


# STOCKTON BOULEVARD CORRIDOR STUDY

## Existing Conditions Report

November 2019

NELSON
NYGAARD

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# INTRODUCTION

Safety and mobility are two critical needs on Stockton Boulevard. The study area includes two of the top five most dangerous stretches of roadway in the city according to the City of Sacramento's Vision Zero program. Stockton Boulevard is one of the few north/south local roads linking south Sacramento to downtown. This puts pressure on Stockton Boulevard to balance the needs of local and regional trips across multiple modes.

This existing conditions document weaves together data analysis and community input to gain a holistic understanding of needs, challenges, and opportunities on the corridor. The findings from this phase of the project will lead to development of corridor alternatives.

## STUDY AREA

The Stockton Boulevard study area covers just over four miles of the corridor from Alhambra Boulevard to 47th Avenue (Figure 1). The study area is under the jurisdiction of the City of Sacramento, except for two west side sections of the street which fall under Sacramento County.

Stockton Boulevard is parallel to State Route 99. There is access to Highway 50 at the north end of the corridor. Sacramento Regional Transit District's (SacRT) Gold Line light rail crosses Stockton at grade level at 34th Avenue.

Design alternatives must consider a street's land uses, development patterns, and traffic characteristics. On Stockton Boulevard, there are three distinct areas with different qualities that will inform solutions. The study area has been separated into segments based on these qualities and is referred to by section throughout this document. The areas are:

- **Urban Campus** (Alhambra Boulevard to Broadway) – Includes the eastern edge of the Midtown Partnership business district, the Highway 50 overpass, UC Davis, and a retail node at Broadway. Generally, the street feels comfortable for walking, with street trees and continuous sidewalks. There are no bike facilities. SacRT's Route 38, which runs every 60 minutes, serves this part of the corridor.
- **Traditional Grid** (Broadway to 21st Ave) – This section has the feeling of an historic main street, with small-scale, street-fronting retail (including the Colonial Theater). Single-family housing and several marked, unprotected crosswalks are present in this area. The sidewalk is narrow in places, and there are street trees in some areas. Bike lanes are present. SacRT's Route 51 runs along this section.
- **Suburban** (21st Ave to 47th Ave) – This section feels loud and uncomfortable for walking or biking, with what feels like high traffic volumes and high-speed drivers. Land uses are generally big box or strip mall retail, with wide setbacks, many driveways, and large parking lots. Bike lanes are present. SacRT's Route 51 runs along this section.

Stockton Boulevard for the most part retains a consistent five-lane section throughout the study area, but differences in land use, intersection type and frequency, pedestrian crossing types and frequencies, and variance in section width define the different segments. An aerial view of the corridor divided into segments is shown in Figure 2

**Figure 1 Stockton Boulevard Study Area and Destinations**

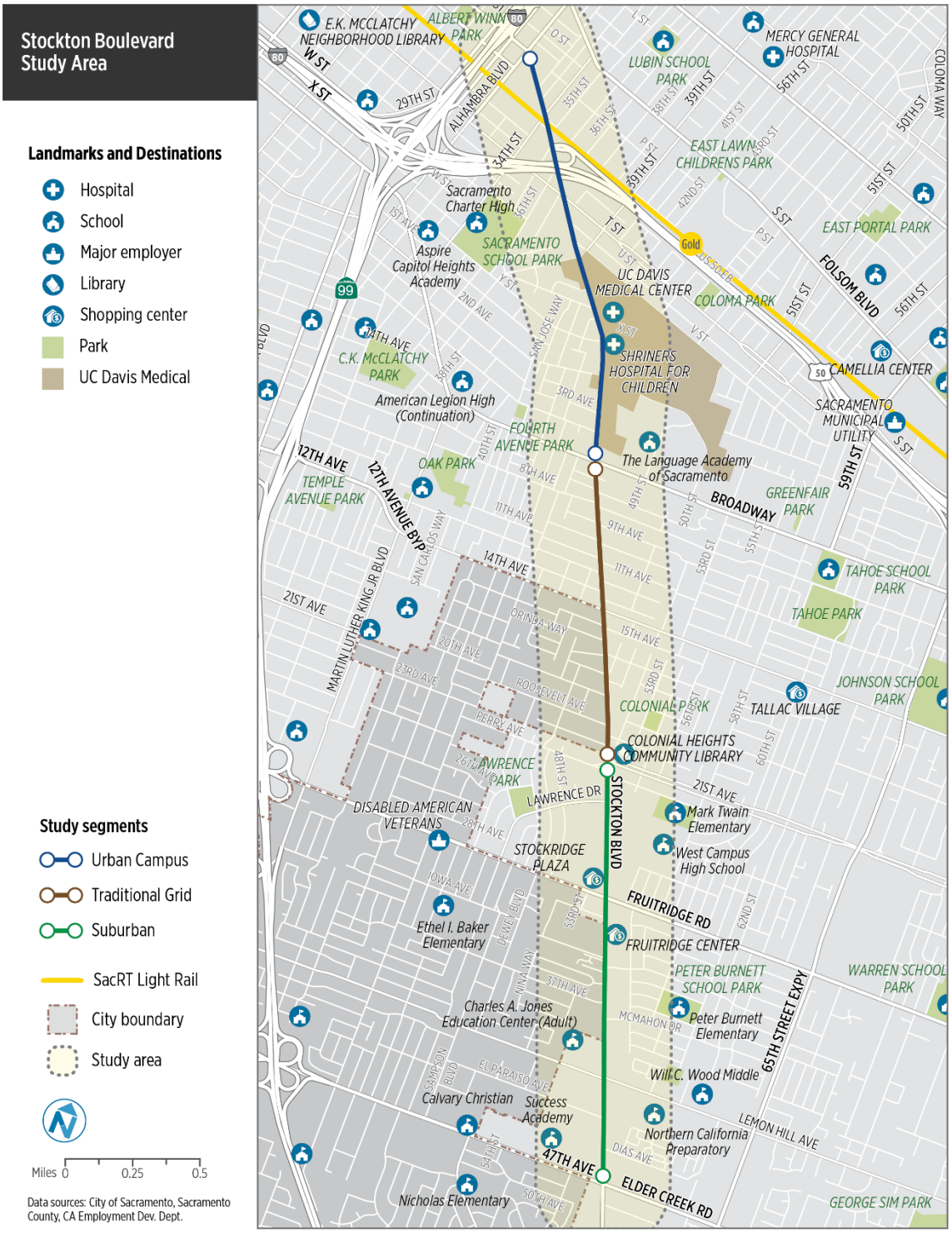
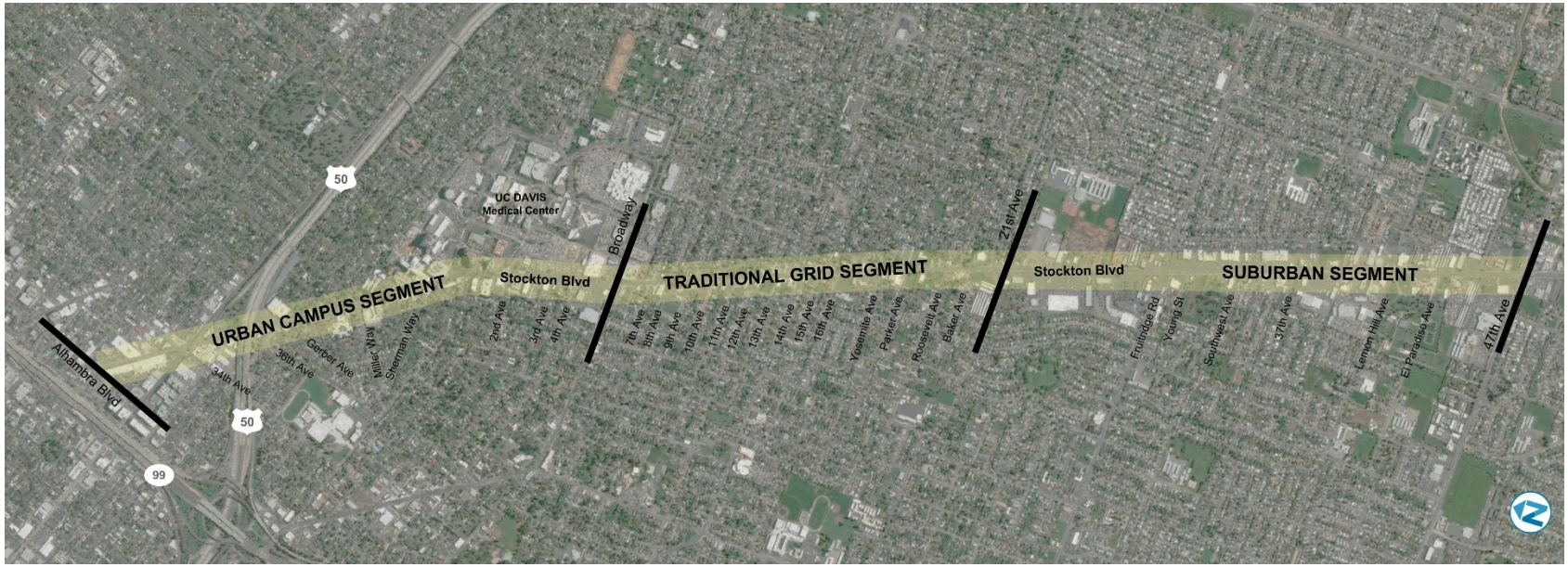


**Figure 2 Stockton Boulevard Segments**



# 1 PLANNING CONTEXT

## PLANNING DOCUMENTS

Several previous plans were reviewed. Recommendations relevant to Stockton Boulevard's design were collated from these reports. For details see Appendix E.

