:**  
 Transportation Injury Mapping System (TIMS), 2011-2020  
 Note that 2020 data is provisional.



There were 92 reported **bicycle injury collisions** in the study area between 2011 and 2020.

While there has been a downward trend in total injury collisions since 2017, KSI collision trends have not seen that same trend.

There have been no bike-involved fatalities over the ten-year period in the study area.



**Source:**

Transportation Injury Mapping System (TIMS), 2011-2020  
Note that 2020 data is provisional.

## Bicycle Collisions

BY SEVERITY, 2011-2020

- Fatal (None)
- Severe Injury
- Other Visible Injury
- Complaint of Pain

### KEY TAKEAWAYS

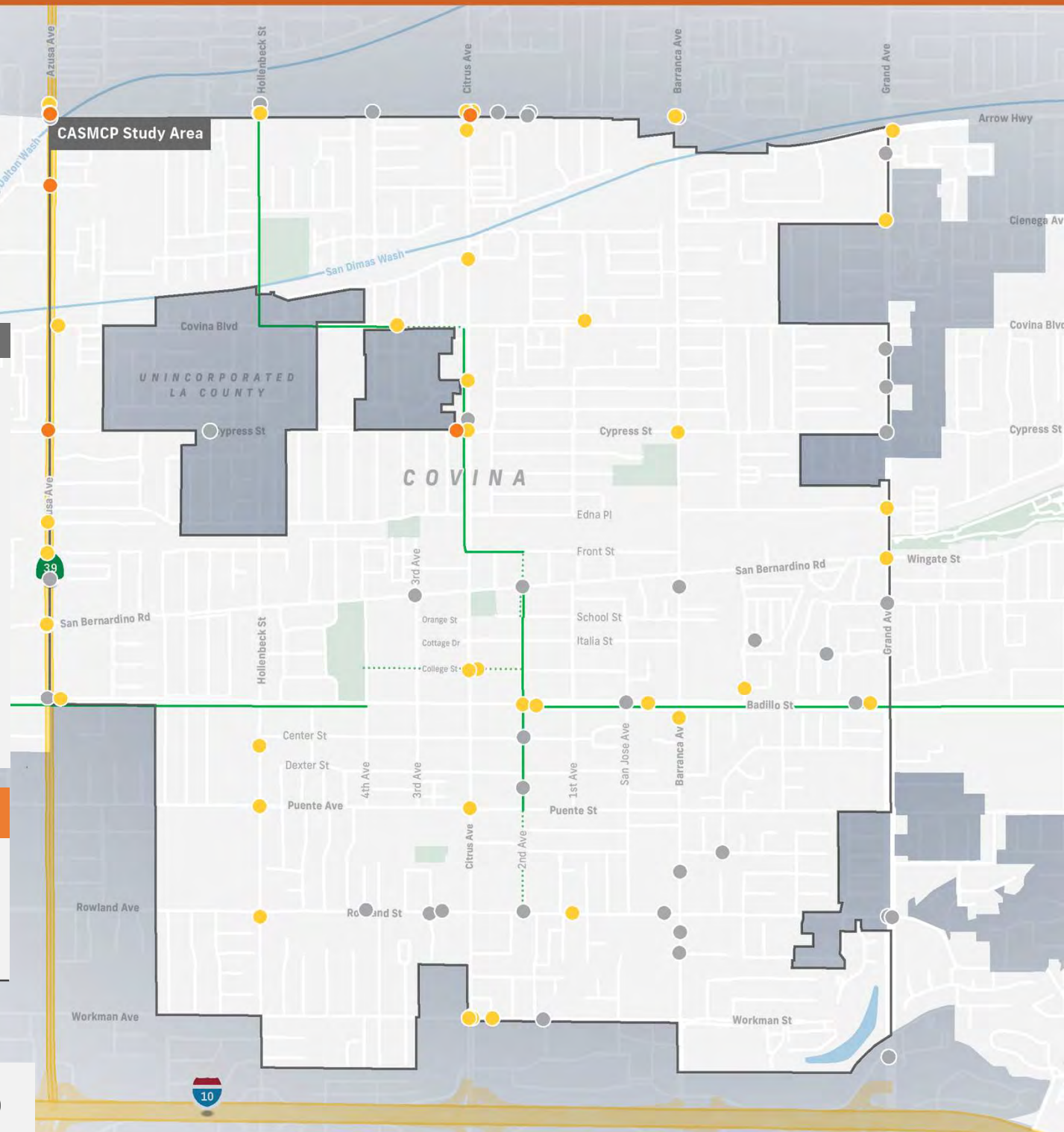
**63% of bicycle collisions occurred at intersections.**

**28% occurred on a street with an existing dedicated bike facility** despite just 5% of roads having facilities, suggesting that more robust treatments may be needed.

**“Wrong side of road” collisions** occur when a bicyclist is biking contraflow to traffic, either in the roadway or on the sidewalk. This commonly occurs when the on-road bicycle facility is uncomfortable, and bicyclists want to be able to see the cars ahead of them. Education, encouragement, and enhanced bike facilities can help mitigate this behavior.

### Top 5 Primary Collision Factors (PCF) %

Wrong Side of Road	47%
Vehicle Right of Way Violation	12%
Traffic Signals and Signs	11%
Improper Turning	9%
Other Hazardous Violation	7%



**Source:**  
 Transportation Injury Mapping System (TIMS), 2011-2020  
 Note that 2020 data is provisional.



### Weekday Daily Speed Data

WEJO DATA

- <20 MPH
- 20 to 30 MPH
- 31 to 35 MPH
- 36 to 40 MPH
- >40 MPH

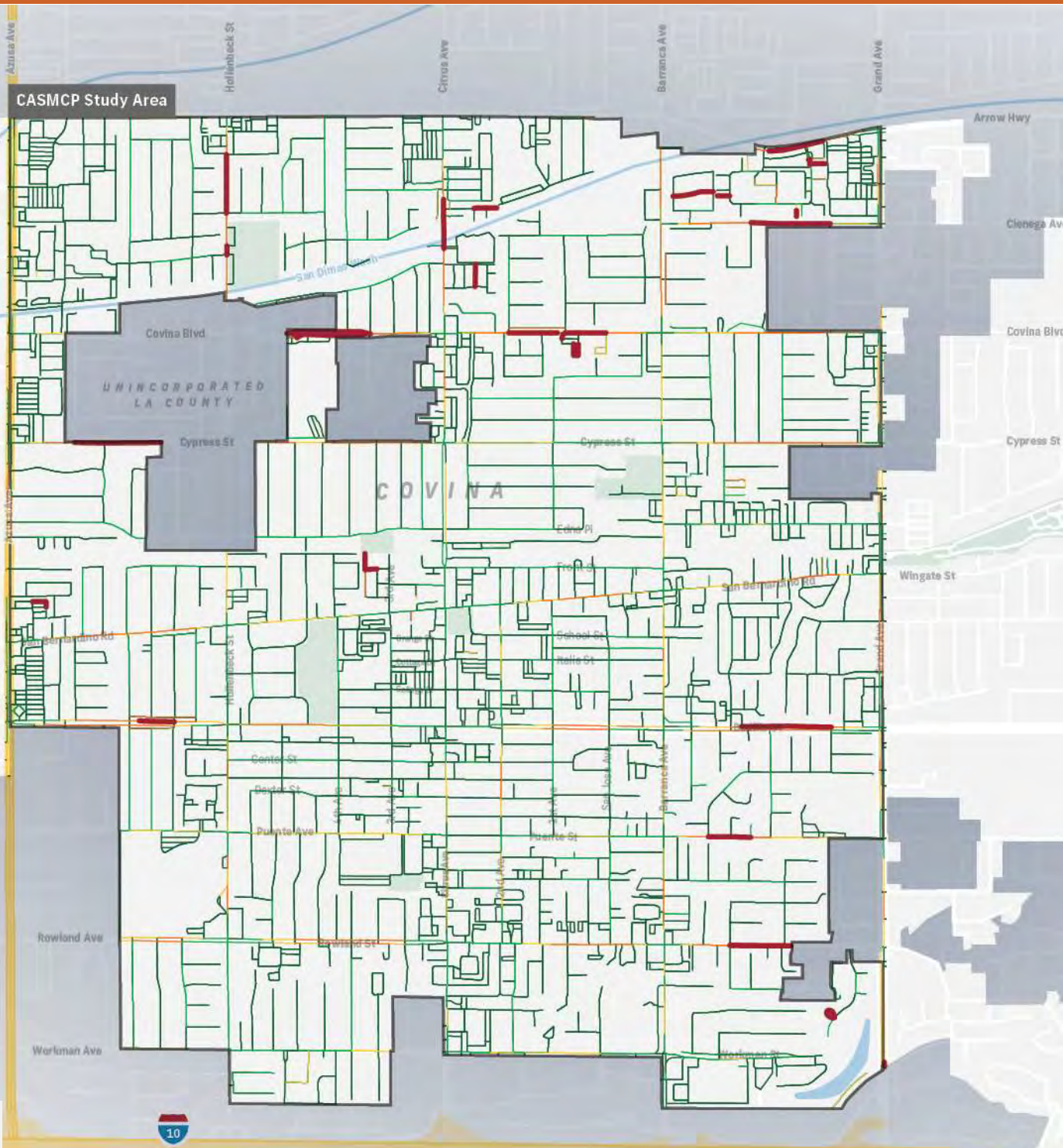
#### KEY TAKEAWAYS

**Speed is the most significant factor in determining severity of collisions.** As speed increases, so does the likelihood of a serious injury or fatality.

As speed increases from 20 miles per hour (MPH) to 40 MPH, the likelihood of a pedestrian surviving a crash drops from 90% to 20%.

**Speed management** will be an important focus in creating safe and comfortable pedestrian and bicycle facilities.

*There are a handful of residential roadway segments shown on the map where data shows average speeds beyond 40 MPH. We would like to explore further with the City the feasibility of speeding on these segments, or if this is data noise.*





### Weekday Overnight Speed Data

WEJO DATA

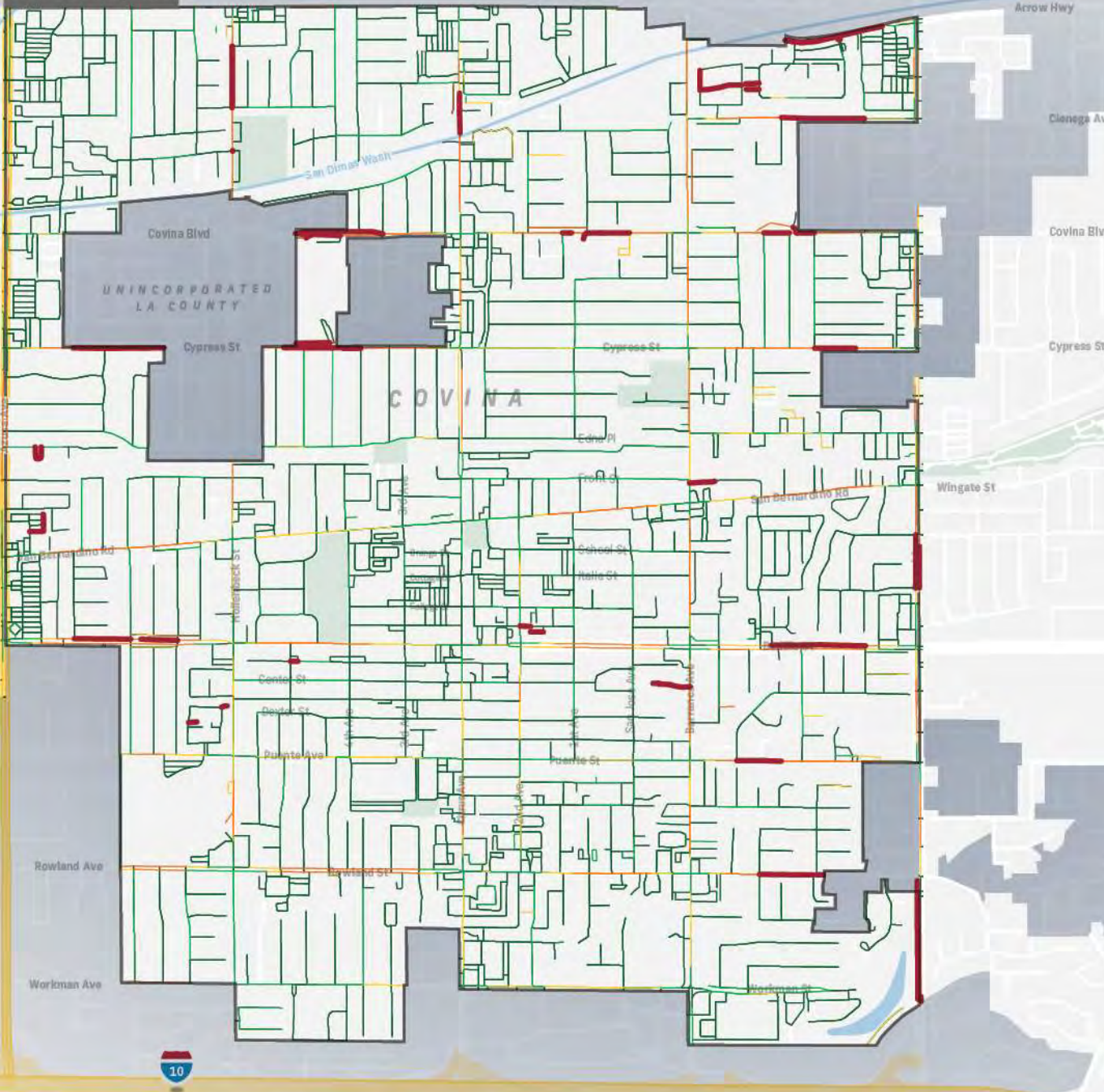
- <20 MPH
- 20 to 30 MPH
- 31 to 35 MPH
- 36 to 40 MPH
- >40 MPH

#### KEY TAKEAWAYS

The number of high-speed segments where the average speed is 40 MPH or more increases in the **overnight hours** and **over the weekend** when streets are less congested.

*There are a handful of residential roadway segments shown on the map where data shows average speeds beyond 40 MPH. We would like to explore further with the City the feasibility of speeding on these segments, or if this is data noise.*

#### CASMCP Study Area



Existing Facilities



### Weekend Daily Speed Data

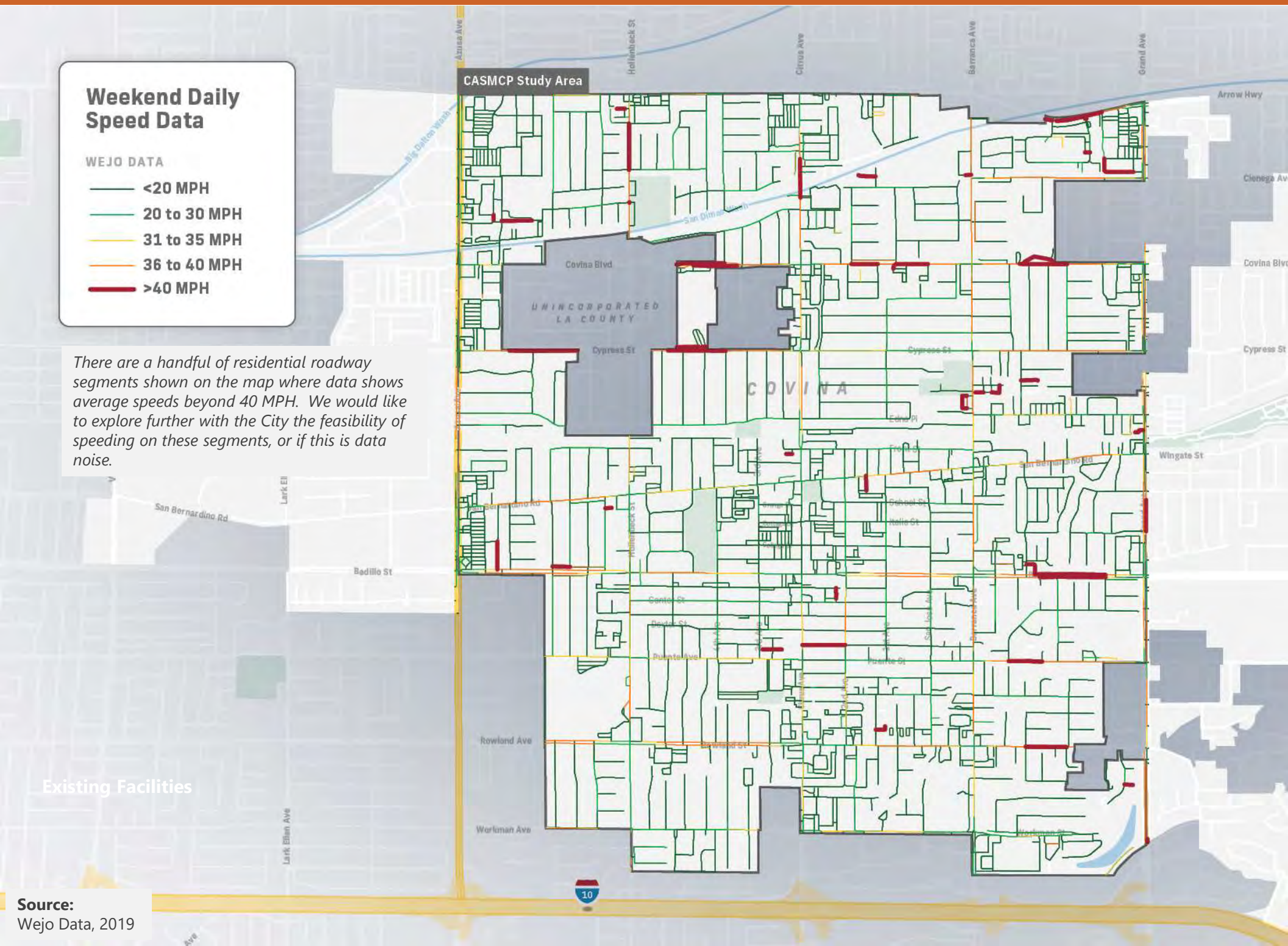
WEJO DATA

- <20 MPH
- 20 to 30 MPH
- 31 to 35 MPH
- 36 to 40 MPH
- >40 MPH

*There are a handful of residential roadway segments shown on the map where data shows average speeds beyond 40 MPH. We would like to explore further with the City the feasibility of speeding on these segments, or if this is data noise.*

CASMCP Study Area

Existing Facilities



# Major Destinations & Accessibility

Key districts in the study area

Transit accessibility







Location of top employers

Access to grocery stores & parks

Economic development corridors and Transit-Oriented-Development sites



## Districts

-  Covina Town Square
-  Health Services
-  Downtown
-  Auto Dealerships
-  Industrial Park
-  Business Park

## KEY TAKEAWAYS

**Covina Town Square** | Several shopping centers within this area. There are also a few adjacent multi-family residential developments such as the Nantucket Village and Covina Grand Apartments

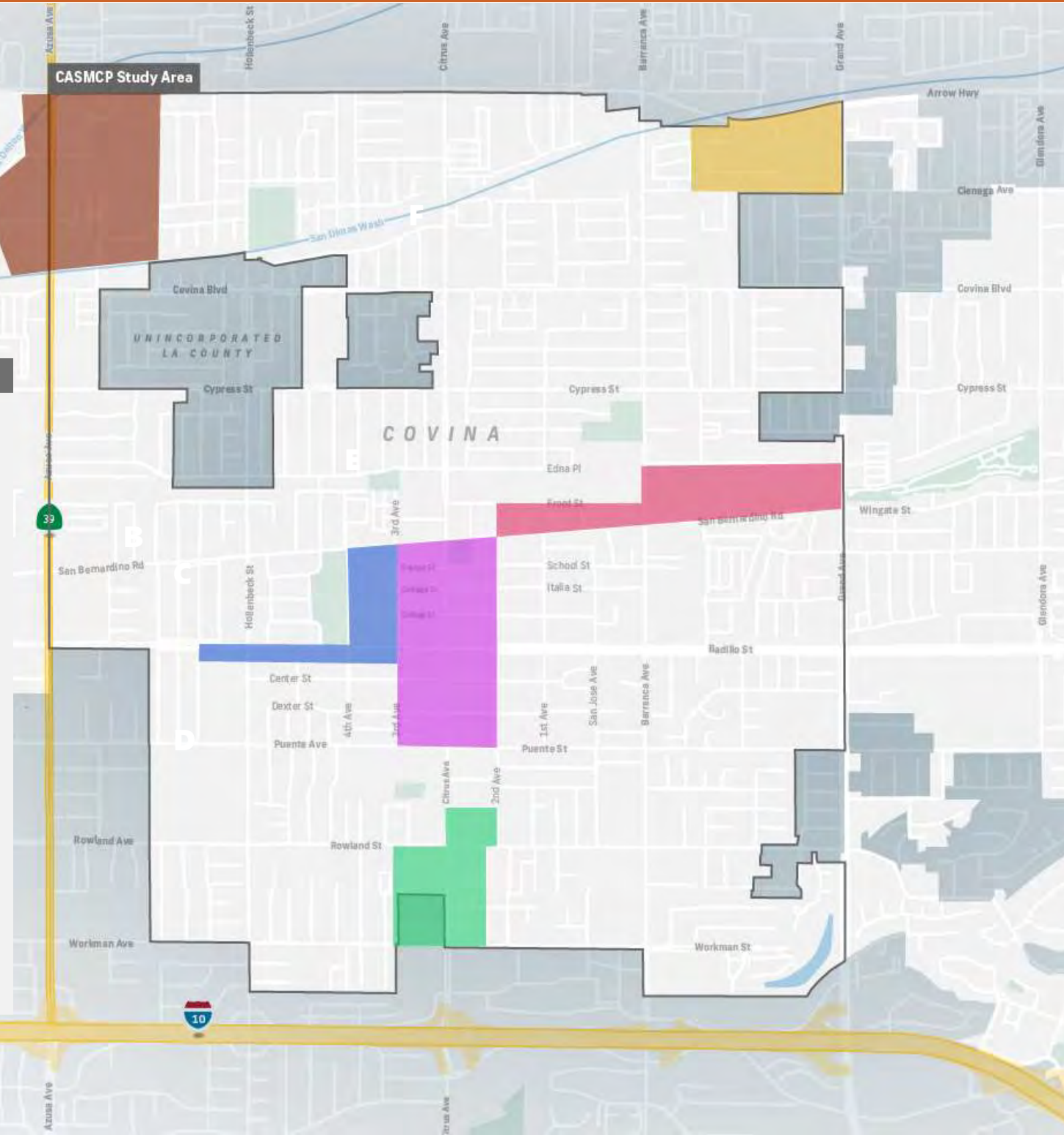
**Health Services** | Location of local hospital and several dental and health clinics

**Downtown** | Small retailers and local restaurants. Has a more walkable and pedestrian-oriented environment. Also contains several civic facilities (library, city hall) and museums.

**Auto Dealership** | Location of several auto dealerships (Chevrolet, Kia, Buick), light auto repair services, such as oil changes, and car rentals.

**Industrial Park** | Heavier industrial uses including auto body repair shops.




**Business Park** | Several offices in light manufacturing and professional services. Also contains Arrow Lodge Brewing.





**5-Minute (1/4-Mile) Walk Shed From Bus Stops**

**BUS STOPS BY AMENITIES**

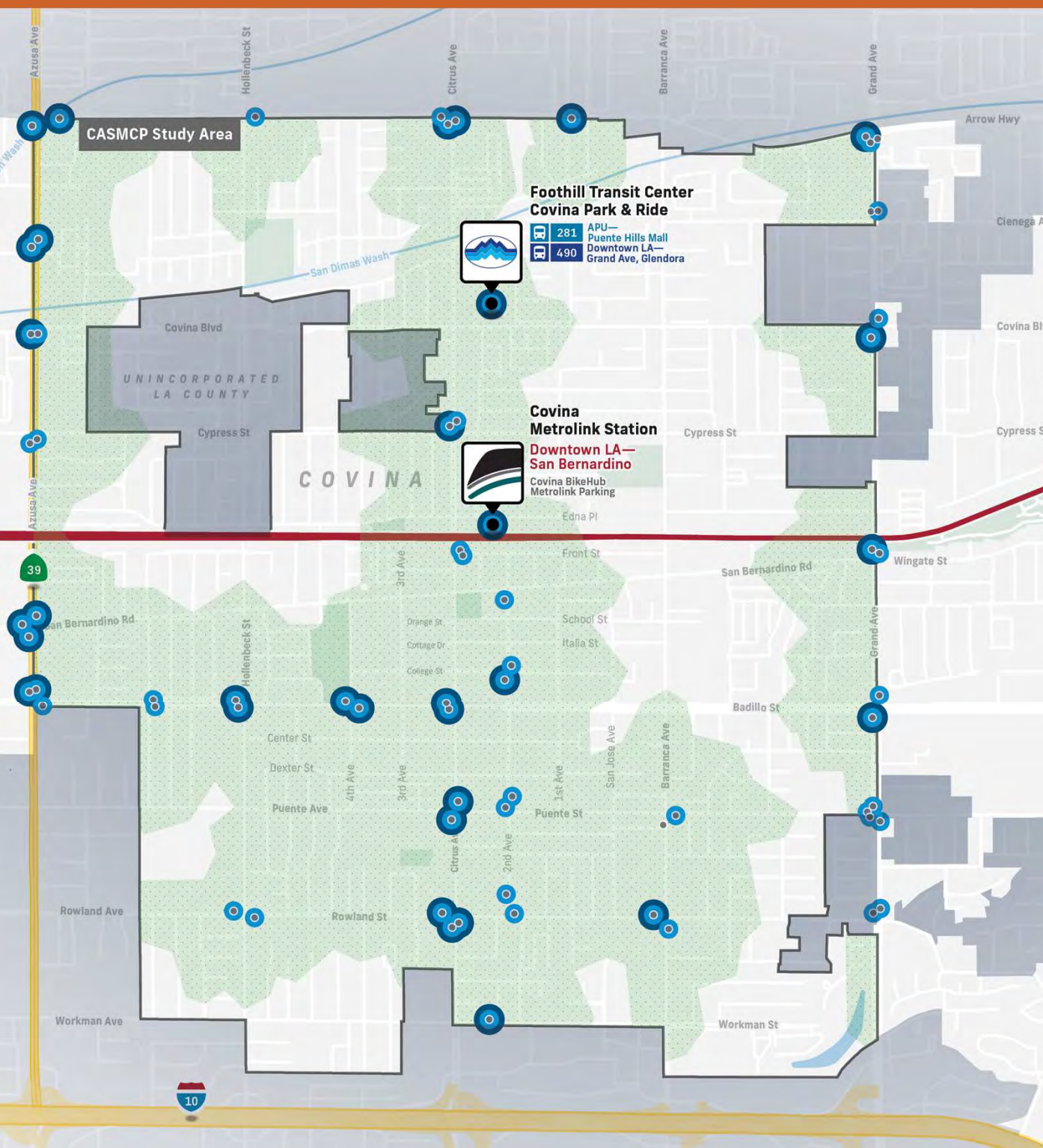
-  Bus Stops with Bench & Shelter
-  Bus Stops with Bench
-  Bus Stops with No Amenities

**KEY TAKEAWAYS**

**70%** of the study area within a 5-minute walk of a bus stop

**97%** of stops have a marked crosswalk within 250'

**3%** of bus stops are located midblock



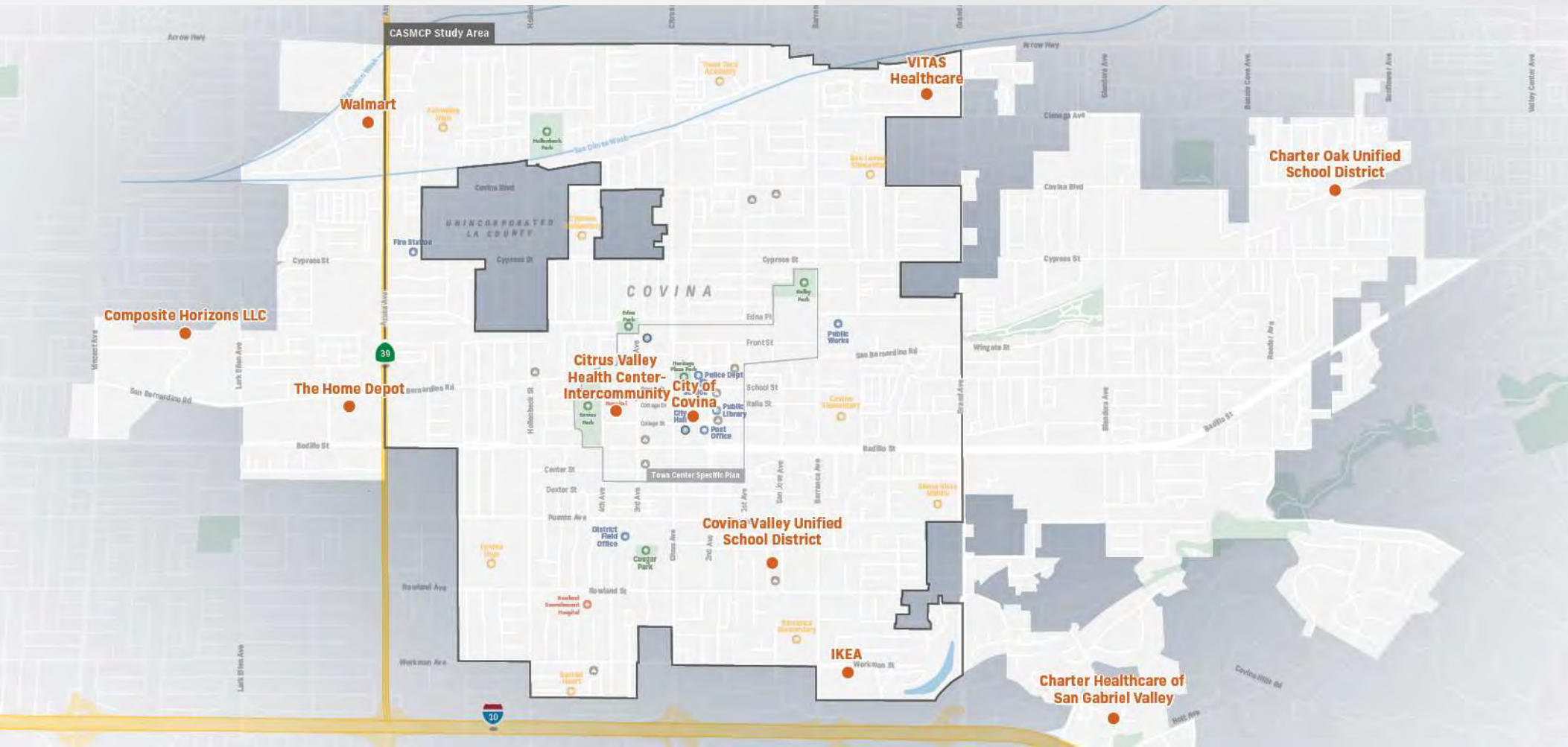


## Major Destinations & Accessibility Top Employers

Among the top ten employers in the City, three are healthcare related, three are school districts / local government, three are major big box retailers, and one is an aerospace components firm.

**Five of these major employers have operations within the CASMCP area**, with several others located just outside of CASMCP boundaries, suggesting workers at these firms could benefit from active transportation improvements.

Employer	Sector	Employees
Covina Unified School District	Education	1,365
Citrus Valley Health Partners – Intercommunity	Healthcare	829
Charter Oak Unified School District	Education	630
Charter Healthcare of San Gabriel Valley	Healthcare	535
Ikea	Retail	325
Walmart	Retail	265
City of Covina	Government	244
VITAS Innovative Hospice Care	Healthcare	221
The Home Depot	Retail	211
Composites Horizons LLC	Aerospace	204





## Park Access

-  Parks and Open Space
  -  Not Accessible to Park\*  
(More than 1/2 mile from park or open space)
- \*Note: these areas have residential density >1,000 people per sq mi

## Grocery Store Access

-  Grocery Store
-  Not Accessible by Walking  
(More than 1/2 mile radius of grocery store)

## KEY TAKEAWAYS

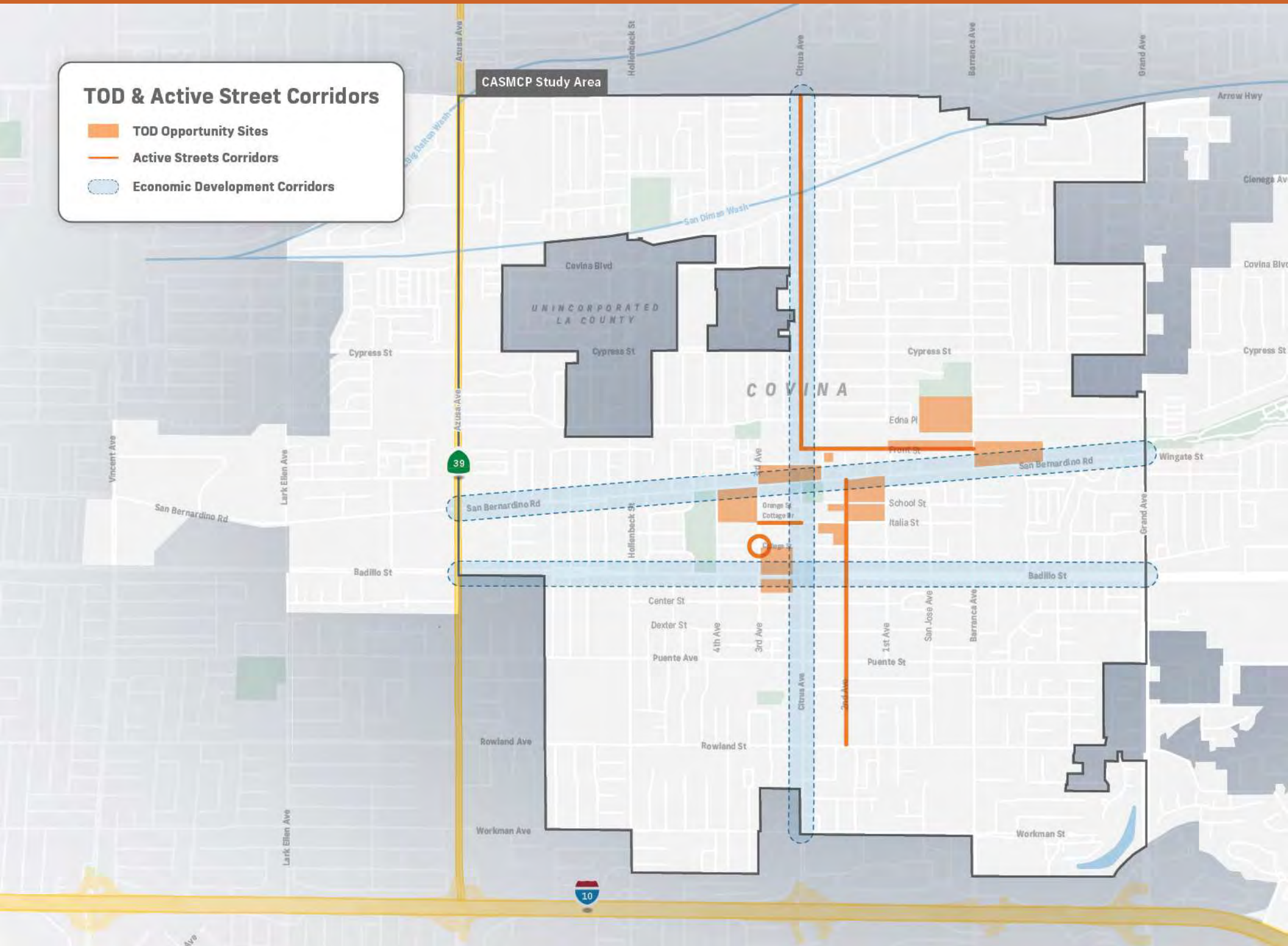
**75% of the study area is within a 1/2-mile radius from either recreational space or grocery stores.**

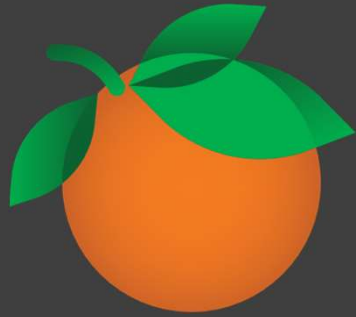
While a 1/2-mile to 1-mile may be too far to walk for some pedestrians, that is just a two-to-four-minute bike ride for the average rider. There are opportunities to **promote access to these destinations** by providing direct bicycle connections.



**TOD & Active Street Corridors**

-  TOD Opportunity Sites
-  Active Streets Corridors
-  Economic Development Corridors









# covina

## active streets & multimodal connectivity plan

FEHR & PEERS

MIG  
Kosmont  
CWE

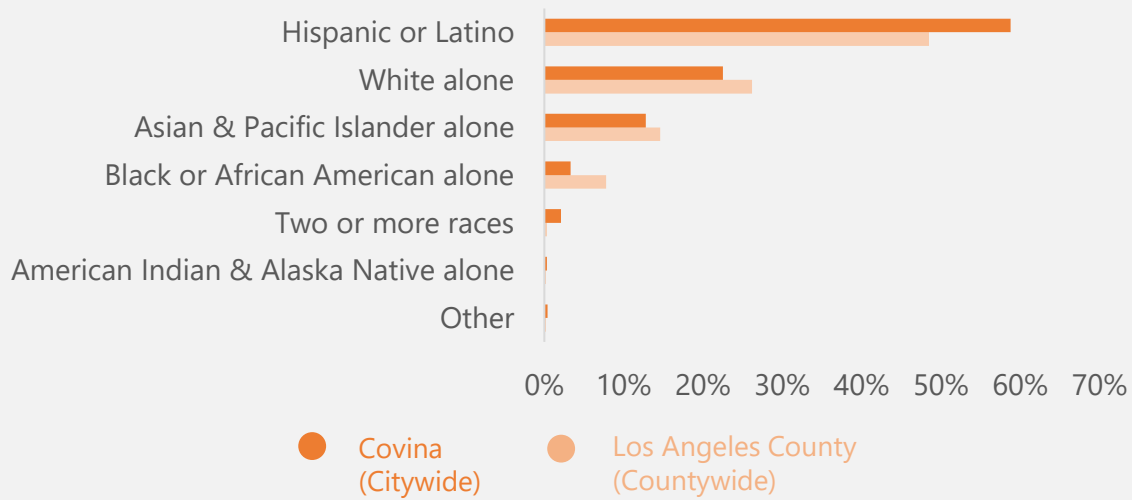
# Existing Conditions

## Equity Study

- Demographics
- Socioeconomics
- CalEnviroScreen
- Disadvantaged Communities
- Sensitive Communities
- Healthy Places Index
- Park Access
- Grocery Store Access
- Housing and Transportation Affordability Index



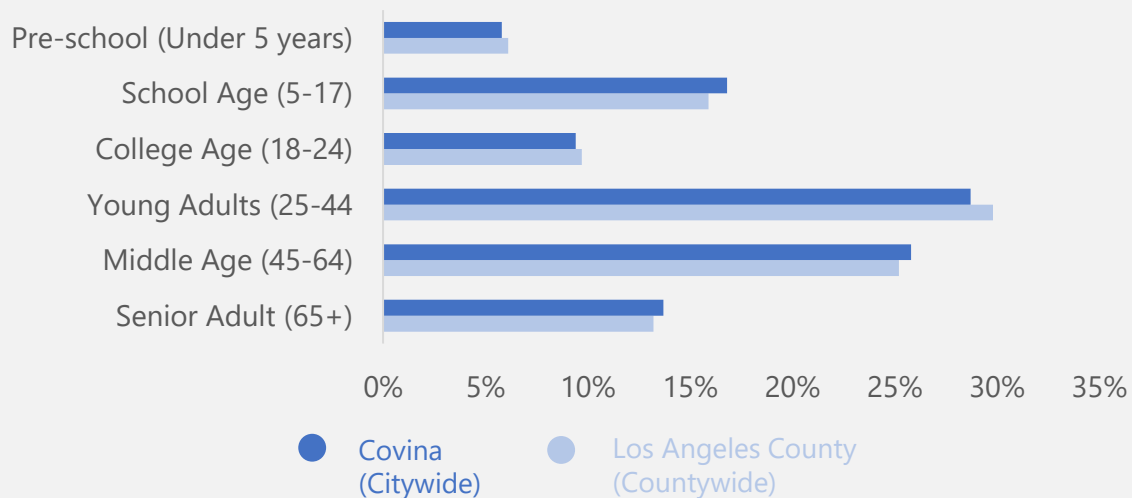
## Race & Ethnicity



In both Covina and the Los Angeles County, Hispanic or Latino residents make up the largest ethnic group.

Covina has approximately 20 percent more Hispanic or Latino residents than the County.

## Age



Covina has a similar age composition as the County. The median age for Covina is 37.3 years old and 36.5 years old for the County.

Source: American Community Survey 2015-2019 5-Year Estimates



## Predominant Population

CENSUS TRACTS WITH A HISPANIC MAJORITY

- Predominant (gap > 50%)
- Sizeable (gap 10% - 50%)
- Slim (gap < 10%)
- Census Tracts

CASMCP Study Area

## STUDY AREA STATS

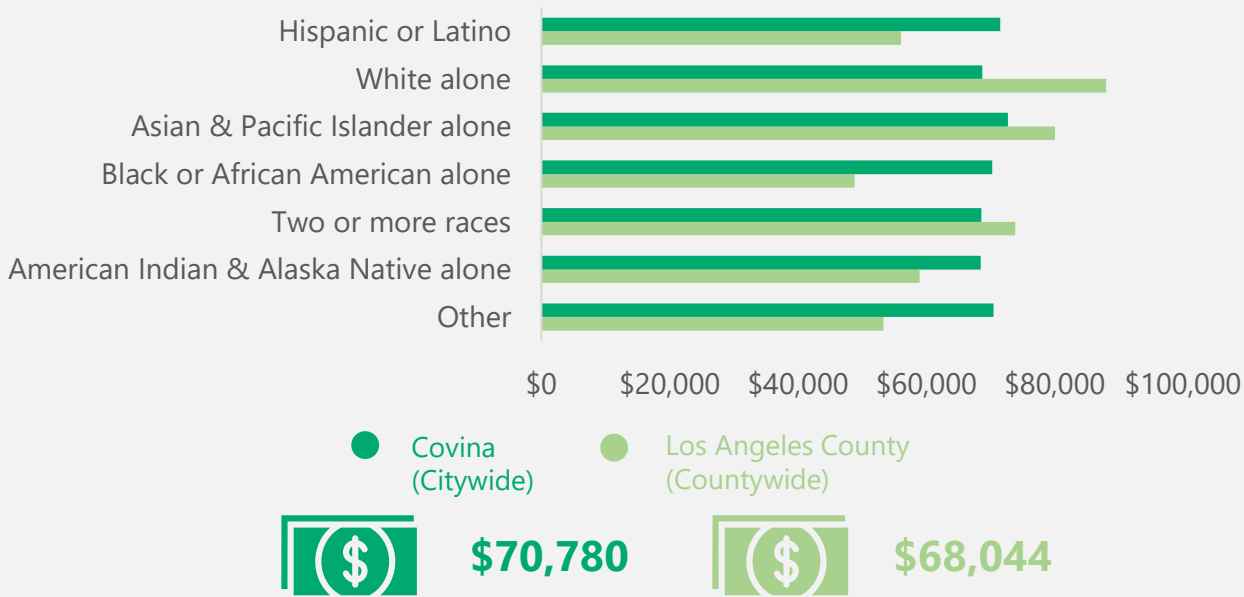
Hispanic or Latino residents are a predominant population in the City. Within the study area, most Census tracts contain a ***Sizeable*** Hispanic majority. One Census tract contains a ***Slim*** Hispanic majority.

The map indicates the extent to which one group is dominant over the next most populous.

- Predominant means the group contains 50% or more people than the next most populous.
- Sizeable means the group contains 10-20% more people than the next most populous.
- Slim means the group contains 10 percent or less people than the next most populous.

Source: California Department of Housing and Community Development, AFFH Data Viewer; US Census Bureau SFI and TIGER data sets 2010

## Median Income



The median income is 4 percent higher in Covina than in the County. In the City, there are no significant disparities between groups, unlike in the County where most people of color have significantly lower incomes than White residents.

### Drive Alone

78%     74%



Covina  
(Citywide)

Los Angeles  
County  
(Countywide)

### No Vehicle Available

2.5%     3.9%



Covina  
(Citywide)

Los Angeles  
County  
(Countywide)

Covina has a similar commuting and vehicle accessibility trends as the County. Roughly  $\frac{3}{4}$  of residents in both the County and City drive alone to work. The County has a slightly higher proportion of households without a vehicle.

Source: American Community Survey 2015-2019 5-Year Estimates

## Median Income

BY CENSUS BLOCK GROUP

- \$0 - \$35,000
- \$35,000 - \$55,000
- \$55,000 - \$70,780 (Covina Median Income)
- \$70,780 - \$95,000
- Greater than \$95,000
- Census Block Group

CASMCP Study Area

## STUDY AREA STATS

**A majority of block groups in the study area fall within or above the City's median income. Lower-income block groups are mostly located east of Citrus Avenue.**

Note: Median Income shown at Block Group geography level.

Source: California Department of Housing and Community Development, AFFH Data Viewer; ACS 2015-2019 5-year estimates



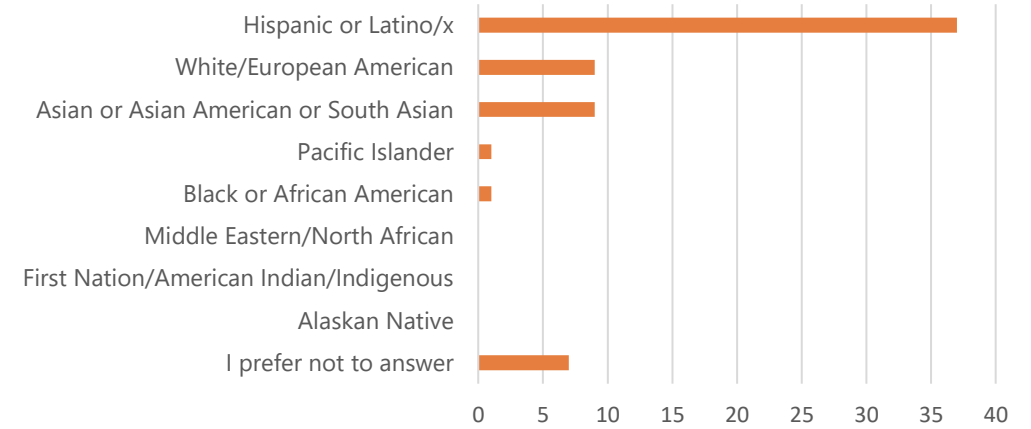
An online survey has been used to hear more from residents about how they travel and move about the downtown Covina area. The survey is meant to inform the public about the project, but to also get an initial understanding of existing conditions from residents themselves. The following provides a brief summary of the information gathered so far.

Based on 58 completed online surveys:

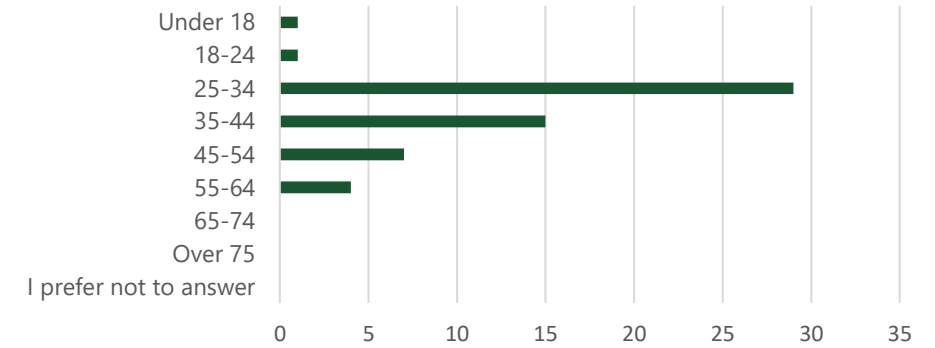
- » Race and ethnicity of survey respondents are a similar proportion to citywide demographics.
- » The age composition of survey respondents is similar to that of the city but missing the over 65 age groups.
- » A majority of survey respondents are women.

Given the total number of survey responses, the survey may not accurately reflect the city's population and demographics because of the small sample size. However, these responses do provide some insight into emerging trends. See pages 36 and 37 for more details on the survey methodology.

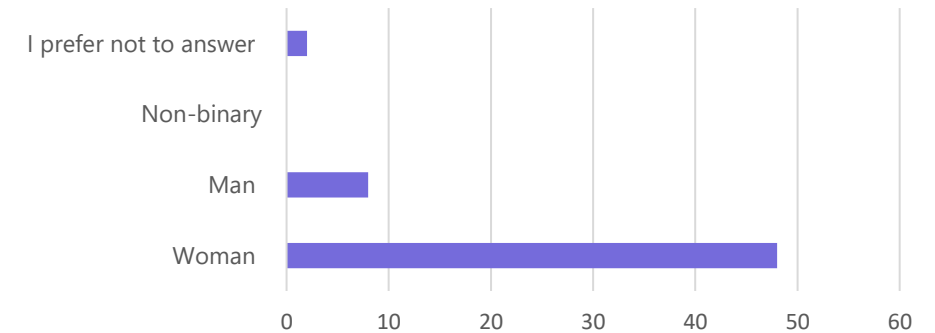
### Race and Ethnicity



### Age



### Gender



Access to vehicles among survey respondents is similar to citywide demographic information.

Given the total number of survey responses, the survey may not accurately reflect the city's population and demographics because of the small sample size

### Census Demographic Data

#### Drive Alone

78%



Covina  
(Citywide)

74%



Los Angeles  
County  
(Countywide)

#### No Vehicle Available

2.5%



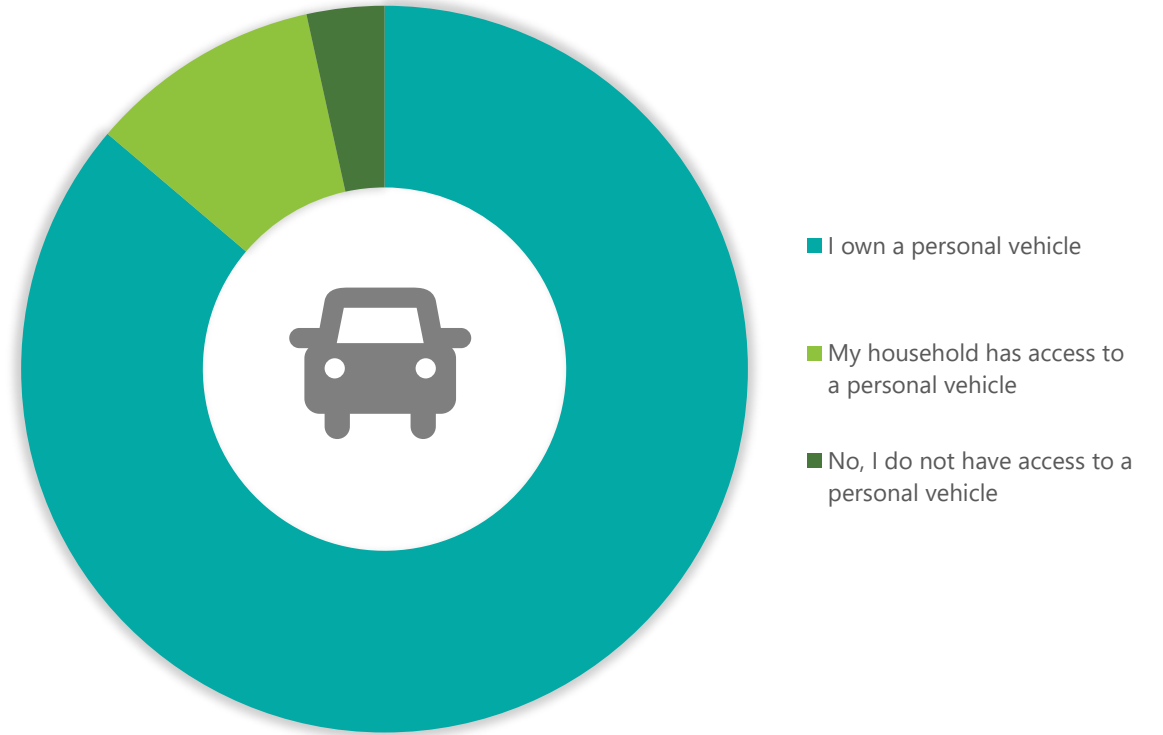
Covina

3.9%



Los Angeles  
County

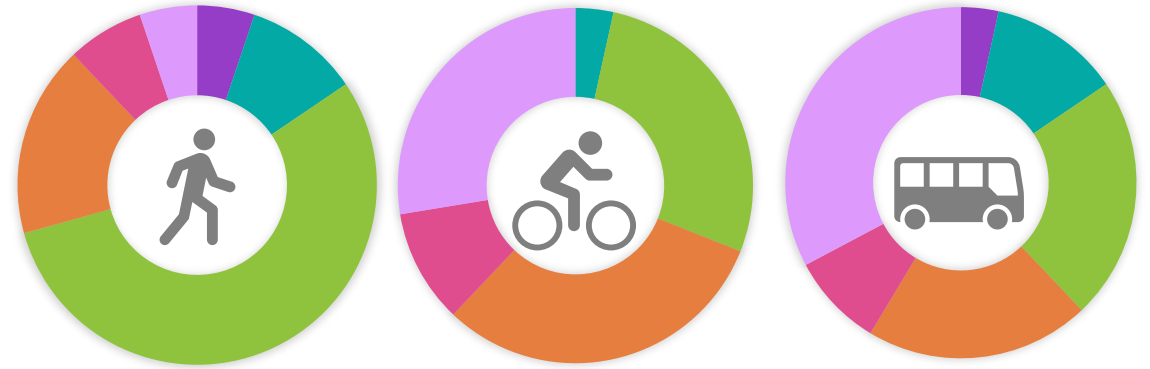
**Do you have access to a personal vehicle?**  
86% said yes versus only 3.5% that said no



Respondents were asked to describe their tendency to use alternative means of transportation, specifically for walking, biking, and taking transit. For each of these three modes they were asked how often they used that mode for their trips. They were also asked to indicate top concerns that kept them from using any of these modes.

Responses show:

- » People are more likely to walk than bike or take transit.
- » The interested but concerned cohort is consistent in size for walking, biking, and transit.
- » Not interested cohort is larger for bicycling and taking transit compared to walking.
- » Inaccessibility is an issue for all three modes, but larger for bicycles and transit.



**Top Concerns:**

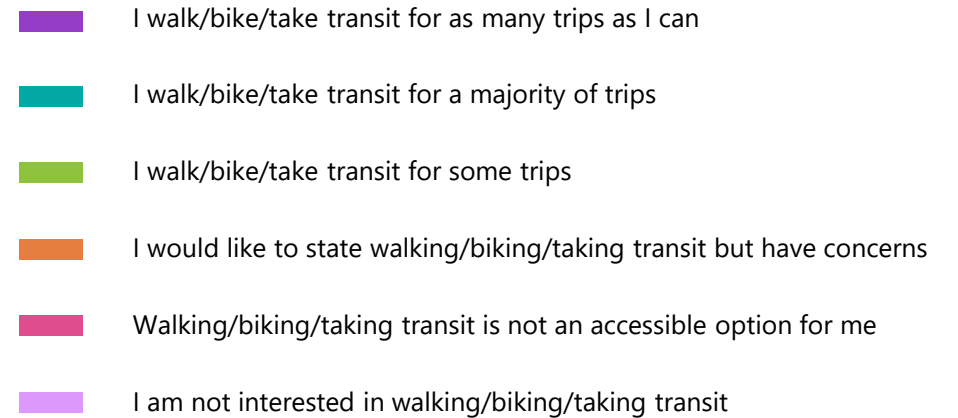
- » Safety
- » Inadequate crosswalks
- » Comfort/lack of shade

**Top Concerns:**

- » Safety
- » Security/ bike friendly infrastructure

**Top Concerns:**

- » Safety
- » Reliability/convenience



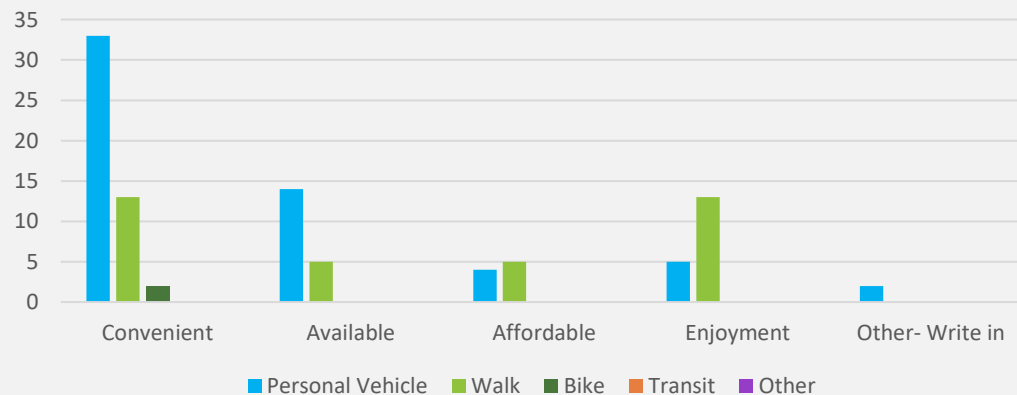


## Rank the modes of transportation you use most often to get downtown

Mode	Rank	Rank Distribution
Personal Vehicle	1	
Walk	2	
Bike	3	
Transit	4	
Other	5	

█ Lowest Rank     █ Highest Rank

## Why did you rank your first choice first?



## Survey Respondents:

Personal vehicle is the most popular mode used to get to Downtown. This correlates with the citywide household access to vehicles.

Walking is the second most popular way for people to get to Downtown. This follows a higher preference of people to walk places as compared to bicycle and transit generally.

Choosing to use a personal automobile is used most often because of its convenience and availability.

People who choose to walk do so more for enjoyment and convenience, just above what is affordable and available to them.

*Note: Other-write in was safety.*

# Identifying Community Inequities

This study used three publicly available tools to identify inequities within the study area. Each of these tools examine a variety of factors relating to the social, health, and environmental conditions of communities statewide. While two of these indices evaluate similar indicators, each one has a different focus.

**CalEnviroScreen 4.0** identifies communities most affected by pollution and the population characteristics that make them especially vulnerable to pollution effects. It uses two groups of indicators to produce an overall composite score; pollution burdens and population characteristics.

*Produced by the California Office of Environmental Health Hazard Assessment.*

**Healthy Places Index 3.0** quantifies factors that shape health to compare the health and well-being of communities and identify where health inequities exist. It combines 23 community characteristics into a single indexed score.

*Produced by the California Public Health Alliance.*

**Sensitive Communities** identifies communities vulnerable to displacement by analyzing criteria that would make it difficult for a household to afford drastic shifts in housing costs in the event of increased development.

*Produced by the UC Berkley's Urban Displacement Project.*

For the purposes of this study, both the similarities and variations in the three indices help identify potentially differing opportunities, challenges, and priorities within different neighborhoods in the study area. For example, one neighborhood might be more concerned about housing issues versus transportation-related burdens.

## Comparison of Indicators

### **CalEnviroScreen 4.0** **Pollution Burden**

- » Ozone
- » PM 2.5
- » Children's Lead Risk from Housing
- » Diesel Particulate Matter
- » Drinking Water Contaminant
- » Pesticide Use
- » Toxic Release from Facilities
- » Traffic Impacts
- » Cleanup Sites
- » Groundwater Threats
- » Hazardous Waste Generators & Facilities
- » Impaired Water Bodies
- » Solid Waste and Facilities

### **Population Characteristics**

- » Asthma
- » Cardiovascular Disease
- » Low Birth Weight Infants
- » Educational Attainment
- » Housing Burden
- » Linguistic Isolation
- » Poverty
- » Unemployment

### **Healthy Places Index 3.0**



- » Population above Poverty
- » Population that is Employed
- » Per Capita Income
- » Pre-School Enrollment
- » High School Enrollment
- » Bachelor's Degree Attainment
- » 2020 Census Response Rate
- » Registered Voters
- » Automobile Access
- » Active Commuting
- » Park Access
- » Retail Density
- » Tree Canopy
- » Homeownership
- » Housing Habitability
- » Low-Income Homeowner Severe Housing Cost Burden
- » Low-Income Renter Severe Housing Cost Burden
- » Uncrowded Housing
- » Diesel PM
- » Drinking Water
- » Ozone
- » PM 2.5
- » Insured Adults

### **Sensitive Communities**

- » Share of very low income residents is above 20%
- AND
- » Share of renters is above 40%
  - » Share of people of color is above 50%
  - » Share of very-low income households that are severely rent burdened above county median
  - » Tracts or areas in close proximity have been experiencing displacement pressures.
- Displacement pressure is defined as:
- » Percent change in rent above county median for rent increases, 2012-2017
- OR
- » Difference between tract median rent and median rent for surrounding tracts above median for all tracts in county (rent gap), 2017

## Sensitive Communities (Urban Displacement Project)

BY CENSUS TRACT

-  Vulnerable to Displacement
-  Disadvantaged Community

CASMCP Study Area

## STUDY AREA STATS

# 2

### Census tracts contain Sensitive Communities

A sensitive Community is defined as having a large proportion of very low-income residents, renters, people of color, and rent increases above the county median.

Source: California Department of Housing and Community Development, AFFH Data Viewer; UC Berkeley Urban Displacement Project (UDP)

Note: The UDP uses ACS 2012-2017 5-Year Estimates data.



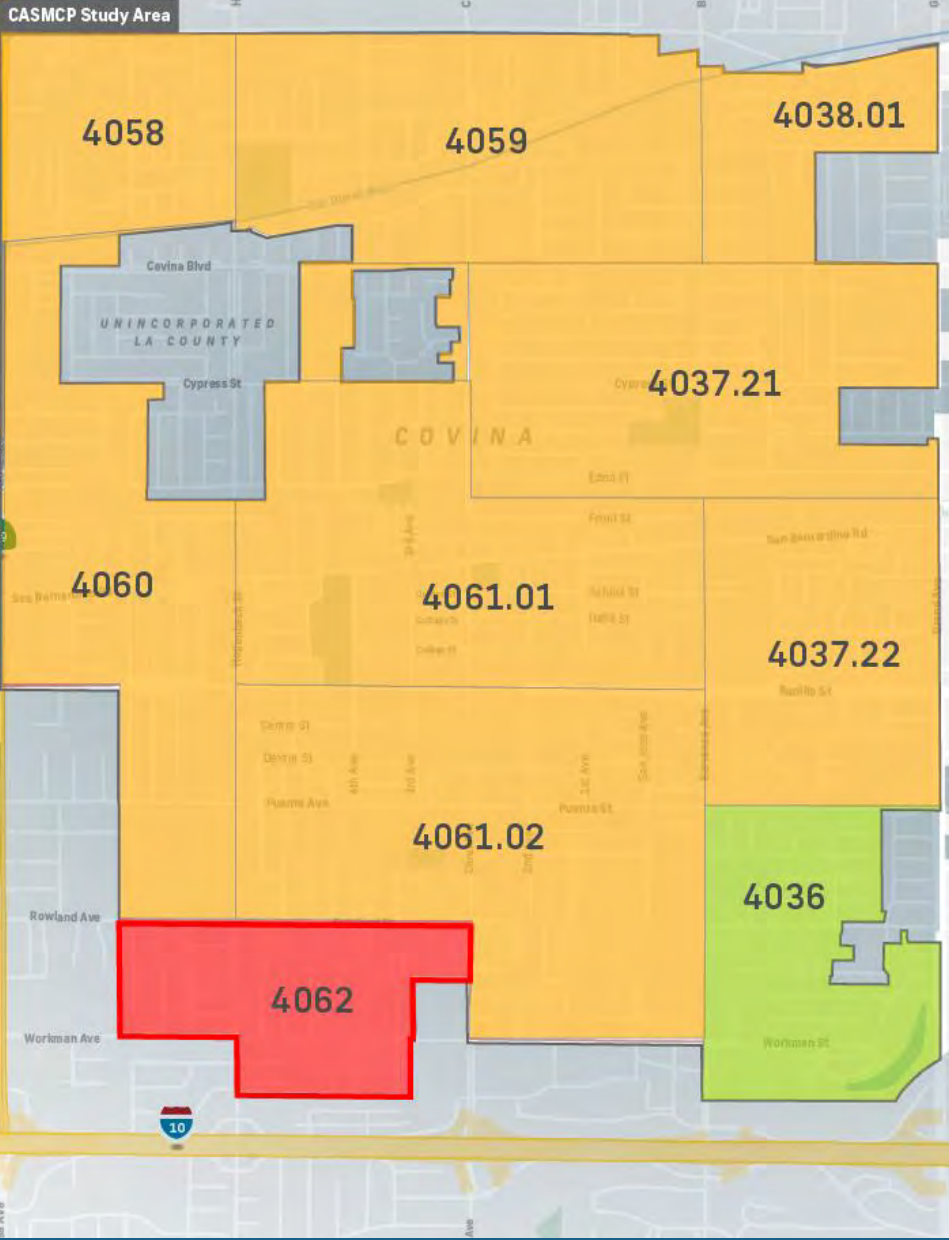
**STUDY AREA STATS**

**CalEnviroScreen 4.0 Composite Score**

BY CENSUS TRACT

- 24% or Lower
- 25% - 49%
- 50% - 74%
- 75% or Higher (DAC)

Census Tracts



**1 Census tract qualifies as a Disadvantaged Community (DAC)**

Disadvantaged Communities are defined as those disproportionately affected by a combination of economic, health, and environmental burdens. These communities have a CalEnviroScreen score in the 75<sup>th</sup> percentile or higher.

Source: California Department of Housing and Community Development, AFFH Data Viewer; CalEnviroScreen 4.0

## CalEnviroScreen 4.0 Pollution Burden Score

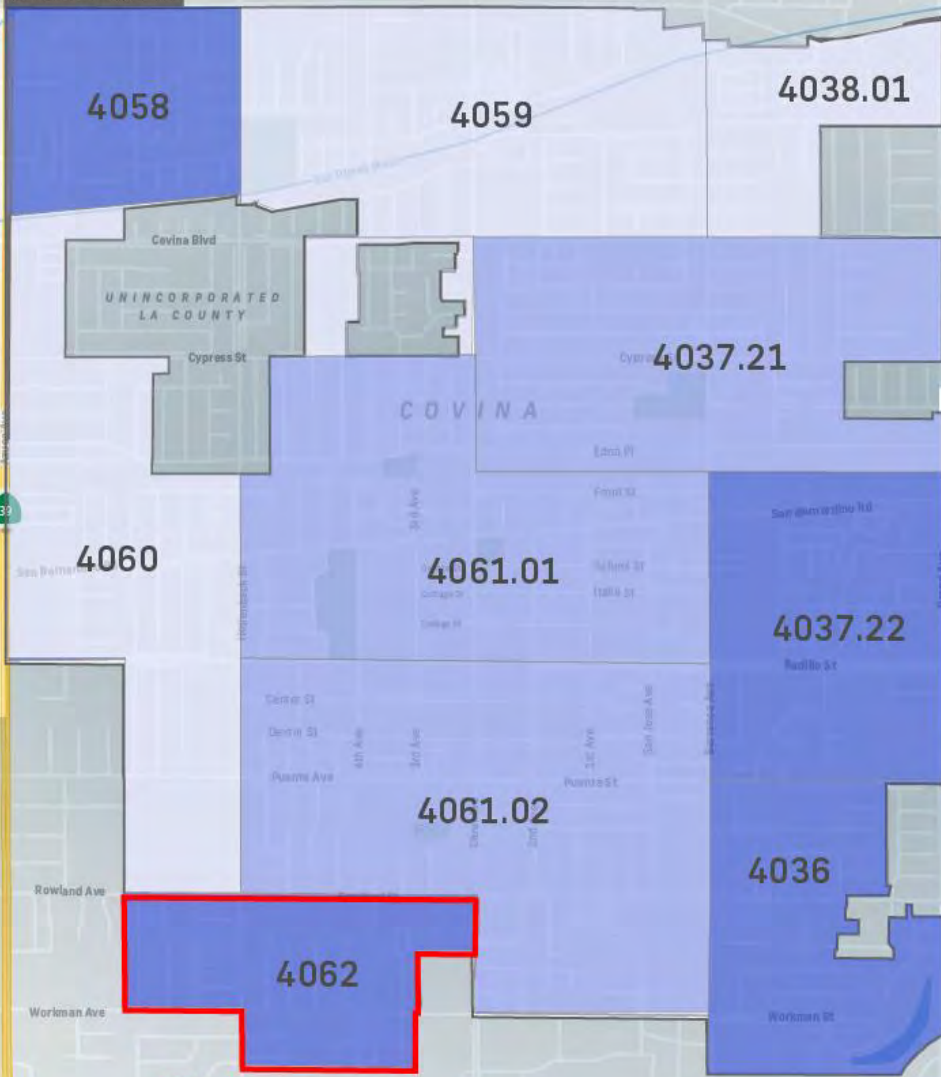
BY CENSUS TRACT

- 24% or Lower
- 25% - 49%
- 50% - 74%
- 75% or Higher
- Census Tracts
- Disadvantaged Community

### Pollution Burdens

CalEnviroScreen pollution burden score uses various pollution indicators to represent potential exposures to pollutants and adverse environmental conditions caused by pollution.

CASMCP Study Area



## STUDY AREA STATS

**PM 2.5 and Ozone are the highest-ranking pollution burdens throughout the study area.**

A majority of the top pollution burdens within the study area and the disadvantaged community relates to transportation.

## DISADVANTAGED COMMUNITY STATS

**86<sup>th</sup> percentile traffic impacts**

Traffic impacts is a measure of the number of vehicles on the roads in an area.

**85<sup>th</sup> percentile PM 2.5**

Particulate Matter, or PM 2.5, is an air pollutant that contains a mixture of organic chemicals, dust, soot, and metals. These particles usually come from cars, trucks, factories and other activities.

**77<sup>th</sup> percentile ozone**

Ozone is found in smog and at ground level it is formed when pollutants chemically react in the presence of sunlight. Cars, factories, farms, are some main sources of ozone pollution.



## CalEnviroScreen 4.0 Population Characteristics Score

BY CENSUS TRACT

- 24% or Lower
- 25% - 49%
- 50% - 74%
- 75% or Higher
- Census Tracts
- Disadvantaged Community

**Population Characteristics**  
CalEnviroScreen's population characteristics score uses both health and socioeconomic indicators that can contribute to a community's vulnerability to pollution.

CASMCP Study Area

4058

4059

4038.01

4037.21

4060

4061.01

4037.22

4061.02

4036

4062

## STUDY AREA STATS

**A majority of Census tracts have a population score within the 50<sup>th</sup> to 65<sup>th</sup> percentile range, including the disadvantaged community.**

Within the disadvantaged community, there are only two indicators that scored in the 75<sup>th</sup> percentile or higher ranking.

## DISADVANTAGED COMMUNITY STATS

**96<sup>th</sup>** percentile housing burden

Housing burdened low income households are households that are both low income and highly burdened by housing costs. Severe cost burden is defined as paying more than 50 percent of income on housing.

**85<sup>th</sup>** percentile linguistic isolation

Linguistic isolation is a term used by the US Census Bureau to describe limited English-speaking households. Members in these households speak a language other than English and speak English less than "very well."



Census Tracts	Percentiles and Indicators		
	CES 4.0 Percentile	Pollution Indicators Percentile	Population Characteristics Percentile
Census Tracts in Study Area			
4036	49	79	30
4037.21	54	63	44
4037.22	64	75	51
4038.01	49	40	51
4058	62	82	44
4059	51	36	56
4060	51	47	50
4061.01	59	62	51
4061.02	65	63	59
4062	77	81	66

Census Tracts	Percentiles and Indicators									
	Pollution Score	Cleanup Sites	Grndwater Threats	Toxic Release Inventory	PM2.5	Traffic	Diesel PM	Drinking Water	Ozone	Lead
Study Area										
4036	79	0	0	77	87	91	51	96	77	72
4037.21	63	9	28	76	80	34	32	91	79	64
4037.22	75	0	23	76	86	41	31	92	78	85
4038.01	40	0	4	75	87	30	45	77	80	53
4058	82	71	25	77	72	47	72	30	80	81
4059	36	2	2	75	75	38	33	42	80	85
4060	47	9	5	77	75	39	37	79	79	79
4061.01	62	19	17	77	80	31	54	50	78	80
4061.02	63	5	5	77	85	31	78	50	77	82
4062	81	0	0	78	85	86	75	93	77	76

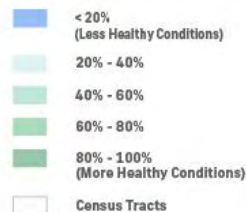
The study will not be able to address pollution burdens outside the realm of transportation because the study focus is to create better conditions for alternative means of transportation. Although these areas experience a number of burdens, addressing the ones related to transportation – i.e., improving walking, biking, and transit conditions could relieve pollution burdens related to transportation (e.g. PM 2.5, diesel PM, traffic, and ozone) by encouraging residents to drive less - will contribute to addressing burdens overall.

Census Tracts	Percentiles and Indicators								
	Population Score	Asthma	Low Birth Weight	Cardio Disease	Edu. Attainmt.	Linguistic Isolation	Poverty	Unemploy.	Housing Burden
Study Area									
4036	30	29	68	15	58	56	30	6	28
4037.21	44	48	42	37	45	29	38	72	59
4037.22	51	61	31	49	57	47	60	50	56
4038.01	51	52	43	53	40	50	50	81	39
4058	44	51	41	48	66	58	36	49	15
4059	56	59	18	61	74	51	74	87	26
4060	50	46	62	37	53	55	37	63	47
4061.01	51	72	39	49	48	47	35	43	65
4061.02	59	81	48	62	45	27	57	51	58
4062	66	36	72	23	73	85	70	58	96

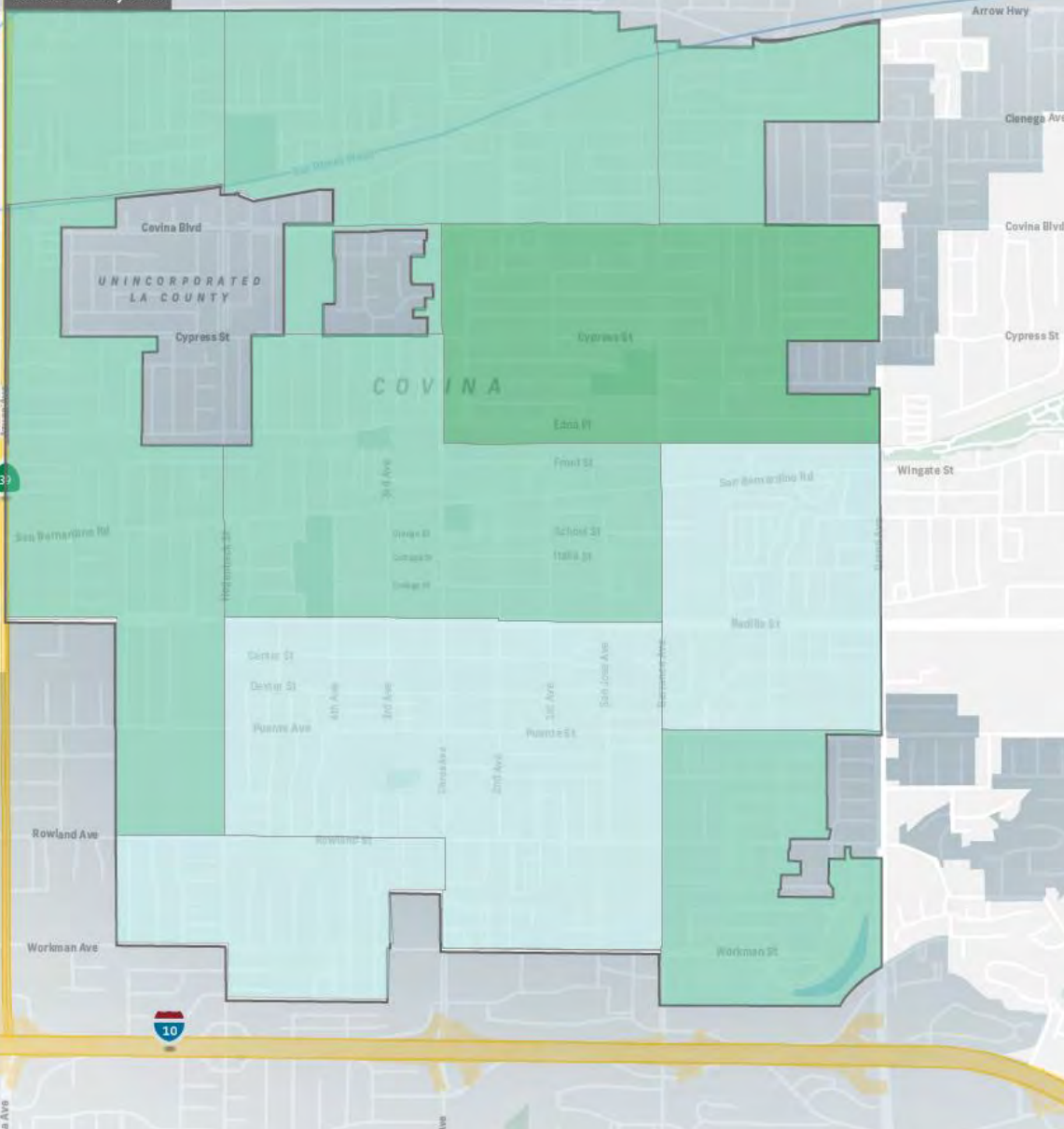


## Healthy Places Index

BY CENSUS TRACT



CASMCP Study Area



## STUDY AREA STATS

### 49<sup>th</sup> percentile HPI composite score

Two of the lowest ranking categories within the study area relate to housing and transportation. The low scores within the study area are largely driven by the low scores in the disadvantaged community.

### 4<sup>th</sup> percentile transportation category

- » % of households with access to an auto
- » % of workers commuting by alternative modes

### 10<sup>th</sup> percentile housing category

- » % of occupied housing units by property owners
- » % households with complete kitchen and plumbing
- » % of low income homeowners paying more than 50% of income on housing
- » % of low income renter households paying more than 50% of income on housing
- » % of households with less or equal to 1 occupant per room

Source: Public Health Alliance of Southern California, California Healthy Places Index 3.0

Healthy Places Index Indicators and Community Characteristics	Covina	Study Area	4036	4037.21	4037.22	4038.01	4058	4059	4060	4061.01	4061.02	4062
<b>Economic</b>	63.3	7.9	56.7	66.3	37.3	43.6	55.6	28.9	55.4	77.5	50.2	41.2
Above Poverty	58.3	44.8	54.9	55.1	28.3	42.7	61.1	19.9	59.1	62.5	39.2	30.7
Employed	80.1	36.4	70.2	93.7	62.1	50.1	70.8	48.5	69.6	98.8	80.0	66.8
Per Capita Income	48.2	39.4	47.2	43.8	29.8	42.4	32.7	28.5	36.5	48.9	36.6	37.0
<b>Education</b>	60.0	13.8	81.3	69.7	40.8	57.0	54.1	61.4	60.0	56.6	48.8	4.9
Pre-School Enrollment	55.9	55.3	52.1	33.1	28.4	47.1	27.5	34.2	47.3	46.1	39.1	29.1
High School Enrollment	35.2	23.9	63.0	63.0	24.5	63.0	63.0	25.5	9.2	63.0	63.0	8.7
Bachelor's Degree Attainment	23.9	38.1	95.1	87.6	49.7	56.9	68.4	77.8	95.1	57.3	48.8	12.1
<b>Social</b>	52.1	7.2	58.3	47.1	29.1	44.2	49.1	50.7	52.5	39.0	34.0	35.3
2020 Census Response Rate	63.5	48.7	54.1	50.3	25.8	48.1	64.5	57.3	54.1	35.3	N/A	40.1
Voting	28.7	12.4	57.5	41.6	32.6	38.9	35.0	41.4	46.7	41.3	32.8	31.5
<b>Transportation</b>	52.5	3.9	86.7	19.4	82.4	75.5	86.7	47.7	84.1	38.1	10.0	4.3
Automobile Access	36.4	50.6	88.8	28.9	65.5	75.7	93.3	49.3	60.2	36.6	19.8	7.4
Active Commuting	74.8	50.2	62.5	48.1	68.2	53.7	59.7	52.3	72.6	60.7	44.5	71.3

- » Lower percentile scores indicate less healthy conditions.
- » The Study Area percentile scores represent the combined score of all the Census tracts in the study area.
- » Percentile ranking is based on comparisons relative to that geography. For example, Study Area compares to other state Census tracts, Covina to other state cities, and Los Angeles County to other state Counties.

Healthy Places Index Indicators and Community Characteristics	Covina	Study Area	4036	4037.21	4037.22	4038.01	4058	4059	4060	4061.01	4061.02	4062
<b>Neighborhood</b>	39.2	17.9	26.4	57.0	34.7	18.8	25.9	32.3	35.4	56.7	41.1	13.3
Park Access	57.7	32.8	20.4	80.1	38.8	22.3	29.5	47.4	37.4	80.1	36.0	13.4
Retail Density	91.2	37.2	81.7	77.5	82.5	78.7	81.6	35.5	79.7	71.4	91.6	89.1
Tree Canopy	21.6	42.7	76.1	16.4	18.2	12.4	20.3	15.2	40.8	27.5	17.5	13.2
<b>Housing</b>	32.1	9.6	76.9	44.6	28.3	47.0	68.0	61.5	50.6	50.0	23.7	11.2
Homeownership	27.9	49.6	73.7	48.2	28.3	57.9	56.0	63.7	63.0	28.0	8.8	26.5
Housing Habitability	37.7	41.4	56.9	49.4	12.1	23.9	80.9	80.9	38.5	42.5	19.6	26.9
Low-Income Homeowner Severe Housing Cost Burden	47.8	60.3	28.9	41.1	85.6	85.8	89.5	49.3	33.0	46.5	17.0	9.9
Low-Income Renter Severe Housing Cost Burden	56.0	57.8	91.9	15.3	60.3	17.1	64.0	53.3	38.9	56.9	83.0	4.0
Uncrowded Housing	28.9	47.2	41.2	72.2	12.3	42.6	24.6	35.0	47.0	65.1	28.2	33.8
<b>Clean Environment</b>	16.0	11.4	9.7	14.7	27.8	16.7	31.2	37.1	28.4	28.9	24.3	11.8
Diesel PM	21.9	48.8	49.1	68.3	69.3	55.3	27.8	67.4	63.6	45.8	21.8	24.5
Drinking Water	29.8	72.0	1.6	3.4	31.9	13.2	62.3	62.3	33.7	37.8	37.8	7.4
Ozone	19.4	72.9	23.8	22.3	22.3	20.7	18.6	20.7	20.7	22.3	23.8	23.8
PM 2.5	12.9	57.5	12.6	20.3	14.3	13.5	28.7	25.8	24.8	19.7	14.7	15.4
<b>Healthcare Access</b>	47.6	10.0	45.4	38.7	37.8	61.3	41.6	34.6	51.3	70.6	33.4	35.3
Insured Adults	43.9	16.9	45.4	38.7	37.8	61.3	41.6	34.6	51.3	70.6	33.4	35.3

- » Lower percentile scores indicate less healthy conditions.
- » The Study Area percentile scores represent the combined score of all the Census tracts in the study area.
- » Percentile ranking is based on comparisons relative to that geography. For example, Study Area compares to other state Census tracts, Covina to other state cities, and Los Angeles County to other state Counties.



## Healthy Places Index

BY CENSUS TRACT

- < 20% (Less Healthy Conditions)
- 20% - 40%
- 40% - 60%
- 60% - 80%
- 80% - 100% (More Healthy Conditions)
- Census Tracts
- Sensitive Communities
- Disadvantaged Community

CASMCP Study Area

4058

4059

4038.01

4037.21

4060

4061.01

4037.22

4061.02

4036

4062

## STUDY AREA STATS

The two identified sensitive communities have differing conditions.

Census tract 4037.21 is the healthiest tract in the study area despite it qualifying as a sensitive community. Census tract 4062 is one of the least healthy tracts in the study area, indicating it bears a variety of burdens in addition to pollution.

## CENSUS TRACT 4037.21

**57<sup>th</sup>** percentile HPI composite score

This tract scores the lowest in clean environment and transportation but scores well in the economic, education, and neighborhood categories likely due to access to parks and commercial uses on Citrus Avenue.

## CENSUS TRACT 4062

**22<sup>nd</sup>** percentile HPI composite score

This tract scores poorly in several categories, with many ranking in the 15<sup>th</sup> percentile. Some of the lowest ranking categories relate to housing, transportation, and neighborhood conditions.

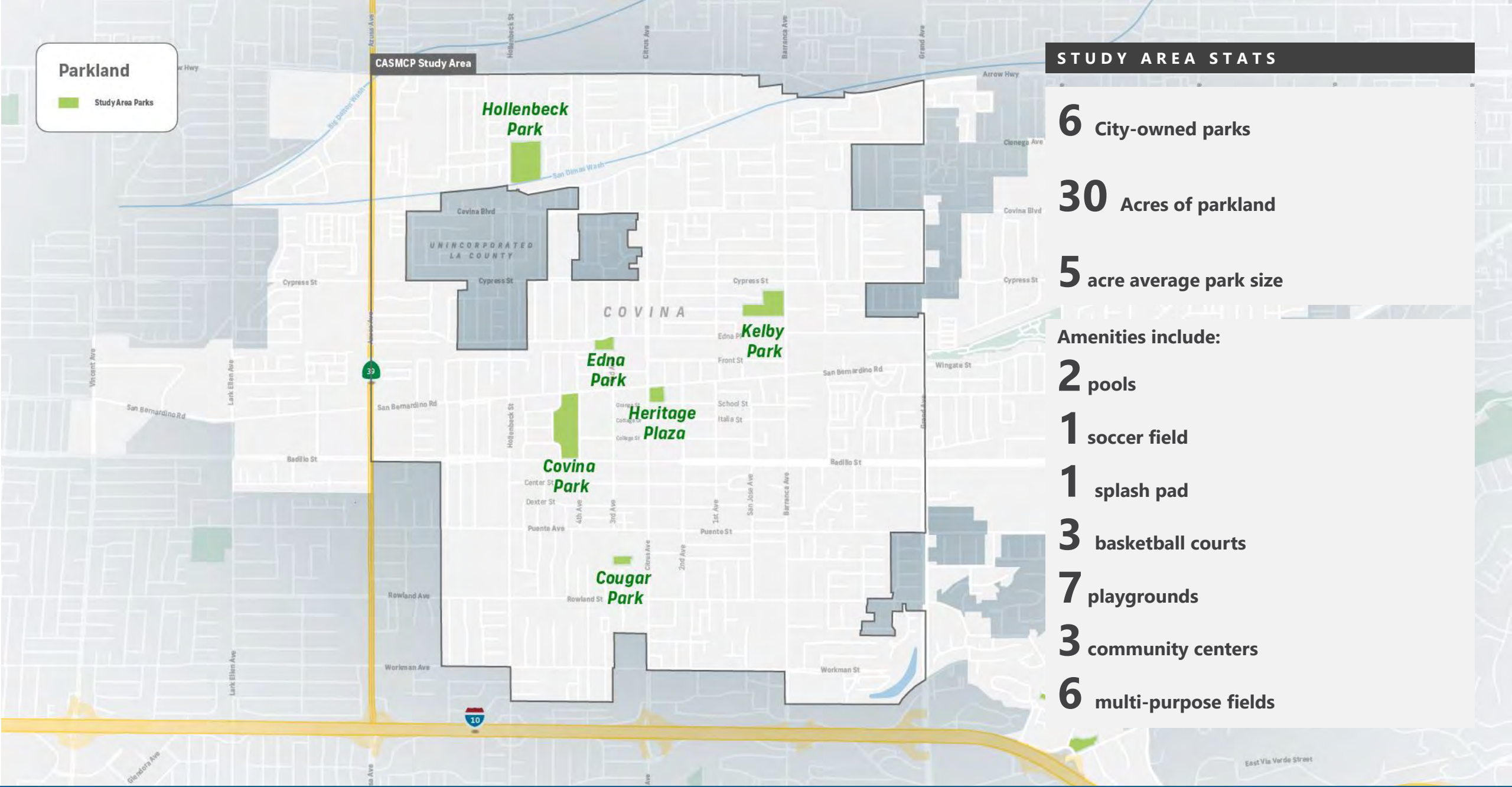
**Parkland**

- Study Area Parks

CASMCP Study Area


**STUDY AREA STATS**

- 6** City-owned parks
  - 30** Acres of parkland
  - 5** acre average park size
- Amenities include:
- 2** pools
  - 1** soccer field
  - 1** splash pad
  - 3** basketball courts
  - 7** playgrounds
  - 3** community centers
  - 6** multi-purpose fields






## Park Access

 Parks and Open Space

No Park Access\*

 < 200 people per sq mi

 200 - 1,000 people per sq mi

 >1,000 people per sq mi

\*Over 1/2 mile from park or open space

 Sensitive Communities

 Disadvantaged Community

CASMCP Study Area

Hollenbeck  
Park

Edna  
Park

Heritage  
Plaza

Covina  
Park

Cougar  
Park

Kelby  
Park

## STUDY AREA STATS

# 25%





of study area residents live farther than 1/2 mile from a park

Generally, the study area has a good amount of larger park space, with an average park size of five acres. However, it still lacks smaller neighborhood-style parks or parklets that are less than one acre in size. These smaller parks can increase park access where it is currently lacking.

Source: California Department of Parks and Recreation, Park Access Tool.