- City of Sacramento Pedestrian Master Plan, City of Sacramento, 2006
- Stockton Boulevard Imagined, Urban Land Institute, 2009
- Sacramento Transit Action Regional Transit Master Plan, Sacramento Regional Transit District, 2010
- Sacramento County Bicycle Master Plan, County of Sacramento, 2011
- Stockton Boulevard Opportunity Sites: Opportunity for a Sustainable Stockton Boulevard, Sacramento Housing and Redevelopment Agency, 2011
- City of Sacramento Bicycle Master Plan, City of Sacramento, 2018
- Sacramento General Plan 2035, City of Sacramento, 2015
- Zoning Code of Sacramento County: Stockton Boulevard Special Planning Area, County of Sacramento, 2015
- Broadway/Stockton Urban Design Plan, County of Sacramento, 1998
- Stockton Fruitridge Neighborhood Opportunity Site: Vision Action Plan, Sacramento Building Healthy Communities Hub, 2016
- Sacramento Metropolitan Transportation Plan/Sustainable Communities Strategy, Sacramento Area Council of Governments, 2016
- Vision Zero Top Five Corridor Study, City of Sacramento, 2017
- Vision Zero Sacramento Action Plan, City of Sacramento, 2018

# 2 COMMUNITY PROFILE

This section highlights study area demographics, travel patterns, land uses, and existing design.

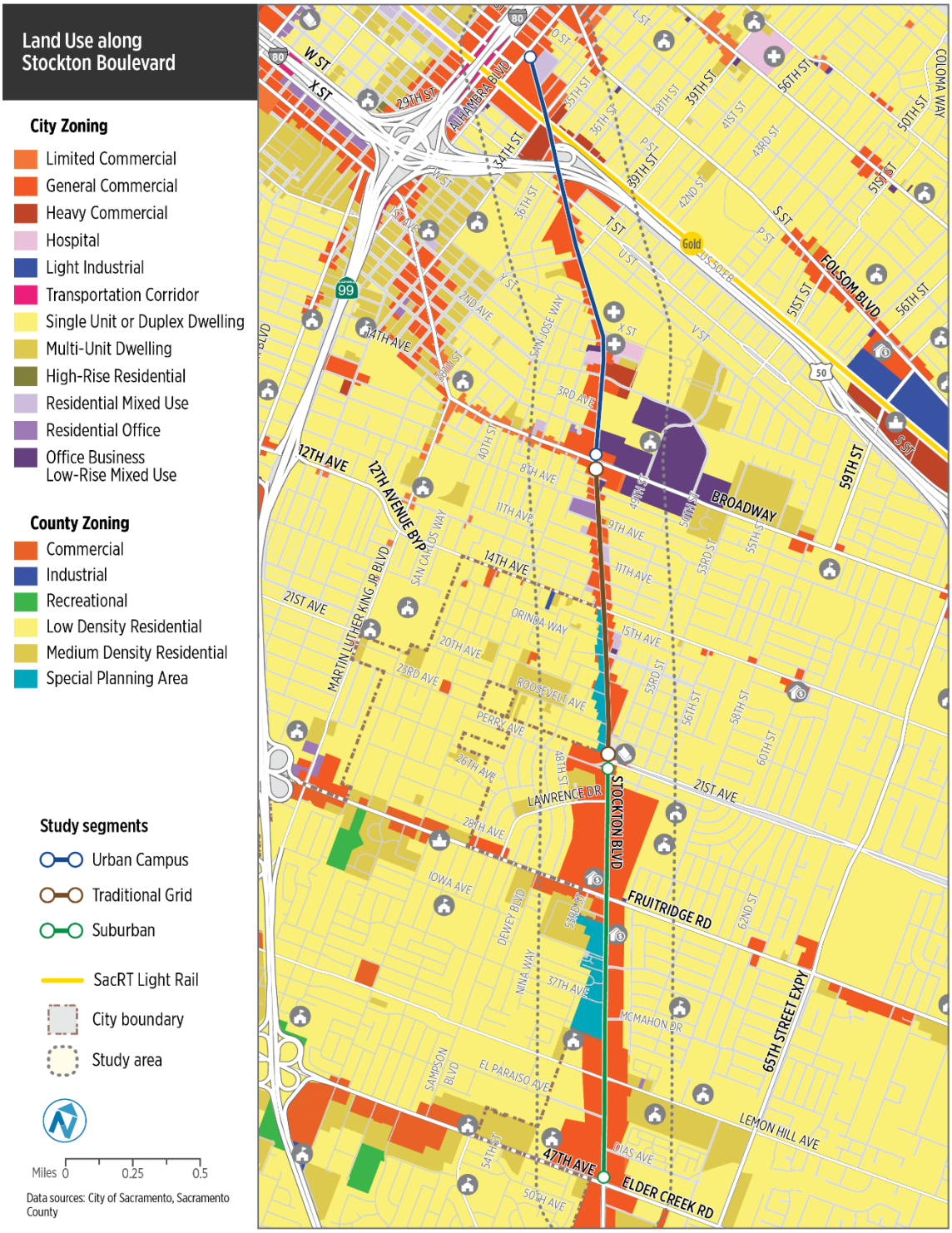
## LAND USE

Land immediately adjacent to Stockton Boulevard is primarily zoned for general commercial use, as seen in Figure 3. Several blocks away from Stockton Boulevard, the area is predominantly low- and medium-density residential use. Some pockets of commercial uses are found along intersecting streets including Broadway, Fruitridge Road, and 47th Avenue.

The corridor includes two stretches of County land that are zoned as Special Planning Area: one between 14th Avenue and 21st Avenue, and the other between Fruitridge Road and Lemon Hill Avenue. The County's Stockton Boulevard Special Planning Area was created to encourage revitalization, discourage uses that are incompatible with residential neighborhoods, reduce motor vehicle parking requirements, enhance access and connections for people walking, biking, and rolling, and promote aesthetic improvements to the area.

There is one major development under construction along Stockton Boulevard, at Stockton and T Street. This intersection has also seen several improvements made to improve safety, such as the installation of a protected left turn, a bicycle signal, and striping changes.