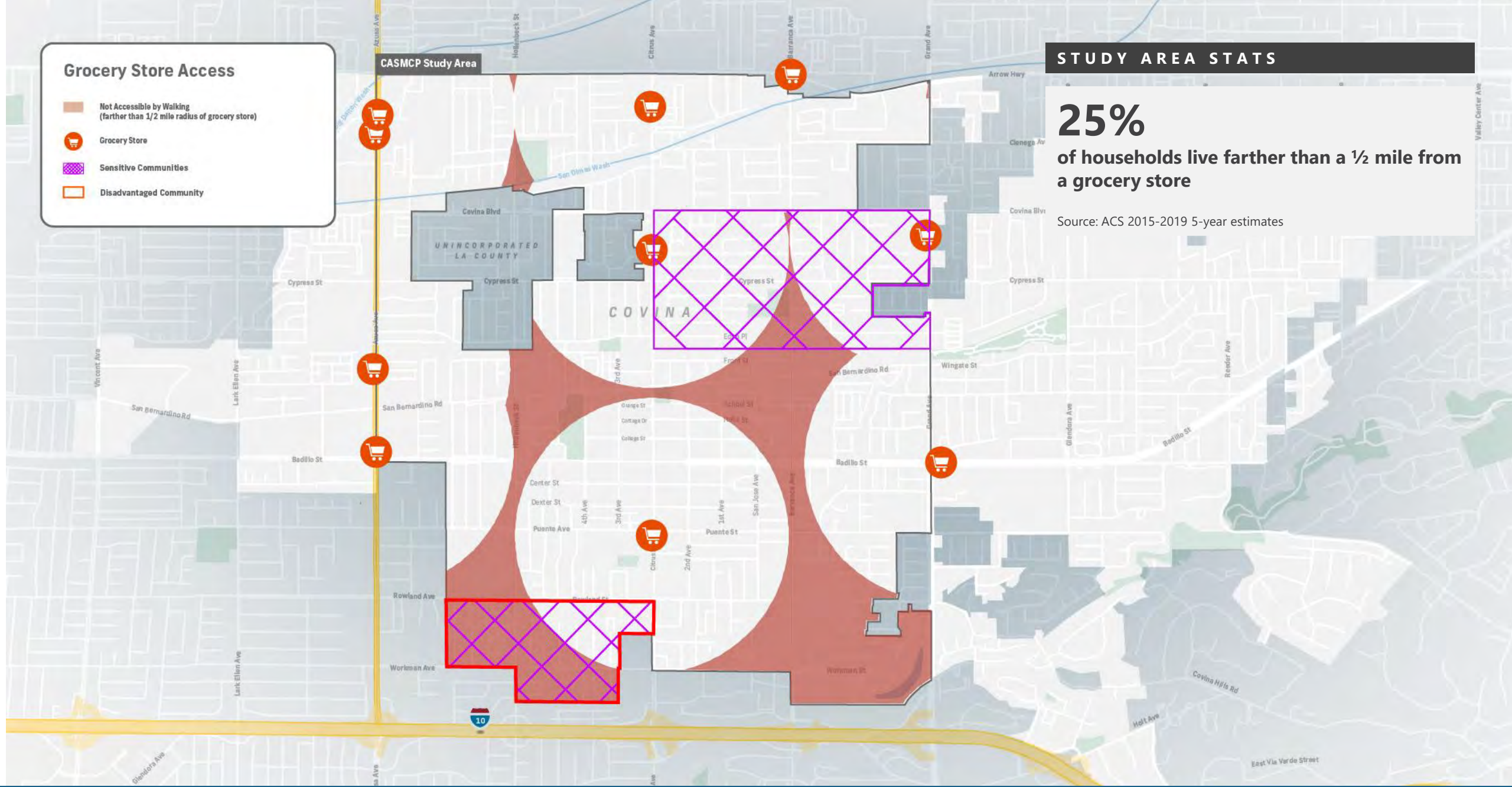
### Grocery Store Access

-  Not Accessible by Walking (farther than 1/2 mile radius of grocery store)
-  Grocery Store
-  Sensitive Communities
-  Disadvantaged Community

### STUDY AREA STATS

**25%**  
of households live farther than a 1/2 mile from a grocery store

Source: ACS 2015-2019 5-year estimates



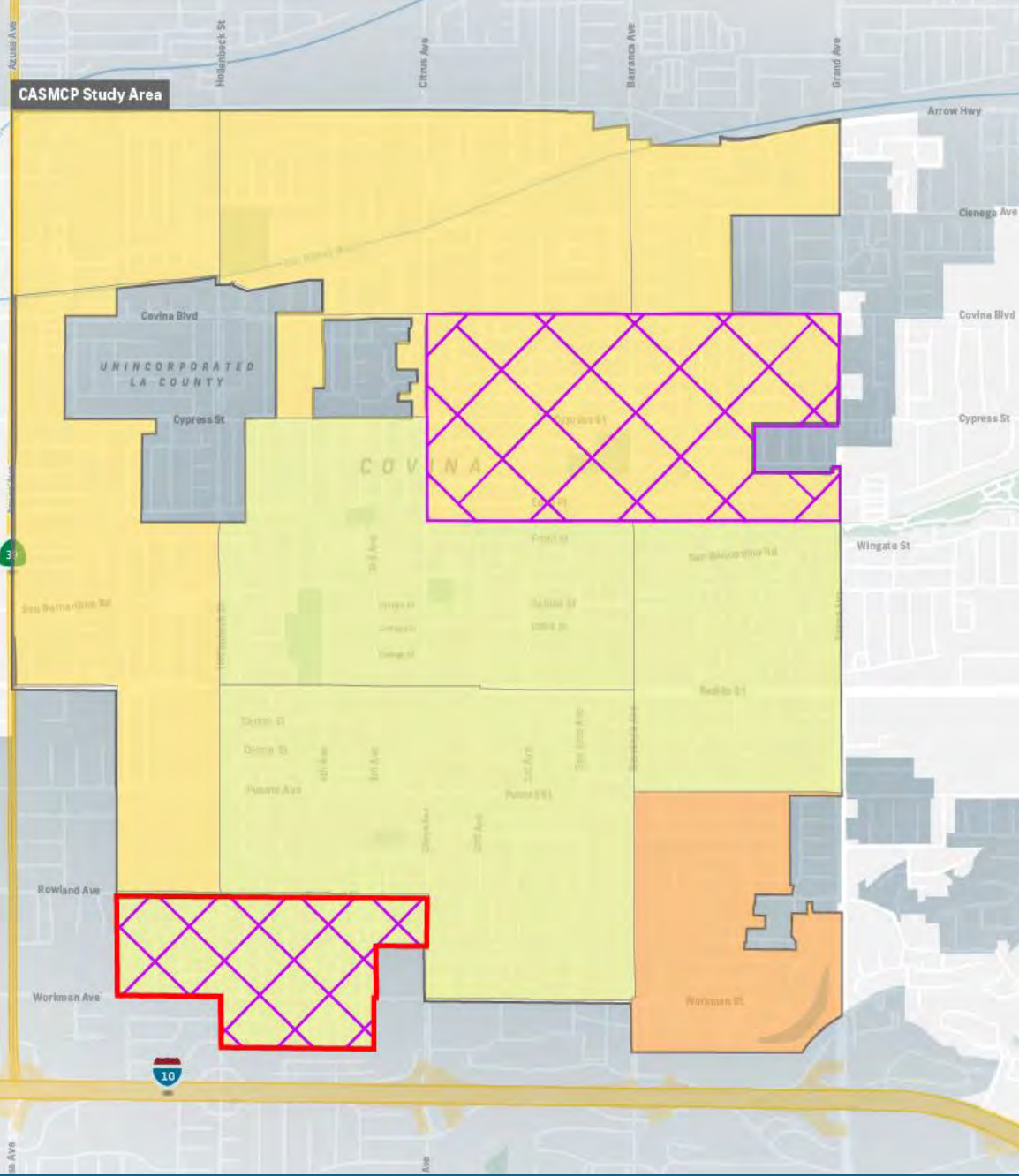
**STUDY AREA STATS**

**Housing & Transportation Affordability Index**

BY CENSUS TRACT  
Housing & Transportation Costs as a % of Income

< 24%	54% - 66%
24% - 36%	66% - 78%
36% - 45%	78% - 87%
45% - 54%	87% +

▨ Sensitive Communities  
 Disadvantaged Community



**58%**  
Average percent of household income dedicated to housing and transportation  
vs. 59% in Covina; 57% in Los Angeles County; **84% in California**

Source: Center for Neighborhood Technology, Housing and Transportation Affordability Index

**35%**  
Average percent of household income dedicated to *housing* (e.g., rent, mortgage)  
vs. 35% in Covina; 35% in Los Angeles County; **43% in California**

Additionally, city level data show that 41% of all city households are cost-burdened, meaning they spend 30% or more of their income on housing costs. Source: U.S. Department of Housing and Urban Development Comprehensive Housing Affordability Strategy (CHAS) Tables 2015-2019

**24%**  
Average percent of household income dedicated to *transportation* (e.g. auto payment, fuel, transit costs)  
vs. 24% in Covina; 22% in Los Angeles County; **41% California**

**Key Take-a-Way**

Study area is performing similar to the City of Covina and LA County. The Study Area is performing better than California.



## Pedestrian Collisions

BY SEVERITY, 2011-2020

- Fatal
- Severe Injury
- Other Visible Injury
- Complaint of Pain
- Sensitive Communities
- Disadvantaged Community

CASMCP Study Area

## DAC & SENSITIVE COMMUNITY STATS

**18** total pedestrian collisions

vs. 122 total pedestrian collisions in whole study area

DAC and Sensitive Areas = 24% of population

DAC and Sensitive Areas = 14% of collisions

Collisions are concentrated along major corridors (Badillo, San Bernadino, Arrow Hwy, and Citrus) rather than within disadvantaged and sensitive communities.

Source: SWITRS/TIMS, 2011-2020



## Bicycle Collisions

BY SEVERITY, 2011-2020

- Severe Injury
- Other Visible Injury
- Complaint of Pain
- Sensitive Communities
- Disadvantaged Community

## DAC & SENSITIVE COMMUNITY STATS

**14** total bicycle collisions

vs. 92 total pedestrian collisions in whole study area

DAC and Sensitive Areas = 24% of population

DAC and Sensitive Area = 15% of collisions

Collisions are concentrated along major corridors (Rowland, Badillo, Arrow Hwy, Azusa, Grand and Citrus) rather than within disadvantaged and sensitive communities.

Source: SWITRS/TIMS, 2011-2020

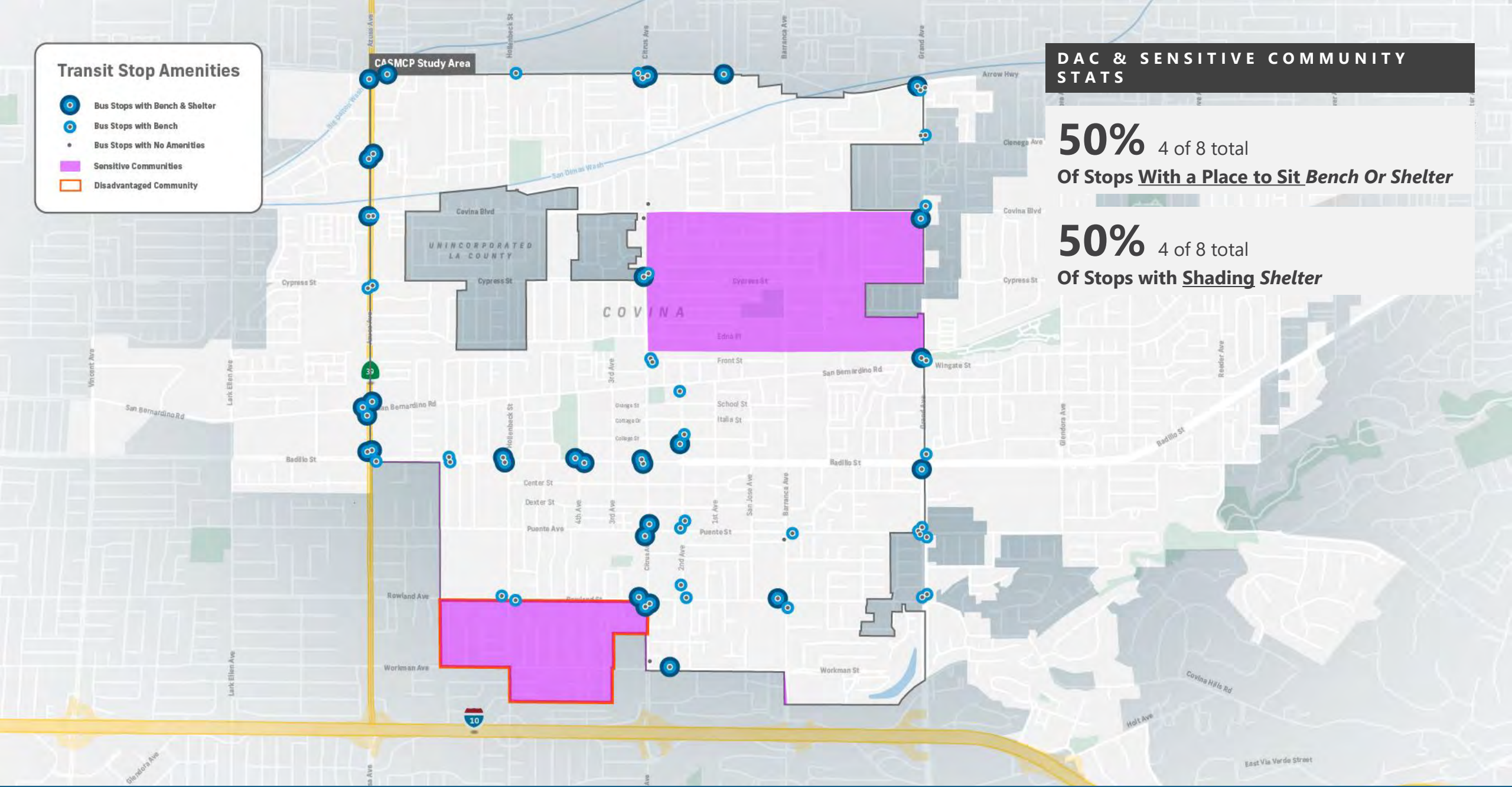
## Transit Stop Amenities

-  Bus Stops with Bench & Shelter
-  Bus Stops with Bench
-  Bus Stops with No Amenities
-  Sensitive Communities
-  Disadvantaged Community

## DAC & SENSITIVE COMMUNITY STATS

**50%** 4 of 8 total  
**Of Stops With a Place to Sit Bench Or Shelter**

**50%** 4 of 8 total  
**Of Stops with Shading Shelter**

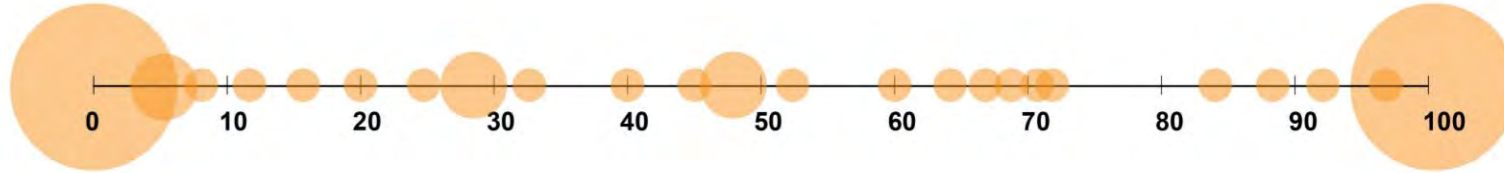




# When waiting for transit, how often do you have....?



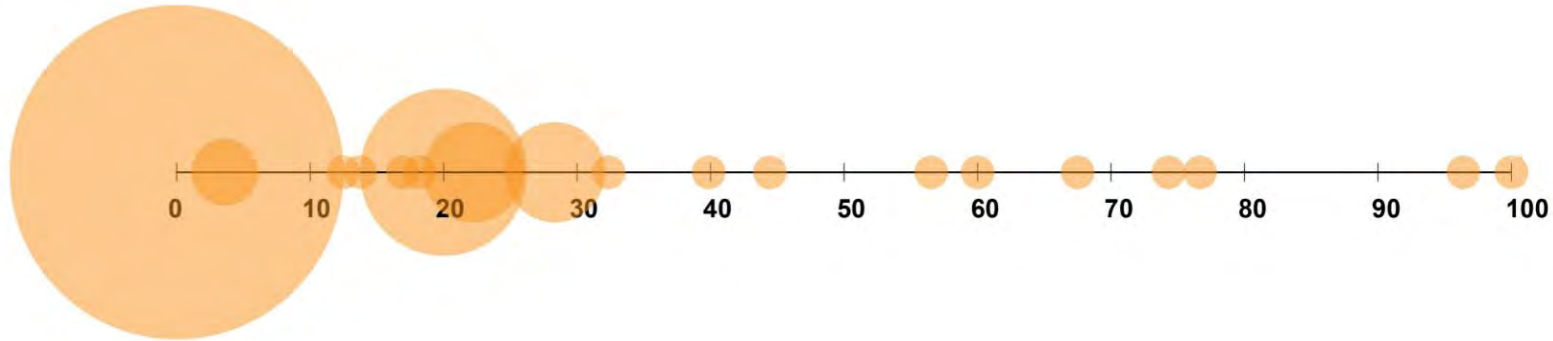
**Place to Sit**



Concentrations of seating availability at never and always, with some fairly even distribution in the occasionally available category.



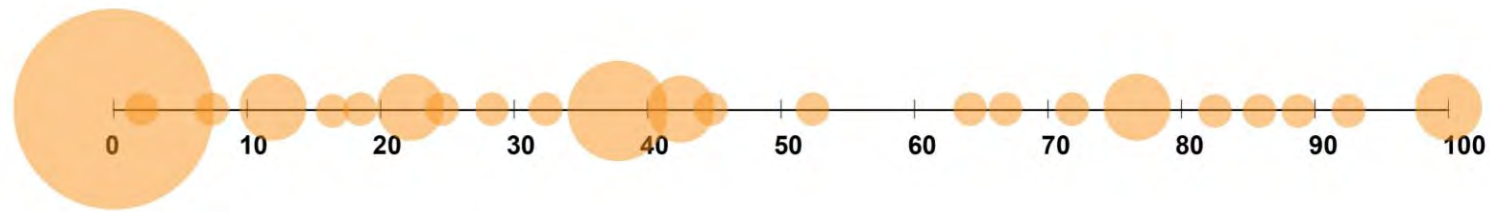
**Shade**



Most of survey respondents indicated there is not adequate shade at a majority of transit stops.



**Adequate Lighting**



Adequate lighting is fairly evenly distributed from never to always.

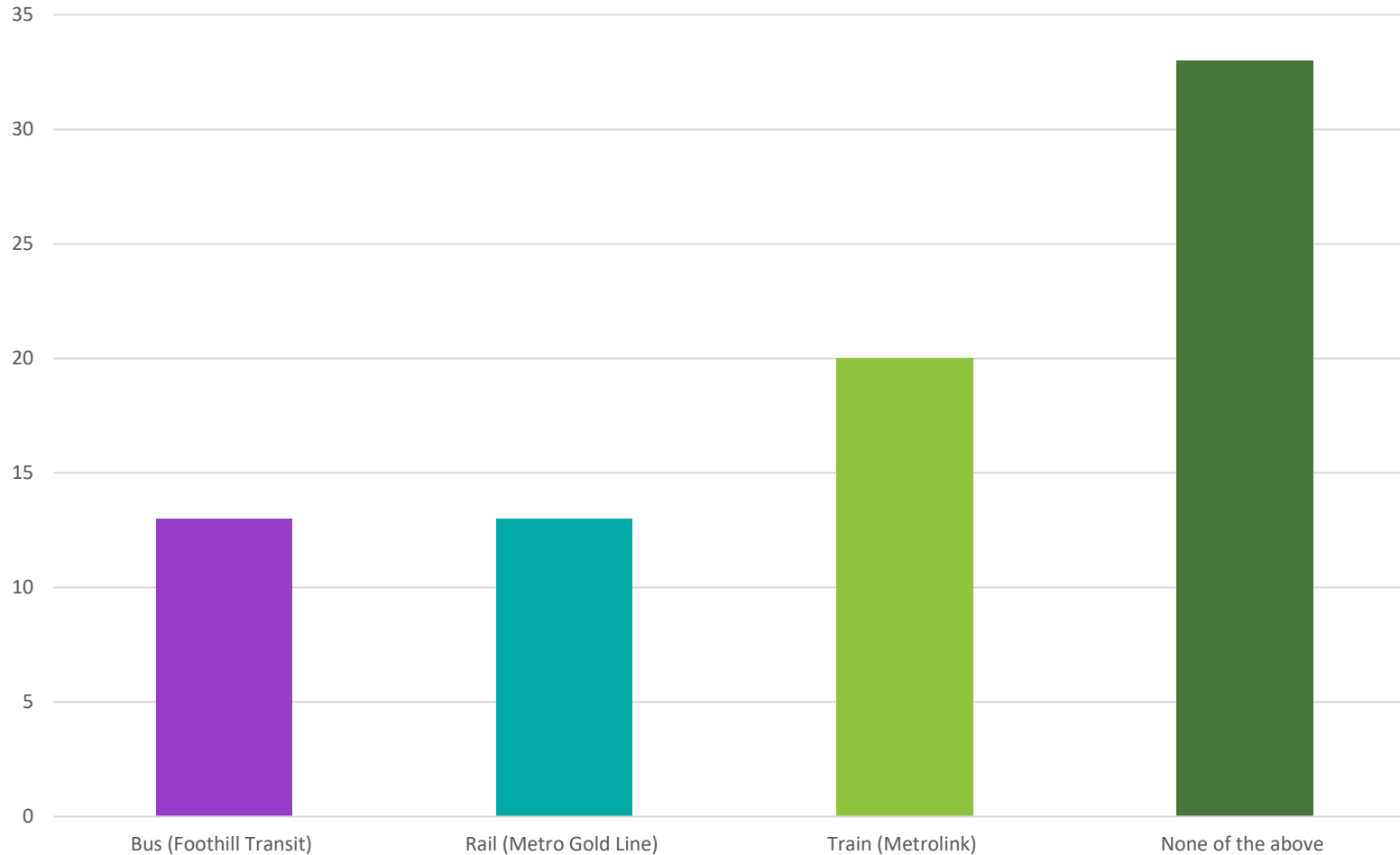
Never

Occasionally

Always



# What type of transit do you use to get around the City?



Metrolink is slightly preferred over buses and Metro Light Rail (Gold Line).

What are the other transit modes people use to get around the City?

## 1. Active transportation and urban design improvements should prioritize urban greening elements and environmental design.

- » Pollution conditions are the primary factors for communities and the study area qualifying as disadvantaged or sensitive communities according to several statewide indices.
- » Climate change will continue to exacerbate negative environmental conditions: rising temperatures, more prolonged and frequent heat waves, heat island effect, and droughts.

## 2. Active transportation improvements should consider potential to develop green “filters” along freight and highway corridors to improve air quality.

- » Major sources of pollution are related to transportation (Diesel PM, PM 2.5, Ozone) throughout the study area.
- » Consider regional and public-private coordination to create improvements to freight and highway network (e.g., fleet electrification, alternative routes, vegetative wall barriers, home filtration systems)

## 3. Active transportation should prioritize reductions of street space devoted to vehicles on major corridors.

- » Majority of pedestrian and bicycle collision occur along major corridors.
- » These spaces could provide placemaking opportunities to create a more pedestrian oriented environments (e.g., parklets, pedestrian refuge areas, shading)

Census tract 4062 is in close proximity to Interstate 10 and is intersected by major corridors such Rowland Avenue, Hollenbeck Street, and Citrus Avenue.





#### 4. **Active transportation and urban design improvements should begin creating a network of small public spaces and parks.**

- » Study area has multiple large parks with variety of amenities – most of study area is within ¼ mile to these parks. Network of closer, smaller parks and open spaces are lacking.
- » Multiple examples of existing spaces that can be designed for small open spaces (e.g., frontage road medians). Summarized in Urban Design Study.
- » Consider shared-use agreements to allow public use of local school outdoor facilities after school hours.

#### 5. **Active transportation and urban design improvements should be prioritized in the two identified sensitive and disadvantaged communities.**

- » These two communities bear the most burdens related to pollution and/or housing cost of all Census tracts in the study area.
- » Tract 4062 is the most impacted by several health, social, and environmental conditions. Tract 4037.21 has relatively healthy neighborhood conditions (park and retail access) but still suffers from housing and pollution-related issues.
- » Should also consider policy updates (e.g., targeted rent control) to prevent displacement of existing communities if public realm improvements make neighborhoods more desirable.

Study area lacks network of closer, smaller parks and open spaces. These spaces could be provided through shared-use agreements with local schools.





# Online Survey Methodology

The online survey was shared with the community using:

- City Social Media Accounts;
- QR codes at pop-up events such as the Farmer’s Market;
- QR codes on information kiosks located in Downtown;
- Paper copies available at public facilities and with community partners.

As of October 17, 2022, we’ve received a total of 58 responses to the survey.

The 58 responses gathered are not representative of the entire community. The responses reflect the habits and thoughts of the community members who we have connected with through the methods listed above.

The number of responses for individual questions varies as a result of conditions and questions being optional. Conditions will only show a follow up question to respondents if a certain response was given. Optional questions allow respondents to only answer questions they feel comfortable responding to as well as limit survey fatigue by not requiring input.

## Have you heard about the Active Streets & Multimodal Connectivity Plan?

Visit our tent on Friday, August 26th 5-9pm at Farmer’s Market & Family Fun Night at Heritage Plaza Park to learn more!

Your input will help improve transit connections and safety for all modes of transportation in downtown Covina.



# Online Survey Engagement

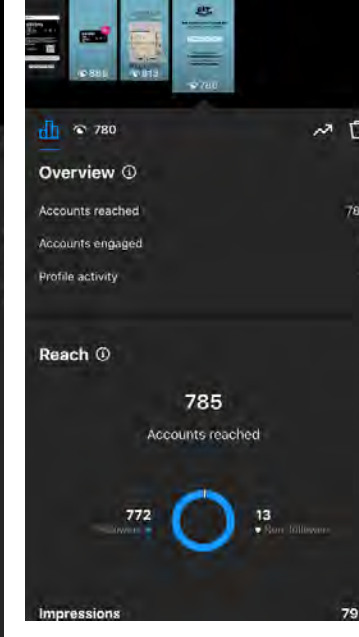
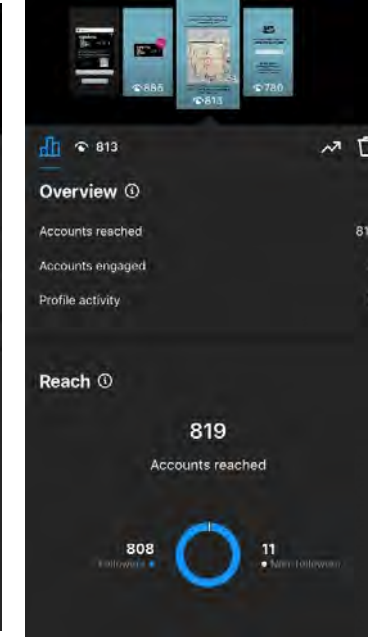
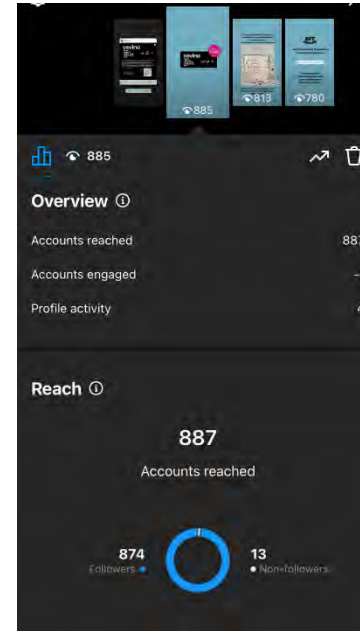
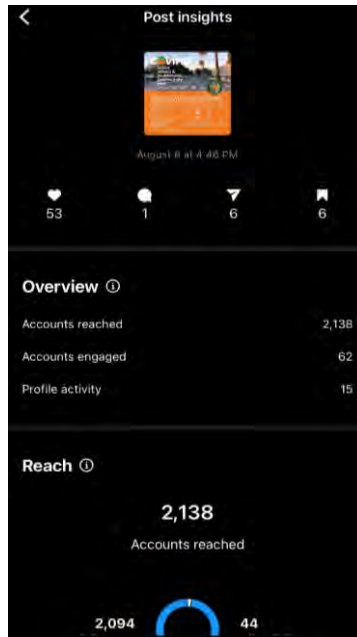
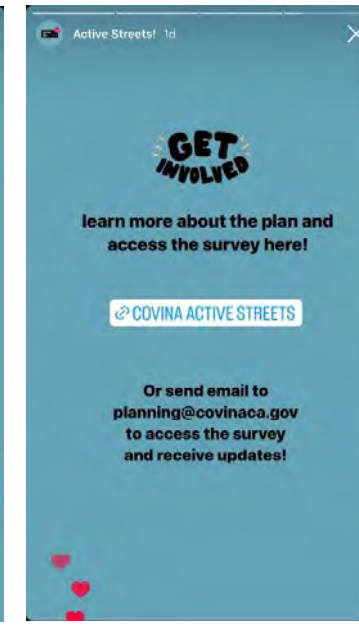
Social Media exposure data provides insight on the interest from the community regarding the Plan and the survey.

A total of 6 Posts were made on the City's Instagram account.

- Regular Post (3)
- 24-Hour "Story" (2)
- "Reel" (1)

Total Social Media Engagement:

- 9,332 views
- 238 clicks
- 26 shares







# covina

## active streets & multimodal connectivity plan

FEHR & PEERS

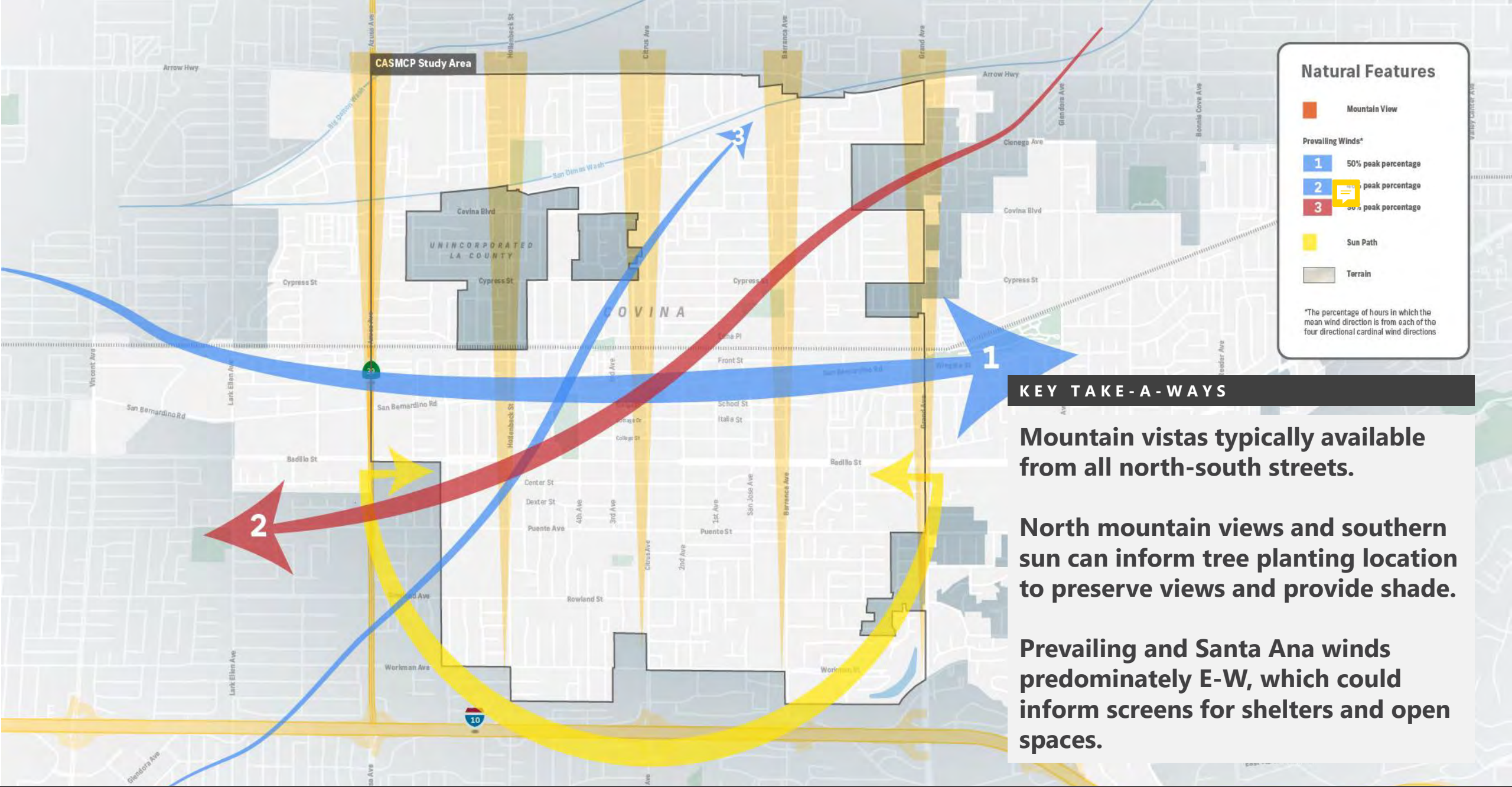
MIG  
Kosmont  
CWE



# Existing Conditions

## Urban Design Study

- Environmental Conditions
- Figure-Ground
- Parks and Tree Canopy
- COVID Public Realm Measures
- Traffic Calming
- Sidewalk Conditions
- Excess/Underutilized Vehicle Space
- Image, Districts, and Barriers
- Stormwater Infrastructure





## Figure / Ground

-  Building Footprints
-  Open Space
-  Areas with gaps in walkable urban fabric



## KEY TAKE-A-WAYS

**Size of the CASMCP Study Area is more community planning scale than neighborhood urban design. Still, clear built form patterns are visible at this scale:**

- **Consistent detached residential form within residential neighborhoods between major corridors;**
- **Gaps in walkable urban form spread throughout study area and typical along major corridors**
- **Significant gaps in walkable urban form (surface parking lots, vacant uses, suburban development pattern) immediately surrounding walkable Downtown along Citrus and Civic Center Park.**



## Tree Canopy

WITHIN 1/4 mile OF DOWNTOWN

- Large Tree
- Medium Tree
- Small or Newly Planted Tree

CASMCP Study Area

## KEY TAKE-A-WAYS

Based on a visual survey, the tree cover is generally the strongest along residential streets, near parks and schools, and along Citrus Avenue in downtown. Tree cover is sparse along industrial areas and major arterials.

No significant discrepancy in tree canopy between Downtown and Disadvantaged/Sensitive Neighborhoods.

While there appears to be some street tree canopy, a majority of street segments are without shade and areas are still dominated by concrete.

Source: Google Maps, 2022

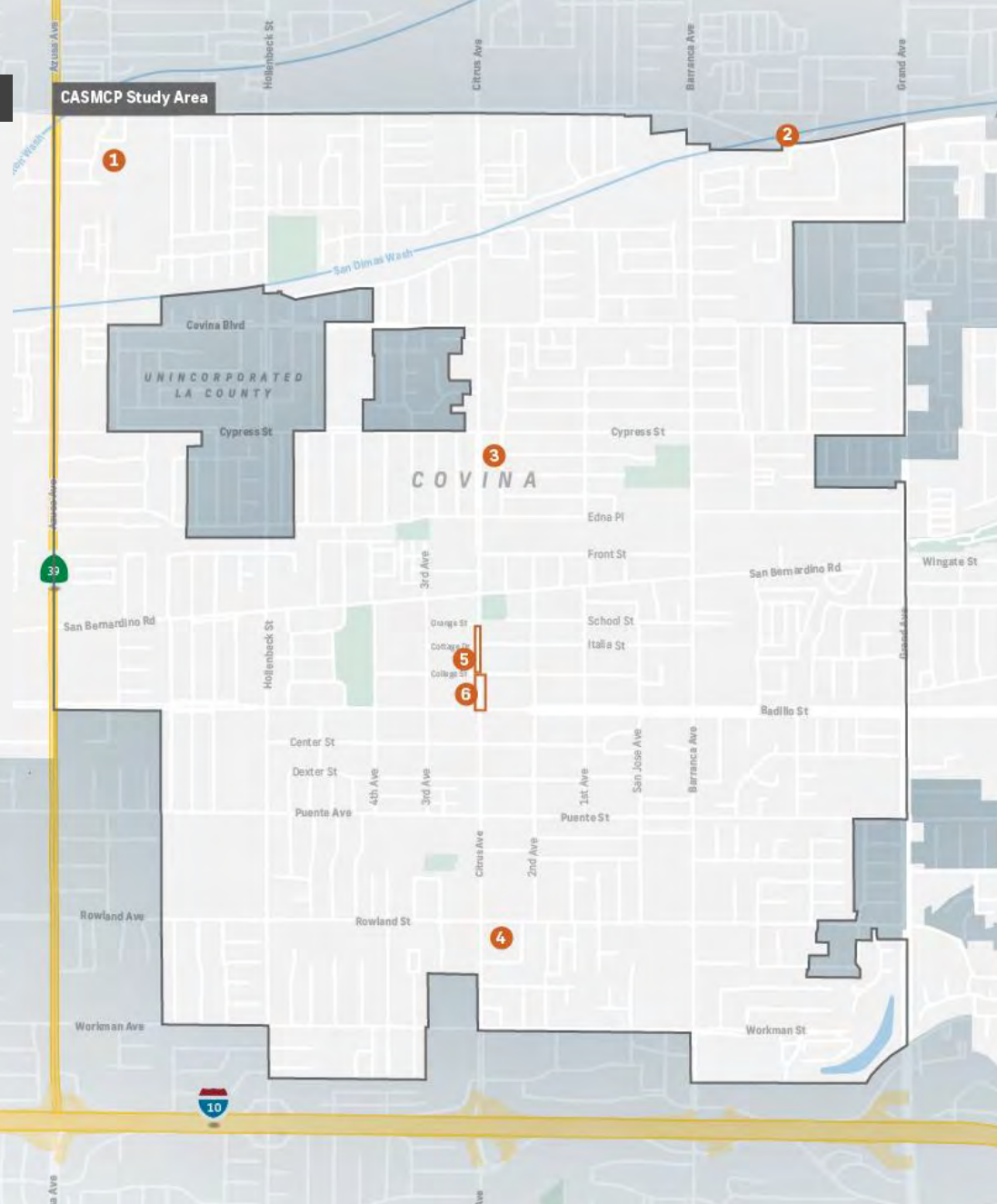


## KEY TAKE-A-WAYS

During the COVID-19 pandemic, many commercial businesses repurposed parking spaces into outdoor dining areas. These locations could potentially provide opportunities and/or partnerships for implementation of permanent pedestrian improvements. It also highlights potential placemaking opportunities in vehicle spaces that are not heavily used.

Source: Google Streetview, December 2020

CASMCP Study Area



1. Covina Town Square



2. Arrow Lodge Brewing



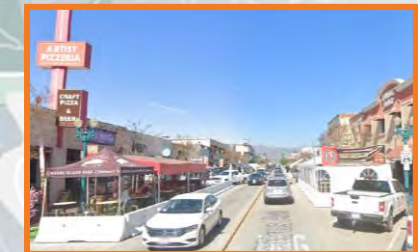
3. Citrus Plaza



4. Shoppers Lane



5. Citrus Avenue outdoor dining on one side of the street



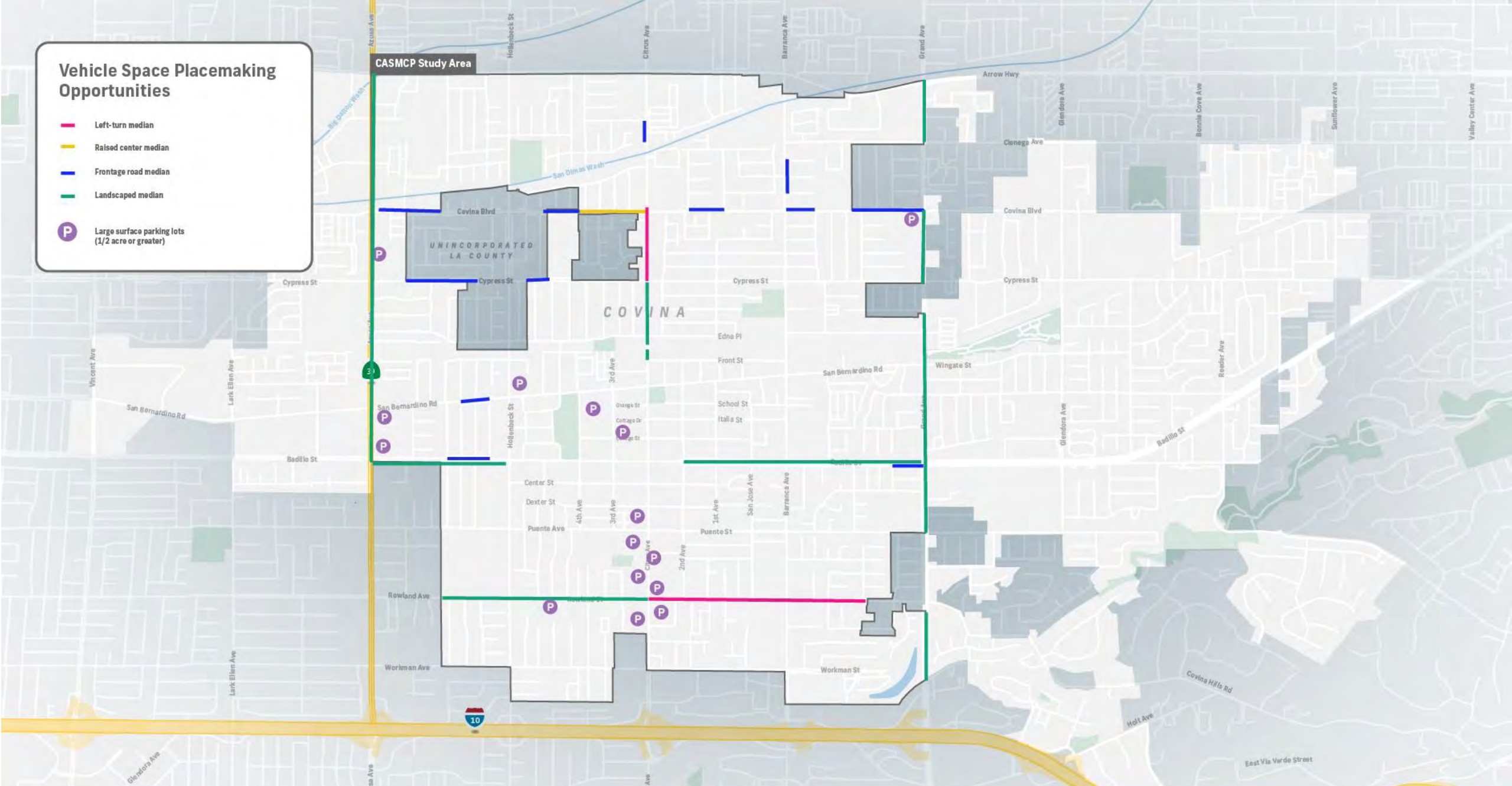
6. Citrus Avenue outdoor dining on both sides of the street



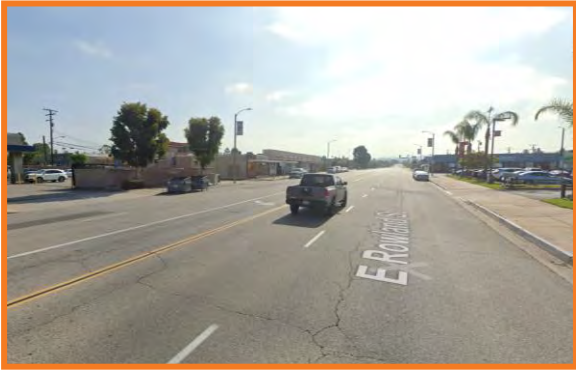
## Vehicle Space Placemaking Opportunities

- Left-turn median
- Raised center median
- Frontage road median
- Landscaped median
- P Large surface parking lots (1/2 acre or greater)

CASMP Study Area



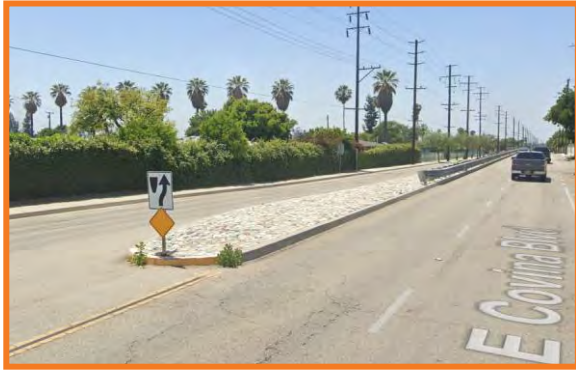




*Left-turn median on Rowland Avenue should be studied for needed capacity and opportunity for new multi-modal space and lane realignments.*



*Transformation of Rosemead Boulevard in Temple City created a protected bicycle lane and green infrastructure from excess roadway capacity.*



*Raised center median on Covina Boulevard provides no shade, increases burden on stormwater infrastructure and encourages speeding.*



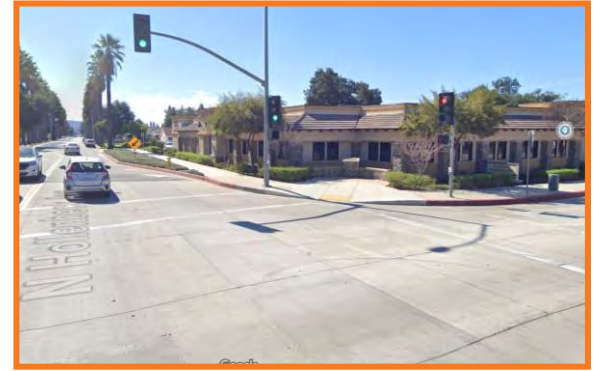
*Center median in Paso Robles provides natural habitat, placemaking, and green stormwater infrastructure.*



*Frontage road on Covina Boulevard with concrete median provides no shade, poor pedestrian paths, and excess parking and travel capacity.*



*Parkways in Mexico City provide pedestrian walking path, tree canopy, and open space in small and narrow spaces.*



*Right-turn merge lane (Hollenbeck and San Bernardino) creates poor intersections for pedestrians with long crossing distances and unsafe turning.*



*Curb extensions shorten pedestrian crossing distances, slow vehicle turning movements, and can be designed for placemaking or green infrastructure.*



## Sidewalk Conditions

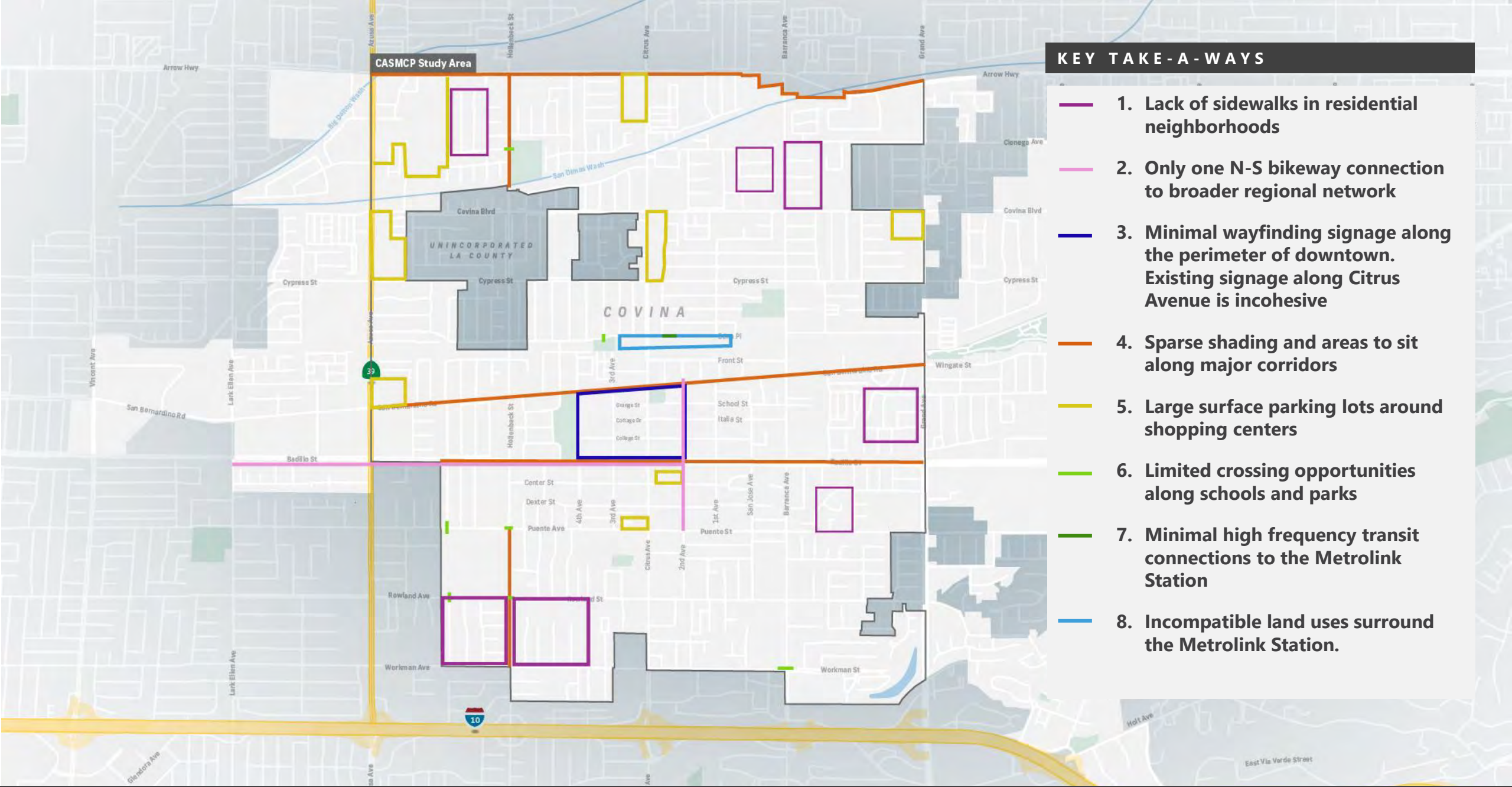
— Missing Sidewalk

CASMP Study Area

## KEY TAKE-A-WAYS

Many residential neighborhoods are missing sidewalks, which makes walking inconvenient and uncomfortable. This could be a significant barrier in encouraging residents to walk more in their neighborhoods.









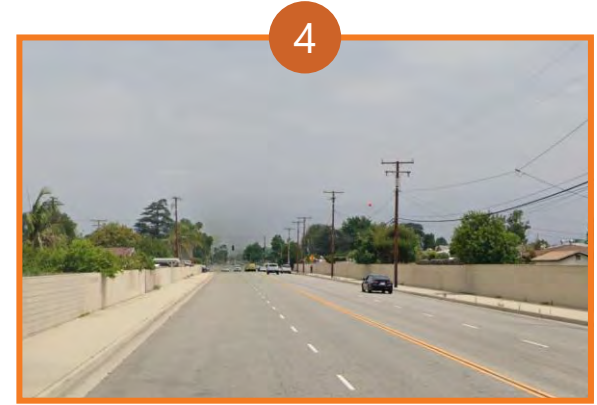
*No sidewalks in residential areas (Rowland St and Hollenbeck Ave) make walking inconvenient and uncomfortable*



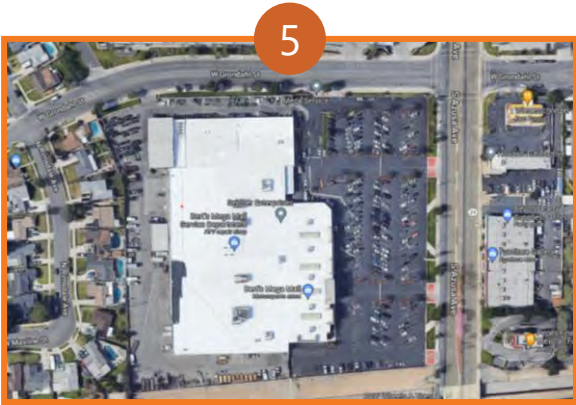
*San Gabriel River Trail Entrance at Ramona Blvd/Badillo St with only one bike route connection to broader network*



*Inconsistent wayfinding style does not support a unifying look or style for downtown*



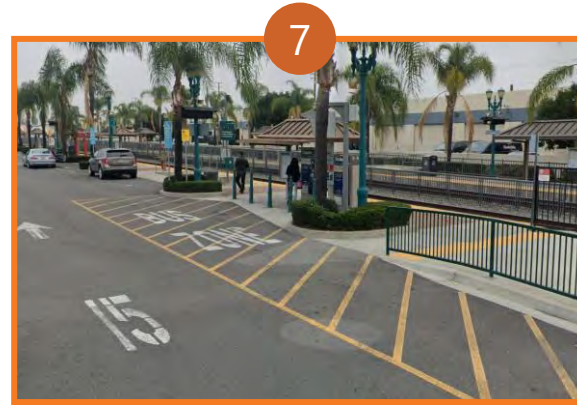
*Sparse shading in public right of way on Hollenbeck Ave lends to uncomfortable walking conditions*



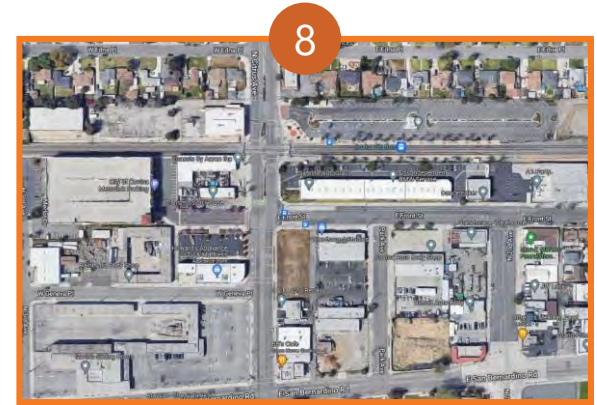
*Large surface parking lots fronting shopping centers create longer walking paths to shop entrances and often puts pedestrians in conflict with motor vehicles.*



*One signalized crosswalk at Barranca Elementary School lends to uncomfortable walking conditions at key activity centers*



*One bus route with direct connection to Metrolink Station indicated limited transit connectivity to broader transit network*



*More compatible uses surrounding the station could be transit-oriented, such as a mix of residential and small-scale retail.*



## Where Do You Live / Your Neighborhood

- Closest Intersection
- General Area
- Closest Intersection and General Neighborhood Boundary
- Neighborhood
- Relative to Major Street

CASMCP Study Area

NORTH OF CYPRESS

NORTH CITRUS

EAST OF CITRUS

## KEY TAKE-A-WAYS

While the sample size of the survey respondents is not large enough to be statistically representative of the entire community, there are some insights into how respondents view their neighborhoods:

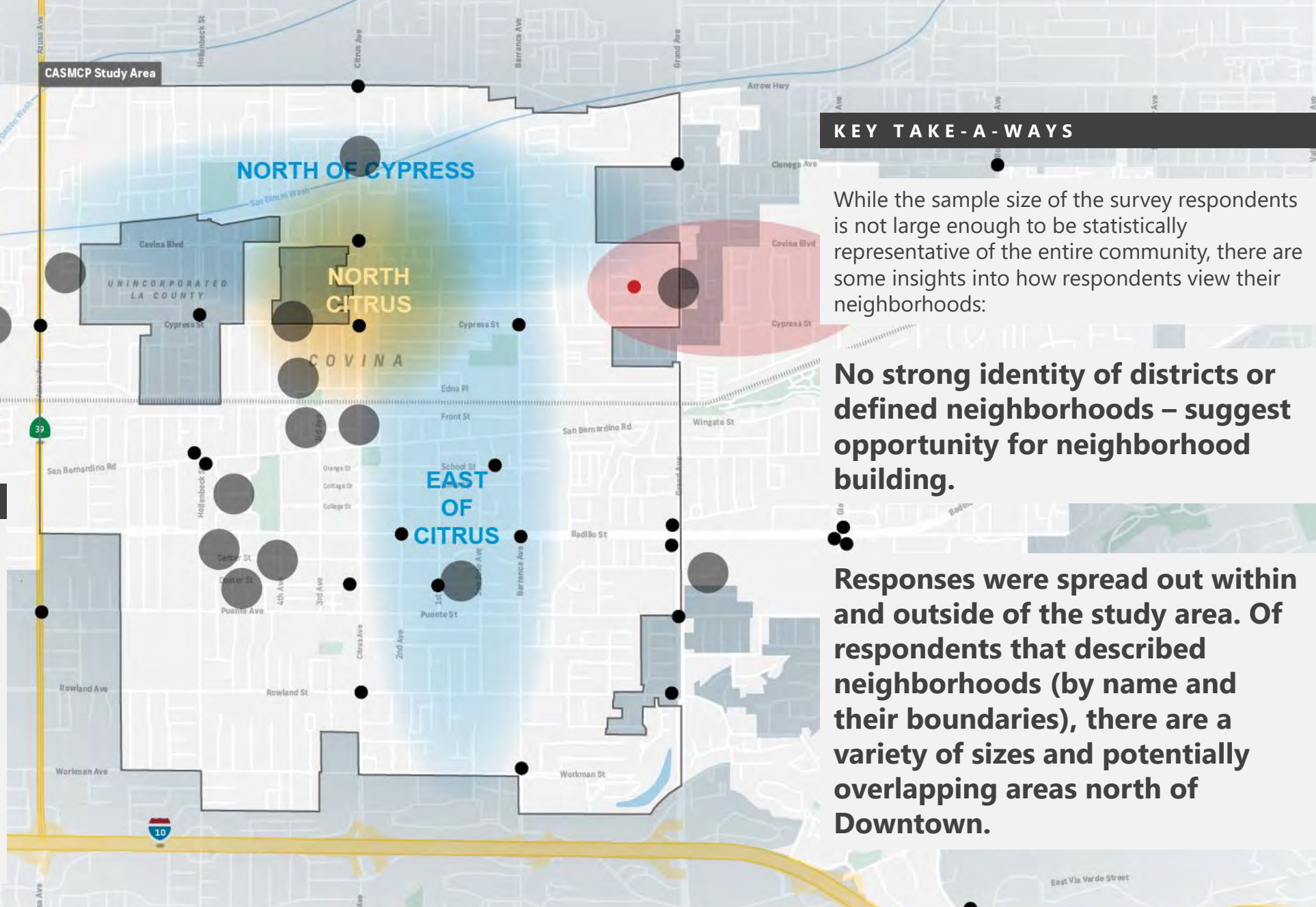
**No strong identity of districts or defined neighborhoods – suggest opportunity for neighborhood building.**

**Responses were spread out within and outside of the study area. Of respondents that described neighborhoods (by name and their boundaries), there are a variety of sizes and potentially overlapping areas north of Downtown.**

## Purpose

Real and perceived neighborhood boundaries by residents can provide multiple inputs to urban design and active transportation:

- Neighborhood edges identify barriers not easily crossed by communities
- Identify what amenities and services are available/lacking within neighborhoods
- What land uses are important to organizing neighborhoods in the Study Area

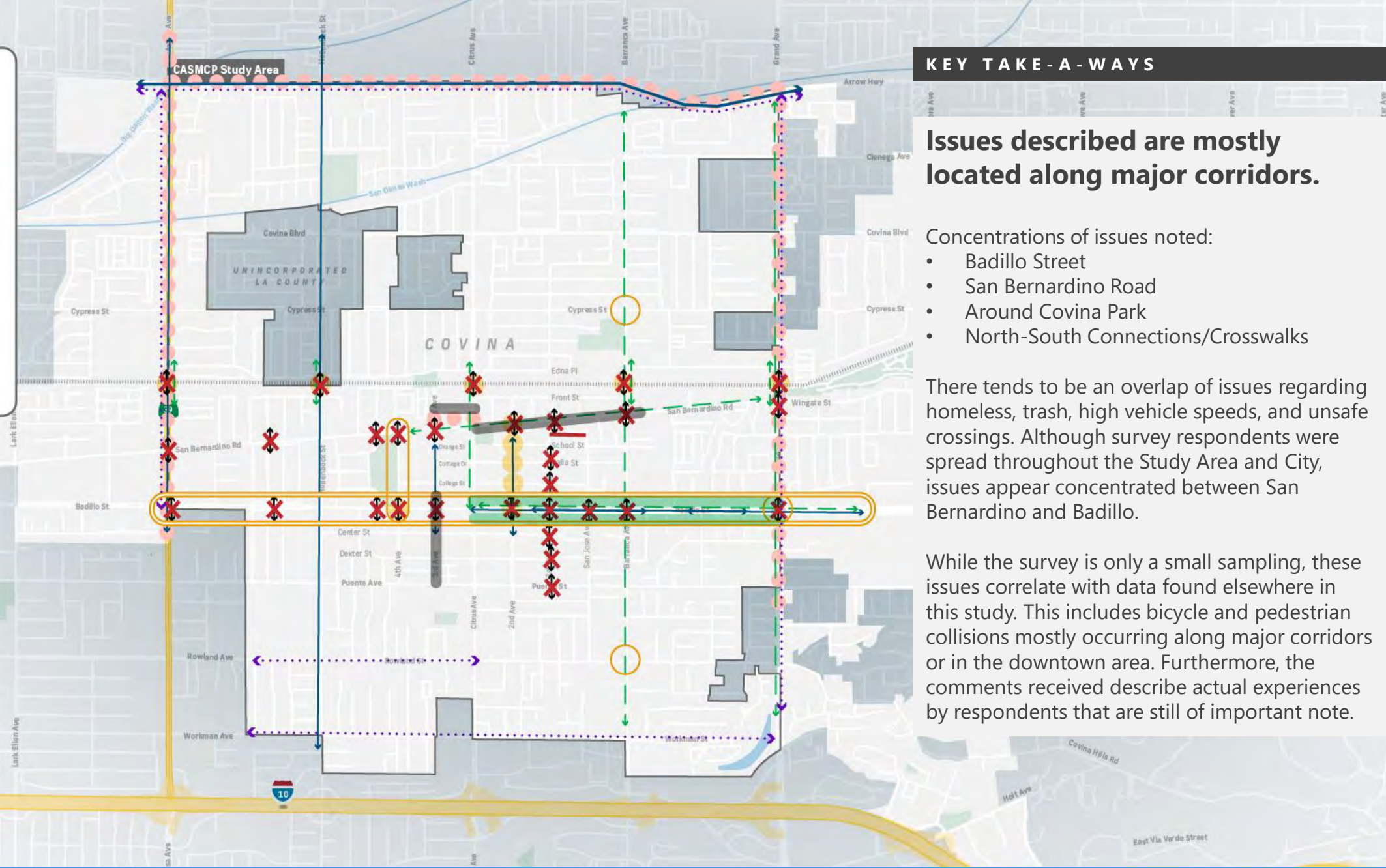




## Issues and Improvements

### Suggested Improvements

- Flashing Crossing Lights
  - Protected Bicycle Lanes
  - Shade
- ### Issues
- Homeless concentrations
  - Fast-moving vehicles
  - Unsafe crossing conditions
  - General issues
  - Lack of Lighting
  - Poor road/sidewalk conditions





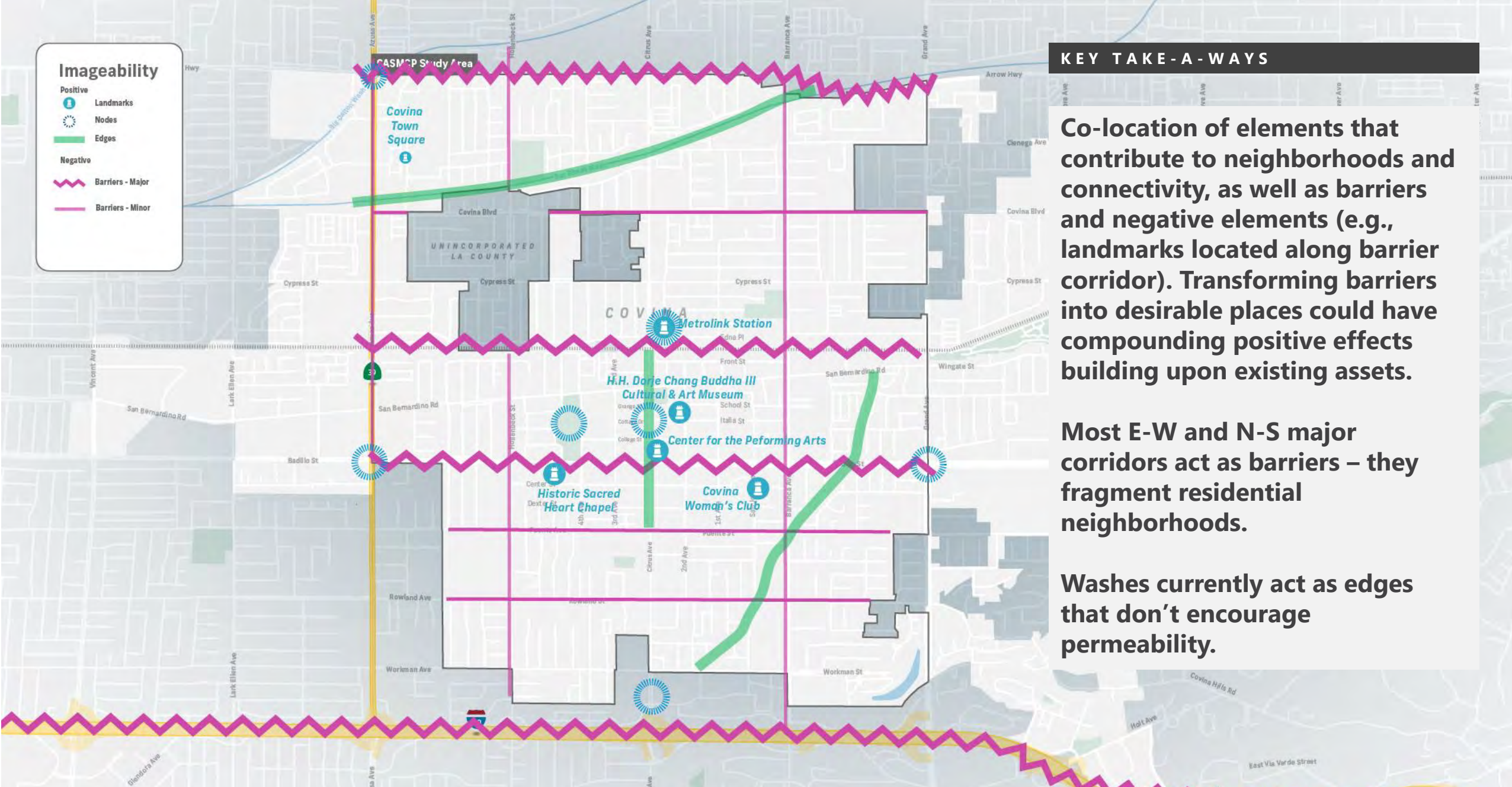
## Imageability

### Positive

- Landmarks
- Nodes
- Edges

### Negative

- Barriers - Major
- Barriers - Minor



## KEY TAKE-A-WAYS

Co-location of elements that contribute to neighborhoods and connectivity, as well as barriers and negative elements (e.g., landmarks located along barrier corridor). Transforming barriers into desirable places could have compounding positive effects building upon existing assets.

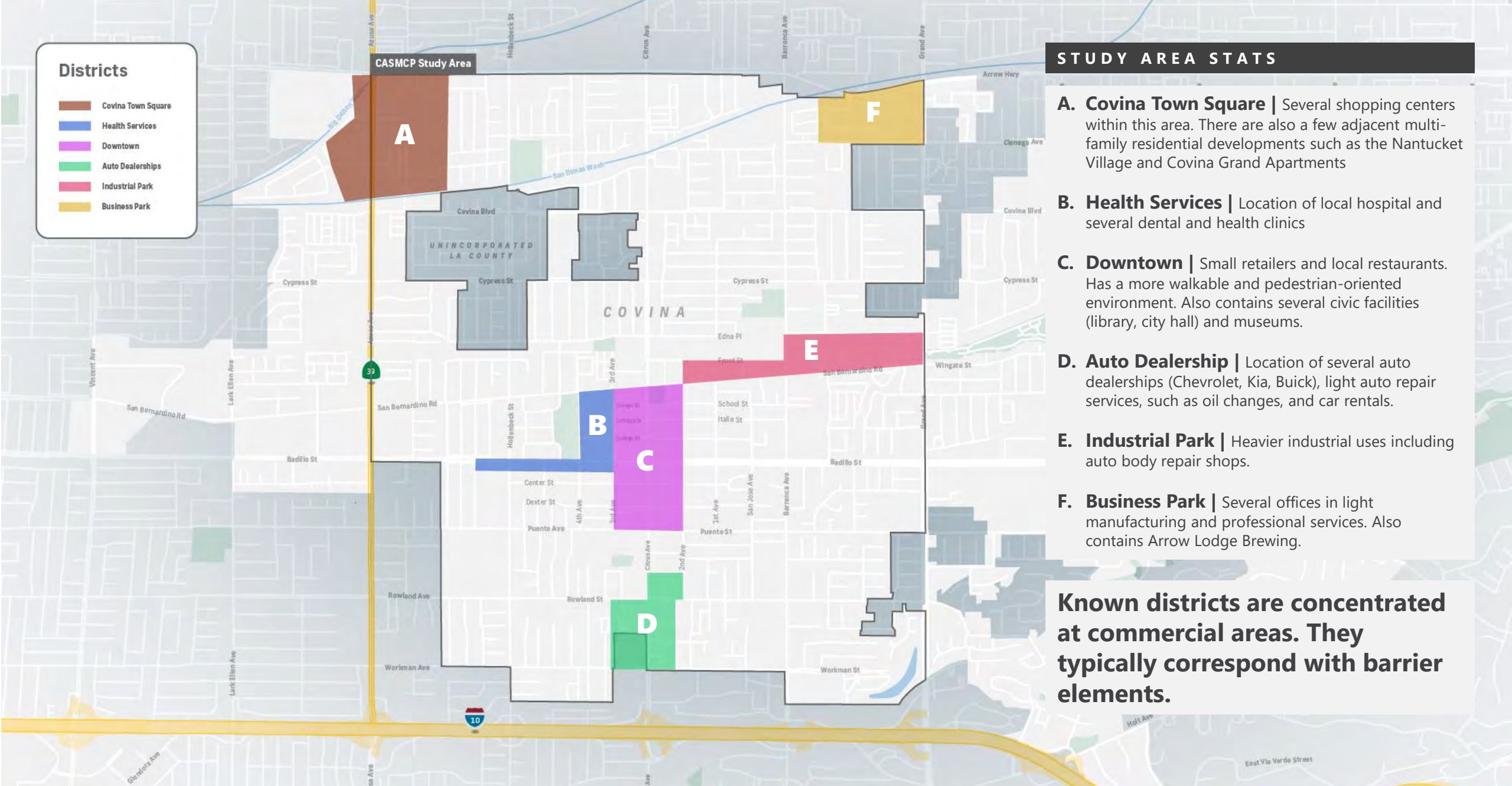
Most E-W and N-S major corridors act as barriers – they fragment residential neighborhoods.

Washes currently act as edges that don't encourage permeability.

## Districts

-  Covina Town Square
-  Health Services
-  Downtown
-  Auto Dealerships
-  Industrial Park
-  Business Park

## CASMCP Study Area



## STUDY AREA STATS

- A. Covina Town Square** | Several shopping centers within this area. There are also a few adjacent multi-family residential developments such as the Nantucket Village and Covina Grand Apartments
- B. Health Services** | Location of local hospital and several dental and health clinics
- C. Downtown** | Small retailers and local restaurants. Has a more walkable and pedestrian-oriented environment. Also contains several civic facilities (library, city hall) and museums.
- D. Auto Dealership** | Location of several auto dealerships (Chevrolet, Kia, Buick), light auto repair services, such as oil changes, and car rentals.
- E. Industrial Park** | Heavier industrial uses including auto body repair shops.
- F. Business Park** | Several offices in light manufacturing and professional services. Also contains Arrow Lodge Brewing.

**Known districts are concentrated at commercial areas. They typically correspond with barrier elements.**



## Stormwater Infrastructure

- Catch Basin
  - Side Opening
  - Grated
- Open Channel
  - Improved
  - Swale

CASMCP Study Area

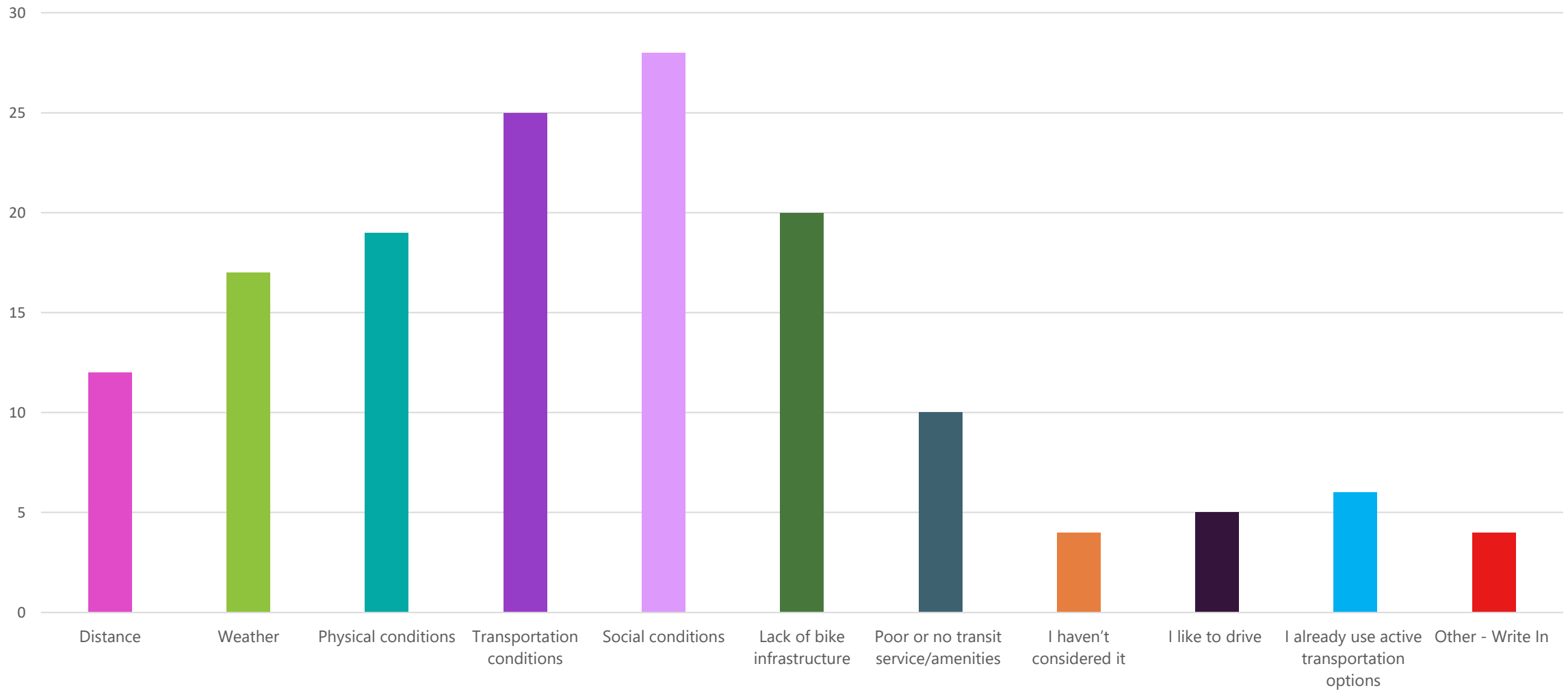
## KEY TAKE-A-WAYS

Multiple washes connect through the study area – existing washes are underutilized and could provide opportunities for multi-purpose pathways, greening, and small open spaces.

Stormwater catch basins are located throughout study area – mostly located along major corridors but also within residential areas. These provide opportunities for creating small, neighborhood open spaces with a variety of activities.

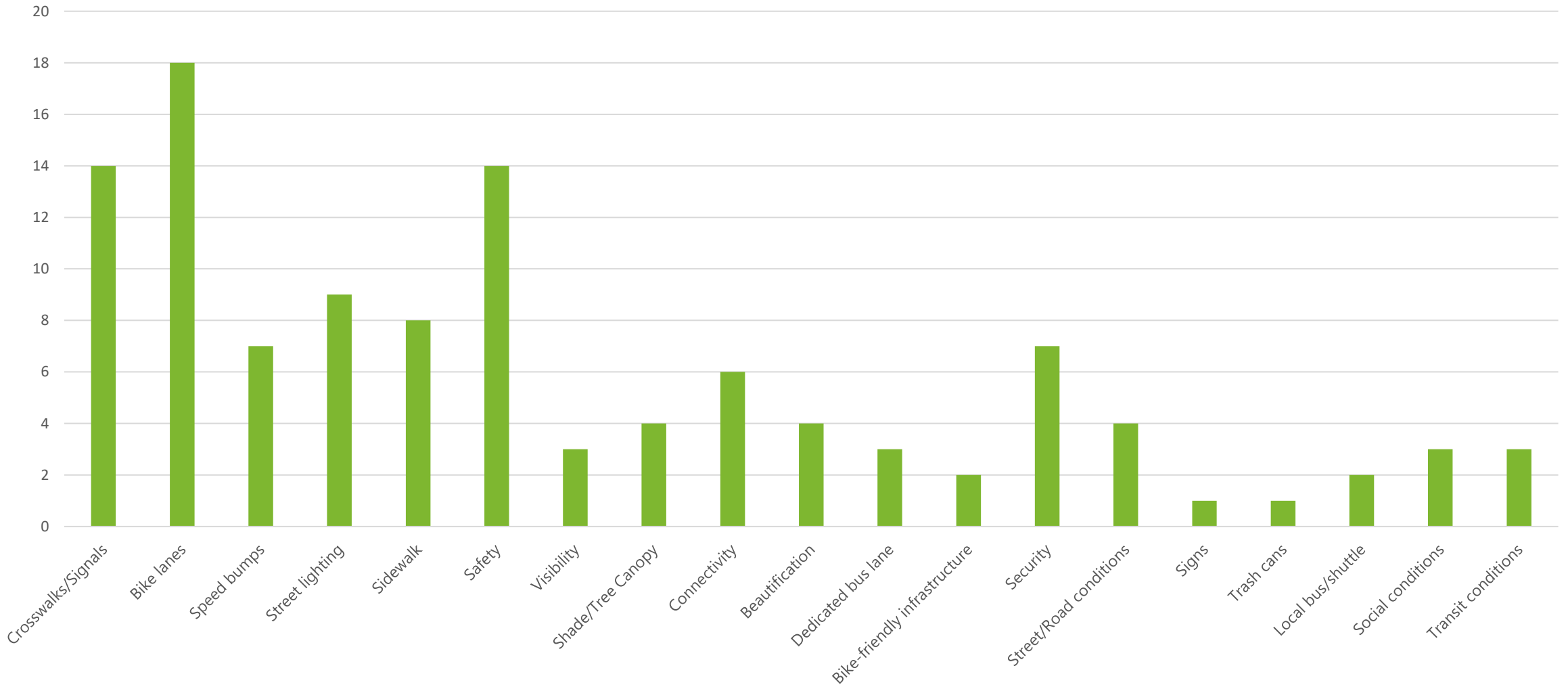
Coordinate stormwater opportunities with San Gabriel Valley Greenway Network Implementation Plan.

# What conditions keep you from using active transportation options to get downtown?





# What improvements would you like to see for pedestrians, bikers, and public transit users?



**1. Concentrate active transportation improvements on major corridors to increase placemaking and breakdown barriers.**

- Many major corridors include frontage roads with concrete medians between frontage road and arterial. These provide excess parking on frontage road and could provide placemaking and open space opportunities.
- Remove merge lanes at intersections and replace with pedestrian space.
- Employ typical traffic calming, reduction of space devoted to vehicles, etc.

**2. The CASMCP Study Area is a large area that can be considered holistically; it can also support multiple neighborhood centers and can be considered at multiple smaller scales.**

- Downtown is beyond the typical walkshed for large majority of the Study Area.
- Propose neighborhood centers at locations so the entire Study area is within a ½ mile walkshed. Develop tailored public- and private- realm strategies to encourage public and private realm redevelopment to create walkable town centers.

**3. Integrate and leverage small urban design improvements with other disciplines – multi-modal transportation, stormwater, climate resiliency and adaptation, etc.**

- There are many underutilized areas that could provide passive or active benefits to neighborhood character and active transportation modes: concrete medians (center and frontage), stormwater catch basins.
- Urban design improvements need to leverage available funding opportunities for improvements – street resurfacing, stormwater/water quality improvements, etc.

San Dimas Wash at Barranca Avenue – provides multiple opportunities from small, neighborhood open space for local residents; multi-modal transportation corridors; placemaking opportunities responding to, and promoting, adjacent development; and opportunities to provide a naturalized environment to improve climate resiliency, reduce heat island impacts, reduce grey infrastructure, and improve water quality and water capture.





**4. Next steps of this study should develop more engagement for how people define their immediate neighborhood and that relationship to their active transportation behaviors.**

- Where are formal and informal neighborhood boundaries?
- What are the sizes of neighborhoods in Covina and what services and opportunities are available within neighborhoods? I.e., grocery stores, transit stops, neighborhood services, etc.
- How often are people walking/biking within their neighborhoods (dog walk, to the park, etc.) versus walking/biking to places outside their neighborhoods?

Census tract 4062 is in close proximity to Interstate 10, more than a mile from Downtown, and bordered by Azusa Avenue. These factors create barriers and represents car-oriented development patterns. There is opportunity for multi-disciplinary approach to encourage a walkable neighborhood center.



---

# CITY OF COVINA

## CASMCP MARKET STUDY

November 2022



1230 Rosecrans Ave., Suite 630

Manhattan Beach, CA 90266

TEL: 424-297-1070 | URL: [www.kosmont.com](http://www.kosmont.com)



# OVERVIEW

- Kosmont Companies (“Kosmont”) is a nationally-recognized real estate and economics advisory firm providing market and economic development services for hundreds of public and private sector clients during the past 35 years.
- Kosmont has been retained to assist Fehr & Peers with the City’s Active Streets and Multimodal Connectivity Plan (“CASMCP”), evaluating existing conditions within the key corridors related to demographic, economic and real estate market opportunities for multi-family, retail, office and hospitality development based on transit improvements.
- Transit systems serving downtown Covina include the Foothill Transit Center, Park & Ride and the Metrolink Station. Located a few miles north on Citrus is the Azusa Metro Gold Line.
- Covina has three vibrant commercial corridors (Citrus Ave., San Bernardino Road and Badillo Ave.) with hundreds of residential units blended with over 1 million SF of retail. The CASMCP will play a major role in improving the economic strength of those corridors by encouraging more pedestrian activity.

# DEMOGRAPHIC HIGHLIGHTS

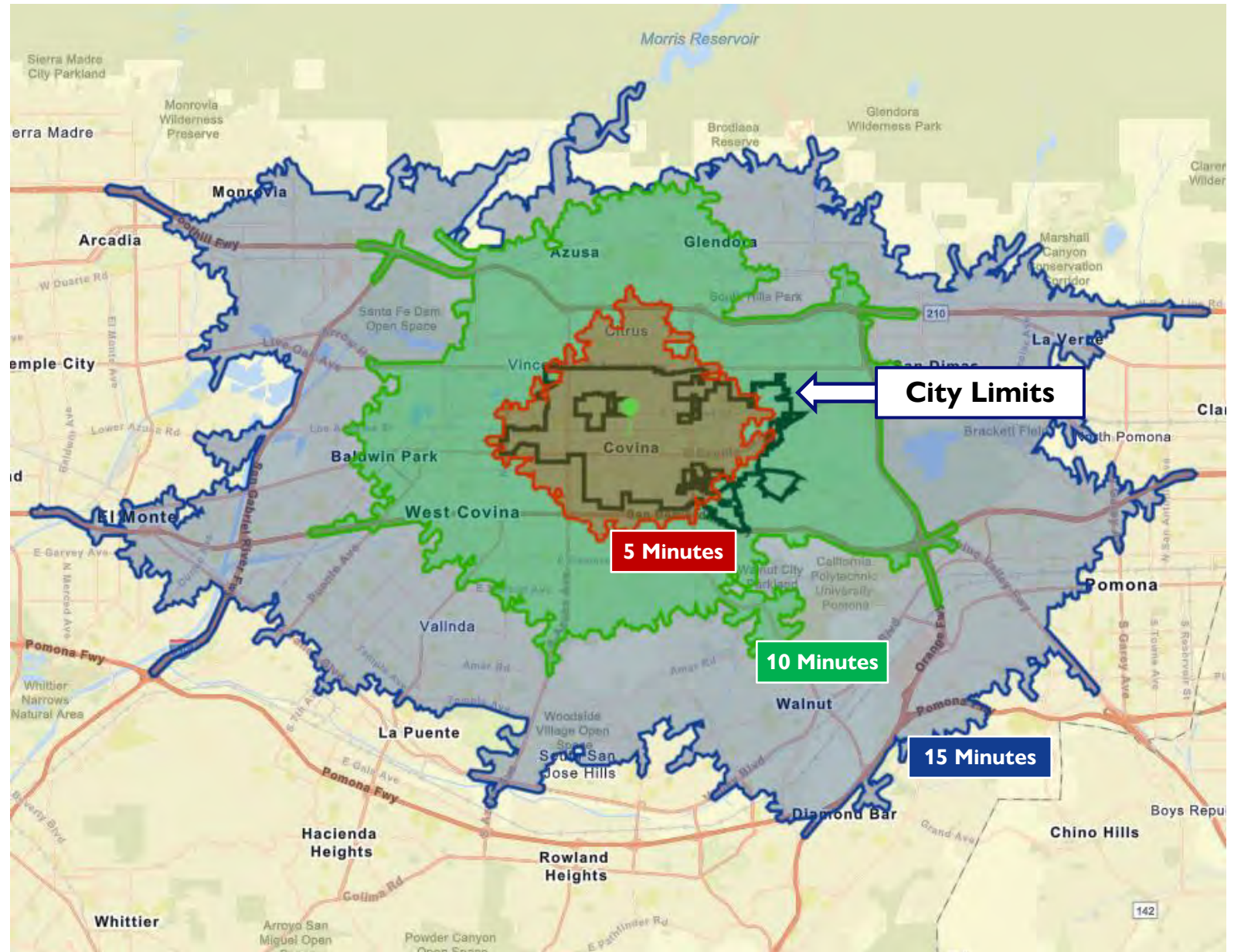
- Covina has a population of ~51,300, seeing total population growth of ~7.7% since 2000
- **Average Household Size** is 3.0 persons, and the **Median Age** is 37.1 years; ~29% of residents achieved at least a bachelors degree, lower than county / state averages
- City **Average Household Income** is \$109,300, approx. ~10% lower than Los Angeles County and 20% lower than statewide levels
- Approximately 77,500 people live within a 5-minute drive of the downtown Covina area
- Covina sees a small net **Inflow** of 544 jobs, with 21,800 workers commuting from nearby communities to jobs in the City of Covina and 21,300 workers commuting to surrounding job centers such as Los Angeles, West Covina, Industry, and Glendora
- **Jobs in the City** are primarily in the Health Care, Retail Trade, Administration / Support, and Accommodation / Food Service sectors
- **Residents of the City** are primarily employed in the Health Care, Education, Retail Trade, and Accommodation / Food Service sectors



# POPULATION & INCOME CITY, COUNTY, AND STATE

	<b>Covina City</b>	<b>Los Angeles County</b>	<b>California State</b>
<b><i>Population</i></b>	51,300	9,992,600	39,770,500
<b><i>Households</i></b>	16,900	3,425,800	13,570,100
<b><i>Average HH Size</i></b>	3.0	2.9	2.9
<b><i>Median Age</i></b>	37.1	36.4	36.7
<b><i>% Bachelor's Degree or Higher</i></b>	28.9%	37.0%	37.8%
<b><i>Per Capita Income</i></b>	\$36,000	\$41,200	\$44,300
<b><i>Median HH Income</i></b>	\$84,600	\$81,400	\$88,900
<b><i>Average HH Income</i></b>	\$109,300	\$119,800	\$129,400
<b><i>Median Home Value</i></b>	\$616,300	\$690,900	\$629,200

# DRIVE TIMES





# POPULATION & INCOME

## 5-, 10-, AND 15-MINUTE DRIVE TIME AREAS

	5 Minute Drive	10 Minute Drive	15 Minute Drive
<b>Population</b>	77,500	278,600	673,600
<b>Households</b>	24,500	85,500	199,800
<b>Average HH Size</b>	3.1	3.2	3.3
<b>Median Age</b>	35.7	36.4	35.9
<b>% Bachelor's Degree or Higher</b>	26.8%	29.4%	29.3%
<b>Per Capita Income</b>	\$32,700	\$35,300	\$33,800
<b>Median HH Income</b>	\$82,400	\$90,300	\$87,900
<b>Average HH Income</b>	\$103,000	\$114,900	\$113,500
<b>Median Home Value</b>	\$594,100	\$621,900	\$615,100

# MAJOR EMPLOYERS

CITY'S LARGEST EMPLOYERS ARE EDUCATION, HEALTHCARE, AND MAJOR RETAILERS

Among the top ten employers in the City, three are healthcare related, three are school districts / local government, three are major big box retailers, and one is an aerospace components firm.

Five of these major employers have operations within the CASMCP area, with several others located just outside of CASMCP boundaries, suggesting workers at these firms could benefit from active transportation improvements.

## Major Employers in Covina

Major Employer	Type	Employees	In CASMCP Study Area?
Covina Valley Unified School District*	Education	1,365	Yes
Citrus Valley Health Partners-Intercommunity*	Healthcare	829	Yes
Charter Oak Unified School District	Education	630	East of Area
Charter Homehealth	Healthcare	535	East of Area
Ikea U.S. West, Inc.*	Retail	325	Yes
Wal-Mart	Retail	265	Just West of Area
City of Covina*	Government	244	Yes
VITAS Innovative Hospice Care*	Healthcare	221	Yes
The Home Depot	Retail	211	Just West of Area
Composites Horizons LLC	Aerospace	204	West of Area



# MEANS OF TRANSPORTATION & COMMUTE TIME

Approximately 75% of Covina workers drove alone to work, similar to County and State averages.

An estimated 12% of Covina workers carpool, 5% use public transportation and 6% are working from home.

Means of Transportation to Work			
	Covina City	LA County	California
Drove Alone to Work	74.7%	72.2%	72.1%
Carpooled	12.2%	9.5%	10.0%
Public Transportation	4.9%	5.4%	4.6%
Bicycle	0.5%	0.7%	0.8%
Walked	0.9%	2.6%	2.5%
Other	0.9%	1.7%	1.6%
Worked at Home	6.0%	8.0%	8.4%

Commute Time			
	Covina City	LA County	California
Less than 15 minutes	19%	17%	21%
15 - 29 minutes	27%	32%	35%
30 - 44 minutes	22%	26%	22%
45- 59 minutes	11%	11%	9%
60- 89 minutes	15%	11%	8%
90+ minutes	6%	4%	4%

# WORKER INFLOW / OUTFLOW

CITY SEES SMALL NET OUTFLOW OF WORKERS

Covina sees a small net inflow of workers from other communities. Approx. 7% of residents/workers stay within the city, while the vast majority commute to/from other locations.

Worker Inflow/Outflow (2019)	
Workers Living & Working	1,675
Workers Coming (Inflow)	21,817
Workers Going (Outflow)	21,273
Net Inflow/Outflow	<b>544</b>
Employment Ratio*	<b>1.02</b>

**Source:** U.S. Census Bureau Center for Economic Studies (2019, Accessed July 2022)

**Notes:** \***Employment Ratio** = People employed within City (living and working in City + those who come into the City for work) / Employed population of City (living and working in City + workers who live in the City, but work outside of the City)



Workers employed in the City but living outside

Workers living in the City but employed outside

Workers living & employed in the City



# WORKER DESTINATIONS & ORIGINS CITY OF COVINA

- Workers who live in Covina primarily work in Los Angeles, Covina, West Covina, Industry, and Glendora.
- Employees who work in Covina primarily live in Covina, Los Angeles, West Covina, Pomona, and Glendora.
- Approx. 18% of Covina residents commute to locations in Covina or adjoining communities, and ~21% of Covina workers come from Covina or adjoining communities; these commuters would be the most likely to shift modes of transportation.

Outflow: Where Covina Residents Commute To		
City	Count	Percentage
Los Angeles	2,889	12.6%
Covina	1,675	7.3%
West Covina	966	4.2%
Industry	747	3.3%
Glendora	560	2.4%
Ontario	498	2.2%
San Dimas	487	2.1%
Anaheim	475	2.1%
Pasadena	474	2.1%
Pomona	474	2.1%
Baldwin Park	442	1.9%
Azusa	406	1.8%
El Monte	398	1.7%
Irwindale	361	1.6%
Arcadia	359	1.6%
Monrovia	324	1.4%
Chino	323	1.4%
Brea	301	1.3%
Irvine	276	1.2%
Duarte	256	1.1%
Other	10,257	44.7%

Inflow: Where Covina Workers Come From		
City	Count	Percentage
Covina	1,675	7.1%
Los Angeles	1,399	6.0%
West Covina	1,374	5.8%
Pomona	886	3.8%
Glendora	781	3.3%
Azusa	608	2.6%
Baldwin Park	603	2.6%
San Dimas	527	2.2%
Rancho Cucamonga	460	2.0%
Ontario	439	1.9%
El Monte	381	1.6%
Upland	372	1.6%
Fontana	369	1.6%
Vincent	357	1.5%
Chino	351	1.5%
Anaheim	330	1.4%
La Verne	307	1.3%
Chino Hills	293	1.2%
Diamond Bar	275	1.2%
La Puente	265	1.1%
Other	11,440	48.7%

# EMPLOYMENT BY INDUSTRY CITY OF COVINA

- Workers who live in Covina primarily work in the Health Care, Education, Retail Trade, Accommodation / Food Service, and Manufacturing industries.
- Employees who work in Covina primarily work in the Health Care, Retail Trade, Administration / Support, Accommodation / Food Service, and Education industries.