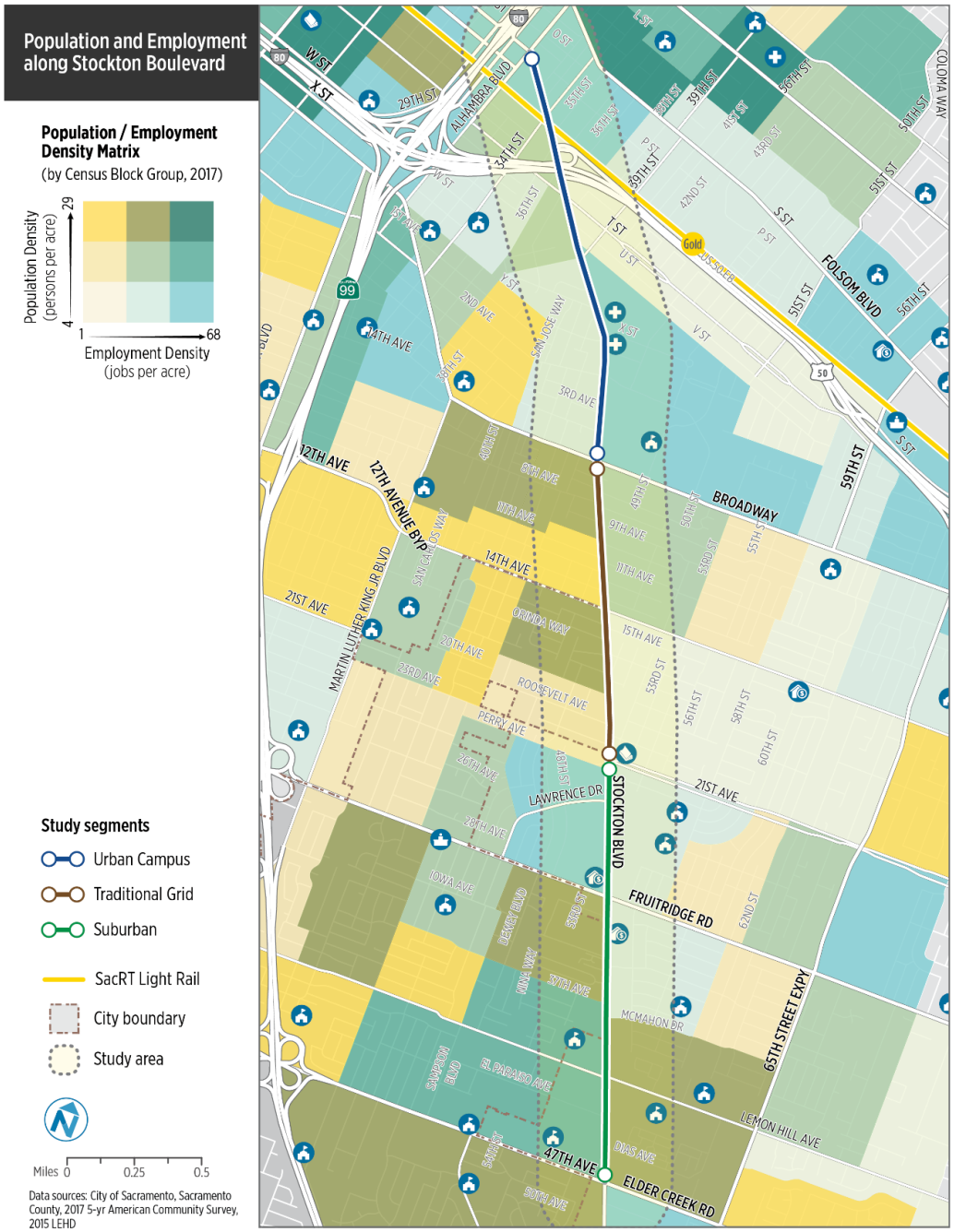
**Figure 3 Land Use Along Stockton Boulevard**



## POPULATION AND EMPLOYMENT

As seen in Figure 4, the highest density of both jobs and residents (darkest green color on the map) is found near the northern end of the study corridor, in downtown Sacramento. The highest population densities are found along the western side of the Traditional Grid segment, and on both sides of the Suburban segment. In general, population density is higher on the western side of the corridor. Areas of high employment density are found around Broadway and Stockton, at the UC Davis Medical campus, and on the west side of the Suburban segment.

**Figure 4 Density of Residents and Jobs**



## TRAVEL PATTERNS

Travel data was extracted from Sacramento Area Council of Governments' SACSIM regional travel demand model. The travel demand model predicts how people in the six-county region travel on a typical weekday, origins and destinations, and trip purpose.

SACSIM tracks trips by Transportation Analysis Zones (TAZs). Trips that travel along a portion of Stockton Boulevard and the TAZs touching the corridor were analyzed to further understand how many trips travel to and through the study area. Trips for each segment (Urban Campus, Traditional Grid, Suburban) were classified into three categories based on the location of their origin and destinations:

- *Local to Segment*, meaning that the trip origin and/or destination is in a TAZ adjacent to the selected segment. For example, a trip that starts along Folsom and travels to UC Davis Medical Center using the Urban Campus segment is a Local on Segment trip.
- *Local to Stockton Corridor*, meaning that the trip traveled through two or more segments and its origin and/or destination was within a TAZ adjacent to Stockton Boulevard. A trip starts in the Traditional Grid area and travels through the Urban Campus segment on its way to downtown would be *Local to Stockton Corridor* for the Urban Campus segment and *Local to Segment* for the Traditional Grid segment.
- *Through trip*, meaning that the trip uses the selected segment, but neither the origin nor destination are located along Stockton Boulevard.

Examples of each category of trip are shown in Figure 5.Figure 6 shows the percentage of trips in each zone classified by category. For all three segments, travel is fairly split between through and local trips. The Urban Campus segment has the highest percentage of through trips (50%), which is to be expected given the presence of freeway on- and off-ramps in that section. The Urban Campus segment carries a high percentage of trips from origins/destinations adjacent to the segment, largely because this segment is the primary access for the UC Davis Med Center and other high trip-generating land uses. The Traditional Grid segment carries the fewest through trips and the largest portion of trips with origins/destinations adjacent to the other two segments.

**Figure 5 Trip category examples**

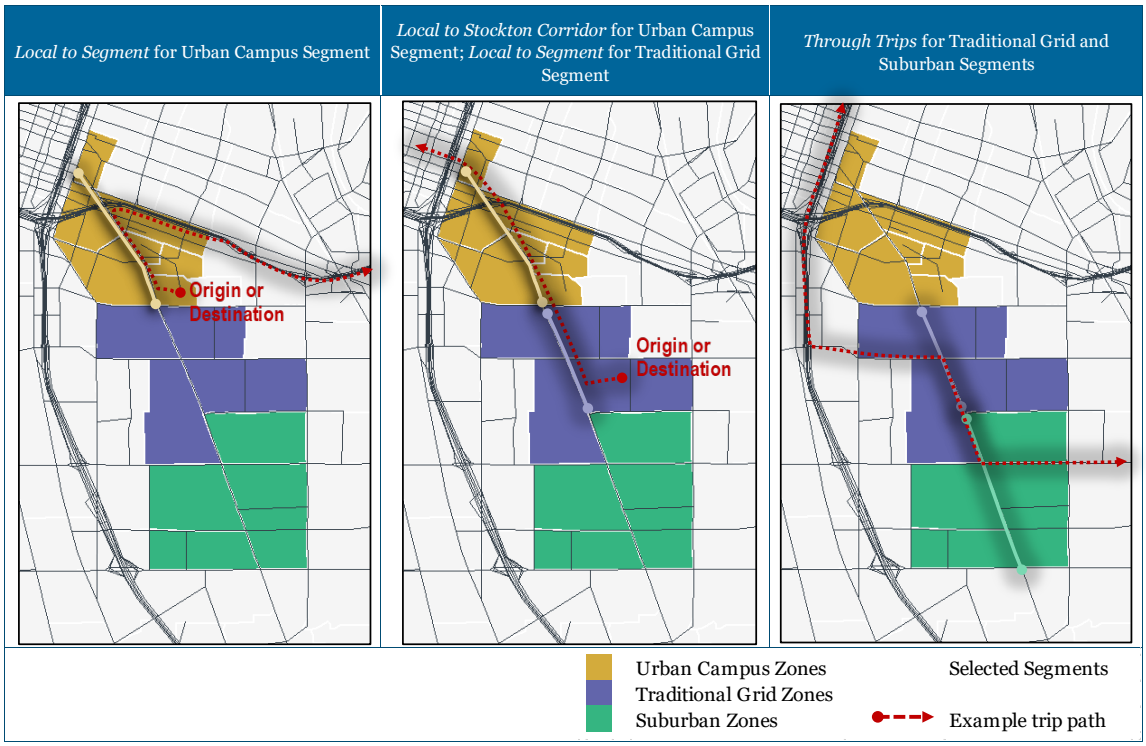



**Figure 6 Percentage of corridor users by origin/destination and segment**

| Selected Segment | Trip Category | | |
|---|---|---|---|
| | *Local to Segment* | *Local to Stockton Corridor* | *Through Trips* |
| Urban Campus | 44% | 6% | 50% |
| Traditional Grid | 22% | 37% | 41% |
| Suburban | 24% | 27% | 49% |

The following maps (Figure 7 through Figure 9) show the network distribution of trips using each segment of the Stockton Boulevard corridor. The more trips a segment has, the thicker it appears on the map. These maps show how Stockton Boulevard typically functions as a complementary facility to SR-99 rather than a competing or alternative route.