## City Resident Employed Population (Age 16+)

Industry Sector	Count	%
Health Care and Social Assistance	3,658	15.9%
Educational Services	2,371	10.3%
Retail Trade	2,311	10.1%
Accommodation and Food Services	2,092	9.1%
Manufacturing	1,758	7.7%
Administration & Support, Waste Management and Remediation	1,673	7.3%
Wholesale Trade	1,377	6.0%
Construction	1,192	5.2%
Professional, Scientific, and Technical Services	1,090	4.7%
Public Administration	1,005	4.4%
Transportation and Warehousing	993	4.3%
Finance and Insurance	723	3.2%
Other Services (excluding Public Administration)	702	3.1%
Information	493	2.1%
Management of Companies and Enterprises	396	1.7%
Arts, Entertainment, and Recreation	385	1.7%
Real Estate and Rental and Leasing	349	1.5%
Utilities	235	1.0%

## Workers Employed Within City

Industry Sector	Count	%
Health Care and Social Assistance	5,355	22.8%
Retail Trade	3,015	12.8%
Administration & Support, Waste Management and Remediation	2,897	12.3%
Accommodation and Food Services	2,426	10.3%
Educational Services	2,204	9.4%
Manufacturing	1,371	5.8%
Professional, Scientific, and Technical Services	1,266	5.4%
Construction	872	3.7%
Other Services (excluding Public Administration)	861	3.7%
Public Administration	665	2.8%
Finance and Insurance	622	2.6%
Real Estate and Rental and Leasing	511	2.2%
Wholesale Trade	491	2.1%
Management of Companies and Enterprises	485	2.1%
Transportation and Warehousing	241	1.0%
Information	101	0.4%
Arts, Entertainment, and Recreation	90	0.4%
Utilities	15	0.1%



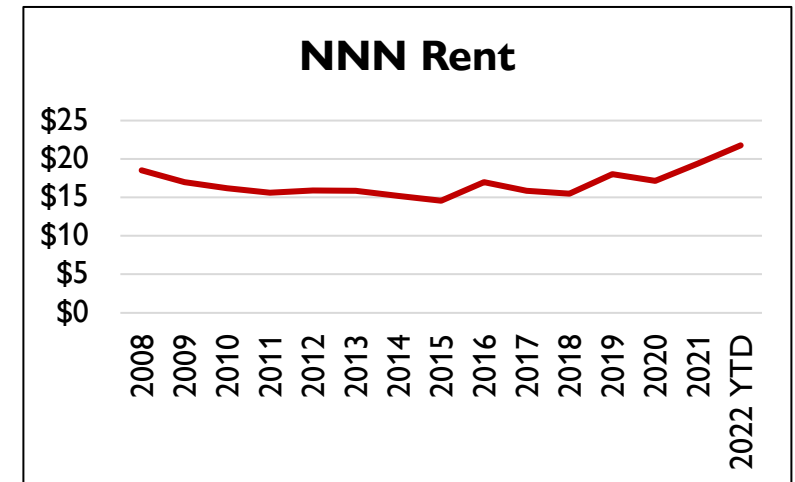
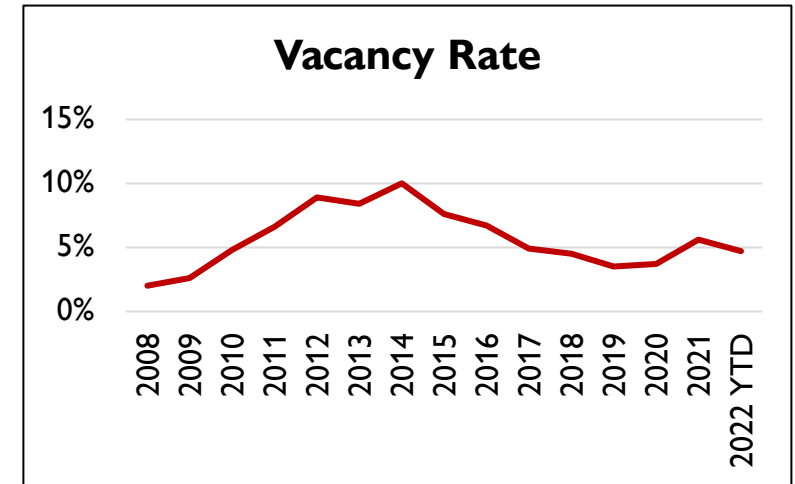
# COMMERCIAL REAL ESTATE SUPPLY & DEMAND SUMMARY

- The Eastern San Gabriel Valley **retail** submarket has seen little growth, with the submarket seeing a decline of -220,000 SF of retail space over the past 5 years. The City has captured ~10% of the regional supply in the local submarket. The City's vacancy rate has fallen from ~10% in 2014 to 4.7% in 2022, with NNN rents approaching \$21.80.
- The Eastern San Gabriel Valley **office** submarket is stable, growing 1.6% over the past decade, with Covina providing ~11% of regional supply. New development activity is focused on medical office and build-to-suits for traditional tenants. Much of the office inventory in the downtown Covina area is medical office, centered around the Citrus Valley Intercommunity Hospital. Vacancy has fallen from ~12% in 2011 to ~3% in 2022, with gross rents of \$23.
- The **multi-family residential** submarket is extremely strong. The City of Covina represents ~8% of regional supply, with the City's inventory adding 42 units over the past decade. Vacancy reached new lows of 1.5% starting in 2020; while rents have grown steadily, reaching ~\$1,800 per month per unit in 2022.
- The City of Covina only has two **hotels**: the 262-room midscale Vanlee Hotel & Suites located near the I-10 and the 26-room economy Evergreen Inn located on Arrow Highway. A 68-room midscale Avid Covina hotel is proposed for a site on Azusa Ave near San Bernardino Road.

# RETAIL MARKET HISTORY

## CITY OF COVINA

Year	Inventory SF	Vacant SF Total	Vacant Percent % Total	Net Absorption SF Total	NNN Rent Overall
2022 YTD	4,215,123	198,039	4.7%	40,346	\$21.79
2021	4,212,637	235,899	5.6%	(97,497)	\$19.42
2020	4,231,620	157,385	3.7%	(12,154)	\$17.17
2019	4,235,872	149,483	3.5%	17,460	\$18.02
2018	4,259,867	190,938	4.5%	(86,724)	\$15.48
2017	4,368,042	212,389	4.9%	78,470	\$15.87
2016	4,368,042	290,859	6.7%	43,037	\$17.00
2015	4,368,042	333,896	7.6%	102,796	\$14.57
2014	4,368,042	436,692	10.0%	(69,483)	\$15.19
2013	4,368,042	367,209	8.4%	62,070	\$15.86
2012	4,323,042	384,279	8.9%	(84,060)	\$15.90
2011	4,309,005	286,182	6.6%	(80,582)	\$15.63
2010	4,310,744	207,339	4.8%	11,862	\$16.22
2009	4,200,445	108,902	2.6%	(25,608)	\$16.99
2008	4,200,445	83,294	2.0%	101,726	\$18.55



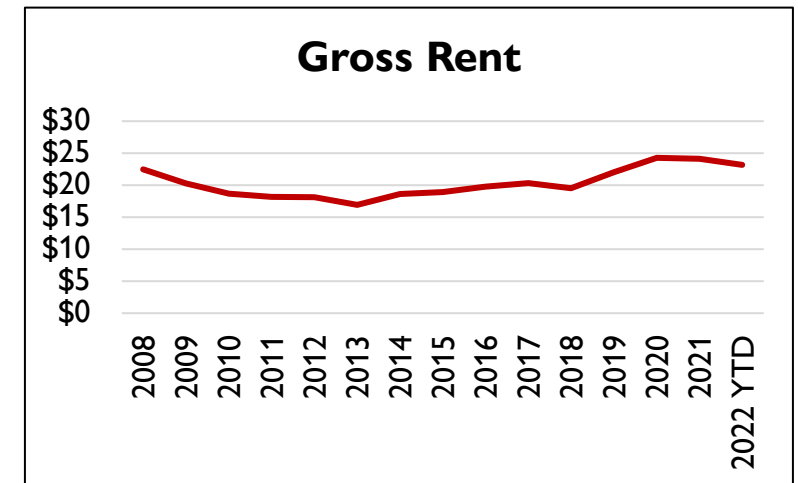
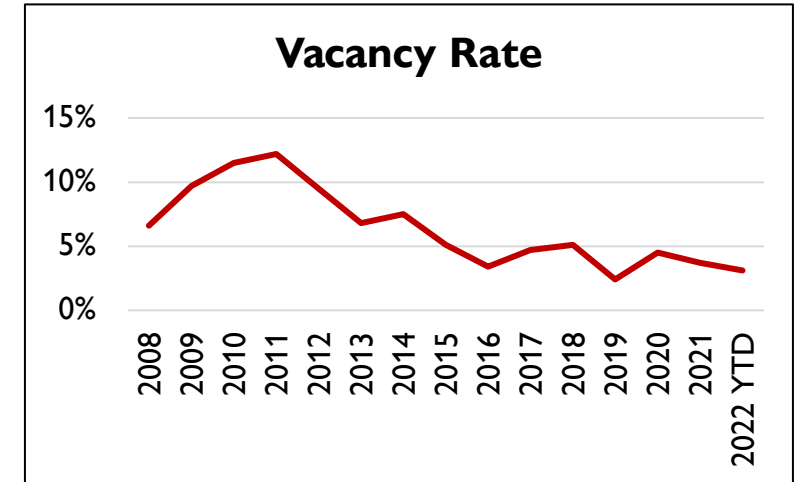
Source: CoStar (Accessed July 2022)

Note: Costar defines Triple Net (NNN) as “a lease where the tenant is responsible for all expenses associated with their proportional share of occupancy of the building, except long-lived structural components and management charges.”

# OFFICE MARKET HISTORY

## CITY OF COVINA

Year	Inventory SF	Vacant SF Total	Vacant Percent % Total	Net Absorption SF Total	Gross Rent Overall
2022 YTD	2,018,816	63,582	3.1%	11,444	\$23.16
2021	2,018,816	75,026	3.7%	12,056	\$24.12
2020	2,023,336	91,602	4.5%	(42,460)	\$24.26
2019	2,023,336	49,142	2.4%	53,427	\$22.05
2018	2,023,336	102,569	5.1%	(6,668)	\$19.55
2017	2,023,336	95,901	4.7%	(27,736)	\$20.32
2016	2,023,336	68,165	3.4%	35,138	\$19.79
2015	2,023,336	103,303	5.1%	47,471	\$18.95
2014	2,023,336	150,774	7.5%	(25,053)	\$18.66
2013	2,036,137	138,522	6.8%	54,364	\$16.93
2012	2,036,137	192,886	9.5%	35,954	\$18.16
2011	2,057,954	250,657	12.2%	(13,908)	\$18.19
2010	2,057,954	236,749	11.5%	(37,365)	\$18.68
2009	2,057,954	199,384	9.7%	(62,893)	\$20.30
2008	2,057,954	136,491	6.6%	15,310	\$22.50



Source: CoStar (Accessed July 2022)

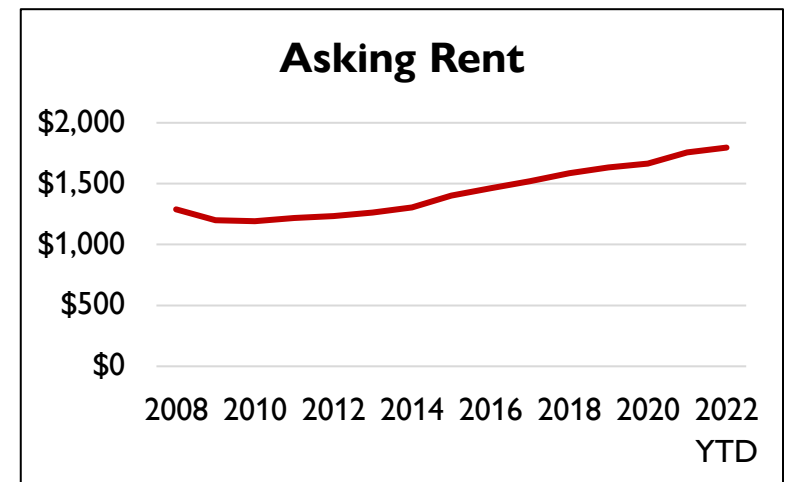
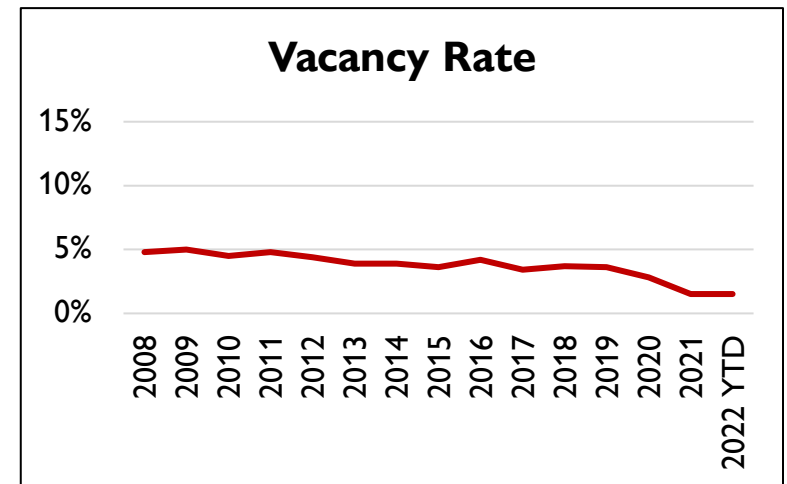
Note: Costar defines Full Service / Gross Rent as “a rental rate that includes normal building standard services which are provided and paid by the landlord.”



# MULTIFAMILY MARKET HISTORY

## CITY OF COVINA

Year	Inventory Units	Vacant Units	Vacancy Percent	Net Absorption (Units)	Asking Rent (Unit/Mo.)
2021	5,148	75	1.5%	14	\$1,795
2020	5,138	79	1.5%	63	\$1,756
2019	5,138	142	2.8%	62	\$1,666
2018	5,119	184	3.6%	4	\$1,633
2017	5,119	188	3.7%	(15)	\$1,587
2016	5,119	173	3.4%	47	\$1,520
2015	5,114	216	4.2%	(22)	\$1,463
2014	5,106	186	3.6%	16	\$1,403
2013	5,106	201	3.9%	-	\$1,306
2012	5,106	201	3.9%	25	\$1,262
2011	5,106	226	4.4%	17	\$1,234
2010	5,106	243	4.8%	(13)	\$1,217
2009	5,106	231	4.5%	26	\$1,192
2008	5,106	257	5.0%	(10)	\$1,199
2007	5,106	246	4.8%	(58)	\$1,290



Source: CoStar (Accessed July 2022)

Note: Costar defines Asking Rent as "average monthly amount the lessor is asking for in order to lease their building/space/land."

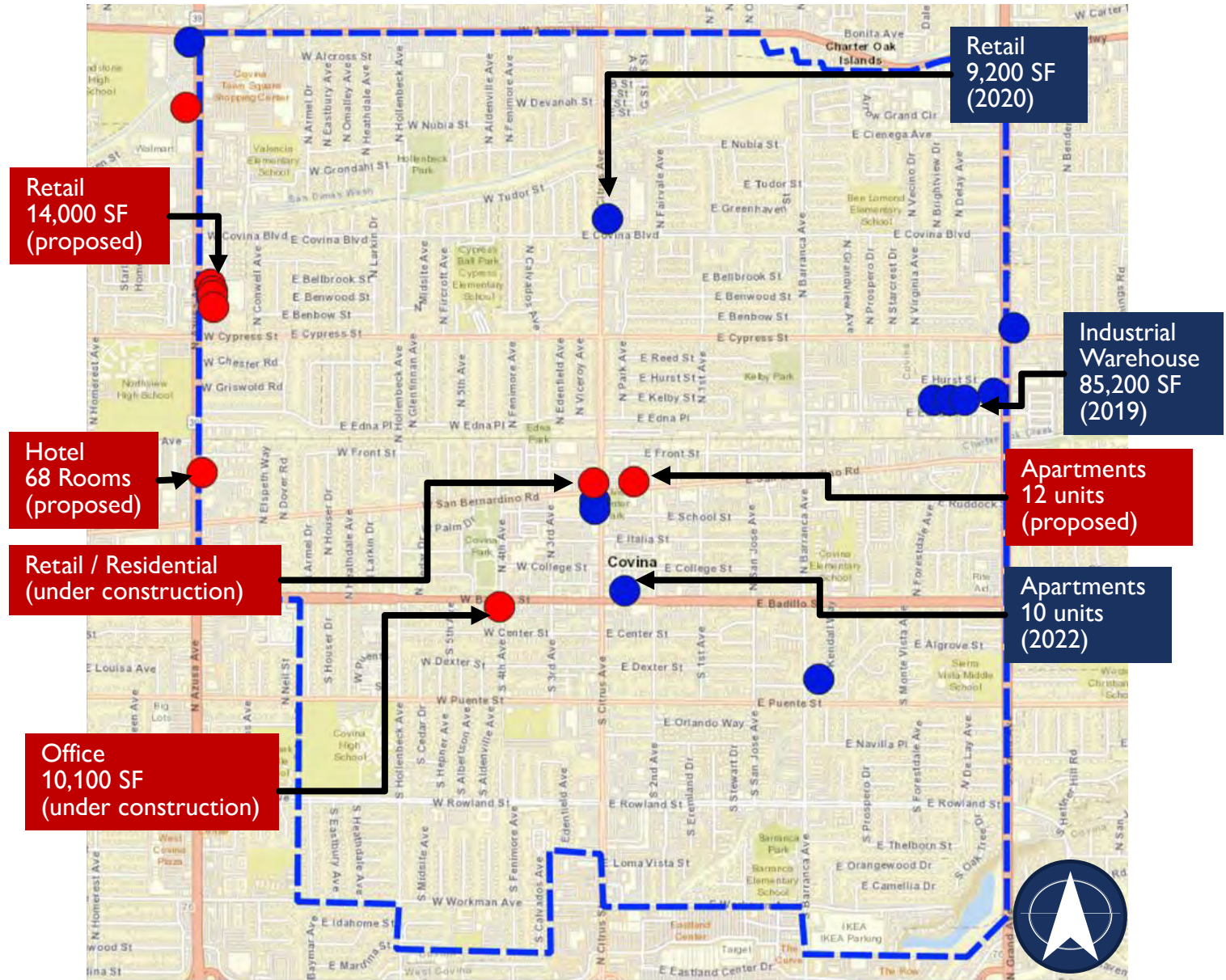
Analytic filters exclude senior / student / military / corporation / vacation housing / co-ops; limit search to buildings with 5+ units; and Market / Market Affordable rent types.

# COVINA CASMCP STUDY AREA

## RECENT / UPCOMING CONSTRUCTION

According to CoStar property data, the Study Area includes a number of recent development projects, as well as a few projects that are under construction or proposed (not necessarily entitled).

Private sector development is often centered along the Citrus Ave, San Bernardino Rd, and Badillo St corridors.



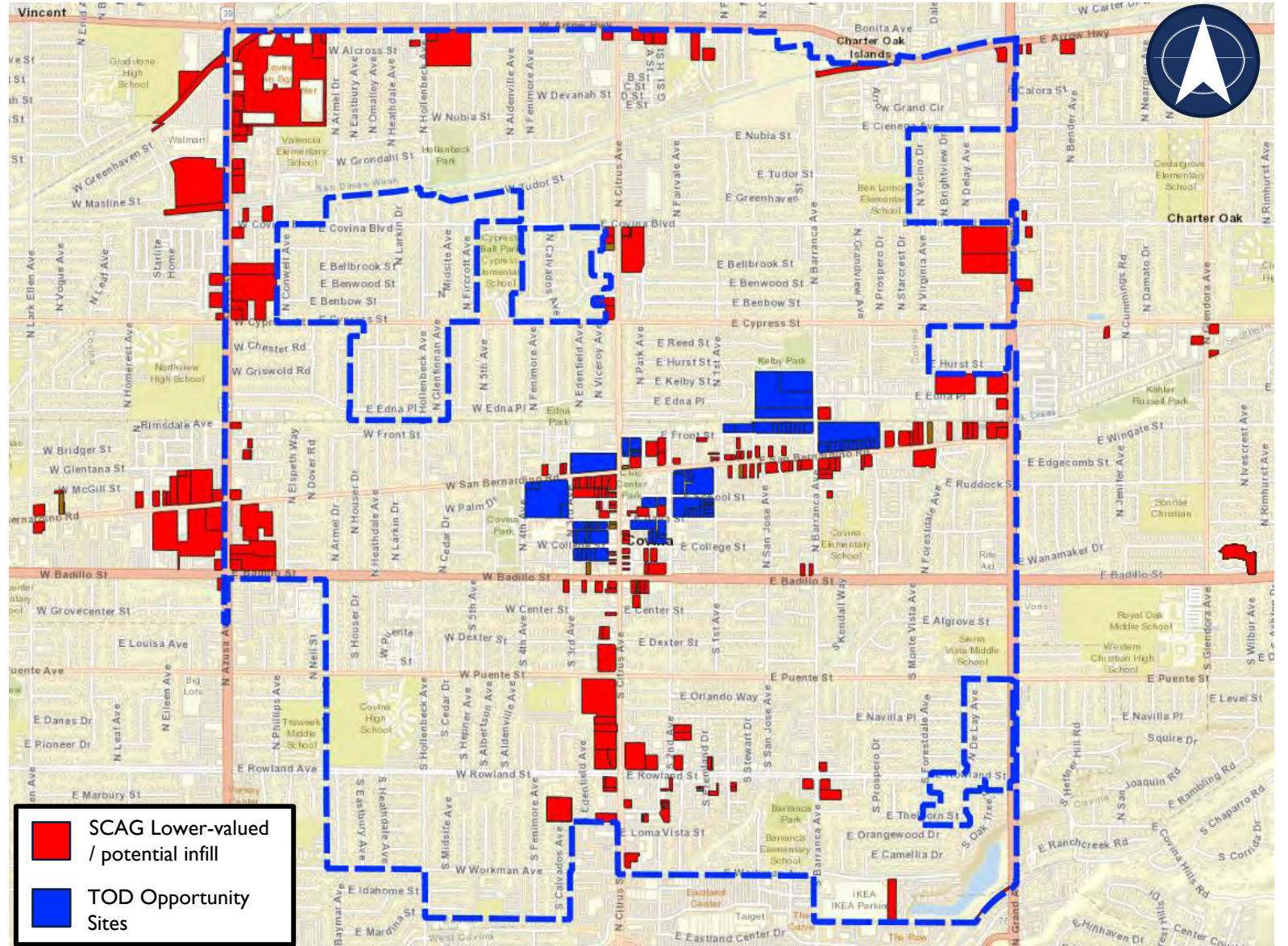


# COVINA CASMCP STUDY AREA

## COMMERCIAL/RETAIL POTENTIAL DEVELOPMENT

SCAG's Housing Element Parcel Tool (HELPR) identifies commercial/retail sites that have a ratio of improvement value to land assessed value less than 1.0, indicating non-vacant sites that may have realistic infill development potential. Several parcels along the Citrus Ave and San Bernardino Road corridors meet these criteria.

The Transit Oriented Development Opportunity Sites were identified in the project's RFP as locations with development potential.



**Note:** Map not to scale





# CITRUS AVENUE CORRIDOR OVERVIEW

The Citrus Ave Corridor is characterized by 1 million SF of retail buildings / shopping centers, a downtown area with a performing arts center and surrounding restaurants / businesses, and almost 300 residential units.

## Recent Market Activity

- 4,400 SF retail building at 1118 N Citrus Ave, built in 2020
- 6,450 SF storefront retail space at 445-495 N Citrus Ave, built in 2020
- 6,367 SF freestanding retail at 435-445 N Citrus Ave, built in 2020
- 10-unit apartment building at 135 E Badillo St, built in 2022, with 3,100 SF of ground floor retail
- 40,000 SF retail / residential building proposed at 137 W San Bernardino
- 12-unit apartment building at 155 E San Bernardino Road, expected to be delivered in August 2023.

There are many potential areas for future development particularly in areas near Covina Station area and areas at the south end of the corridor.

## Commercial Real Estate Summary

2022 Q2	Retail	Office	Multifamily
Inventory	1,042,100 SF	286,200 SF	297 Units
Buildings	150	39	6
Inventory Change Since 2017	+ 17,200 SF	-	+ 10 Units
Vacancy	1.4%	3.7%	1.3%
Market Rent*	\$25.79	\$25.74	\$1,175
Upcoming	40,000 SF	-	12 Units

Source: CoStar

Note: Market rent data CoStar's estimate of market rents for the area based on activity in the region, actual rents may vary; Upcoming SF includes properties identified by CoStar as Under Construction, Final Planning, or Proposed



# CITRUS AVENUE CORRIDOR MAP





# SAN BERNARDINO ROAD CORRIDOR OVERVIEW

The San Bernardino Road Corridor is characterized by significant retail buildings, medical office near the medical center, retail shops / restaurants near the intersection with Citrus Ave, and almost 400 residential units, as well as automotive and light industrial properties.

## Recent Market Activity

- 6,450 SF storefront retail space at 445-495 N Citrus Ave, built in 2020
- 6,367 SF freestanding retail at 435-445 N Citrus Ave, built in 2020
- A proposed 40,000 SF storefront retail / residential building at 137 W San Bernardino Road
- A proposed 12-unit apartment building at 155 E San Bernardino Road, expected to be delivered in August 2023.

There are many potential areas for future development particularly in areas near intersections with Citrus Ave and the mixed-industrial area near the Metrolink Station.

## Commercial Real Estate Summary

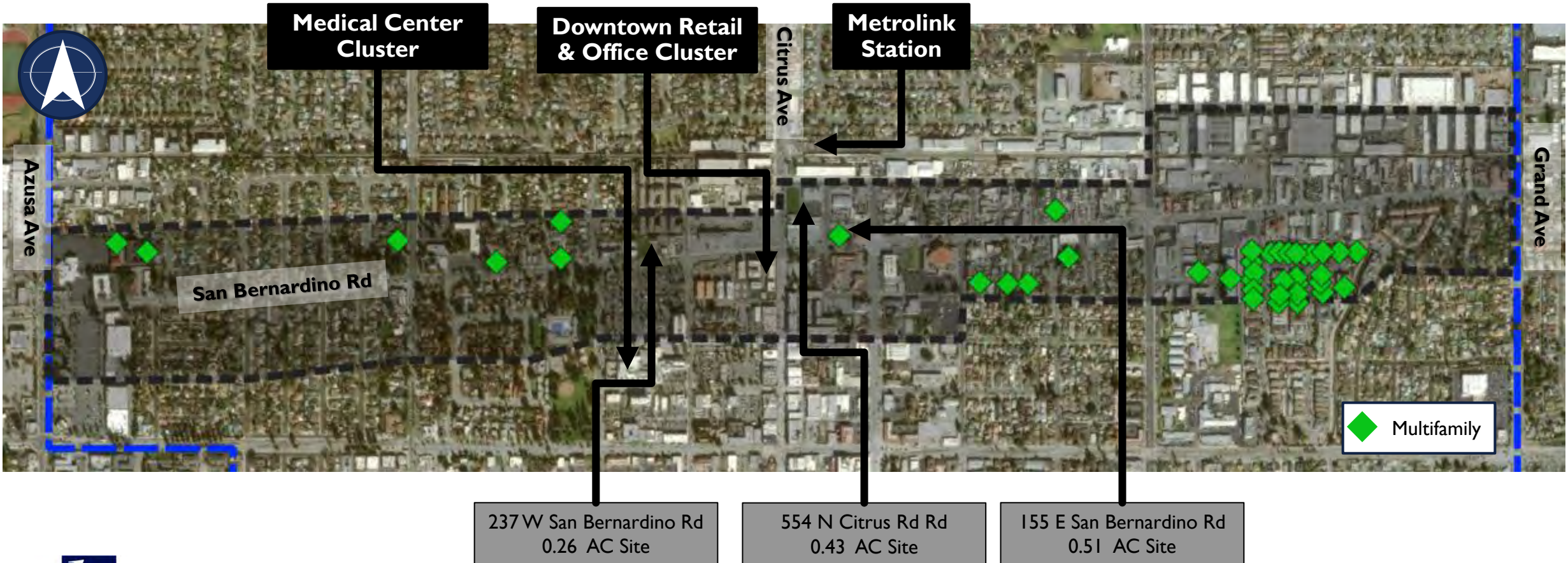
2022 Q2	Retail	Office	MF	Industrial
Inventory	530,900 SF	168,800 SF	384 Units	461,600 SF
Properties	98	34	37	55
Inventory Change Since 2017	-11,200 SF	0	0	0
Vacancy	3.0%	0%	2.0%	2.8%
Market Rent*	\$26.27	\$28.20	\$1,528	\$17.37
Upcoming SF*	40,000	0	12	0



Source: CoStar

Note: Market rent data CoStar's estimate of market rents for the area based on activity in the region, actual rents may vary; Upcoming SF includes properties identified by CoStar as Under Construction, Final Planning, or Proposed

# SAN BERNARDINO ROAD CORRIDOR MAP



# BADILLO STREET CORRIDOR OVERVIEW

The Badillo Street Corridor is characterized by small retail buildings, small medical office buildings (particularly around the medical center area), and single-family neighborhoods, and low-rise / garden style apartment buildings.

## Recent Market Activity

- 10-unit apartment building at 135 E Badillo St, built in 2022, with 3,100 SF of ground floor retail
- 10,100 SF+ office building is under construction at 304 W Badillo St

There are many potential areas for future development particularly in areas near intersections with Citrus Ave and Azusa Ave.

## Commercial Real Estate Summary

2022 Q2	Retail	Office	Multifamily
Inventory	327,800 SF	400,000 SF	518 Units
Properties	51	63	70
Inventory Change Since 2017	-	-4,500 SF	+10 Units
Vacancy	0.8%	2.1%	3.6%
Market Rent*	\$24.77	\$27.59	\$1,595
Upcoming SF*		10,100 SF	



# BADILLO STREET CORRIDOR MAP



# CASE STUDY REVIEW

## *TRANSIT / ACTIVE TRANSPORTATION & ECONOMIC DEVELOPMENT*

The addition of bike lanes / pedestrian areas in commercial corridors is sometimes met with apprehension from local businesses, who are concerned about negative economic impacts due to the loss of parking in front of their businesses.

However, in a variety of case studies from other cities, pedestrian and bike improvements have been analyzed to understand their economic impact – in most cases, these studies tend to show either a neutral or positive impact on the vitality of retail businesses on streets impacted by road diets.

Key findings include:

- Bicyclists and pedestrians can be a sizable portion of a businesses' clientele in a downtown area; while their per-trip spending can be lower than that of customers who drive, they tend to make a larger number of trips
- Merchants in downtown areas tend to over-estimate the percentage of their customers who come via car and underestimate the percentage who bike or walk, thus over-estimating the impact of lost parking
- Non-drivers can spend a long amount of time in a downtown area, likely leading to greater spending within the downtown district (and additional spending at locations other than their primary destination)

# CASE STUDY REVIEW

## **Portland State University – Economic and Business Impacts of Mobility Improvements**

Researchers used a variety of analytic approaches and data sources to estimate the economic impacts of bicycle and street improvements in seven corridors across four cities – Portland, OR; San Francisco, CA; Minneapolis, MN; and Memphis, TN). The analysis observed some mixed results, but generally found that street improvements have either positive impacts on corridor economic and business performance or nonsignificant impacts.

## **York Avenue Road Diet – Los Angeles**

In 2006, the City of Los Angeles put 1.1 miles of York Boulevard (between Eagle Rock Blvd and Avenue 52) on a road diet – narrowing the street from four mixed-use travel lanes to two mixed-use travel lanes, a turn lane, and bicycle lanes.

According to a study conducted in 2011/2012:

- 85% of merchants felt new bike lanes did not hurt their businesses, while a similarly high percentage of customers felt the bike lanes were important roadway additions
- Businesses and customers alike seem to prefer slower vehicle speeds or feel that speed is unimportant
- Businesses assumed that ~60-70% of their customers arrived by car, only 15-30% customers surveyed arrived by car
- Analysis found that the road diet had little impact on property sales, values sales tax collections, and business formation



# CASE STUDY REVIEW

## **UC Davis – Bicyclists as Consumers**

Scholars from UC Davis published a study in 2014 that analyzed the differences in shopping behavior between bicyclists and motorists in downtown Davis. The study found that cyclists made more frequent shopping trips than customers traveling by car, and also found that cyclists spent slightly more on their purchases than motorists. The study also found that people who biked downtown were more loyal customers to the downtown area – they spent a larger share of their total spending downtown than drivers did.

## **Toronto – Economic Impacts of Removing Parking for Bike Lanes**

A series of economic impact studies were conducted by The Centre for Active Transportation on bike lane corridors in Toronto between 2009 and 2017. The studies found that a large majority of visitors to the study areas arrive by active transportation (bicycle or walking), and that merchants tended to overestimate the percentage of their customers who arrived by car. The studies also found that visitors who used active transportation visited more often and spent more money compared to customers who drove to the area, presumably to purchase a specific item.

# CASE STUDY REVIEW

## **Institute for Transportation & Development Policy – Economic Case for Cycling**

A 2022 report by researchers at the ITDP notes that more trips by bicycles benefit individuals, businesses and cities, and that more demand for bicycles spurs jobs and economic opportunities. The report notes that

- Bicycles have a much lower cost for purchase / operation / maintenance than private cars
- Reducing vehicle trips minimizes costs to society such as congestion, air pollution / green house gas emissions
- High quality cycling infrastructure can raise property values / municipal revenues
- Improving access by bicycle to commercial areas can result in higher retail sales
- Bicycle infrastructure can facilitate bicycle tourism and recreational opportunities
- Mobility infrastructure can also support private investment in shared micromobility services (such as bikeshare / e-scooter)
- Cycling infrastructure can be used for local goods delivery while reducing pollution / congestion

## **Smart Growth America – Complete Streets Project Outcomes**

A 2015 report from Smart Growth America notes that Complete Streets projects can be a vital part of an economic development strategy, playing a key role in downtown revitalization efforts. The report's economic analysis assessed business impacts on 22 commercial areas. Overall, the Complete Streets projects were found to be supportive of employment, new businesses, and higher property values, and the report notes that some cities observed higher retail sales along the improved corridors.

# CASE STUDY REVIEW

## Sources and Links

Liu, Jenny H. and Shi, Wei. Understanding Economic and Business Impacts of Street Improvements for Bicycle and Pedestrian Mobility – A Multicity Multiapproach Exploration. NITC-RR-1031/1161. Portland, OR: Transportation Research and Education Center (TREC), 2020.

Link: [https://ppms.trec.pdx.edu/media/project\\_files/NITC-RR-1031-](https://ppms.trec.pdx.edu/media/project_files/NITC-RR-1031-1161_Understanding_Economic_and_Business_Impacts_of_Street_Improvements_for_Bicycle_and_Pedestrian_Mobility.pdf)

[1161\\_Understanding\\_Economic\\_and\\_Business\\_Impacts\\_of\\_Street\\_Improvements\\_for\\_Bicycle\\_and\\_Pedestrian\\_Mobility.pdf](https://ppms.trec.pdx.edu/media/project_files/NITC-RR-1031-1161_Understanding_Economic_and_Business_Impacts_of_Street_Improvements_for_Bicycle_and_Pedestrian_Mobility.pdf)

McCormick, Cullen. “York Boulevard: The Economics of a Road Diet.” Luskin School of Public Affairs, University of California, Los Angeles, CA Link:

[https://nacto.org/docs/usdg/yorkblvd\\_mccormick.pdf](https://nacto.org/docs/usdg/yorkblvd_mccormick.pdf)

Popovich, Natalie, and Susan L. Handy. "Bicyclists as consumers: Mode choice and spending behavior in downtown Davis, California." *Transportation research record* 2468, no. 1 (2014): 47-54. Link: [https://www.researchgate.net/profile/Natalie-](https://www.researchgate.net/profile/Natalie-Popovich/publication/276803953_Bicyclists_as_Consumers/links/5661cee208ae4931cd5bcd20/Bicyclists-as-Consumers.pdf)

[Popovich/publication/276803953\\_Bicyclists\\_as\\_Consumers/links/5661cee208ae4931cd5bcd20/Bicyclists-as-Consumers.pdf](https://www.researchgate.net/profile/Natalie-Popovich/publication/276803953_Bicyclists_as_Consumers/links/5661cee208ae4931cd5bcd20/Bicyclists-as-Consumers.pdf)

Information about the Toronto studies can be found on the Centre for Active Transportation’s website here: <https://www.tcat.ca/resources/bloor-street-economic-impact-studies/>

Making the Economic Case for Cycling, Institute for Transportation and Development Policy. June 2022. Report and other information can be found here:

<https://www.itdp.org/publication/economics-of-cycling/>

Safer Streets, Stronger Economies – Complete Streets Project Outcomes From Across the Country. National Complete Streets Coalition and Smart Growth America, March 2015. Link: <https://smartgrowthamerica.org/wp-content/uploads/2016/08/safer-streets-stronger-economies.pdf>



# CASE STUDY – IMPACT OF CLOSING STREETS TO VEHICLES & MULTIMODAL IMPROVEMENTS

## VENTURA / SANTA BARBARA / CULVER CITY

As a response to the COVID-19 pandemic, the cities of Santa Barbara and Ventura have each closed a portion of their downtown districts to vehicular traffic, increasing pedestrian access and outdoor dining spaces. The City of Culver City also made mobility changes during this time period, adding a dedicated bus lane and bike lanes to several downtown corridors.

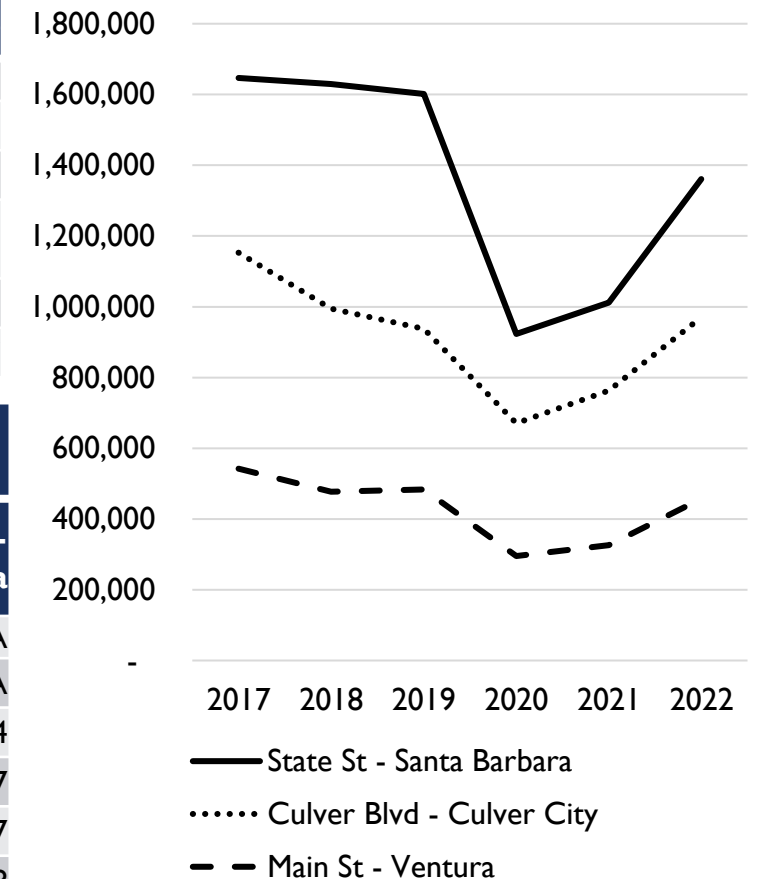
Using PlacerAI data, Kosmont found that closure of major downtown streets has resulted in visitation levels and length of visits generally in-line with, and in some cases exceeding, pre-COVID patterns.

Jan – June Visits	State St - Santa Barbara	Culver Blvd - Culver City	Main St - Ventura
2017	1,646,775	1,153,117	542,161
2018	1,629,856	995,014	477,641
2019	1,601,678	938,047	483,486
2020	922,756	671,107	295,176
2021	1,011,654	763,463	326,118
2022	1,361,256	970,388	457,067

### Avg / Median Dwell Time

Jan – June Visits	State St - Santa Barbara	Culver Blvd - Culver City	Main St - Ventura
2017	NA	NA	NA
2018	NA	NA	NA
2019	79 / 65	81 / 60	104 / 74
2020	72 / 58	68 / 47	95 / 67
2021	70 / 56	62 / 42	117 / 77
2022	75 / 59	68 / 49	111 / 78

January - June Visits



Source: Placer.ai

Note: Visit data filtered for visits from visitors with homes located within 5 miles of downtown areas to exclude tourism effects.

## TECHNICAL MEMORANDUM

To: Mr. Miguel Núñez  
Fehr & Peers

From: Narasimha Murthy, PhD, TE

Date: August 18, 2022

Subject: Covina Active Streets and Multimodal Connectivity Plan (ASCMP)  
Existing Conditions Infrastructure (Study Area)  
Technical Memorandum

---

### 1. Introduction

The major project objective is to investigate the study area, and the feasibility for developing Active Streets and Multimodal Connectivity Plans (ASMCP) in the City of Covina (City). The city is in Los Angeles County, California; estimated at 22 miles (35 km) east of downtown Los Angeles, in the San Gabriel Valley. The current population is 51,268 according to the 2020 census.

A small stretch of the Interstate 10 freeway is to the south of the city. The city is served by Interstate 210 (Foothill Freeway) to the north, Interstate 605 (San Gabriel River Freeway) to the west, State Route 57 (Orange Freeway) to the east, and Interstate 10 to the south. The Metrolink San Bernardino Line passes through the city just north of the downtown area and Foothill Transit Center (Transit Center) is north of San Bernardino Avenue.

The City has a total area of seven (7) square miles (18 sq km); City of West Covina borders the City on both the south and west side. City of Irwindale is to the west, as well as the unincorporated County area of Vincent, and the City of Baldwin Park. Cities of Azusa and Glendora are to the north, the unincorporated County area of Charter Oak to the northeast, City of San Dimas to the east, the unincorporated County area of Ramona, and the City of Pomona to the southeast.

The city has grown in the past 50 years and has basic infrastructure built across the city, including roads, transportation, water, and electricity (energy). The city has public buildings, private offices, schools ranging from elementary to college, medical centers, and big box commercial stores such as Home Depot, Costco, Walmart, and IKEA. In addition, it has the Covina Metrolink station and Covina Transit Center.

## 1.1 Project Study Area

The study area for this project is shown in Figure 1 (bordered in black), Arrow Highway to the north, Grand Avenue to the east, Azusa Avenue to the west, and the I-10 freeway to the south (close to Workman Avenue). The estimated total study area is three (3) square miles (approximately 1.5 miles east-west and 2.0 miles north-south). Figure 1 shows the Covina Metrolink Station and the Covina Transit Center along Citrus Avenue to the north of San Bernardino Road. Citrus Avenue passes through the middle of the study area. Figure 2 shows the north-south and east-west oriented street network in the study area with the existing right-of-way (R/W).

The major north-south oriented arterials are Azusa Avenue, Hollenbeck Avenue, Citrus Avenue, Barranca Avenue, 1<sup>st</sup> Avenue, 2<sup>nd</sup> Avenue, and Grand Avenue. The major east-west oriented arterials are Arrow Highway, Covina Boulevard, Cypress Street, San Bernardino Road, Badillo Street, Rowland Avenue, College Street, Cienega Avenue, and Workman Street.

There are local minor north-south and east-west streets that form the entire roadway network in the study area connecting businesses, schools, and residential areas within the city.

**The City's downtown area** in Figure 1 (smaller circle area) is between Badillo Street to the south, College Street to the north, 2<sup>nd</sup> Avenue to the east, and 3<sup>rd</sup> Street to the west. The downtown area has restaurants, shops, cinemas, and attractions within the small area. In the downtown area the travel lanes are reduced from two (2) to one (1), parking restrictions with additional pedestrian safety signs are provided.

The downtown area remains busy during both weekdays and weekends. Figures 3 and 4 shows the typical Covina downtown area with parking on both sides of the road with one (1) through lane. Citrus Avenue from north to south has varying posted speeds of 40, 35, and 25 miles per hour (mph) from south to north in different sections of the road. The speed limit in the downtown area is 25 mph.

*The existing right-of-way (R/W) for the major north-south and east-west streets are provided in Figure 2. The R/W for the major arterials ranges between 80 and 50 feet. Most of the roads are on level terrain and the grades are not greater than 5 percent. The major roads have a posted speed of 40 miles per hour (MPH), except in the downtown area. The intersection of major north-south and east-west streets have been signalized (most have protected left turns and yield phase depending on the volume of traffic at the intersection). The following section provides the brief roadway characteristics of the major roads.*

### North-South Major Streets

Azusa Avenue (Highway 39) is a major road with 80 feet R/W and forms the western limit of the study area. This major north-south street has two-way turning lanes (TWTL), left turn pockets (LTP), medians, right turn pocket (RTPO) and it has 2 lanes in each direction. It connects the I-10 to the south and SR 210 freeway to the north. The street has commercial establishments and less residential units. There two (2) High Schools to the north of San Bernardino Road

Hollenbeck Avenue has 60 feet R/W. It has bike lane with two (2) lanes in each direction between AR/W Highway and Covina Blvd. To the north of Cypress Street, it is mostly commercial, whereas to the south of Cypress it is residential. There is a school in the corner of Rowland Street and Hollenbeck Avenue and a Baseball Park to the north of Covina Blvd.



Citrus Avenue has 80 feet R/W, and it is in the center of the study area. The downtown area is located to the north of Badillo Street to San Bernardino Road along Citrus Avenue. The downtown area posted speed is 25 MPH. The two (2) travel lanes are reduced to one (1) travel lane, the intersections in this section are clearly marked with different tiles, including mid-block pedestrian crossings. Additional roadside parking is provided by removing a through lane for travel, which assists in reducing auto speed. To the north of E Front Street there are single family residential units up to Cypress Street on both sides. But Citrus Avenue is mostly commercial with limited bike lane to the south between Covina Blvd and E Front Street.

2<sup>nd</sup> Avenue starts at E Front Street and ends at E Rowland Street. An important north-south street with 80 feet R/W. Majority of the roadway is residential, except between Navilla Place to Rowland Street it is commercial.

Barranca Avenue has 60 feet R/W and to the north of Covina Blvd mixed commercial use. To the south up to Rowland Avenue mostly residential.

Grand Avenue forms the eastern limit of the study area. Like Azusa Avenue it provides access to both I-10 and SR 210 freeways. From Rowland Avenue to San Bernardino Road, it is mostly residential with 2 lanes in each direction. To the north of San Bernardino Road, it is mixed commercial and residential.

#### East-West Streets

Arrow Highway is a major arterial with 2 lanes in each direction with 80 feet R/W. The arterial mixed use of commercial and residential units between Azusa Avenue and Grand Avenue. Arrow Highway is the northern limit of the study area. Like Azusa Avenue and Grand Avenue, it has left and right turn pockets at major intersections and acts as a major thoroughfare for the region.

Covina Blvd has 60 feet R/W, and it has bike lanes between Hollenbeck Avenue and Citrus Avenue with mostly residential units. At the intersection of Covina Blvd and Citrus Avenue is the Covina Transit Center. It has two lanes in each direction with left turn pockets at major intersections with median.

Cypress Avenue has 60 feet R/W with two lanes in each direction with left turn pockets and median. Mostly residential units along Cypress Avenue between N Cornwell Avenue to Grand Avenue.

San Bernardino Street has 60 feet R/W with 2 lanes in each direction with mixed residential units and commercial use. Between Azusa Avenue and 3<sup>rd</sup> Street majority land use is residential. From 3<sup>rd</sup> Street to Grand Avenue, it is commercial plus light industrial areas.

Badillo Street has 80 feet R/W with two lanes in each direction. It is a major arterial with left and right turn pockets and medians. It has bike lane throughout between Azusa Avenue and Grand Avenue, except between 2<sup>nd</sup> and 4<sup>th</sup> streets. Badillo Street is mostly mixed residential and commercial use.

Puente Street has 50 feet R/W with two lanes in each direction with single family residential units with schools and park, limited commercial use along the arterial.

Rowland Avenue forms the southern limit of the study area, and it has 70 feet R/W with two lanes in each direction with mixed residential and commercial use.

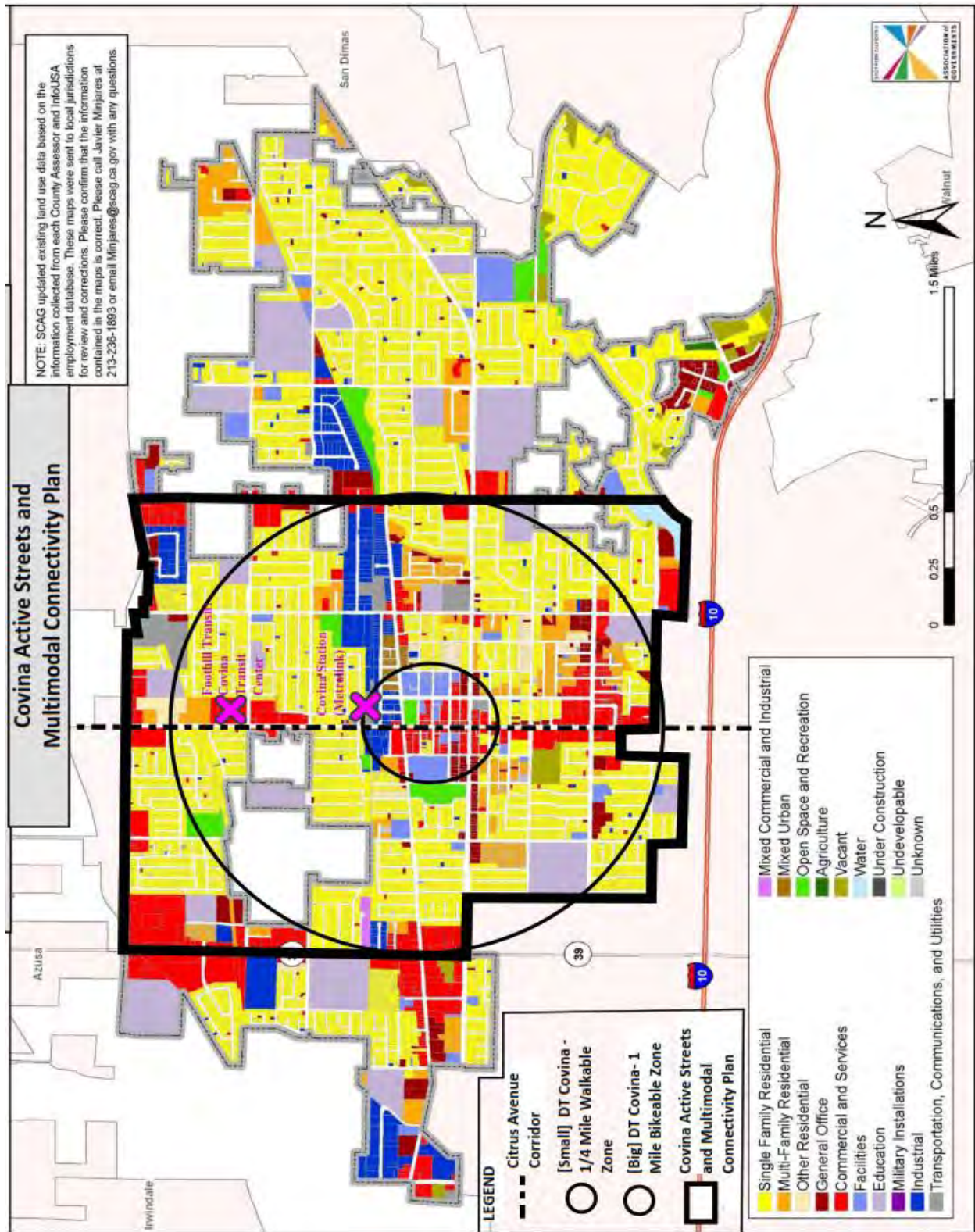


Figure 1 Existing Land Use and Project Study Area



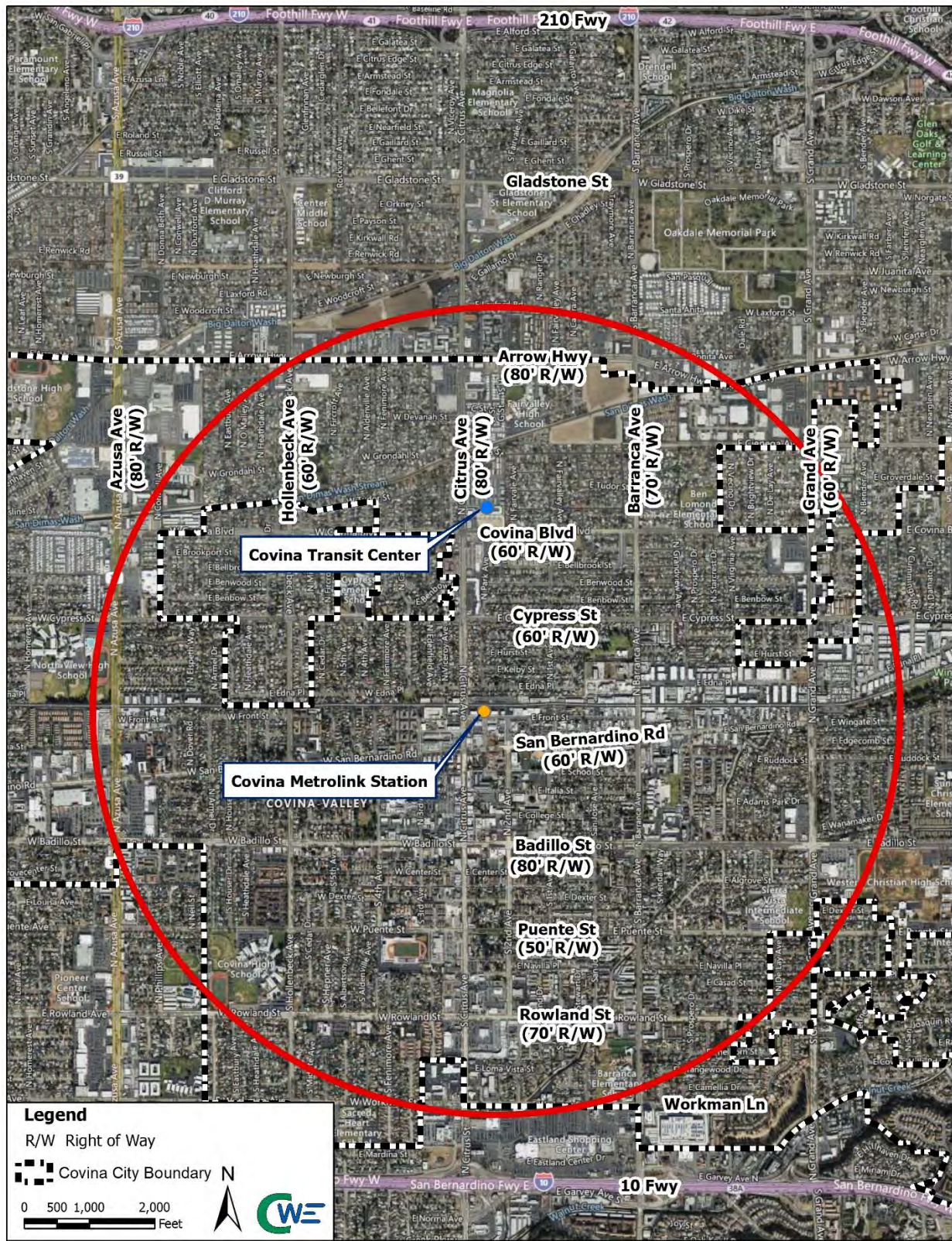


Figure 2 Project Study Area – Major Roadway Network





Figure 3 Downtown Covina - North of Badillo Street



Figure 4 Downtown Covina – Intersections & Pedestrian Crosswalk

## 2. Infrastructure and Transportation System

Currently, cities are fraught with infrastructure challenges, whether it is short- or long-term, building new infrastructure, or maintaining it. The recent trend of declining tax revenues and transportation funds makes it difficult for local governments to maintain basic services, let alone plan for future infrastructure needs. This study is targeted towards providing active transportation options and establishing a multimodal connectivity plan for the City by using the existing infrastructure and adding the necessary elements for travel and safety.

### 2.1 Study Area – Existing Infrastructure Status

The entire study area was surveyed by driving through the roadway network both north-south and east-west streets. During the field survey, notes were made on important road elements such as signalization, bikeways, left turn pockets, school zones, pedestrian signs, major and minor shopping centers and strips, cinemas, downtown area, and any other road elements of importance. Also, photos were taken at important roadways and intersections for further analysis as needed for the study.

#### 2.1.1 Existing Conditions

Majority of the streets in the study area have mixed commercial and residential (single family homes to apartments) activities and there are streets exclusively with single and multi-family housing. There are residential units near educational institutions, such as elementary and high schools, located close to these residential areas. This provides the students to travel (walk/bike) to the schools from the nearby residences.

In the study area, there are major north-south and east-west streets that serve the traffic needs as shown in Figure 2. The major north-south oriented arterials are Azusa Avenue, Hollenbeck Avenue, Citrus Avenue, Barranca Avenue, 1<sup>st</sup> Avenue, 2<sup>nd</sup> Avenue, and Grand Avenue. The major east-west oriented arterials are Arrow Highway, Covina Boulevard, Cypress Street, San Bernardino Road, Badillo Street, Rowland Avenue, College Street, Cienega Avenue, and Workman Street.

The majority of the major intersections in the study area have adequate left turn pockets and the major intersections are signalized depending on the volume of traffic at the intersections. All the major roads have 40 mph as posted speed, with exceptions along Citrus Avenue near the downtown area and near school zones having reduced speeds (25 mph). The minor intersections intersecting the major roads have stop sign control. In addition, near school zones, proper signage indicating pedestrian crossing, and bikeway lanes are marked for the safety of road users.

The right-of-way (R/W) ranges between 80 feet and 50 feet for all the major north-south and east-west roads as shown in Figure 2. At major intersections with high volumes the right turn pockets are provided.

Grand Avenue, Citrus Avenue, and Azusa Avenue have direct access to freeways (I-10 to the south and SR-210 to the north). The remaining north-south and east-west roads have indirect access to freeways using the major connectors. The downtown area described in Section 1 and shown in Figures 1, 3 and 4 has reduced speed of 25 mph for a limited distance north of Badillo Street and reduced number of through lanes from two lanes (2) to one (1), which provide more parking in the downtown area and also assists to reduce auto speeds.

In the downtown area, well-marked pedestrian crossings with different road surface color (tiles are used) for visibility and pedestrian signs as shown in Figure 4. This arrangement also provides advanced notice to drivers entering the downtown area and clearly differentiates other areas within the study area, such as school zones. Most of the intersections in the study area meet the required 4' or wider and most observed intersections have curb ramps and truncated domes at all corners. Some of the major arterials allow curbside parking as shown in Figure 5.



Figure 5 Roadside Parking – San Bernardino Road



### 3. Major Transportation Centers

The Southern Pacific Railroad and the Metrolink San Bernardino Line pass through the city just north of the downtown area. The Covina Transit Center is served by both local and express bus lines and is located at the Citrus Avenue and Covina Boulevard intersection, as shown in Figure 6. The Transit Center in Covina has 360 estimated parking spaces. From the Covina Transit Center, bus connections are available to the Cities of Azusa, Glendora, and Walnut.

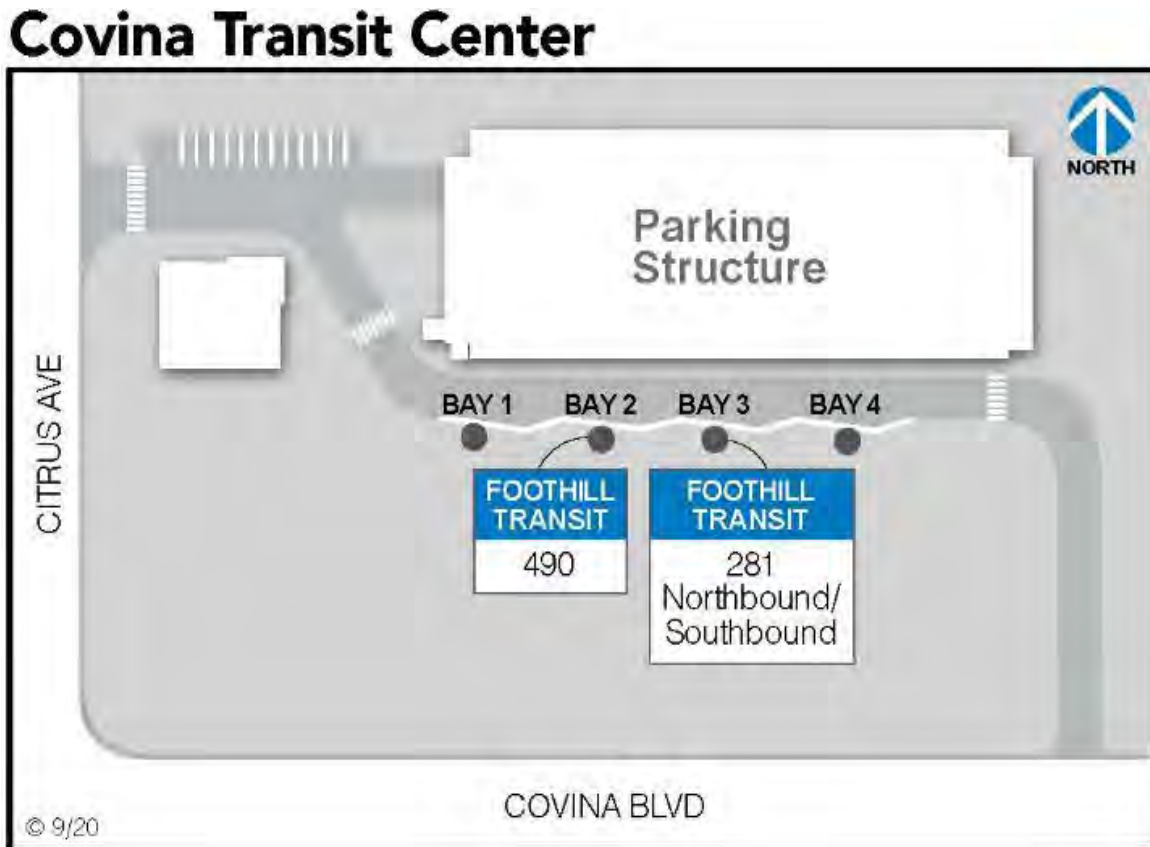


Figure 6 Covina Transit Center

The Covina Metrolink station is located three-quarter of a mile to the south of the Covina Transit Center. It is located at 600 N Citrus Avenue to the east between Front Street and Edna Place as shown in Figure 7. The station serves the San Bernardino line of Metrolink connecting Downtown Los Angeles (west) and Downtown San Bernardino (east), passing through Downtown Pomona. There are an estimated 1000 parking spaces in a parking lot and parking structure located close to the station with a daily fee.

#### 3.1.1 Transit Oriented Development (TOD)

One of the project tasks is to identify a suitable location for the development of a Transit Oriented Development (TOD) site. The City has provided twelve (12) suitable TOD sites, one must be identified as the most suitable site as shown in Figure 8.



Figure 7 Access to Metrolink Station, Covina

SB 743 (Steinberg, 2013) updates the way transportation impacts are measured in California for new development projects, making sure facilities are built to allow Californians more options to drive less. TOD integrates the building of housing, retail, office, and public space together focused on transit stations (both bus and rail). This infill of development allows people within comfortable walking distance, usually within a quarter mile, of a public trail transit station to reduce automobile dependence for local and work trips.

In addition, the attraction of an accessible transit system increases the land use value in the area, **commuter's health risks are reduced**, and provides additional active transportation activities to the community [1,2]. The selection of suitable site factors needs to be considered and evaluated such as the location, proximity to transit centers, economic feasibility (land value and taxes), size, share of commercial and residential (usually apartments), and availability of land.

The significant benefits of building adjacent to rail transit stations through TODs has been proven worldwide with regards of strengthening local economic conditions, increase of transit ridership, improved social and health benefits, increase of land-values and real estate, while creating a more sustainable community [3].

1. Potential Health Implications and Health Cost Reductions of Transit-Induced Physical Activity  
I.N. Sener, Richard J. Lee and Zachary Elgart. Journal of Transportation Health, June 2016 pp133-140.
2. <https://doi.org/10.46830/wriprn.20.00082>; Synergizing Land Value Capture and Transit-Oriented Development: A Study of Bengaluru Metro.
3. Measuring the success of transit-oriented development; JL Renne, C Curtis, and Luca Bartolini - Transit Oriented Development, 2016 - taylorfrancis.com



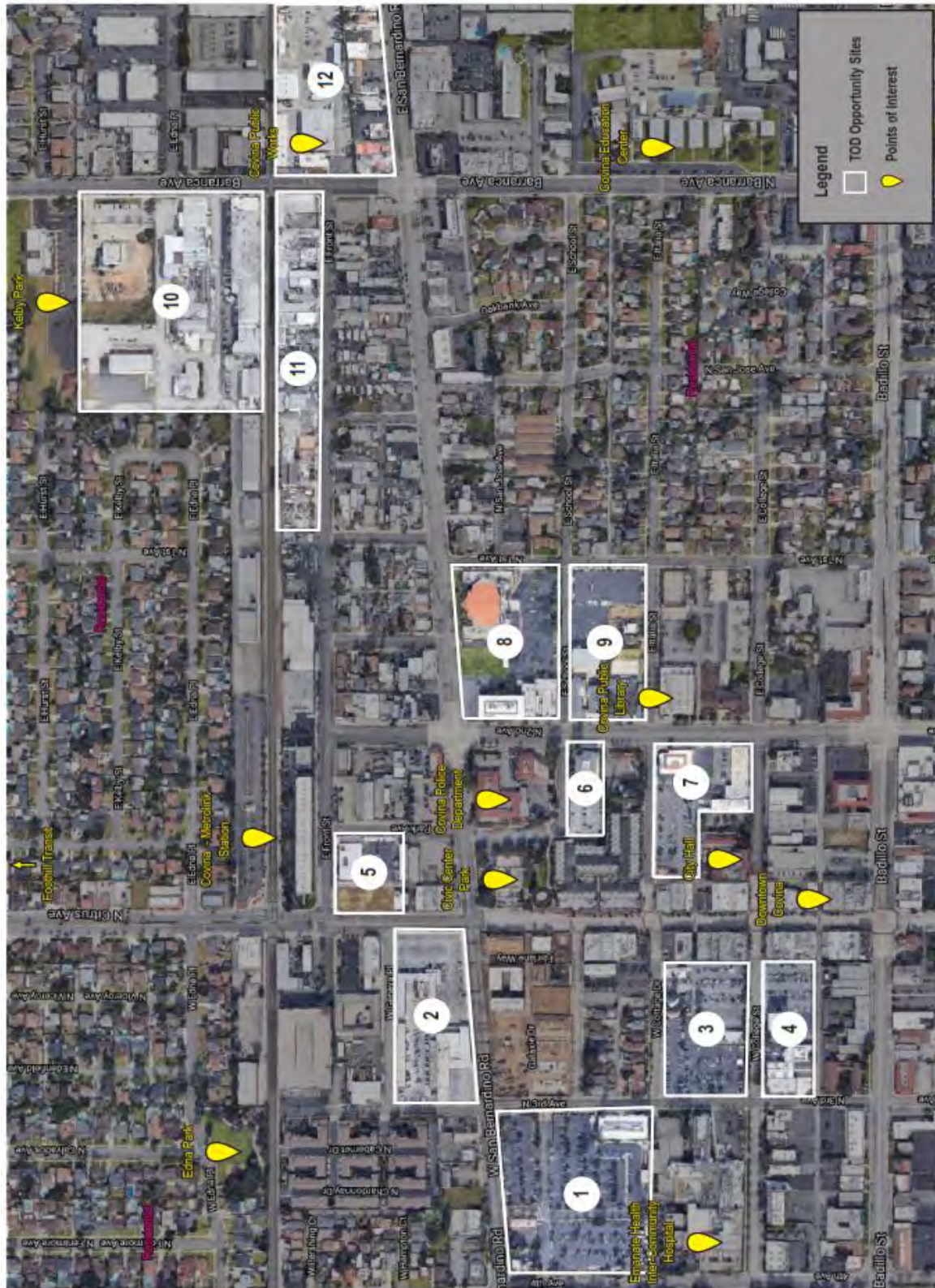


Figure 8 Transit Oriented Development Sites Identified



## 4. Existing Active Transportation

Active transportation is described modes of travel such as walking, cycling, in-line skating, and skateboarding using roadway and sidewalk surfaces. It is also combined with other modes of travel such as buses and trains. Currently, there are bike lanes marked on City streets.

The identified streets with bike lanes are Citrus Avenue, Badillo Street, 2<sup>nd</sup> Street, Hollenbeck Avenue, and Covina Boulevard. Only Badillo Street has bike lane from Azusa Avenue to Grand Avenue (with a gap between 2<sup>nd</sup> and 4<sup>th</sup> Avenue), while the remaining streets are only partially marked for a bike lane. Figures 9,10 11 and 12 shows typical bike lanes, road markings, and signs in the study area.

Adding more bike lanes to selected road networks helps to encourage bike riding and increases access to destinations by bike. In addition, health risks are reduced [1]. The selection of additional active transportation facilities such as bike lanes will require evaluation of the streets, safety, and accessibility to attractions such as schools and commercial places

### 4.1.1 Selection of Bike Lane Route

The safety of both pedestrians and bike riders needs to be considered in designing the Active transportation within the focused study streets in Figure 13. The development of Bike Lane Type (I, II, III, and IV) selection primarily depends on the traffic volume and operating speed characteristics of the roadway, which are often implied by their functional classification (arterial, collector, local) within various land use contexts of the city. The minimal allowable width of a bike lane is 5 feet from the face of a curb or guardrail to the bike lane stripe. The overall safety of all road users should be paramount in selecting and designing the bike facilities.



Figure 9 Bike Lane on Citrus Avenue North of Cypress Street



Figure 10 Advance Bike Lane Sign (for Badillo Street)





Figure 11 Bike Lane on Badillo Street (East of Hollenbeck) with Parking



Figure 12 Bike Lane, Parking and Pedestrian Crossing – 2<sup>nd</sup> Avenue





## 5. Summary

A site visit was conducted to evaluate the existing infrastructure in the study area for the purpose of developing potential active transportation improvements and identifying a potential TOD site. The entire study area road network was traveled to understand the existing transportation infrastructure such as major and minor arterials, freeway access, major and minor land use developments (schools, commercial, and public buildings), transit centers (rail and bus), and safety aspects of roadway design and development. Existing maps, City-provided data, and aerial imagery were also evaluated.

The existing bike lanes are well-marked. By increasing access to use bikes on appropriately selected road networks in the study area, the city will help encourage commuters to use multimodal transportation. Overall safety of all road users should be paramount in selecting and designing bike lane routes.

City of Covina

# Equity Outcomes

## Covina Active Streets and Multimodal Connectivity Plan

City of Covina



*Prepared by:*  
MIG, Inc.



Final  
January 23, 2024



## INTRODUCTION

The Covina Active Streets & Multimodal Connectivity Plan (Plan) seeks to further regional and local sustainability through improving the active transportation network. An existing conditions analysis was conducted by Fehr&Peers and MIG for the study area where current conditions and data related to transportation – crosswalks, intersections, collisions, facilities, amenities, access, and ridership – were analyzed along with conditions related to the public realm to provide context. The existing conditions analysis also included an Equity Study which used data and community input to identify areas with barriers and challenges that create vulnerabilities for the community. Input from the community’s habits, concerns, and experiences were gathered using a digital survey tool and community engagement.

The Equity Study utilized data from CalEnviroScreen 4.0, Healthy Places Index 3.0, and UC Berkley’s Urban Displacement Project to examine inequities within the study area.

- CalEnviroScreen 4.0 (CES): Scores are composed of twenty-one indicators representing the product of pollution burdens and population characteristics, to produce an overall CES score for each census tract. A percentile ranking for a census tract above seventy-five means that the census tract is in the top 25% of all CalEnviroScreen scores statewide.
- Healthy Places Index 3.0 (HPI): Scores are composed of twenty-three community characteristics to quantify various factors that shape health. These scores can be used to identify health inequities by comparing the well-being and health of communities.
- UC Berkley’s Urban Displacement Project: Analyzes a set of criteria that would make it difficult for a household to afford changes in housing costs in the event of increased development. These communities vulnerable to displacement are referred to as sensitive communities.

The team analyzed the data from these three sources to assess what challenges each census tract experienced and whether specific areas experienced more inequities than others. This assessment also highlights individual burdens or characteristics that impact areas which do not experience as many challenges.

Data from CalEnviroScreen 4.0 designates census tract 4062.00 as a disadvantaged community. After reviewing all three data tools, census tracts 4061.02 and 4037.22 also experience multiple inequities. These three census tracts will be referred to as Equity Areas.

## PURPOSE AND METHODOLOGY

Community input was a necessary part of the Equity Study process to hear directly from community members. A digital survey tool was used to learn about the community’s ideas to realize active streets in Covina and to gather information to inform the Equity Study. The survey was launched [Month/Year] and closed [Month/Year]. Due to a low number of responses, the survey reopened in [Month/Year]. The responses gathered from the digital survey tool are from a self-selecting, and non-random sample. These results are reflective of the experiences of those who filled out the survey, and were used to identify geographies, challenges, and concerns.

Equity is the fair distribution and allocation of resources, that considers the barriers and challenges in accessing these benefits. *The Built Environment and Health* by the Prevention Institute states,

“Environmental factors contribute to disproportionately high incidences of negative health outcomes in low-income communities which are often also beset with structural and institutional inequities.” Inequitable distribution of resources and physical infrastructure in Covina are factors that contribute to negative health outcomes in this community.

The Equity Outcomes report builds on the data examined in the Equity Study to determine areas and neighborhoods where inequities could be addressed through improvements proposed in the Covina Active Streets & Multimodal Connectivity Plan.

## DEFINITIONS

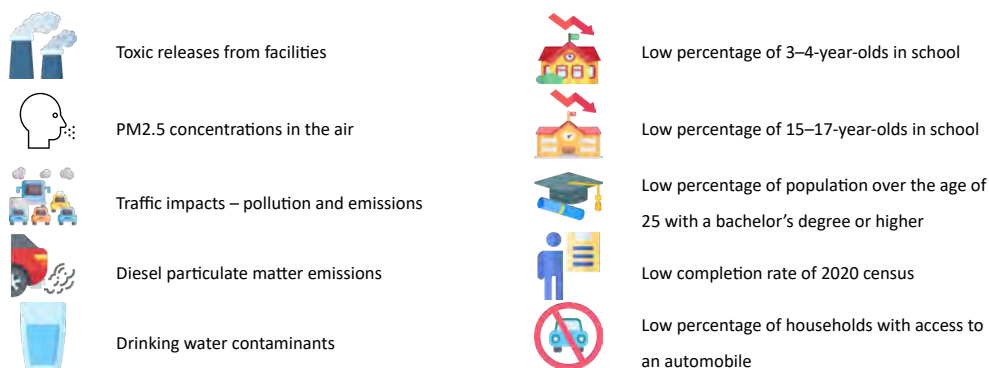
The following terminology will be used to ensure consistency and provide clarity in reviewing the data described in this document.

- Disadvantaged Communities (DAC) – as per Cal EnviroScreen 4.0, communities disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution.
- Indicators – as per Cal EnviroScreen 4.0, measures of environmental conditions or health and vulnerability factors.
- Characteristics – as per Cal EnviroScreen 4.0 and Healthy Places Index, qualities that identify features of communities or populations.
- Sensitive Communities – as per UC Berkeley’s Displacement Project, communities vulnerable to displacement.
- Equity Areas – for the purposes of this assessment, areas with barriers and challenges that create vulnerabilities for populations.

## SUMMARY OF FINDINGS

Of the 45 combined indicators and characteristics – 21 indicators and characteristics used by CES, 23 used by HPI, and 1 used by UC Berkeley – 26 are defined in Figure 1. All indicators and characteristics are important when assessing the degree to which a community experiences negative impacts. This Plan informs the strategies to improve the local active transportation network, therefore this assessment will focus on the indicators and characteristics that demonstrate the opportunity for healthy outcomes through the proposed projects.

Figure 1: Legend for Table 1: Data Indicators and Characteristics



















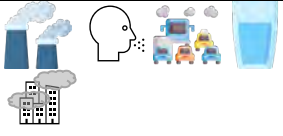
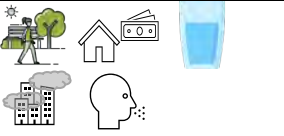
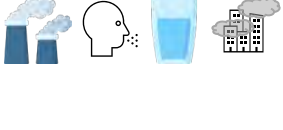
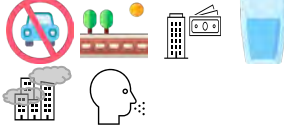
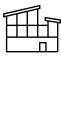
	Ozone concentrations in the air		Low percentage of people living within a half-mile of a park, beach, or open space
	Potential risk for lead exposure in children living in low-income communities with older housing		Low percentage of land with tree canopy in relation to population
	High rate of emergency department visits for asthma		Low percentage of people who own their home
	Limited English-speaking households		Households with poor quality plumbing and basic kitchen facilities
	High unemployment for populations eligible for work force		Low-income homeowners who pay more than 50% of their income on housing
	Low-income households burdened by housing costs		Low-income renters who pay more than 50% of their income on housing
	People earning less than 200% of the federal poverty level		Households with more than 1 occupant per room
	Low average income		Households that would have difficulties affording changes in housing costs

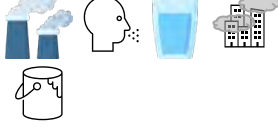

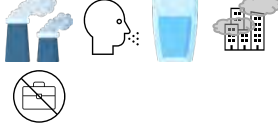
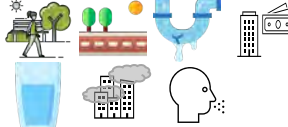
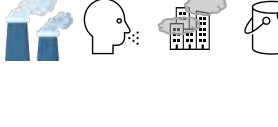
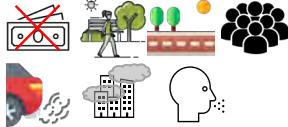
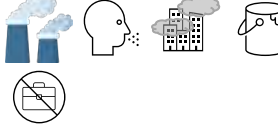
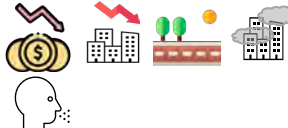









Table 1 provides a visual summary of the indicators and characteristics used by CalEnviroScreen 4.0, Healthy Places Index 3.0, and UC Berkley’s Urban Displacement Project. Each icon shown represents an indicator or characteristic that is negatively impacting the listed census tract leading to poor environmental conditions and health outcomes in Covina. Census tracts 4062.00, 4061.02, and 4037.22, demonstrate the greatest benefit for healthy outcomes that can be addressed through the proposed projects (also see Map 1 and Map 2 in the Appendix). These census tracts are shown in red in Table 1 and are being considered Equity Areas because of the opportunities for positive or healthy outcomes from the following negative impacts:

- Diesel particulate matter emissions
- High rate of emergency department visits for asthma
- Low average income
- Low percentage of 3–4-year-olds in school
- Low percentage of population over the age of 25 with a bachelor’s degree or higher

Table 1: Data Indicators and Characteristics

Tracts	CalEnviroScreen 4.0	Healthy Places Index 3.0	UC Berkeley Urban Displacement Project
4036.00			
4037.21			



4037.22			
4038.01			
4058.00			
4059.00			
4060.00			
4061.01			
4061.02			
4062.00			

## EQUITY OUTCOMES

In addition to looking at transportation amenities and resources for the Covina Active Streets & Multimodal Connectivity Plan, the fair distribution of community resources and services, parks and open space, and streetscape or public realm improvements are also being considered in the neighborhoods that experience disproportionate impacts, as per the data from the existing conditions analysis. Exploring these categories identifies barriers and challenges the community experiences. Addressing these barriers and challenges by improving access can lead to better health outcomes and improved

quality of life for Covina, and more specifically people who live in the census tracts that are most burdened.

According to *Parks and Public Health in Los Angeles County: A Cities and Communities Report*, “Cities and communities with less park space per capita on average had higher rates of premature mortality from cardiovascular disease and diabetes, higher prevalence of childhood obesity, and greater economic hardship compared with cities and communities with more park space per capita.” Those who have access to infrastructure and amenities that promote active lifestyles experience better outcomes than those who do not have access. Further, parks serve as central locations for “enrollment in health and social services, youth development programs, employment events/job fairs, and nutrition assistance programs”, places where community members gather to address health and social issues in their communities and can increase access to fresh produce. Parks provide more than just greenspace; they facilitate access to vital community resources and can help connect residents who otherwise would need to travel longer distances to access these resources.

The existing conditions analysis for Covina reveals tree canopy, ozone, and particulate matter 2.5 as issues across the entire City. Further, Catalyst California links the impacts from climate change on air quality and temperatures to worsening conditions for low-income Black and Brown communities, emphasizing the importance of green open space that can be strategically used to promote climate resiliency (“LA County Park Equity Groups Fight to Turn Park-Poor Communities ‘Red to Green’”).

Numerous studies support the idea that increasing activity by providing necessary infrastructure and amenities and encouraging safer environments help mitigate some of the citywide inequities. Respondents’ attitude in the survey reflects behavior that is willing to be more active if needs are met and supported.

Interventions and improvements in the three Equity Areas can greatly improve health – mental and physical -, environmental conditions and even economic conditions by increasing access and connectivity through the recommendations.

## **SURVEY FEEDBACK**

When asked “What type of walker describes you best?” over half of the survey responses indicated “I walk for some trips; I would walk more but have concerns (e.g., comfort, convenience, safety, distance to destination)”. Respondents are willing to adopt more active lifestyles but the current conditions they experience do not support their needs. Further, opportunities to facilitate accessibility for people with disabilities and people who use mobility aids could improve their experience as they move through the public realm leading to equitable outcomes for everyone.

Feedback received from the survey supports and reflects the findings from the existing conditions analysis. Survey respondents suggested the following improvements which would help address their concerns:

*Comfort – improvements address feeling of uneasiness and maintains peace of mind related to physical conditions resulting in positive experiences.*

- Increase shade by planting shade and street trees
- Reduce vehicle speeds
- Improve condition of sidewalks, address missing sidewalks, and maintain unobstructed clear paths
- Incorporate consistent access to trash receptacles
- Improve access to bicycle amenities
- Provide transit shelters with shade, sufficient lighting, and seating that accommodates people of all sizes

*Convenience – improvements prioritize pedestrians and active transportation by providing simple alternatives that are preferred.*

- Increase connectivity networks for pedestrians
- Prioritize pedestrian experience in public realm

*Safety – improvements that help protect pedestrians and offer peace of mind. Some challenges related to safety go beyond physical barriers and need to be addressed at the social policy level.*

- Increase visibility through street lighting
- Improve pedestrian crossings and crosswalks
- Reduce vehicle speeds
- Provide secure bicycle amenities
- Implement designated protected bike lanes and paths

*Distance to destinations – improvements that increase active transportation connectivity networks to areas of interest.*

- Examples based on community input include:
  - Downtown
  - Library
  - Post Office
  - Fire Station
  - Police Station
  - Parks
  - Grocery Stores
  - Bank

The results from entire survey can be found in the summary of community engagement in the Covina Active Streets & Multimodal Connectivity Plan.

## **INTERVENTIONS AND IMPROVEMENTS**

The recommendations proposed for the Covina Active Streets & Multimodal Connectivity Plan address concerns and barriers highlighted during the Equity Study. These recommendations increase access to greenspace, improve connectivity, make the pedestrian experience in the public realm more enjoyable, encourage the use of active transportation, facilitate climate resiliency, and make the City safer – for everyone.

The Covina Active Streets & Multimodal Connectivity Plan can address barriers and improve quality of life for Equity Areas. The Plan includes design interventions and proposes addressing barriers by implementing projects that include:



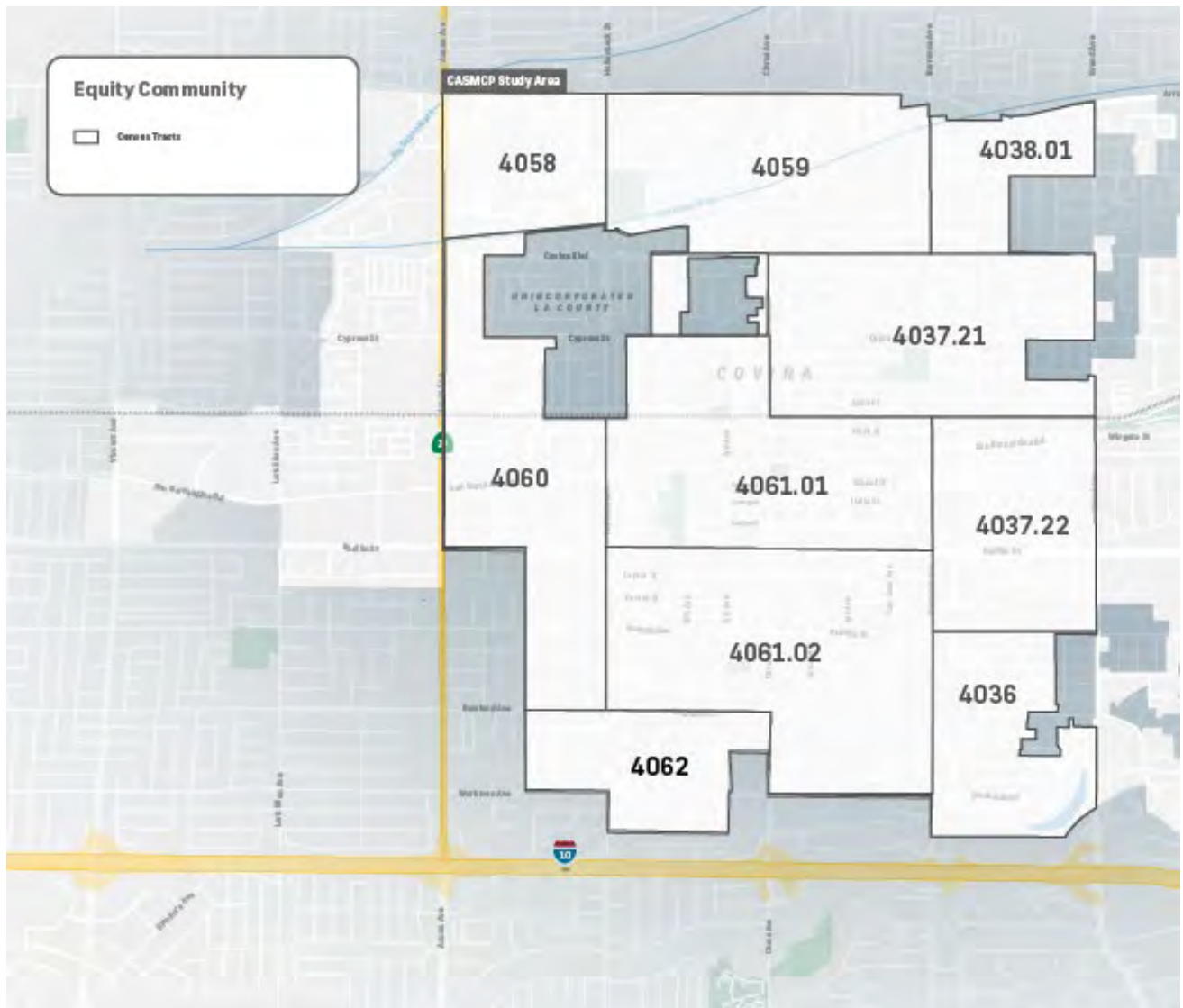
- Sidewalk Zone Amenities
  - Lighting
  - Street furniture
  - Bicycle racks
  - Transit shelter
  - paving
- Physical Expansions
  - Sidewalk
  - Treelet
  - Curb extension
- Green Infrastructure
  - Street trees
  - Bioswales
  - Permeable paving
- Curb space Management
  - EV charging
  - On-street parking
  - Service loading
  - Pick-up / Drop-off
  - Micro mobility parking

## **CONCLUSION**

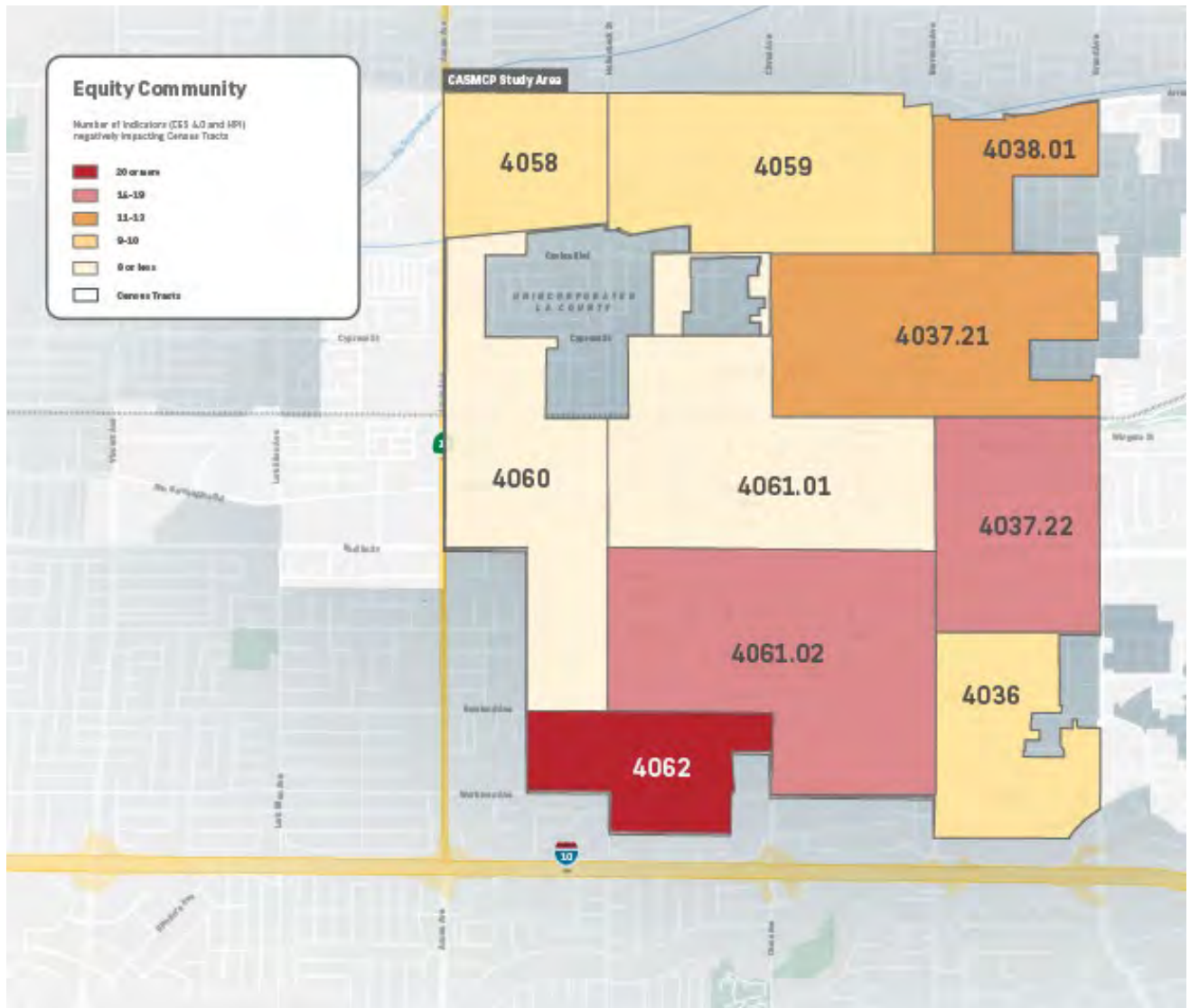
Addressing the inequities identified in the Equity Areas can bridge gaps that would result in greater outcomes not just for the entire City but especially for those in these communities who live these experiences. In order to improve the active transportation network and further regional and local sustainability, community resources and services, parks and open space, and streetscape or public realm improvements must be fairly distributed and barriers to access these benefits need to be addressed. The implementation of strategies and interventions included in the Covina Active Streets & Multimodal Connectivity Plan will bring Covina one step closer to achieving more equitable outcomes.