**Figure 7 Flow of trips using the corridor: Urban Campus Segment**

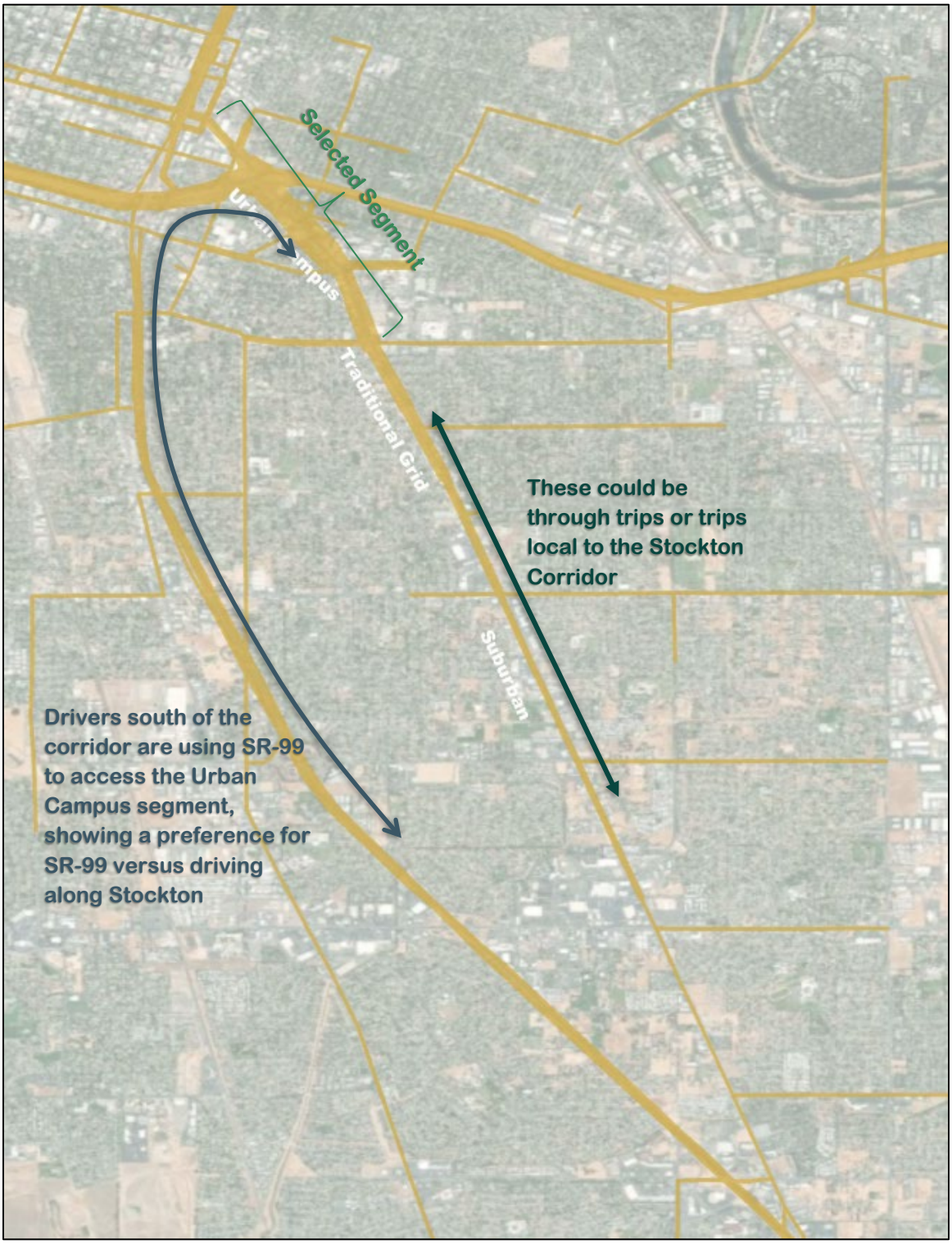


**Figure 8 Flow of trips using the corridor: Traditional Grid Segment**

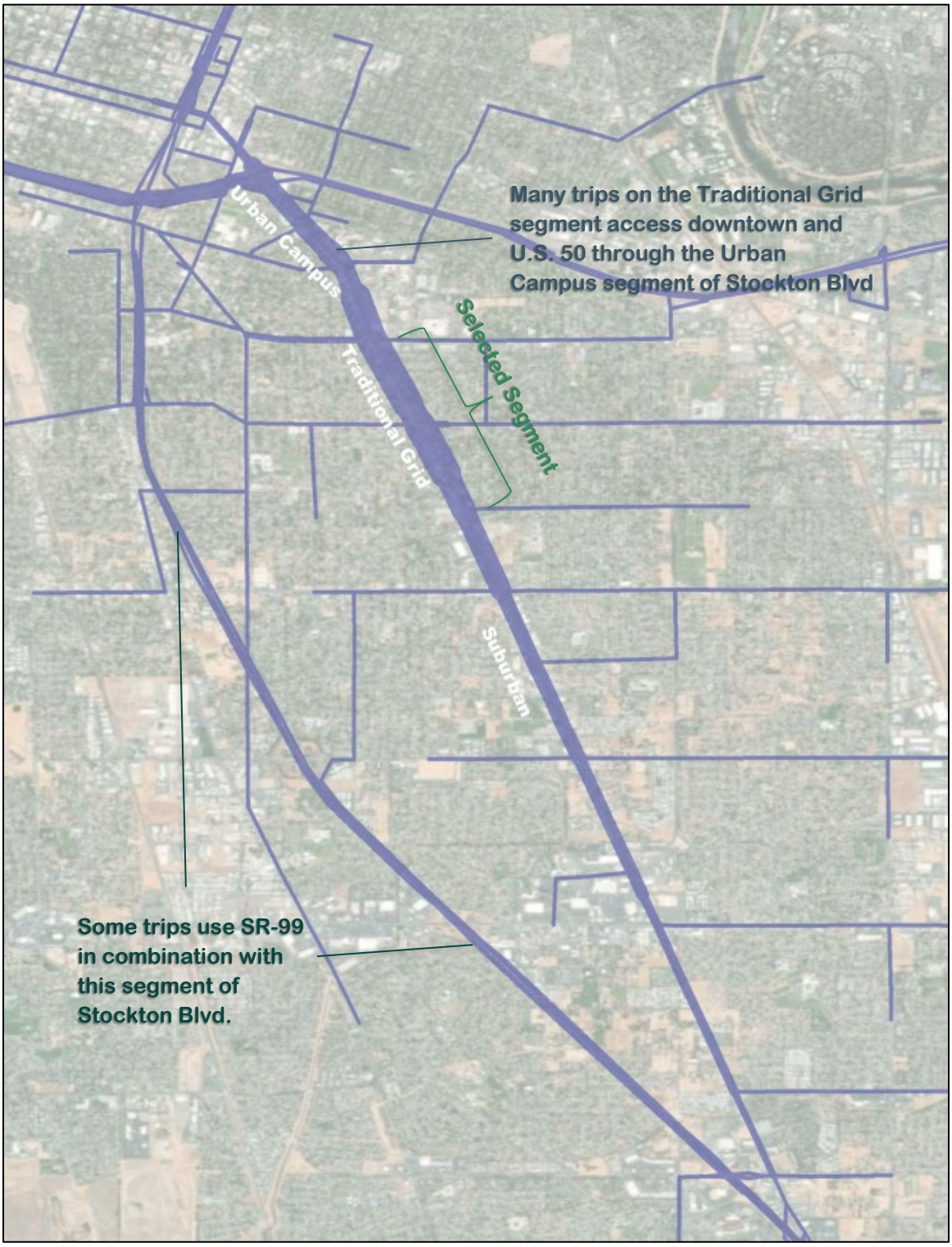
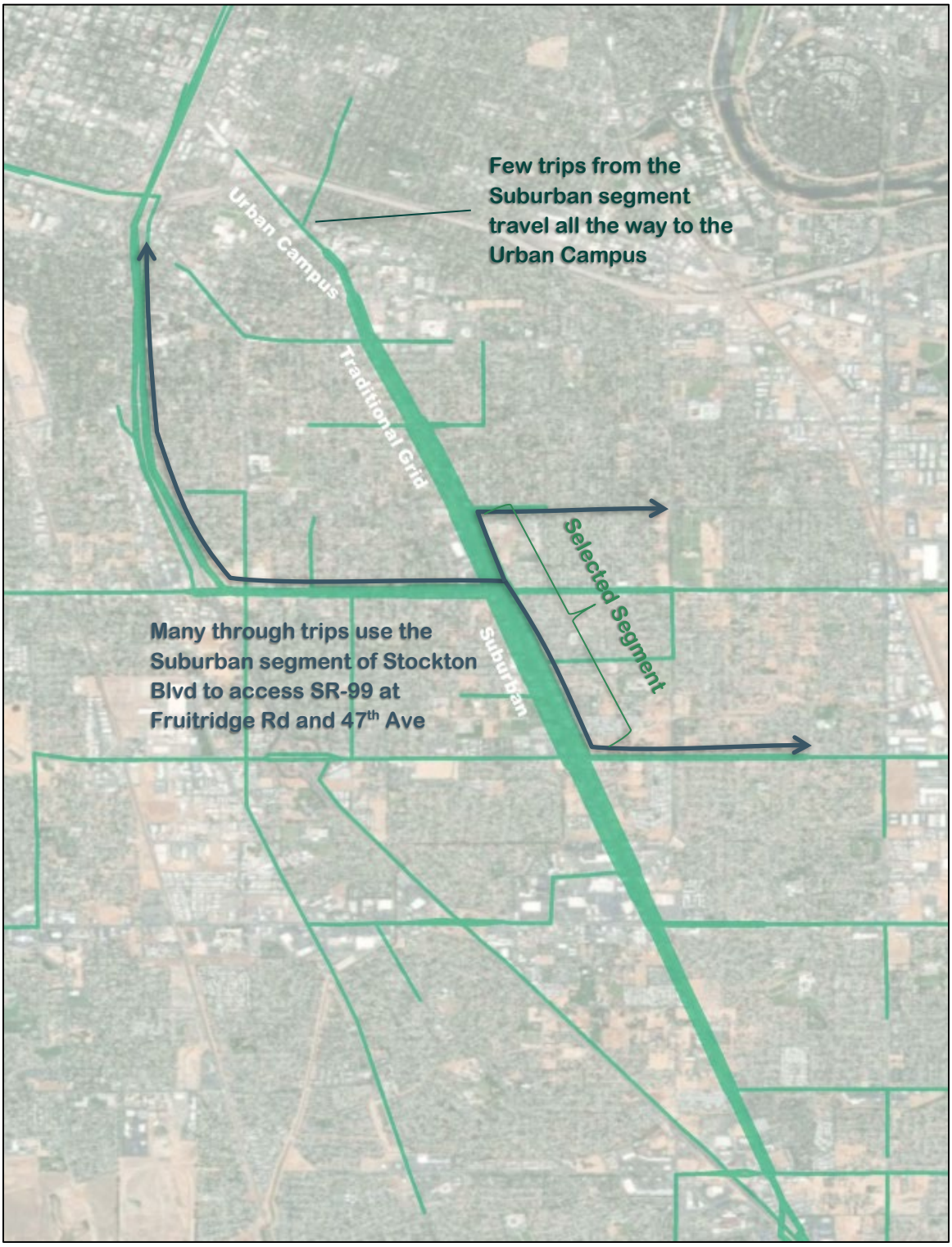