## Appendix

Map 1: Study Area Census Tracts



Map 2: Equity Indicators (CES 4.0 and HPI) by Census Tract





---

# CITY OF COVINA

## CASMCP TASK 4 ECONOMIC DEVELOPMENT REPORT

August 2023



El Segundo, CA  
TEL: 424-297-1070 | URL: [www.kosmont.com](http://www.kosmont.com)

## TASK 4 ECONOMIC DEVELOPMENT OVERVIEW

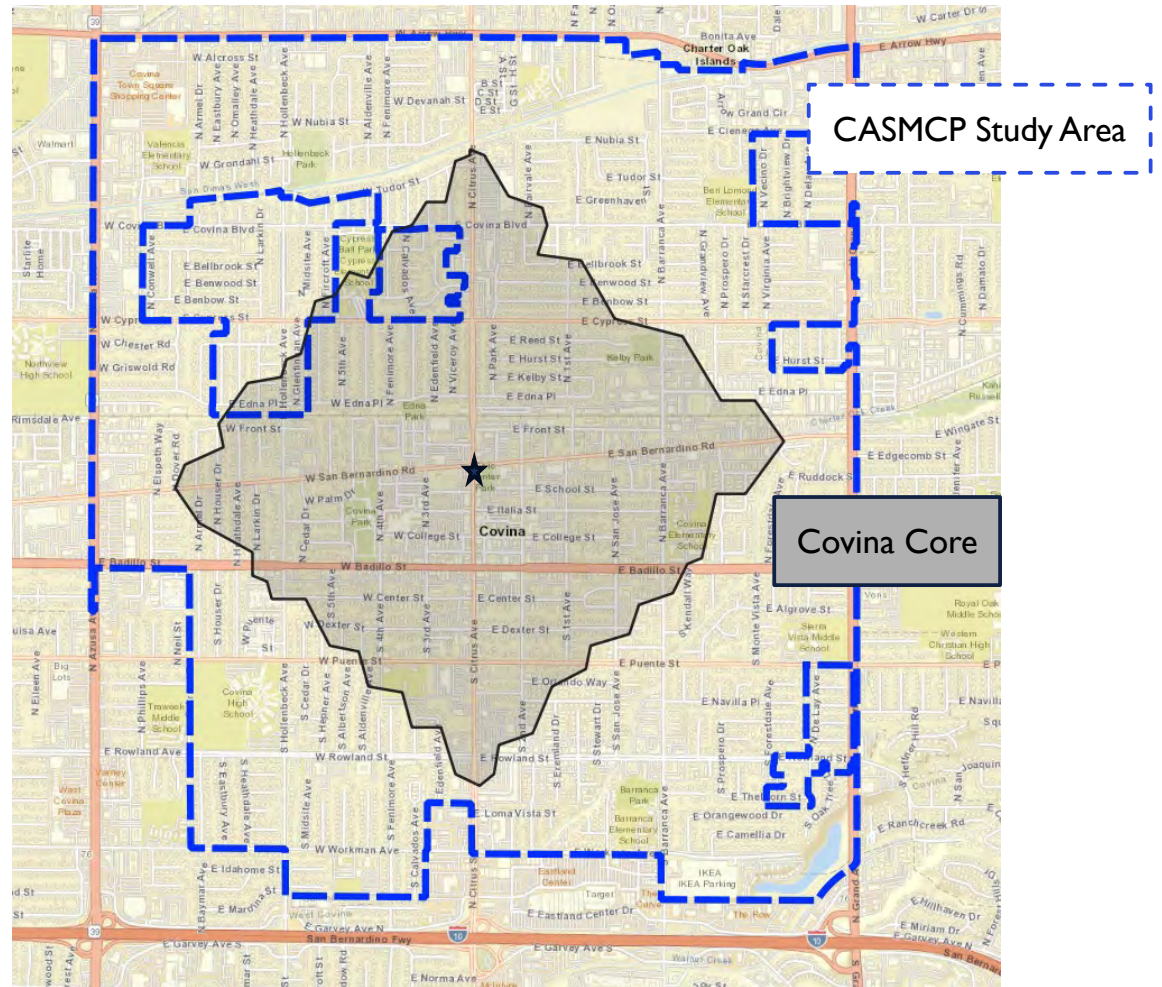
Per Covina's Active Streets and Multimodal Connectivity Plan ("CASMCP") contract, Kosmont was tasked with providing the Fehr & Peers team with Economic Development ("ED") and Transit Oriented Development ("TOD") market and case study research.

The research identified development recommendations for the City to consider that build off the expected increase in pedestrian and cyclist mobility throughout the downtown area / Metrolink station. ED studies have increasingly focused on more pedestrian friendly districts to revitalize downtown areas that were seeing a significant loss of customers as e-commerce growth beginning in 2010 significantly cannibalized small brick and mortar stores. Covid-19 impact accelerated the loss of local shopping visits. While some appointment-oriented service businesses find loss of on street parking to be problematic, food/beverage, entertainment and gift shop uses benefit from spontaneous visits as pedestrians explore the downtown.

Research found that Active Street Improvements provide significant socio-economic benefits, including increasing low-income household accessibility to vital commercial services. Ease of non-auto access will also encourage more and longer visits to downtown dining and entertainment venues.

# CASMCP STUDY AREA & DOWNTOWN AREA

The research focuses on the “Covina Core” area at the center of the CASMCP Study Area, defined as the area within a 15-minute walk of the intersection of Citrus Ave. & San Bernardino Rd. This Covina Core area includes the Metrolink Station, commercial properties oriented along Citrus Ave. and other commercial corridors, the Emanate Health Inter-Community Hospital and surrounding medical offices, Covina City Hall and other civic institutions, a renovated Performing Arts Center, and residential neighborhoods.





# COVINA CORE OVERVIEW

The Covina Core is home to a population of ~11,100, with an average household income of ~\$100,000. The Covina Core has ~2.5 million SF of commercial space in addition to ~1,300 multi-family residential units.

In general, downtown areas not easily accessed from regional freeways are best suited to accommodate a subset of retail activity, serving the residents of the area and visitors to the businesses.

Commercial uses in the Covina Core include:

- Restaurants, including national quick-service brands, local independent restaurants, and bars / pubs
- Personal / professional services
- Small-format grocery / convenience stores
- Small local shops - antique stores, hobby shops, bookstores, and music stores
- Healthcare, including the hospital and ~343,000 SF of medical office and other healthcare uses
- Industrial properties, including older properties near the rail line, with ~60% of industrial space small warehouse / distribution and ~25% showroom / service
- Covina Center for the Performing Arts, a historic theater with ~140 seats

	Covina Core	CASMCP Study Area	Covina City
Population	11,100	30,800	51,300
Households	3,800	10,300	16,900
Median Age	36.2	36.2	37.1
% Bachelors	26.7%	26.1%	28.9%
% Hispanic	61.5%	60.7%	59.0%
Median HH Income	\$79,200	\$76,900	\$84,600
Average HH Income	\$100,400	\$97,600	\$109,300

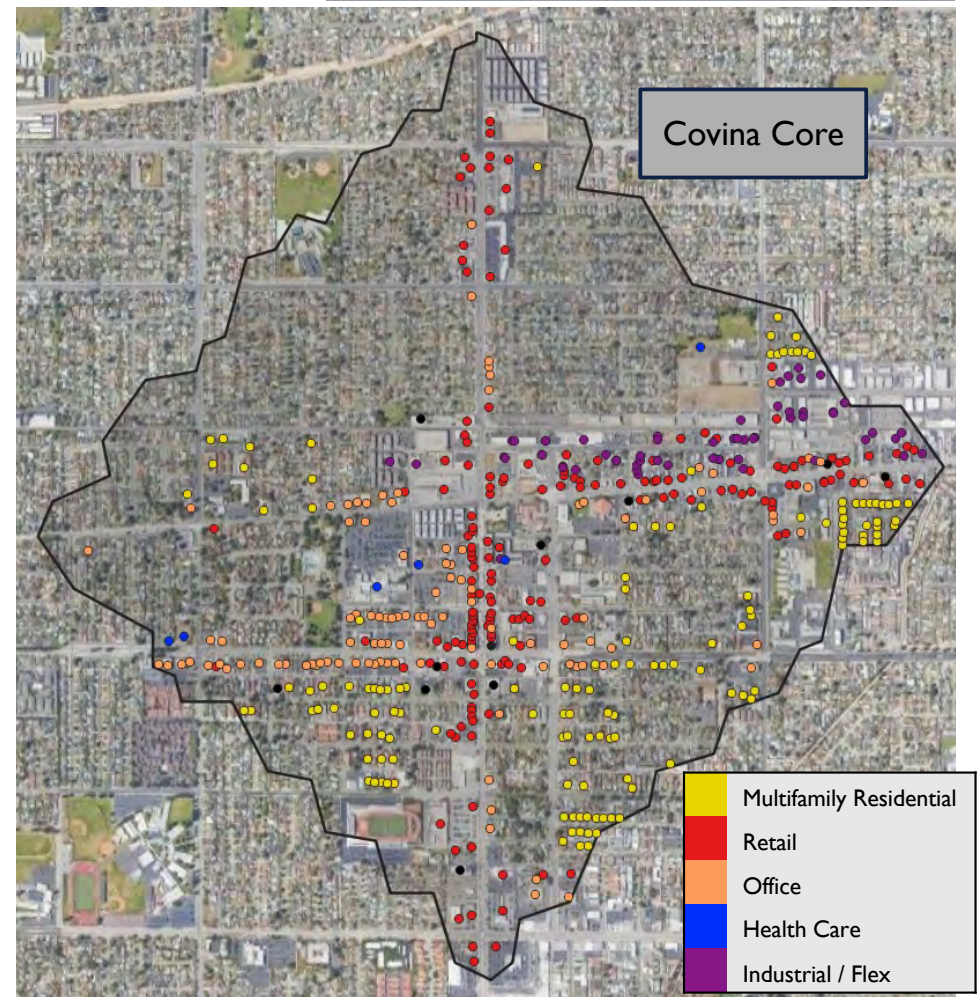
Covina Core	Properties	Building SF
Multifamily	142	1,299,600
Retail	175	1,007,700
Office	108	625,000
Industrial / Flex	60	609,700
Health Care	6	222,500
Other	11	101,100



Source: ESRI, CoStar

# COVINA CORE COMMERCIAL PROPERTIES

Covina Core	Properties	Bldg SF
Multi-family Residential	142	1,299,600
Office	108	625,000
<i>Medical Office</i>	52	302,800
<i>Other Office</i>	56	322,200
Health Care	6	222,500
<i>Hospital</i>	1	182,300
<i>Other Health Care</i>	5	40,100
Retail / Entertainment	176	1,034,200
<i>Storefront Retail Bldgs</i>	57	304,300
<i>Freestanding Retail Bldgs</i>	28	214,500
<i>General Retail</i>	8	64,600
<i>Automotive</i>	52	316,400
<i>Restaurant / Fast Food</i>	23	77,900
<i>Theater / Concert Hall</i>	1	26,500
<i>Bank</i>	4	20,800
<i>Drug / Convenience</i>	3	9,200
Industrial / Flex	60	609,700
<i>Warehouse / Distribution</i>	26	372,300
<i>Service</i>	17	87,200
<i>Manufacturing</i>	11	77,100
<i>Showroom</i>	5	69,100



Source: CoStar

# COVINA CORE RESIDENT EXPENDITURES

Residents in the Covina Core, within a 15-minute walk of the intersection of Citrus Ave. & San Bernardino Rd. are estimated to spend ~\$13,000 per household on key downtown retail goods and services categories annually, or around ~\$50 million in purchasing power.

15-Minute Walk Area	Avg. Amount per HH	Total Amount
Food Away from Home	\$4,222	\$15,984,000
Alcoholic Beverages	\$712	\$2,697,000
Health and Personal Care Products	\$1,017	\$3,850,000
Smoking Products	\$330	\$1,250,000
Housekeeping Supplies	\$774	\$2,930,000
Apparel and Services	\$2,338	\$8,851,000
Computers, Hardware, and Accessories	\$209	\$791,000
Household Furnishings: Furniture	\$641	\$2,427,000
Household Furnishings: Appliances	\$415	\$1,571,000
Household Furnishings: Other Categories	\$365	\$1,384,000
Entertainment / Recreation: Fees & Admission	\$849	\$3,216,000
Entertainment / Recreation: Pets	\$700	\$2,650,000
Entertainment / Recreation: Audio / Video (Select Categories)	\$288	\$1,088,000
Entertainment / Recreation: Toys / Games / Crafts / Hobbies / Photo Equip / Reading	\$273	\$1,034,000



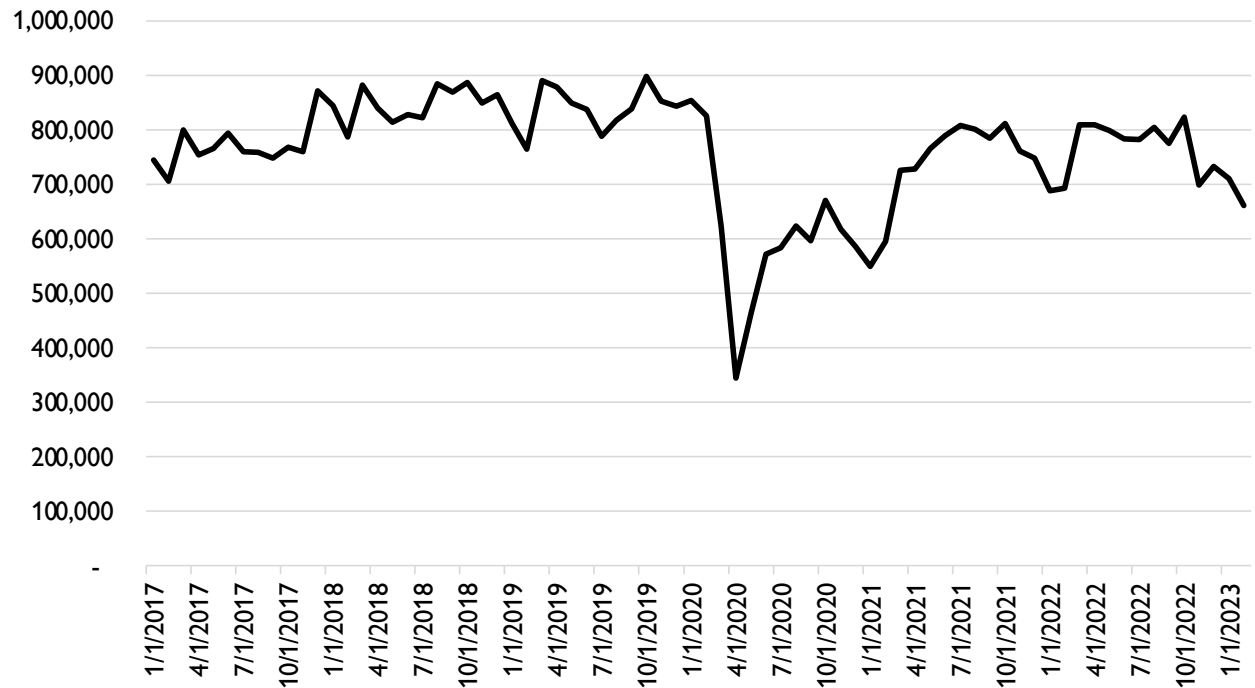
Source: ESRI Business Analyst Online



# COVINA CORE VISITATION TRENDS

According to mobile data analytics platform Placer.ai, the Covina Core area sees ~700,000 – 900,000 monthly visits from people that live outside of the Core area, with ~75-80% of those visitors spending at least 30 minutes in the Covina Core.

### Monthly Visits to Downtown Covina Area



Source: Placer.ai

# POPULAR COVINA CORE VISITOR DESTINATIONS

According to mobile data analytics platform Placer.ai, the following locations within the Covina Core are among the more popular locations for residents of the Core area and residents of the City of Covina. A star (\*) denotes locations that also see a larger percentage of visits from out-of-towners.

Location	% of Downtown-area Residents who visit location	% of Covina Residents who Visit Location
<b>Shopping Centers</b>		
Covina Towne Center*	41%	35%
Palm Center	23%	23%
Windsor Center	11%	0%
<b>Groceries / Essentials</b>		
Baja Ranch Market*	21%	16%
CVS*	16%	13%
7-Eleven	7%	3%

Location	% of Downtown-area Residents who visit location	% of Covina Residents who Visit Location
<b>Shopping / Services</b>		
Eiffel Nails	10%	8%
Color Me Mine*	10%	7%
Century Nails	6%	3%
Citrus Car Wash	6%	5%
Covina Tobacco Inc.	5%	3%
Citrus Jeweler	4%	5%
Covina Animal Hospital	3%	2%
<b>Other Locations</b>		
Emanate Health Inter-Community Hospital*	29%	23%
Covina Park*	27%	19%
Covina District Stadium*	20%	18%
Kelby Park	5%	5%
Covina Center for the Performing Arts	2%	2%
Covina Animal Hospital	3%	2%



Source: Placer.ai

# POPULAR COVINA CORE VISITOR DESTINATIONS

Location	% of Downtown-area Residents who visit location	% of Covina Residents who Visit Location	Location	% of Downtown-area Residents who visit location	% of Covina Residents who Visit Location
<b>Quick Service Restaurants</b>			<b>Restaurants / Bars</b>		
Starbucks*	21%	13%	Ola Restobar*	12%	10%
Covina Burger*	14%	11%	Bread & Barley*	9%	9%
Little Caesars Pizza	12%	13%	CityGrill Covina	7%	7%
Popeyes Louisiana Kitchen*	11%	9%	Edna Vees Public House*	7%	6%
Jack in the Box	11%	8%	Bishamon Japanese Restaurant	7%	0%
Del Taco	10%	8%	The Rendezvous	7%	3%
P & G Super Burger	8%	6%	Artist Pizzeria	5%	5%
Capri Deli*	7%	5%	Domestic BBQ	5%	4%
Alfredo's	6%	0%	El Matador	5%	0%
Rad Coffee*	6%	6%	The Rude Dog Bar & Grill	2%	1%
Yum Yum Donuts	6%	2%	Chatterbox	1%	0%
Red Devil Pizza	5%	5%	Lincoln House	1%	2%
Pizza Hut	5%	4%			
Boba Tea Lounge*	4%	6%			



Source: Placer.ai; \* denotes locations that also see a larger percentage of visits from out-of-towners.



# RETAIL NEAR METROLINK / HEAVY RAIL STATIONS

- Development near Metrolink and Metrorail stations typically includes a mix of residential and commercial properties, often aiming for TOD that provide a blend of homes, businesses, and services in a relatively dense and walkable area. However, many stations have no development due to lack of municipal planning.
- Retail development found near Metrolink stations generally falls in the following categories:
  - **Small-scale Retail:** Convenience stores and quick-serve dining provide consumers with basic necessities.
  - **Neighborhood-serving Retail:** Includes smaller retail properties that meet the needs of the residents and transit patrons, such as specialty grocery stores, pharmacies, cafes, and restaurants.
  - **Entertainment & Dining:** Includes full-service restaurants, bars, entertainment venues, and nightclubs that are generally found in higher foot-traffic areas and draw both local residents, as well as visitors from the surrounding area
  - **Regional-serving Retail:** Includes larger-scale retail developments that draw customers from the wider region

# CASE STUDY - METROLINK RAIL STATIONS



Main Street El Monte near the Metrolink Station is home to:

- **Local restaurants** (El Huarache De Dona Chela, Golden Ox Burgers, Progress on Main, NORMS, Little Pan, Lorena's),
- **Small independent clothing retailers** (Railcar Fine Goods, Sucasa, Botas Guadalajara),
- **Jewelry stores** (David's Jewelers, Q Jewelry),
- **Hobby / craft / gift stores** (Musica Latina, Valley Craft LA, H&S Sewing)

Nearby land uses include new multifamily apartment buildings & SF residential neighborhoods.



Ramona Blvd Baldwin Park near the Metrolink Station is home to:

- **Civic Uses** (City Hall, police station,
- **Local restaurants** (Nissi, Lucky Star Burgers, Via Mar, Taco Nazo, Taqueria El Atacor, Golden Panda Buffet)
- **Park Plaza on Maine Shopping Center** (Superior Grocers, CVS Pharmacy, O'Reilly Auto, shops / restaurants)
- **Local Retailers** (Urban X, Broken Horn Saddlery, La Gueras Boutique)

Other local land uses include single family and multifamily residential neighborhoods.



## DOWNTOWN COVINA PARKING

- A 2018 Parking Study & Management Plan prepared by Nelson Nygaard for the Covina Town Center Specific Plan identified over 4,400 parking spaces - 1,520 on-street parking, 1,405 public off-street parking in public lots / structures, and ~1,390 spaces in off-street private lots.
- The Study notes that utilization averaged ~52%, with greater levels of occupancy in off-street spaces (likely due to longer time limits, indicating a high use for employee parking). Utilization exceeded 85% in the Town Center core area in Citrus Ave between College and Badillo streets.
- The Study parking demand models showed a parking surplus of ~1,400 spaces based on existing land uses. Demand models that included future development still showed an excess of ~700 spaces on weekdays and ~380 spaces on weekends.
- While parking issues are common in downtown areas – suggesting issues are more a matter of parking space distribution, pricing, accessibility, and wayfinding.
- This also suggests that some of the area dedicated to parking in the downtown Covina area could be utilized with more commercial outdoor uses without heavily impacting the availability of parking.



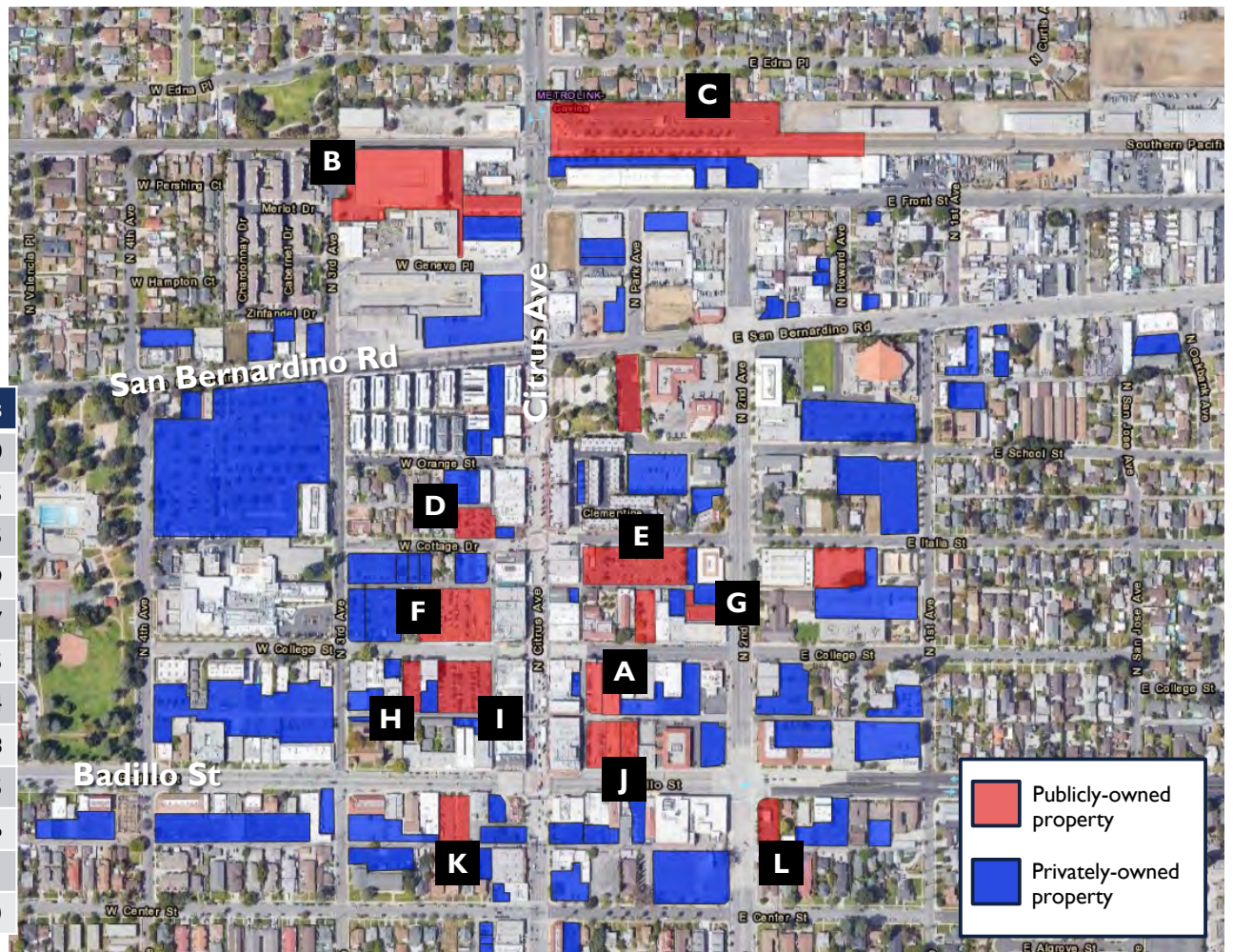
Source: Nelson Nygaard – Town Center Specific Plan, Parking Study and Management Plan



# OFF-STREET PARKING AREAS

The downtown area has a number of publicly- and privately-owned paved parking lots located near the major commercial corridors. Surface parking are dead-zones for pedestrian activity and strategies that allow some of these parking areas to be re-used as parklets / outdoor dining / other uses can help bring new and vibrant activity to the downtown.

	Name	Spaces
A	Downtown Parking Structure	120
B	Metrolink Parking Structure	665
C	Metrolink Station Lot	155
D	Lot 1	39
E	Lot 3	107
F	Lot 4	115
G	Lot 5	14
H	Lot 6	28
I	Lot 7	95
J	Lot 8	36
K	Lot 9	31
L	Lot 10	(leased to Bank of America)



Source: Nelson Nygaard – Town Center Specific Plan, Parking Study and Management Plan

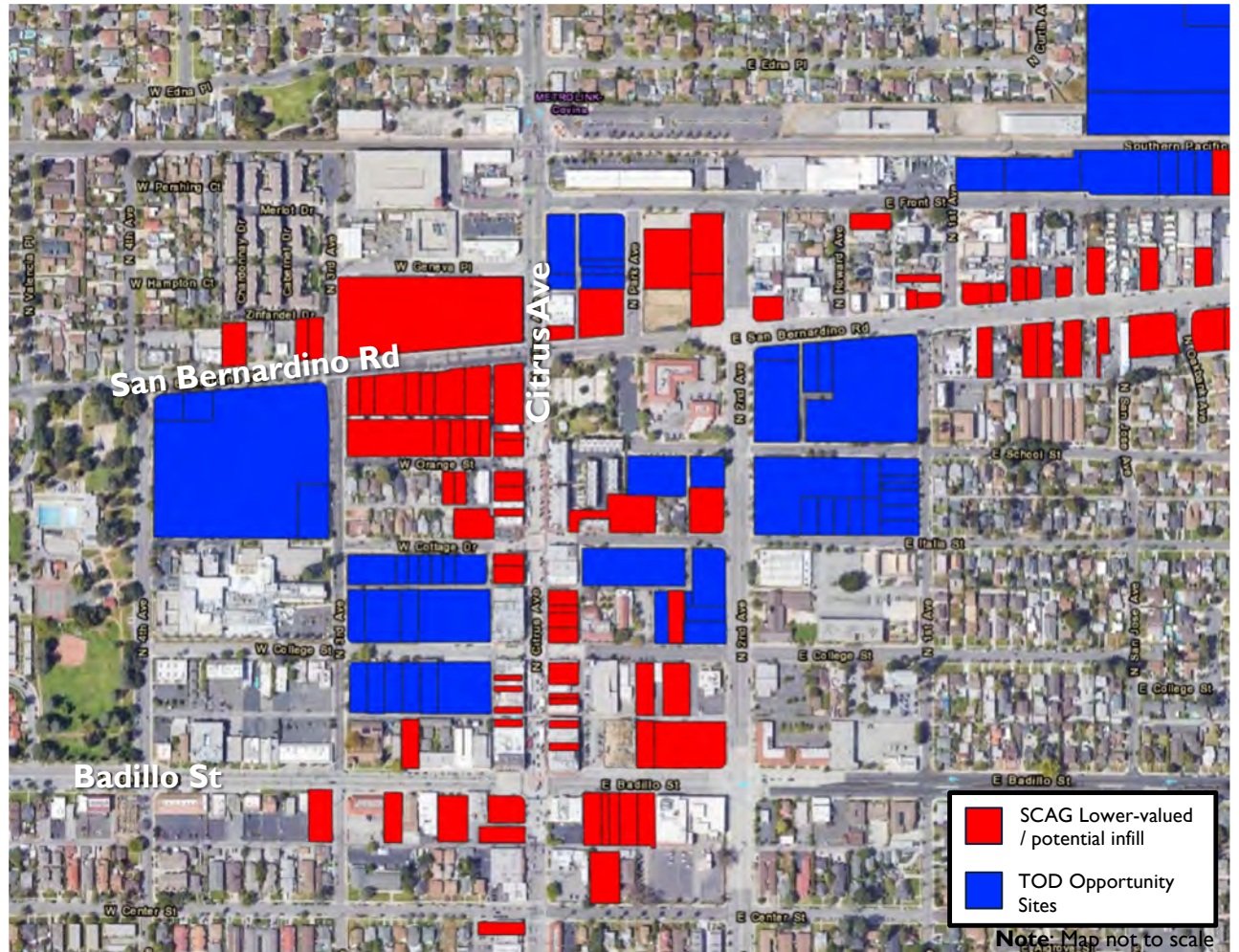


# COVINA CASMCP STUDY AREA

## COMMERCIAL/RETAIL POTENTIAL DEVELOPMENT

SCAG's Housing Element Parcel Tool (HELPR) identifies commercial/retail sites that have a ratio of improvement value to land assessed value less than 1.0, indicating non-vacant sites that have realistic infill development potential.

The Transit Oriented Development Opportunity Sites were identified in the project's RFP as locations with development potential.



Source: ESRI BAO Online, SCAG, City of Covina



# WALK DISTANCE FROM COVINA PARKING STRUCTURES

Walking distances from the Metrolink and downtown parking structures covers much of the downtown Covina area. The map at right shows the 5-minute walking distance boundary from the parking structures. This suggests the downtown area is well-served by these facilities.





# REACTIVATING UNDERUTILIZED PARKING

Generally speaking, cities and property owners are exploring new uses and programming that reactivates underutilized parking space, parking lots, and parking structures:

- **Temporary reuses** for special events such as outdoor movie screenings, block parties, farmers markets, and craft fairs
- **Short-term reuses** such as parklets that allow for extra outdoor seating for dining, music performance spaces, gardens, waiting areas, or retail display tables
- **Semi-permanent reuses** such as converting parking garage roofs into “people decks” that provide spaces for people to gather / relax / socialize, and façade revisions that reactivate the sides of structures that face the street (enlivening the pedestrian experience in the area with micro-retail and art)



Some parking structures set up temporary movie screenings on their roofdecks – converting underutilized parking into fun events with chairs, lights, turf, & restaurant partners.



Parklets have become a popular way to convert street parking spaces and other paved areas into outdoor dining areas, miniature parks / gardens, and other vibrant uses that encourage visits.

# TRANSIT / ACTIVE TRANSPORTATION & ECONOMIC DEVELOPMENT

The CASMCP Market Study Task 2 completed by Kosmont in November 2022, provided a number of case studies that explored the economic impacts of active transportation improvements. The summary provided below highlights the way cities most recently have developed ED strategies improving pedestrian activity in a downtown area, improving vibrancy and business activity, as e-commerce and Covid-19 trends dramatically changed personal shopping habits.

The addition of bike lanes / pedestrian areas in commercial corridors is sometimes met with apprehension from local businesses, who are concerned about negative economic impacts due to the loss of parking in front of their businesses. However, in a variety of case studies from other cities, pedestrian and bike improvements have been analyzed to understand their economic impact – in most cases, these studies tend to show either a neutral or positive impact on the vitality of retail businesses on streets impacted by road diets.

Key findings include:

- Bicyclists and pedestrians can be a sizable portion of a businesses' clientele in a downtown area; while their per-trip spending can be lower than that of customers who drive, they tend to make a larger number of trips
- Merchants in downtown areas tend to over-estimate the percentage of their customers who come via car and underestimate the percentage who bike or walk, thus over-estimating the impact of lost parking
- Non-drivers can spend a long amount of time in a downtown area, likely leading to greater spending within the downtown district (and additional spending at locations other than their primary destination)

# ECONOMIC DEVELOPMENT & PLACEMAKING

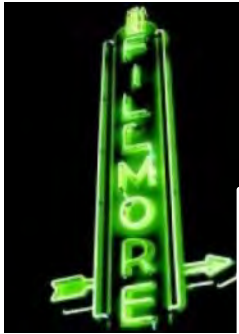
Programming downtown areas via the use of micro-districts can encourage nodes of focused business activity that promote collaboration and innovation – such as areas focused on arts / entertainment, hospitality, office, health / wellness, and dining / restaurants.

While downtown areas should still aim to integrate many different uses in mixed/blended-use districts, micro-districts that place emphasis on particular themes can help business clusters to thrive and improve the overall downtown experience.

- **Entertainment / Arts Districts:** Focused on cultural and recreational amenities, such as theaters, music venues, art galleries, and experiential activities. These districts can attract residents and tourists and create a vibrant and lively urban environment. Districts can focus on supporting the development of new facilities / venues / restaurants to revitalize the area and attract new visitors.
- **Medical Districts :** Focused on health / wellness uses such as hospitals, medical office buildings, fitness centers / gyms, healthy restaurants, specialty care services, and urgent care facilities. Other uses – such as residential / hotel and restaurant / entertainment – can create a more vibrant and dynamic district. These districts provide vital services for community members, as well as attracting activity from nearby communities seeking care.
- **Restaurant Districts:** Focused on restaurants, bars, cafes, and food-related amenities as well as entertainment. These districts can create a vibrant and lively urban environment that is desirable to residents, workers, visitors, and tourists.



# PLACEMAKING THROUGH DISTRICT EVENTS



Distinctive signs – such as the neon signs in Fillmore and the Star Theatre in Oceanside – can give an area a distinctive sense of place.



Events like the CicLAvia bike / walk fairs in Los Angeles and the Mission Inn Festival of Lights in Riverside, CA are memorable and engaging activations of public spaces.

Murals in downtown Providence, RI add character and highlight local artists and themes.



The Temecula Valley Hospital is a 140-bed acute care facility that anchors a growing district of other medical centers, offices, and clinics – as well as medical training programs at the High Desert Medical College and California State University of San Marcos @ Temecula. This medical district is also situated near other uses such as retail shopping centers, driving economic activity in the area.

# PEDESTRIAN-CENTRIC AREAS IN DOWNTOWN

Pedestrian-oriented design and public spaces help activate downtown districts through vibrant / engaging activity.

Even before Covid-19 pandemic, increasing the amount of public space dedicated to pedestrians became popular, with many cities allowing parking spaces, sidewalks, and roadways to be used for commercial activity.

Many cities have found these changes have contributed to more vibrant and enjoyable commercial districts and have found ways to make some of these changes permanent.



## Components of Successful Pedestrian-Oriented Downtown Areas

<b>Anchors</b>	Nearby anchor institutions help drive foot traffic throughout the day, such as universities, transit hubs, office/financial core, or medical centers.
<b>Variety of Uses and Services</b>	Downtowns need a vibrant mix of active uses: retail, residential, & commercial; late-night services (bars & restaurants, movie theater) to attract crowds all day; convenience-related businesses, unique shopping experiences, entertainment attractions, programming/public events; balance of chains & independents, retail & restaurants, indoor & outdoor.
<b>Amenities</b>	Attractive landscaping (parklets, gardens, fountains, monuments), public art, outdoor dining, public tables / chairs, stages, artists, and vendors
<b>Programming</b>	Festivals, concerts, sports, food trucks, performers drive vibrancy and create a sense of place and destination
<b>Accessibility, Walkability, and Visibility</b>	Centralized parking allows convenient access to visitors; successful pedestrian-oriented downtown areas need to be easily reachable and accessible, with numerous entrances, cross-streets, nearby parking, public transit. They should also incorporate walkable neighborhood structures, amenities, and visible interest. Visibility of the pedestrian areas should not be overly blocked by buildings or landscaping.
<b>Management</b>	Coordinated activities can ensure area management / maintenance; dedicated agency/business improvement district to oversee maintenance, security, planning, programming, retail mix, etc.

# IMPLEMENTING TEMPORARY PEDESTRIAN MALLS

While downtown Covina is not suited for full pedestrian mall street closures, some temporary closure concepts and other pedestrian-oriented changes may be strategies that can activate the downtown area.

This would include closing portions of side streets for special events (weekend block parties, farmers markets, outdoor festivals), building parklets, encouraging outdoor dining on sidewalks / patios / parking areas.

Partial closures and events are a good way to test concepts, assess conditions, clarify goals, and build community support for further changes.

## Best Practices – Creating Pedestrian Areas

<i>Step 1</i>	<b>Car Dependency</b>	Ensure that there are nearby parking alternatives with proper wayfinding. Reliance on cars can be hard to assess without testing the concept temporarily.
<i>Step 2</i>	<b>Pedestrian Mall Concept Testing</b>	Start by closing streets for a few days (a holiday; a regular weekend day; a whole weekend, etc), treating each as a test..
<i>Step 3</i>	<b>Temporary Closure</b>	First use temporary materials: barricades, epoxy gravel, potted plants, small trees, movable tables and chairs.
<i>Step 4</i>	<b>Adding Permanence</b>	If it works well, can shift to permanent plants / trees / fixtures. Focus on programming. Partner with key institutions, strategically locate equipment needed for targeted activities. Resist adding immovable barriers.



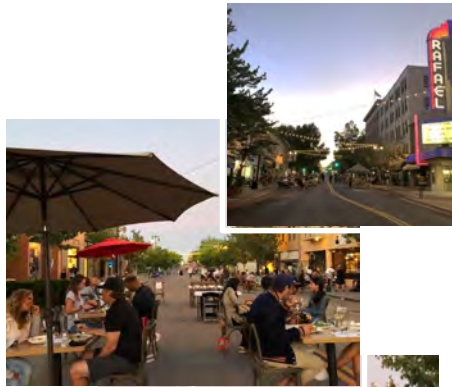
Source: Walkable City Rules, Jeff Speck



# PEDESTRIAN-ORIENTED DOWNTOWN DISTRICTS CASE STUDIES

During the COVID-19 pandemic, San Rafael initiated a “Streetary” program that expanded outdoor dining in the downtown area into street parklets. Due to the program’s popularity, in December 2022, the City decided to continue the program, instituting design / development standards and fees and opening up the program to all dining establishments in the City.

The City also runs Dining Under the Lights block parties on Thursday / Fridays that temporarily close a portion of the main street (4<sup>th</sup> Street), allowing restaurants to set up larger outdoor dining areas, bands to play on stages, and retailers / vendors to set up outdoor displays.



Ventura closed five blocks of Main Street in downtown Ventura during the pandemic as part of its Main Street Moves program to create a pedestrian-friendly area with outdoor dining and patios. The city provides free parking as well as expanded bike parking.

In April 2022, the City Council voted to extend the closure through June 2024 while the City explores the possibility of making the changes permanent.



---

# CITY OF COVINA

## CASMCP TASK 4 ECONOMIC DEVELOPMENT REPORT

August 2023



El Segundo, CA  
TEL: 424-297-1070 | URL: [www.kosmont.com](http://www.kosmont.com)

City of Covina

# Engagement Summary

## Covina Active Streets and Multimodal Connectivity Plan

City of Covina



*Prepared by:*  
MIG, Inc.



Final  
January 23, 2024



# Introduction

The project team conducted three rounds of outreach over the development of the Covina Active Streets and Multimodal Connectivity Plan (CASMCP) to ensure that the plan reflected the community's wants and needs. Each round of engagement included online engagement, pop up opportunities, and formal public meetings. All engagement activities were conducted in English and Spanish. Underserved and disadvantaged areas of the city (identified through the equity assessment) also received targeted outreach to provide maximum and appropriate engagement opportunities for difficult-to-reach populations.

## Outreach

### **Round #1 – Groundtruthing Existing Conditions, August 2022 – October 2022**

The purpose of the first round of engagement was to introduce the project to the public and gather initial feedback on challenges and opportunities for walking, biking, and transit. There was a total of four events held during this round, which included:

- August 23, 2022: Project Workshop at Covina Planning Commission
- August 26, 2022: Pop-Up at Covina Farmers Market
- October 4, 2022: Pop-Up at National Night Out
- April 11, 2023: Project Update at Covina Transportation and Mobility Advisory Commission

### **Round #2 – Understanding Community Priorities, May – June 2023**

The second round of engagement focused on understanding what improvements were of most need and priority to community members. ActiveSGV, a local community-based organization, was brought on as a partner to help reach a wider and inclusive audience, such as those with limited English proficiency and diverse cultural backgrounds. The events during this phase were more interactive and included a community bike ride and walking tour to provide an on-the-field survey of key transportation barriers. A working group session was also conducted with parents and educators from the Covina-Valley Unified School District (CVUSD). The project team identified the CVUSD as a key stakeholder as it is the only school district with the study area's boundaries. Each of these events occurred in or near the equity priority areas identified through the equity analysis.

- May 6, 2023: Community Bike Ride and Feedback Session led by ActiveSGV (*Held in Downtown Covina, which is located within Equity Priority Area #3*)
- May 11, 2023: Parents & Educators Working Session with Covina-Valley Unified School District and ActiveSGV (*CVUSD office located between Equity Priority #3 and #5*)
- May 21, 2023: Community Walk and Feedback Session (*Held in Downtown Covina, which is located within Equity Priority Area #3*)
- June 13, 2023: Project Update at Covina Planning Commission

### **Survey Tool – Web-Based and Print Mobility and Access Questionnaire, August 2022 – October 2022 and May 2023**

The survey served as a tool to hear more from the community about how they move about the study area. It provided the project team with insights into existing mobility patterns and preferences. The

survey was live during the first and second rounds of engagement. The survey was provided in English and Spanish. Copies of a paper version of the survey were also made available to public facilities and community partners.

### **Round #3 – Confirming Community Priorities, September - October 2023**

The third round of community workshops focused on confirming the consensus of the plan recommendations and discovering the communities' priority for projects.

- September 30, 2023: Pop-Up at Sacred Heart Annual Festival (*School located in Equity Priority Area #4*)
- October 13, 2023: Pop-Up at Thunderfest Car Show and Music Festival

## **Attachments**

The following pages include exhibits that reflect all the engagement activities held during the course of the project. These include:

- Poster Board Comments from Round #1
- Community Bike Ride, Walking Tour, and CVUSD Working Session Key Takeaways
- Walking Tour Summary
- Poster Board Comments from Round #3
- Survey Methodology and High Level Takeaways

# Covina Active Streets and Multimodal Connectivity Plan



**Directions:**

For questions 1-3, mark along the scale that most closely reflects your preference/behavior. Write any reasons why you like/don't like using a specific mode in Covina.

**Instrucciones:**

Para las preguntas 1 a 3, coloque una calcomanía en la escala que más refleja su preferencia/comportamiento. Escribir las razones por las que le gusta/no le gusta usar un modo específico en Covina.

**1. What do you think about walking? ¿Qué piensas sobre andar a pie?**



**I walk to get places**  
Ando a pie para llegar a lugares

**I sometimes walk to get places**  
A veces ando a pie para llegar a lugares

**I don't walk**  
No ando a pie

**Why do you walk or not in Covina?**  
¿Por qué anda o no anda a pie en Covina?

**2. What do you think about biking? ¿Qué piensa sobre andar en bicicleta?**



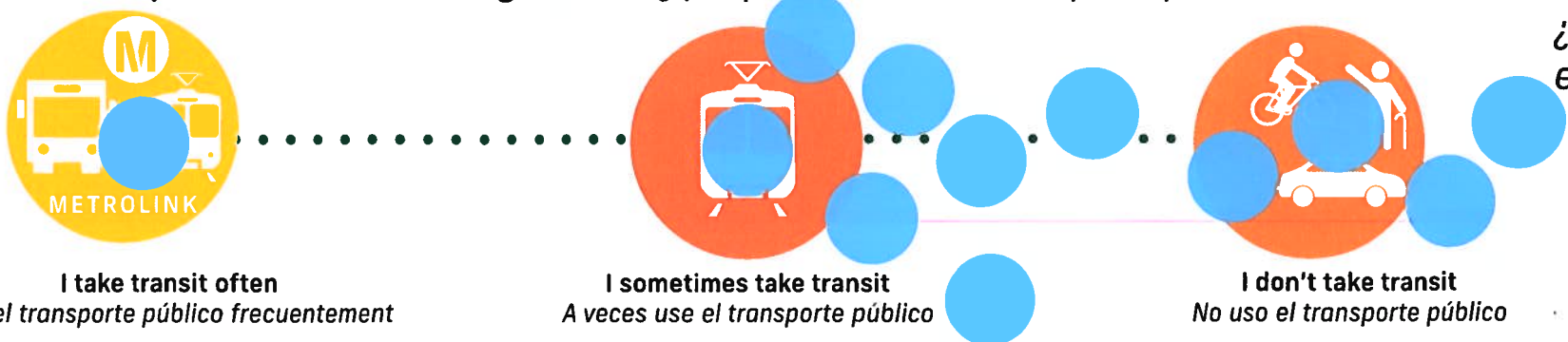
**I bike to get places**  
Voy en bicicleta para visitar lugares

**I sometimes bike to get places**  
A veces voy en bicicleta para visitar lugares

**I don't bike**  
No ando en bicicleta

**Why do you bike or not in Covina?**  
¿Por qué anda o no anda en bici en Covina?

**3. What do you think about taking transit? ¿Qué piensa sobre el transporte público?**



**I take transit often**  
Uso el transporte público frecuentement

**I sometimes take transit**  
A veces use el transporte público

**I don't take transit**  
No uso el transporte público

**Why do you use transit or not in Covina?**  
¿Por qué usa o no usa el transporte público en Covina?



# Covina Active Streets and Multimodal Connectivity Plan



## Directions:

For both questions, place the appropriate color sticker on the map at your destination or where issues are present.