**Figure 9 Flow of trips using the corridor: Suburban Segment**



## STREET LAYOUT

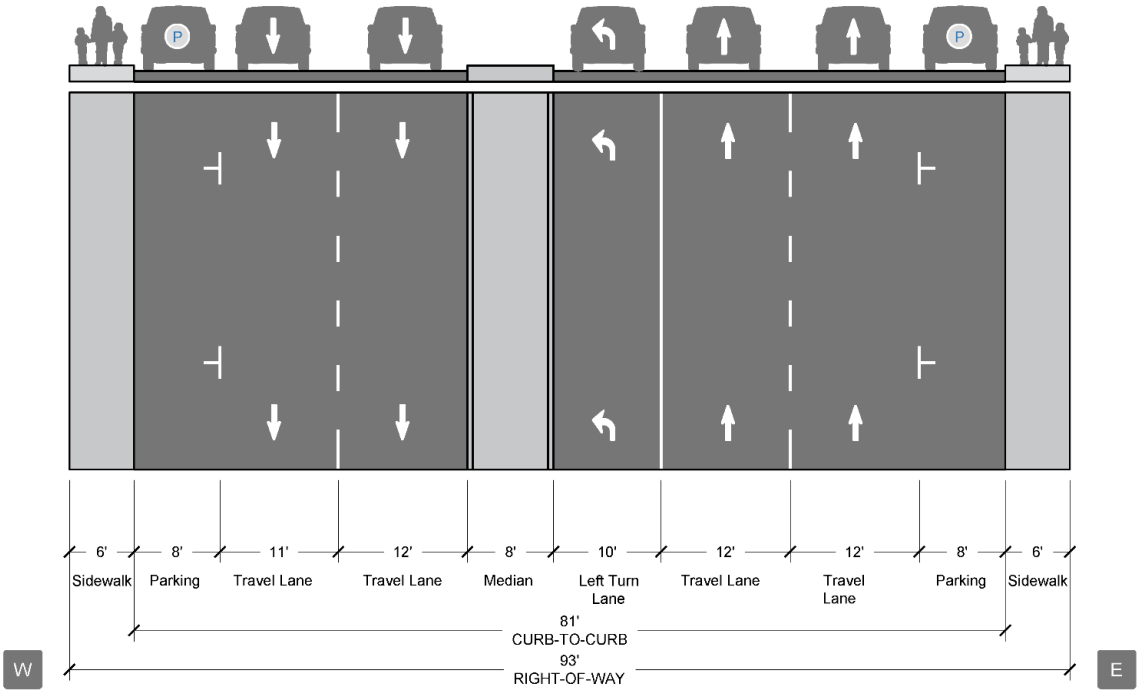
This section describes current street layouts in the corridor by its three segments: Urban Campus, Traditional Grid, and Suburban. The following figures show a typical street layout, example photos, and plan views displaying geometric issues and opportunities typical to each segment. Note that sections vary slightly within each segment. Key trends throughout the corridors:

- **Sidewalks**. Sidewalk widths range from a maximum of 13 feet to a minimum of 5 feet.
- **Bicycle Lanes**. Striped bicycle lanes exist south of Broadway ranging in width from 5' to 6', usually with a 2' to 3' portion of the bicycle lane on asphalt outside of the gutter. This is consistent with current City Street Standards.
- **Landscape Buffers**. Landscape buffers vary from property to property along the corridor, ranging from nonexistent (providing only a 5' curb-tight sidewalk) to widths that meet or exceed the 7'-8" city street design guidelines.
- **Travel Lanes**. Travel lanes vary in width from 11' to 12' along the corridor. The inside travel lanes are typically 11' with the variable lane width captured in the outside lanes. Turn lanes vary from 11'-12', with some portion of the turn lane width in the gutter.
- **Parking**. There is very little on-street parking on Stockton Boulevard. It is present for two blocks in the Urban Campus segment at the US 50 interchange. On-street parking is typically 7' wide per City standards.
- **Medians**. Stockton Boulevard's cross section includes a mostly continuous two-way left turn lane throughout the study area. This lane varies in width from 10' to 11'. In the Traditional Grid and Suburban segments, the two-way left turn lane is interrupted by a raised, planted median. This median may serve as a pedestrian refuge, block left turns at offset intersections, or establish turn lanes at expanded intersections. It varies in width from a minimum 2' at expanded intersections to 10' at pedestrian crossing refuges.
- **Bus Pullouts**. Bus pullouts exist at various locations along the corridor. Their ultimate width is typically 10' which enables the bus to pull out of general traffic to serve a stop while blocking the bicycle lane if it exists in the section. Typically, the 10' width is gained by encroaching upon the landscape buffer.

## Urban Campus Segment

At US 50, the curb-to-curb width is 81' and there is on-street parking.

**Figure 10 Cross-Section: Under I-50 Bridge**




From U to V Streets, there are street trees and the area generally feels comfortable for walking. The property lines are at the back of the sidewalk, for a total right-of-way of 80'.

### Unique Challenge in Urban Campus Segment: SacRT Rail Crossing

The SacRT Gold Line crosses Stockton Boulevard where it intersects 34th Street and R Street. As currently designed, the at-grade crossing has minimal features to enhance pedestrian safety, consisting of a pair of striped crosswalks over the rails. Sidewalks are missing on either side of the railroad tracks, as are pedestrian safety gates as seen in Figure 13. This intersection is also difficult to navigate as a motorist, due to operational challenges of a 5-way intersection and the rail crossing. While the Stockton Boulevard Corridor Study will identify some improvements to this intersection, this intersection requires improvements that are out of the scope of this effort. Future Sacramento efforts will analyze traffic flow, turning movements, signal operations, and other site-specific data to improve conditions.

**Figure 11 Cross-Section: U Street to V Street**

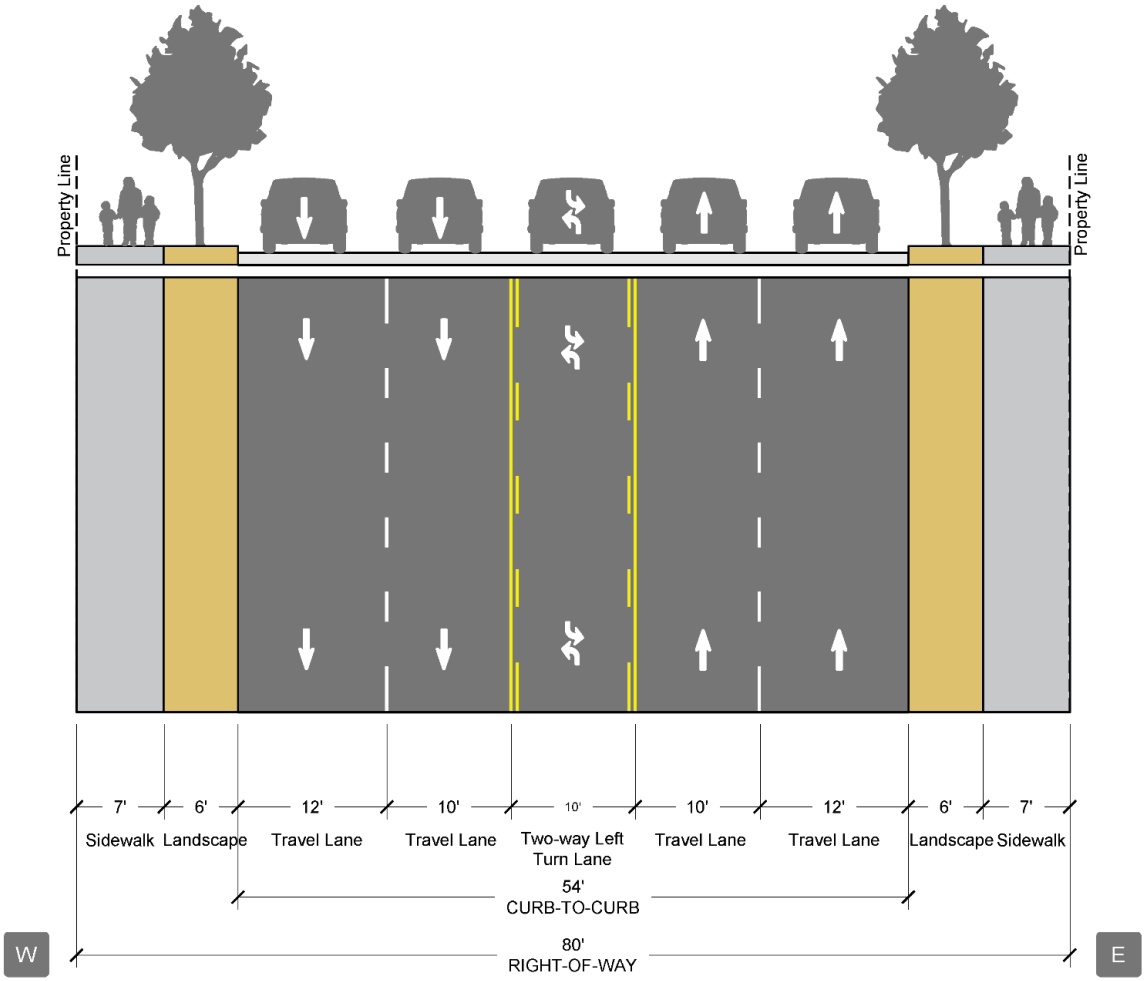


**Figure 12 Urban Campus Segment Defining Characteristics**

**Figure 13 Urban Campus – Typical Conditions**

Typical bus stop and street section

Stockton Boulevard at US 50 interchange

34th Street light rail crossing facing north

## Traditional Grid Segment

In this segment, the sidewalk and buffer vary throughout. In some places there is a generous sidewalk while in other places it is 5'. The buffer ranges from nonexistent to planted with trees. The property line shifts from parcel to parcel.

**Figure 14 Cross Section Between Roosevelt Avenue to Parker Avenue**

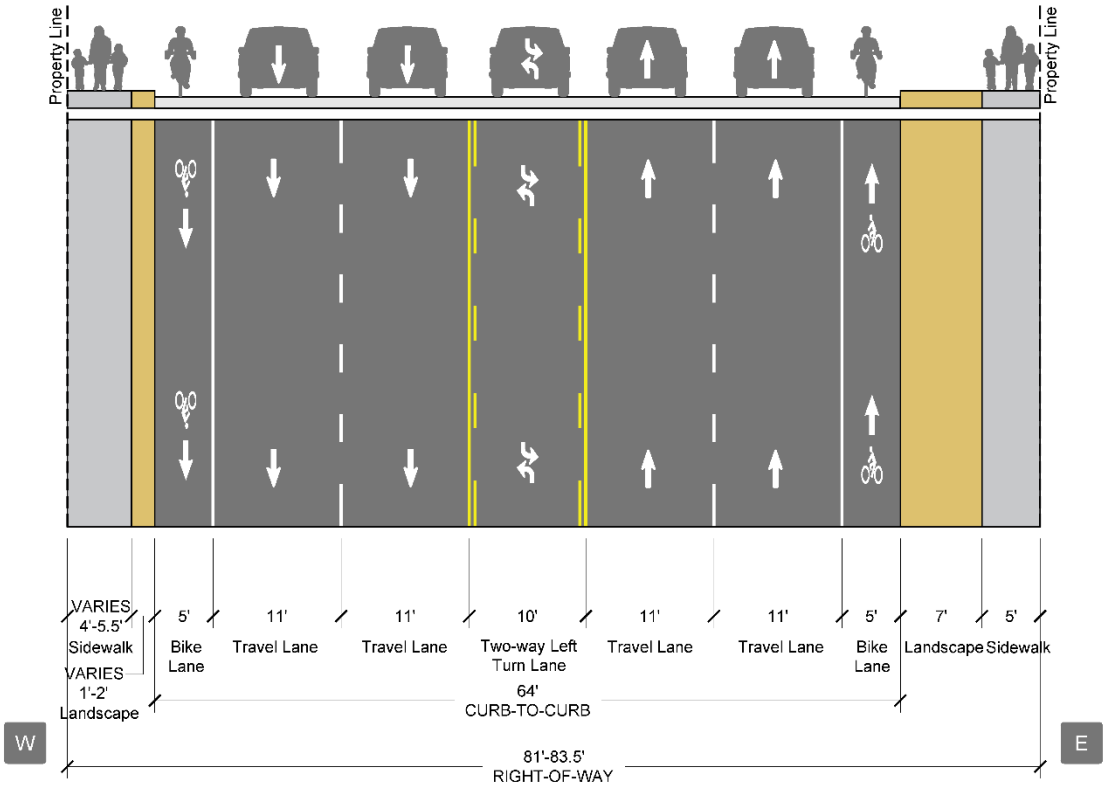


**Figure 15 Traditional Grid Segment Defining Characteristics**

**Figure 16 Traditional Grid – Typical Conditions**

Typical signalized intersection

Mid-block pedestrian crossing with median refuge


Existing bicycle facilities

## Suburban Segment

This segment includes the largest intersections in the study area, with dual left turn lanes and occasionally right turn lanes as well. The parcel lines, in many cases, are well behind the sidewalk; for example, in Figure 17 the parcel line runs through a parking lot on the east side, yielding a right-of-way of 104'.