You can place as many stickers on the map as you would like.

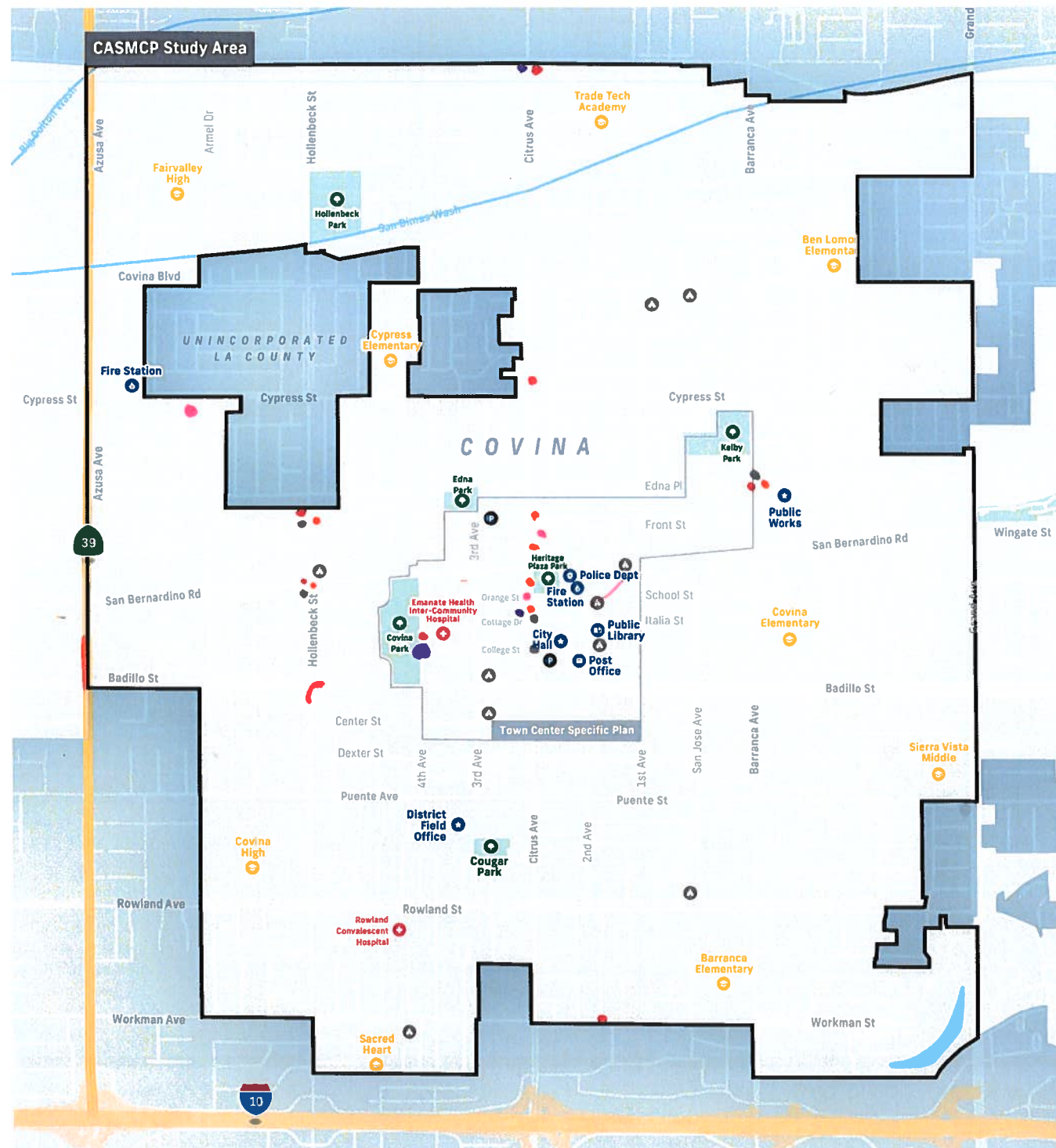
## Instrucciones:

Para las dos preguntas, coloque la calcomanía del color correspondiente en el mapa de su destino o donde haya problemas.

Puede colocar tantas calcomanías en el mapa como quiera.

## 1. I use these modes to get to places: Use estos modos para llegar a los lugares

- Walking: andar a pie
- Bike: andar en bici
- Board / other: board / other patineta / otro
- Mobility assistance: asistencia de movilidad
- Transit: transporte público
- Carpooling: carpooling



## 2. I experience issues at places: Experimento problemas en lugares:

- poor/broken sidewalks** / aceras dañadas
- not enough shade** / no hay suficiente sombra
- lack of lighting** / falta de iluminación
- lack of bike infrastructure** / falta de infraestructura para bicis
- crossings don't meet my needs** / los cruces no satisfacen mis necesidades
- uncomfortable conditions** / condiciones incómodas
- inattentive/fast drivers** / conductores distraídos/rápidos
- no seating** / falta de lugares para sentarse

**Why do you walk or not in Covina?**

*¿Por qué anda o no anda a pie en Covina?*

*I walk every day after school*

*Lark Ellen Ave*

**Why do you bike or not in Covina?**

*¿Por qué anda o no anda en bici en Covina?*

**Why do you use transit or not in Covina?**

*¿Por qué usa o no usa el transporte público en Covina?*

**Why do you walk or not in Covina?**  
*¿Por qué anda o no anda a pie en Covina?*

**Why do you bike or not in Covina?**  
*¿Por qué anda o no anda en bici en Covina?*

**Why do you use transit or not in Covina?**  
*¿Por qué usa o no usa el transporte público en Covina?*

Other, I believe Citrus Ave  
should be walkable from Center St  
to San Bernardino - Basically,  
pedestrian and biker only!



**Why do you walk or not in Covina?**  
*¿Por qué anda o no anda a pie en Covina?*

**Why do you bike or not in Covina?**  
*¿Por qué anda o no anda en bici en Covina?*

Citrus is too fast  
near San Bernadino Rd  
Bike lanes would be great

**Why do you use transit or not in Covina?**  
*¿Por qué usa o no usa el transporte público en Covina?*



Led by ActiveSGV on Saturday, May 7<sup>th</sup>



60+ cyclists joined a 10-mile ride around the study area and to the Gold Line station.



Riders of all ages joined the ride.



Extensive feedback was collected after the ride on what improvements participants would like to see.



Engagement

## Round 2 Bike Audit



*“More lighting needed. Dangerous Crossing uncontrolled intersections especially at dusk “*

*“Class 1 or 2 bike lanes north/south”*

*“More controlled intersection all around parks”*

*“[Shade] very limited, more tree canopy needed”*

*“Will bike ride more if it was safer to do so”*

*“[Cars drive] fast on Citrus”*

*“Less potholes. Fix the streets”*

Engagement

## Round 2 Bike Audit



Walk Audit on Sunday, May 21<sup>st</sup>



Eight participants and children walked Downtown Covina



Engagement

## Round 2 Walk Audit

The project team introduced participants to the project, key terms, and collected feedback from their experiences.







# Active Streets & Multimodal Connectivity Plan

## FRONT ST

- NO CROSSWALKS
- LOOK LIKE NO CONNECTION
- NOT WELCOMING
- NO DRAW

### SAFETY CONCERNS

#### GLENDORA/CYPRUS

- ▷ NOT WALKABLE
- ▷ POOR AMENITIES

#### PUENTE-BARRANCO/CITRUS

- ▷ NO SIDEWALKS

#### BB/BADILLO MANZANILLA

- ▷ UNWELCOMING
- ▷ LACK OF SIDEWALKS

## CITRUS

- PED FRIENDLY
- ACTIVATED
- ARTICULATE VISION INDUSTRIAL/US. OTHER
- BLOCK N SAN BERN
- BACKED UP TRAFFIC N → S UP TO MUNK

## 2ND ST

- PED ALT
- NEEDS LIGHTS @ XINGS
- LACKS SHADE
- PAVERS
- NOT INVITING
- ITALIA - BETTER CONNECT
- 31 FLAVORS COLLEGE INTERSECTION POOR
- BADILLO-MERGING

## METROLINK

- ACCESS BUS/TRANSIT STOP. -POOR
- LACKS ORIENTATION DON'T KNOW WHERE YOU ARE OR GOING
- NEEDS CONNECTION
- OPPORTUNITY TO CONNECT TO DNTN
- IMPROVE ACCESS TO STRUCTURE

Engagement

## Round 2 Walk Audit

Engagement

## Round 2 School District Meeting

Held on May 11<sup>th</sup>, 2023

Facilitated by ActiveSGV and Fehr & Peers

12 parents and staff in attendance

### Key Themes/Desires:

- **Shade and bus stop amenities**
- **Crosswalk enhancements**
- Education and enforcement strategies targeting **poor driver compliance** with yielding and turn restrictions
- **Enhance the streetscape**
- Traffic calming, lighting, and other measures so people feel **more comfortable walking/taking transit**



# Covina ASMCP

## Walk Audit Approach and Format

### Introduction

The walk audit was designed to engage the community in the second round of the Covina Active Streets and Multi-Modal Connectivity Plan. The walk audit took place on Sunday, May 21 from 9am-12:30pm. The route took place through Downtown Covina, along 2nd Avenue, Badillo Street, Citrus Avenue, and Front Street (see Figure 1). In total eight community members participated in the event.

Members of the project team that attended the event include:

#### City of Covina

Daniella Andrade

#### Fehr & Peers

Melody Wu

#### MIG, Inc.

Esmeralda García

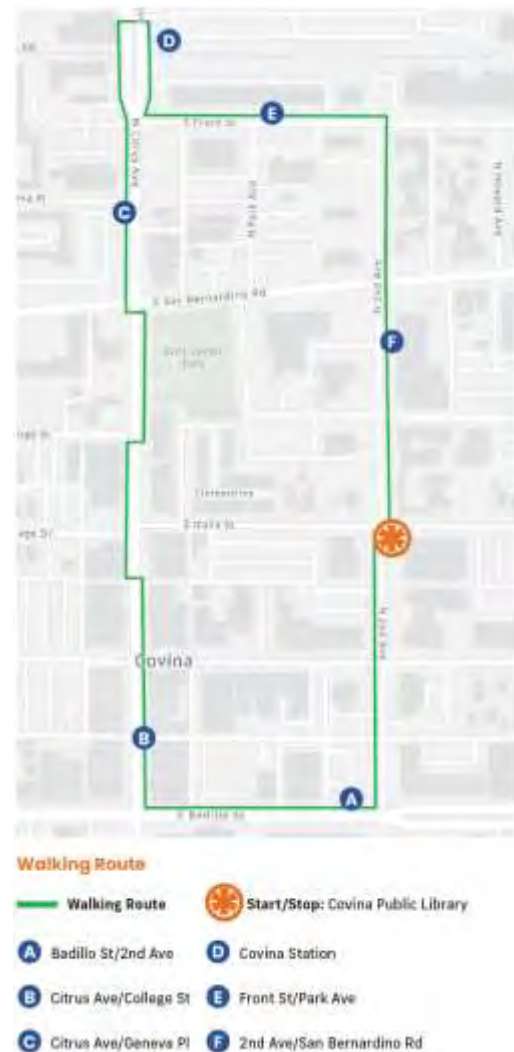
Jackie Martinez

Sara Perez Rojas

### Approach

The Covina Public Library served as the starting and ending point of the walk audit. Prior to the start of the walk audit, the MIG team gave a presentation informing participants about the day's agenda, project background, walk audit purpose, and instructions on how to perform the walk audit. Participants were also given a guide booklet to record what they observed during the

Figure 1: Walk Audit Route



walk. Esmeralda García, Jackie Martinez, and Sara Perez Rojas of MIG served as facilitators that guided participants through the walk audit.

After the orientation, participants broke up into one large group and walked the route. Stops were made at previously identified locations which served to expose participants to certain conditions such as narrow sidewalks, fast-moving vehicles, and unsafe crosswalks. Facilitated conversations were held at each stop to encourage participants to reflect on what they were experiencing at that moment. Participants were also encouraged to rank the stops on a scale of 1-5 (1 = strongly disagree and 5 = strongly agree) based on how poorly or adequately certain criteria were present along the route. The following is a list of criteria that they were asked to rank:

#### Safety

1. There is a presence of highly transparent ground floors, windows, and entries
2. Sidewalks are smooth and without cracks, vegetation is trimmed, etc.
3. There is enough separation between pedestrians and traffic through ample sidewalks width, landscaping, and street furniture.
4. Drivers yield to pedestrians and traffic is slowed via narrow roadways, striping, no turn on red lights, etc.
5. There is clear safety signage, such as yield and stop signs.

#### Aesthetics

1. Public realm is interesting and captivating with unique characteristics and landmarks
2. Consistent landscaping that provides ample shade and is well maintained.
3. There are varied and sufficient pedestrian amenities that are well maintained and inviting.
4. There is a lack of unpleasant smells, blank walls, vacant lots, trash, and fences

#### Accessibility

1. Sidewalks are large enough for pedestrians to move comfortably in opposing directions.
2. Sidewalk quality is consistent.
3. Signalized intersections allow ample time to cross, frequently allow pedestrians to cross and are a reasonable distance.
4. Signage provides clear directional and locational information.
5. Curbs and curb ramps are present at all crossings.

After the walk audit concluded, a facilitated discussion was held at the library to debrief on participants' overall thoughts and experiences. Comments from this discussion were captured on a wall graphic.

## Participant Feedback

The following provides an overview of the comments received at each stop and a summary of some overall themes that arose from the conversations with participants.

### Stop #1: Badillo St/2<sup>nd</sup> Ave

#### Overall Ranking and Key Takeaways:

Safety: 2.4

Aesthetics: 2.8

Accessibility: 2.6

Participants noted that intersections lacked highly visible crosswalks and/or not enough phasing time was dedicated to allow pedestrians to cross the street safely and comfortably. They also noted that the lack of landscaping and shade trees negatively impacted the overall aesthetics of the area. Another significant attribute of the area was the alley adjacent to the Wells Fargo. Participants remarked that the alley is heavily used and somewhat difficult to navigate because of a lack of clear sightlines between alley, parking lots, and main arterials.

#### Comments:

##### Shade

- Need more shade on 2nd Ave
- Not enough trees on 2nd
- Dead trees
- Need more trees
- Need more shade
- Post Office need landscaping, no trees
- Citrus has more shade

##### Crosswalk Improvements

- Add a flashing beacon – 2<sup>nd</sup> Avenue / Library
- Conditions at 31 flavors intersection are poor
- Unsafe corner at College and 2nd Ave
- Short signal to walk across Badillo
- Blind corner
- Corners not handicap accessible
- Very quick light cross over Badillo St
- Maybe add some sort of signal control at the crosswalk to the library
- Not enough time to cross the other way from one side of 2<sup>nd</sup> Ave to the other
- Crosswalk time could be longer
- Basking Robin's needs more space for pedestrians at intersection



## Vehicle Speed and Traffic

- 2nd/Italia issues with safety speed
- No signal or entrance/exit at Post Office (alley)
- Very high traffic (alley)
- Stop sign inside/hidden (alley)
- High traffic alley
- Alley behind Post Office is hard to see when exiting

## Public Realm

- The post office is unsightly
- Sidewalks need to be smoother
- Citrus is slow, library needs something better especially to the library
- No eyes on streets unless at during church hours
- McIntyre has done a good job “gentrifying”

## Stop #2: Citrus Ave/College St

### Overall Ranking and Key Takeaways:

Safety: 3.8

Aesthetics: 4.2

Accessibility: 4.2

Participants loved the aesthetic of downtown and many noted how the brick façade of buildings and decorative pavers along sidewalks contributed to an overall pleasant walking experience. They also pointed out certain elements that contributed to a safer environment such as high visibility/marked crosswalks, wider sidewalks, and the presence of more pedestrian amenities. They also felt that parking helped create a barrier between pedestrians and the street, which made them feel safer walking. Participants mentioned that the transition between 2<sup>nd</sup> and Citrus Avenue along Badillo Street was a bit harsh and did not contribute to an overall cohesive look and feel with the surrounding area. Many also noted motorists tend to make unsafe turn movements at the corner of Badillo and Citrus. They mentioned motorists tend to either use the turn lanes to move straight through the intersection or attempt to merge onto the through lane from the turn lanes.

### Comments:

#### Architectural Style and Aesthetics

- Pavers, nice brick, and lighting are pleasant
- Liked aesthetics of downtown, brick, wider sidewalks, slower traffic, trees, more trash cans
- Brick in breezeway should be extended to southside
- Love the brick on the buildings

- Relief to get to downtown area
- Very welcoming
- Brick paths makes it more pleasant for pedestrians
- Bars across make it confusing as to when to access

#### **Pedestrian Amenities**

- Benches in breezeways is nice
- More places to sit in alleyways
- Pedestrian amenities in breezeway

#### **Road Safety**

- Merging on Badillo is difficult
- RRFBs at crossings are good at slowing down traffic because drivers are scared they can hit something
- Need tactile warning devices
- Audio pedestrian signals are helpful
- Dangerous corner at Badillo/Citrus because drivers tend to go straight through the intersection onto Badillo from turning lanes on Badillo
- Speed limit not visible
- Dangerous corner at Badillo/Citrus need left turn signals
- Feel more protected with parked cars that provide a sort of barrier
- Corner (Badillo/Citrus) is dangerous, need more cohesive transition/change in aesthetic/safety
- More clear distances for pedestrian crossing

#### **Branding and Identity**

- Good signage
- Downtown is beautiful
- New signage looks great
- Has a great vibe
- Nice signage for bus
- Welcoming sidewalk and pavers
- Downtown is very welcoming

## **Stop #3: Citrus Ave/Geneva Pl**

### **Overall Ranking and Key Takeaways:**

Safety: 2.5

Aesthetics: 2.3

Accessibility: 2.8

Participants generally felt the area was unsafe and unwelcoming due to harsh transitions in sidewalk width and vacant buildings. They felt that sidewalks narrowed too abruptly or were closed off to pedestrians without enough warning. The original walk audit route had participants walk along the west side of Citrus Avenue and cross at Front Street to reach the next stop. However, the group had to take an unexpected detour due to a sidewalk closure north of Geneva Place. Participants mentioned that the sidewalk had been closed for what they felt was a significant amount of time and indicated some frustration that the sidewalk had not yet re-opened. They also noted a need for more direct pedestrian paths between the Metrolink parking structure and station. Existing crosswalks were not the most convenient or comfortable to use because participants mentioned that they must wait a long time for their turn to cross.

### **Comments:**

#### **Safety and Security**

- Felt dangerous
- Unwelcoming
- Need more sidewalks north of Geneva Pl
- Covina Metrolink Garage – catalytic converter stolen, people jaywalking on north leg because of no crosswalk or crossing on train tracks, need a more direct path from garage to Metrolink (traffic signals take minutes between each phasing)

#### **Adjacent Land Uses**

- Building front (west side of Citrus) is unsightly
- Doors of adjacent buildings drop at street, seems dangerous
- Corner at Howards retail store is not feels uncomfortable and unsafe (corner just south of Geneva Pl)

#### **Pedestrian Access**

- Unable to use sidewalk due to closure
- Change in width of sidewalk is confusing
- Pedestrian flashing lights not visible on Grand. Would be more reassuring if pedestrians could see when they are on.
- Citrus/San Bernardino transition in crossings/sidewalk is difficult to navigate
- Sidewalk closed near Geneva Pl had to find an alternative route

#### **Other**

- Metrolink area not welcoming as other examples (Downtown Pasadena)
- Dangerous transition going southbound towards San Bernardino Rd. Vehicles are forced to turn right on the street before
- No signage for Foothill Transit stops on Front Street
- Parking regulations not clear



## Stop #4: Covina Station

### Overall Ranking and Key Takeaways:

Safety: 2.5

Aesthetics: 2.5

Accessibility: 2.8

Some participants noted that the actual station felt welcoming, but that the surrounding area did not. Others mentioned that even with some security features such as lighting and a security guard booth, the station still felt unsafe due to a general lack of “eyes on the street.” Many noted that the station felt disconnected from downtown and was not well integrated like other stations in Southern California. One participant brought up that the Claremont Station was more welcoming and easier to access/navigate because of how well-integrated it was into the downtown area. Others noted that there was also a lack of wayfinding signage to navigate the station, points of interest, and find connections to local bus routes.

### Comments:

#### Transit Connections and Wayfinding Signage

- Parking structure access is poor to station and doesn't serve downtown street
- No bus stop signage
- Not easy to find/see Foothill Transit signage
- Parking structure far away, needs more signage

#### Safety and Security

- Jaywalking is prevalent due to lack of crosswalks
- Station lacks lighting, feels unsafe even with security guard
- Green barriers near the tracks are a bit confusing to figure out

#### Land Use and Aesthetics

- Buildings are not cohesive
- Salmon colored building is an eyesore
- The station is nice, but the surrounding area feels unsafe and unwelcoming

## Stop #5: Front St/Park Ave

### Overall Ranking and Key Takeaways:

Safety: 2.6

Aesthetics: 2

Accessibility: 2.8

Participants noted that the area was hostile towards pedestrians because of a lack of shade trees and heat reflecting off the surrounding buildings. They also noted the bus stop was not welcoming and not very comfortable to access, especially for people with disabilities due to the narrow sidewalk and lack of

transit amenities. During the walk audit, the participants experienced a person in a wheelchair boarding off a bus and having trouble navigating the sidewalk due to the narrow width. Participants were also unsure if Front Street needed a makeover because it appeared to be very clearly designated for industrial uses. However, they did note that Front Street did not complement the adjacent station area. They noted that visitors unfamiliar with the area and who are traveling by train might be confused about how to reach Downtown due to the lack of design and land use cohesion between Front Street and Citrus Avenue.

### Comments:

#### Traffic Safety

- Crosswalk could be helpful on Front/2<sup>nd</sup>
- Cars go fast, but sidewalks feel safe
- Cars speeding by and traffic is mostly cut through. Front Street does not have high traffic volume
- Bus stop is very narrow and hard to navigate for people with mobility devices
- Prefer to walk down San Bernardino than Front
- Was not aware there was a bike lane on Front St
- No marked crosswalk on 2<sup>nd</sup> and Front
- Campfire brewery – love the environment they created

#### Adjacent Land Uses

- Mercedes service building reflects heat onto pedestrians
- Gets hot because of heat reflecting from buildings
- Very industrial
- Prioritize finishing Citrus rather than de-industrializing Front St

#### Built Environment

- No trees
- Too hot
- Dangerous sidewalk
- Unwelcoming
- Street is clean but not welcoming
- Really hot to walk
- Needs more trees for shade
- Unwelcoming to pedestrian, no shade
- Tree maintenance
- There's a bus stop but no trees
- Signage that captivates is needed to inform pedestrians they can walk along Front Street (especially if it were to redevelop)

## Stop #6: 2<sup>nd</sup> Ave/San Bernardino Ave

### Overall Ranking and Key Takeaways:

Safety: 3

Aesthetics: 2

Accessibility: 3.25

Participants noted a lack of interesting land uses or destinations. They noted that vehicle speeds are extremely fast along San Bernardino Avenue and that the light to cross San Bernardino Avenue along 2<sup>nd</sup> Avenue was extremely short, which augmented the lack of pedestrian safety. They felt relief from the shade trees along 2<sup>nd</sup> Avenue after having traveled along Front Street.

### Comments:

#### Points of interest

- Front Street is ignored, not welcoming
- Signage for museum is not very visible
- Sidewalk at car shop not friendly to pedestrians nor easy to navigate
- Police station adds a sense of safety but overall the area does not feel safe
- No storefronts to access on 2<sup>nd</sup> Ave
- No destinations available

#### Traffic Safety

- Very high-speed vehicles
- Short pedestrian light change
- Pedestrian crossing signal is too short on San Bernardino
- Westbound right lane coming up to 2<sup>nd</sup> should be right turn only
- Intersections feel scary because there is not enough time to cross
- Some take 2<sup>nd</sup> Ave as a shortcut to avoid downtown

#### Public Realm

- Shady trees provide relief
- No trash cans available
- Paved sidewalks, street trees are nice
- Eastside sidewalk not as nice as westside
- Feel changes going toward downtown
- Trees and shade cool the area and they're nice and stark contrast from Front Street



## Debrief Discussion

At the end of the walking route participants re-grouped at the library for a debrief discussion on what they experienced during their walk. Their comments were captured on a wall graphic as shown on Figure 2. The wall graphic also provides some high level key takeaways.

Figure 2: Wall Graphic Comments



# Vote for your priorities!

## Corridors

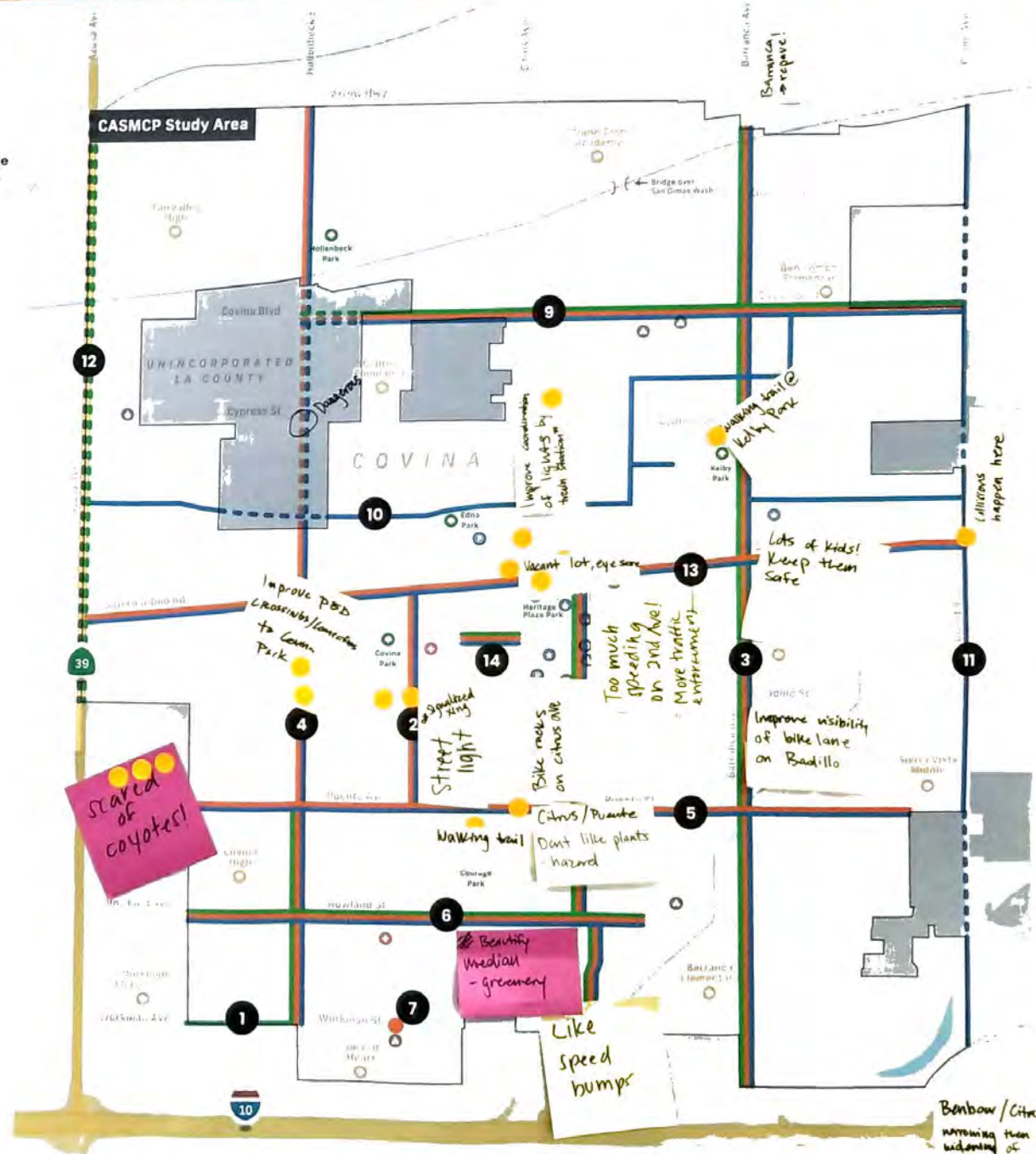
Corridor	Pedestrian Crossing Improvement	Bicycle Improvement	Streetscape Improvement	Max Average Daily Traffic
1 Workman St & Hollenbeck Ave	3	2	3	9,300
2 4th Ave	3	3	3	n/a
3 Barranca Ave	3	3	3	17,400
4 Hollenbeck Ave	4	4	4	14,900
5 Puente St	3	3	3	6,700
6 Rowland St	3	3	3	12,200
7 Workman Ave/ Aldenville Ave	3	3	3	9,300
8 2nd Ave	3	3	3	5,900
9 Covina Blvd	3	3	3	8,300
10 Edna Bicycle Blvd	3	3	3	8,300
11 Grand Ave	3	3	3	28,100
12 Azusa Ave	3	3	3	27,200
13 San Bernardino Rd	3	3	3	27,200
14 Cottage Dr	3	3	3	n/a

**Prioritize bike lanes on larger streets**

**Pedestrians & Seniors!!**

**Puente St - narrow, bike lane would be nice**

Not currently proposed, open to community input





# Vote for your priorities!

Not currently proposed;  
open to community input

## Corridors

1 Workman St & Hollenbeck Ave

 Pedestrian Crossing Improvement

 Bicycle Improvement

 Streetscape Improvement

Max Average Daily Traffic

9,300

2 4th Ave

n/a

3 Barranca Ave

17,400

4 Hollenbeck Ave

14,900

5 Puente St

6,700

6 Rowland St

12,200

7 Workman Ave/  
Aldenville Ave

9,300

8 2nd Ave

5,900

9 Covina Blvd

8,300

10 Edna Bicycle Blvd

Dark line narrowing & street

11 Grand Ave

28,100

12 Azusa Ave

27,200

13 San Bernardino Rd

27,200

14 Cottage Dr

n/a

Prioritize bike lanes on larger, quiet streets

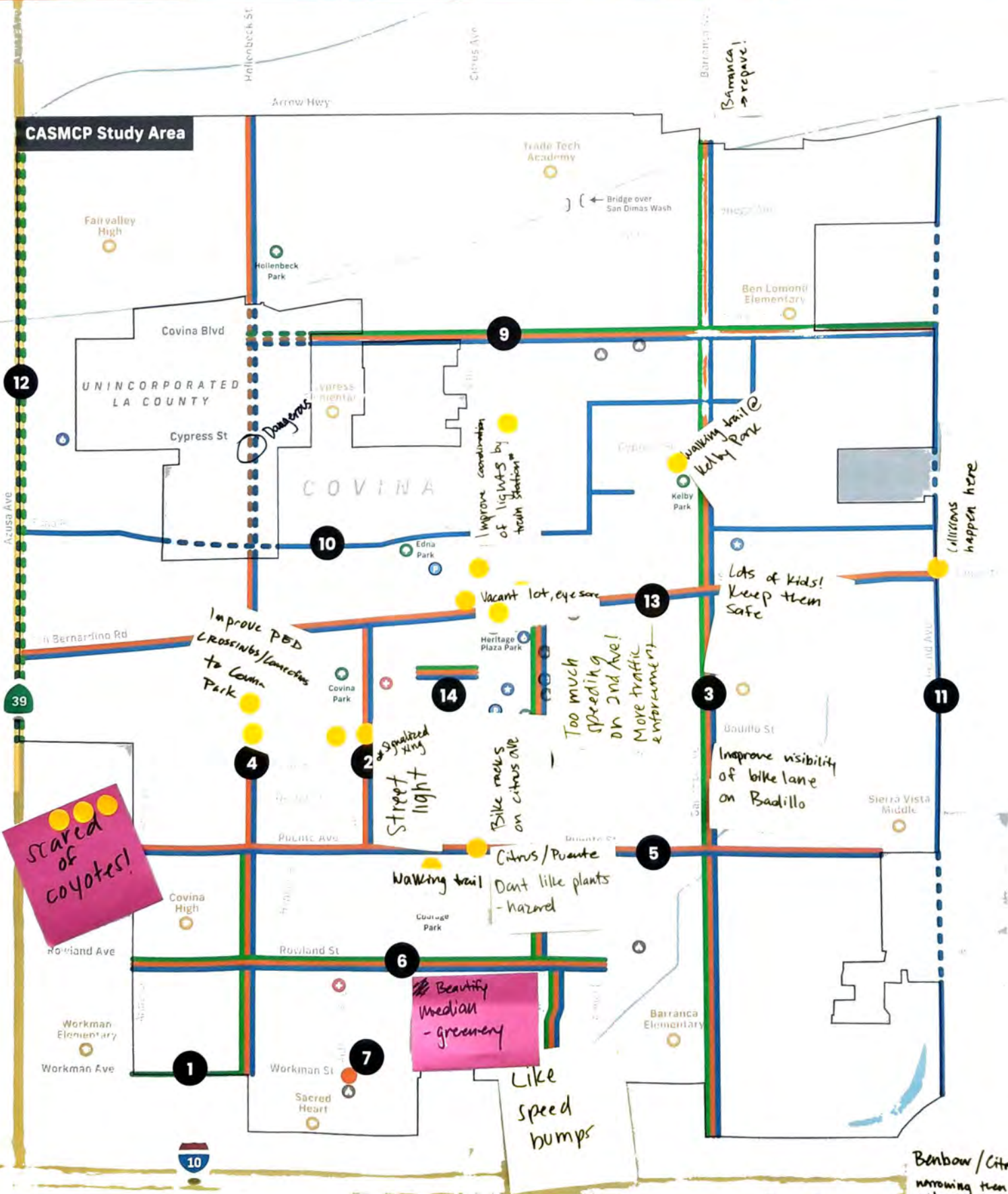
Puente St - narrow, bike lane would be nice

Pedestrians & Seniors!!

azusa ave

35





Pedestrian Crossing Im



Bicycle Impro

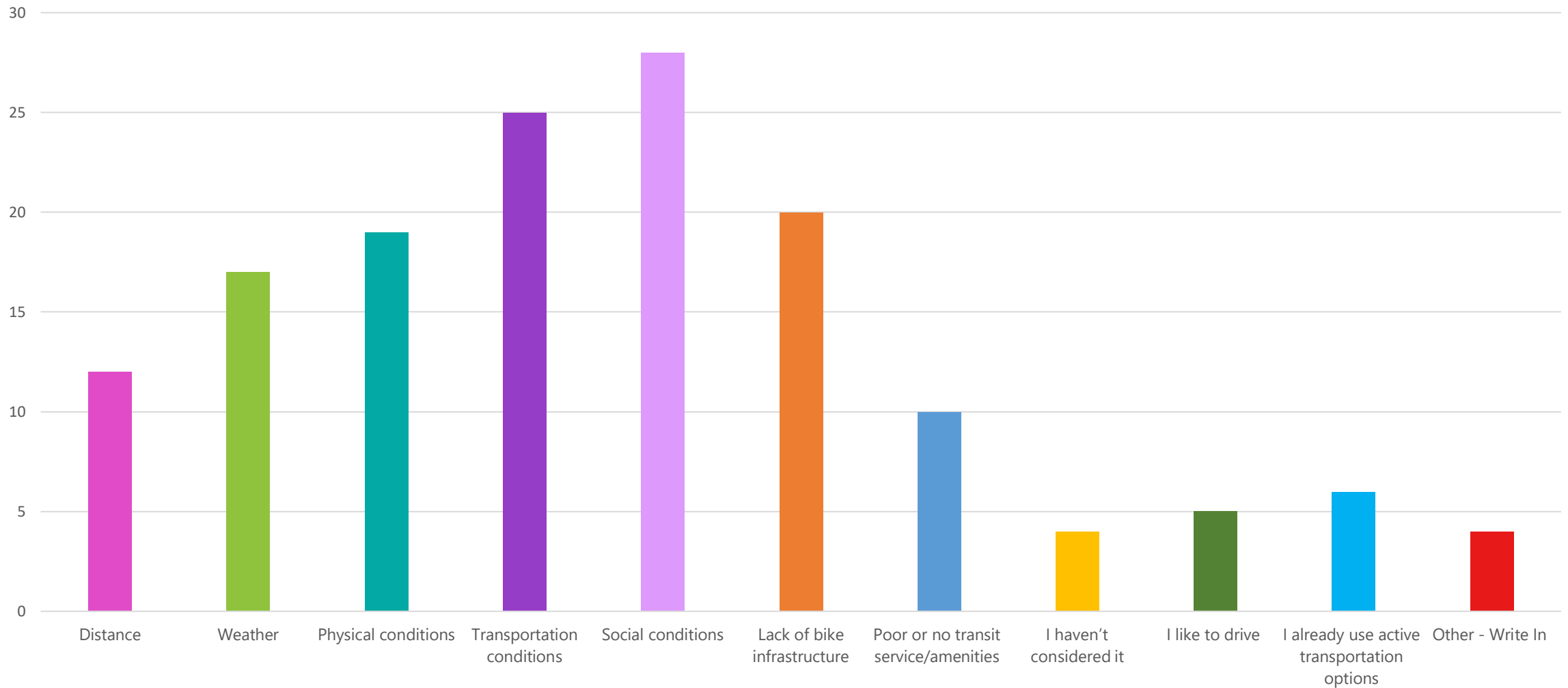


Streetscape

Requires Coordination with Adjacent Juris

Benbow/Citrus narrowing then widening at Street - Dont like!

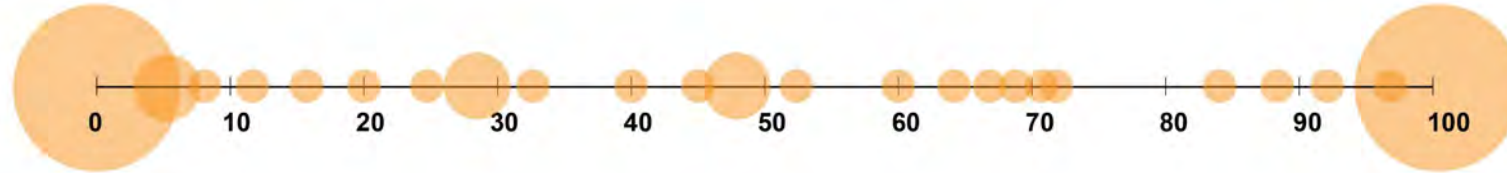
# What conditions keep you from using active transportation options to get downtown?



# When waiting for transit, how often do you have....?



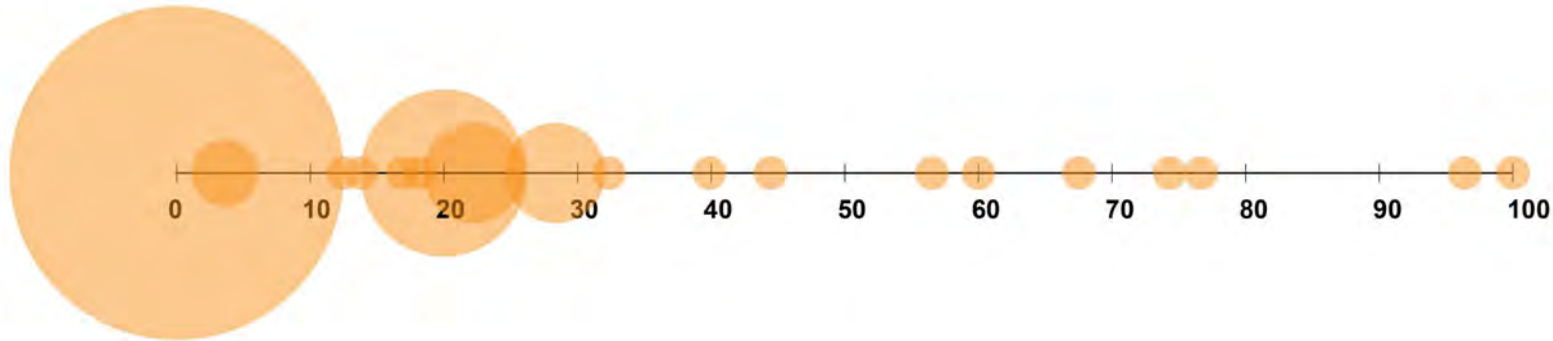
**Place to Sit**



Concentrations of seating availability at never and always, with some fairly even distribution in the occasionally available category.



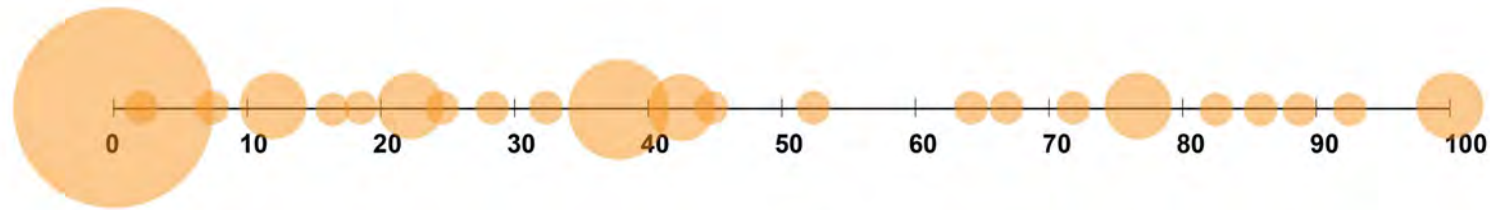
**Shade**



Most of survey respondents indicated there is not adequate shade at a majority of transit stops.



**Adequate Lighting**



Adequate lighting is fairly evenly distributed from never to always.

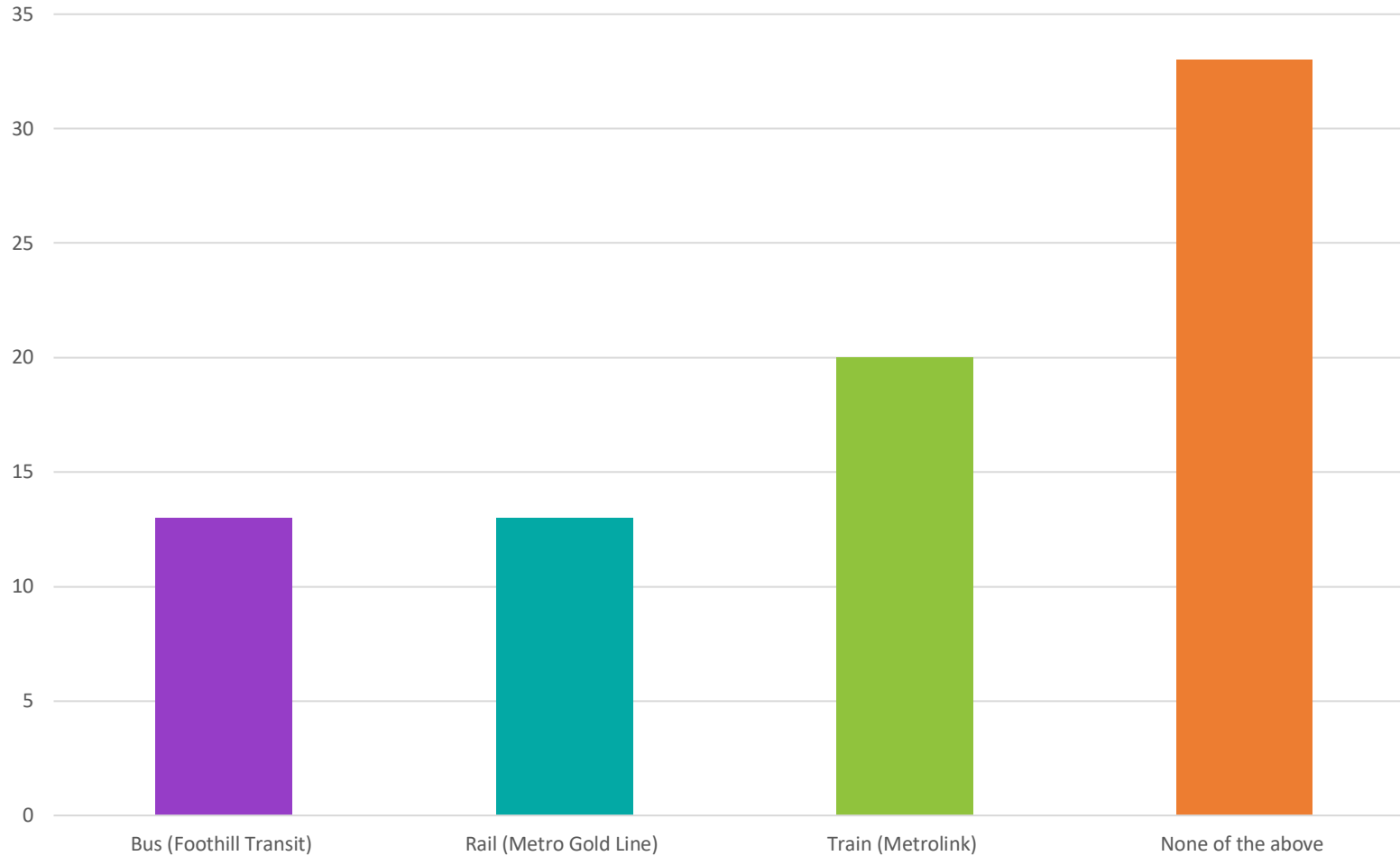
Never

Occasionally

Always



# What type of transit do you use to get around the City?



Metrolink is slightly preferred over buses and Metro Light Rail (Gold Line).

What are the other transit modes people use to get around the City?

# What improvements would you like to see for pedestrians, bikers, and public transit users?