**Figure 17 Cross-Section: Stockton Blvd at 47th Avenue/Elder Creek Rd**

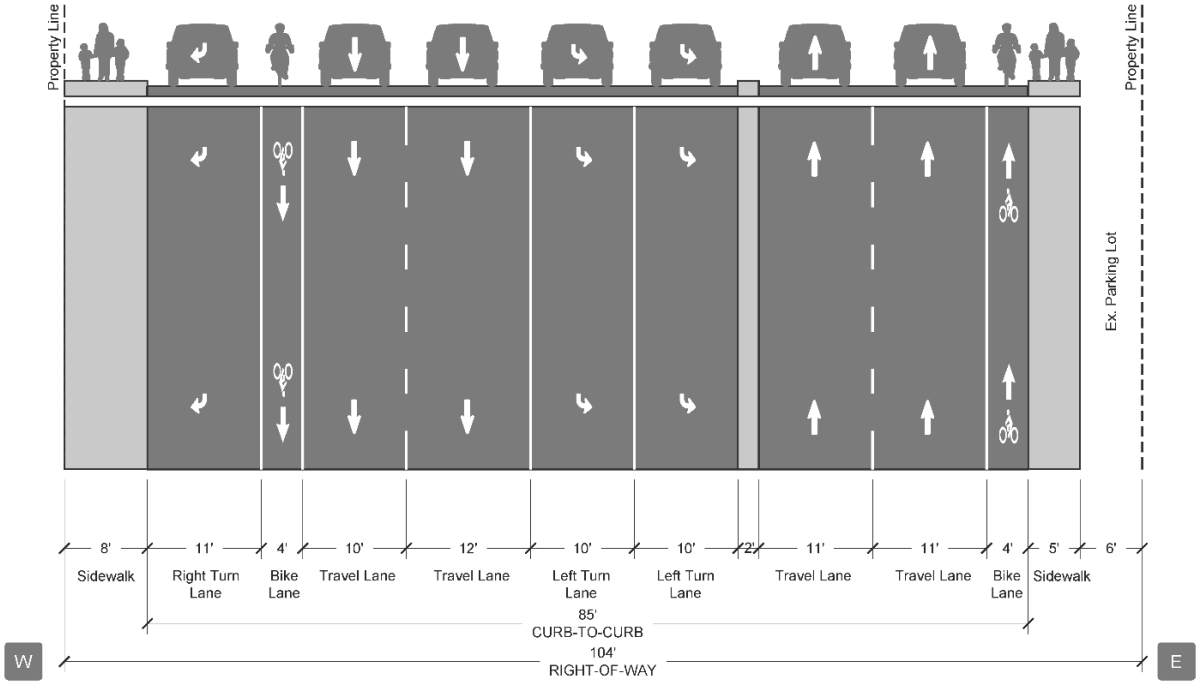


**Figure 18 Cross-Section: Fruitridge Road to Jansen Drive**

**Figure 19 Cross section – Intersection of Stockton Boulevard and Fruitridge Road**

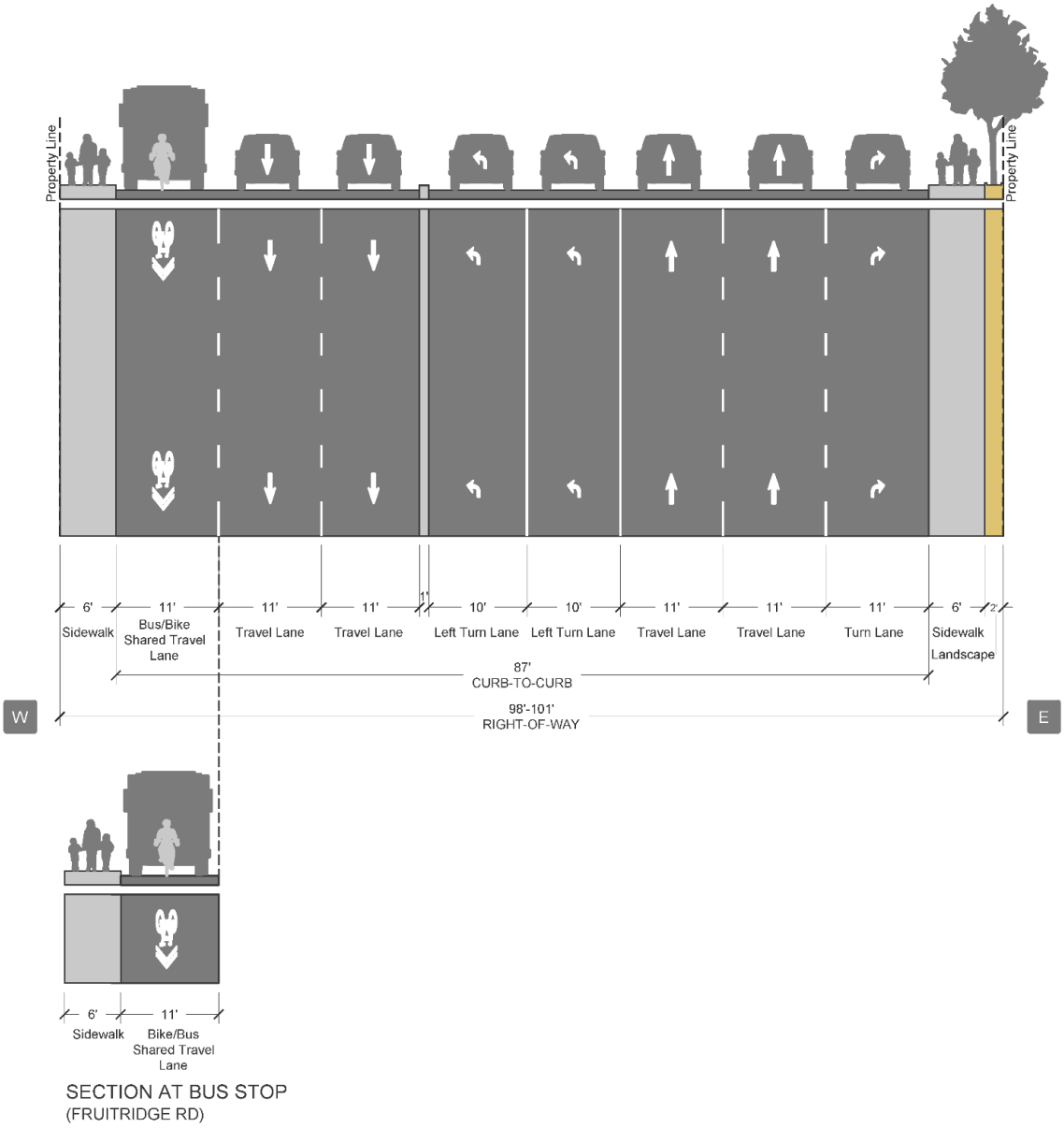


**Figure 20 Suburban Segment Defining Characteristics**

**Figure 21 Suburban Segment – Typical Conditions**

Typical cross street intersection

Signalized mid-block pedestrian crossing


Existing street section with raised median on approach to intersection

# 3 TRAVELING STOCKTON BOULEVARD TODAY

## WALKING

While people walk throughout the corridor, the intersection with the highest volume of pedestrian traffic is 2nd Avenue, according to traffic count data collected by video in May 2019. More than 100 people cross 2nd Avenue east of Stockton Boulevard in both the AM and PM peak hours, or the hours during morning and evening rush hour with the highest volumes observed. Sixty people cross Stockton Boulevard in the AM peak and 89 in the PM peak. Alhambra Boulevard, X Street, Broadway, and Fruitridge Road all saw pedestrian counts in the 20-30 range per peak hour. For a detailed look at pedestrian counts, please see Appendix F.

### Sidewalks and Sidewalk Buffers

Sidewalks are continuous throughout the corridor except for one stretch of approximately 80', located along the west side of Stockton at 4th Avenue. Figure 22 shows sidewalk and buffer widths based on a sampling of locations throughout each study segment. Sidewalk width varies from less than six feet up to 13 feet. In general, sidewalks are wider on the west side, though widths are more consistent on the east side of the street. Sidewalk widths are more generous in the Urban Campus and Traditional Grid segments, while widths in the Suburban segment are consistently close to 6 feet.

Unlike sidewalks, buffers between the street and the sidewalk are not consistently present throughout the corridor. Buffer strips are more common on the east side and range from 5.5 to nearly 12 feet in width. Along the west side of Stockton Boulevard, buffers are very uncommon. In the Suburban segment, they are almost nonexistent.

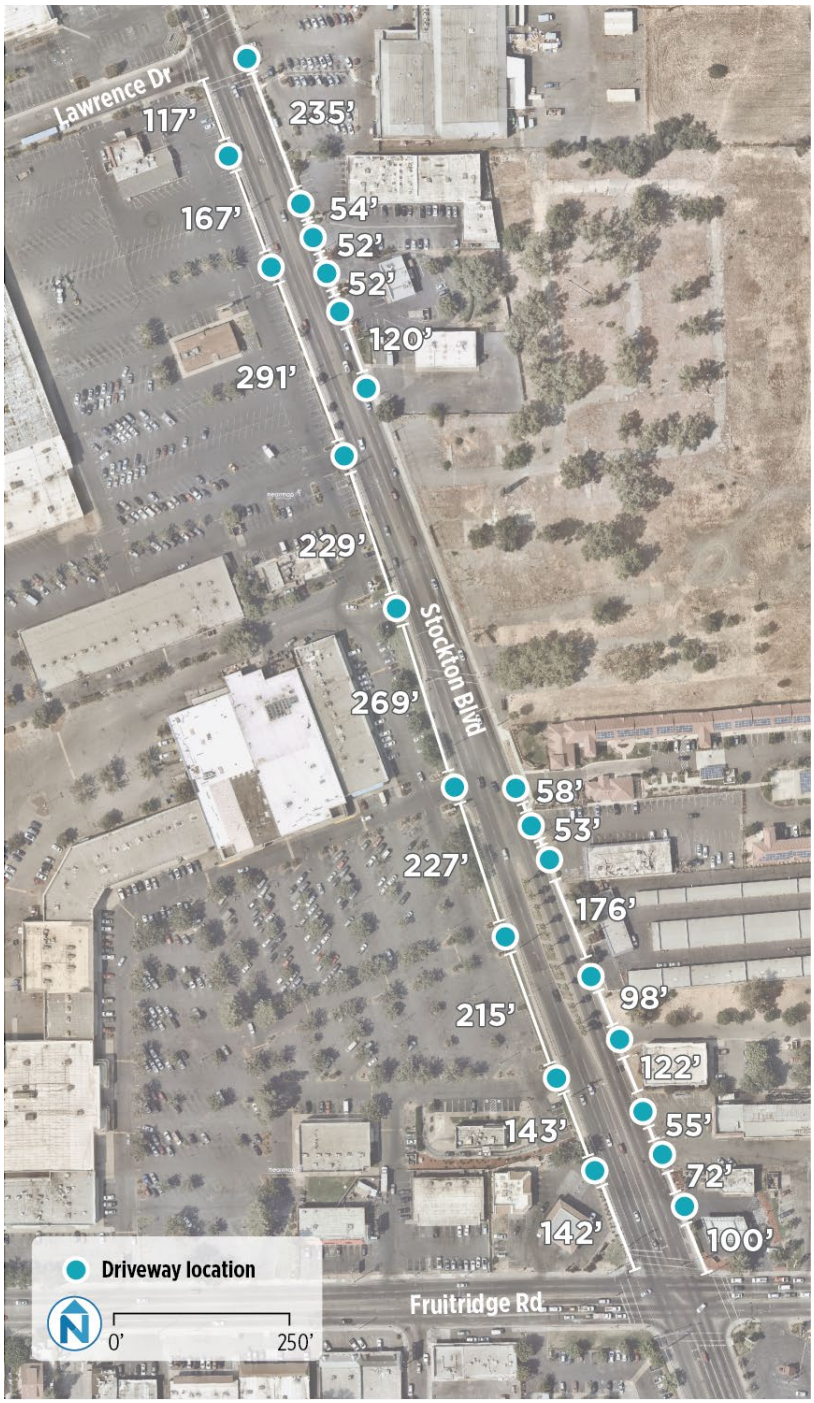
**Figure 22 Sidewalk and Buffer Width**

| | | | | West side | | | East side | |
|---|---|---|---|---|---|---|---|---|
| | From | To | At | Sidewalk width (ft.) | Buffer width (ft.) | | Buffer width (ft.) | Sidewalk width (ft.) |
| Urban Campus | Alhambra | 32nd | 32nd | 11.5 | | Roadway | 7 | 5.5 |
| | 32nd | 34th | 33rd | 13 | | | 5.5 | 6.5 |
| | T | 39th | V St | 6 | 5.5 | | 6.5 | 7 |
| | 39th | X | 39th | 11.5 | | | 6.5 | 6 |
| Traditional Grid | Broadway | 8th | 6th | 9 | | | 11 | 6 |
| | 8th | 10th | 9th | 6 | 9.5 | | 11.5 | 6 |
| | 12th | 14th | 13th | 7 | 5 | | 8.5 | 8 |
| | 14th | San Francisco | 15th | 5.5 | | | 6.5 | 5 |
| Suburban | 21st | Lawrence | mid-block | 6 | | | | 5 |
| | Lawrence | Fruitridge | mid-block | 5.5 | | | | 5 |
| | Jansen | McMahon | Gordon | 7.5 | | | | 6 |
| | Lemon Hill | Dias | El Paraiso | 6 | | | | 5 |

## Driveways and Curb Cuts

Driveways are numerous along the study corridor. Spacing was calculated for one block north of Fruitridge Road (Figure 23). Sacramento street design standards specify a minimum distance of 250' between driveways along four-lane arterial streets, indicating that this stretch of Stockton Boulevard is not in compliance with city standards.

**Figure 23 Driveway Spacing, Stockton Boulevard at Fruitridge Road**

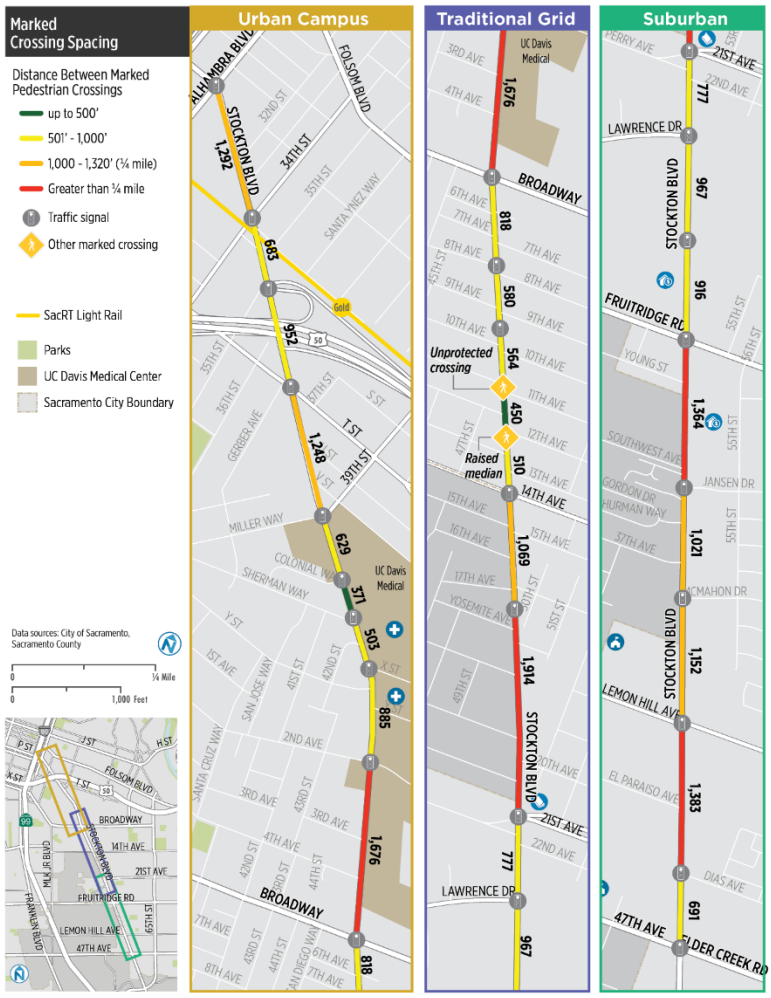


## Crossing the Street

The frequency and design of pedestrian crossings is essential to pedestrian mobility. High visibility crossings enable pedestrians to safely cross busy streets and alert drivers to the possibility of encountering pedestrians. The spacing between marked crosswalks is largest along the Suburban segment, with an average spacing of 1,034 feet between marked crosswalks, and lowest along the Urban Campus segment, with an average spacing of 906 feet (Figure 24).

Guidance and standards regarding the desired spacing between marked pedestrian crossings are scant. Local traffic engineers determine the spacing between signalized intersections and marked crossings based on pedestrian crossing demand, roadway type, traffic volume, and other factors. The City's *Pedestrian Crossing Guidelines* recommends considering a distance of 300 feet from the nearest intersection as a starting point in determining whether an uncontrolled site should be treated with a marked crosswalk, which is consistent with the Federal Highway Administration's Manual on Uniform Traffic Control Devices. As shown in Figure 24, the shortest spacings between marked pedestrian crossings are concentrated along the Traditional Grid segment, between Broadway and 14th Avenue, and the Urban Campus segment, near the UC Davis Medical Center.

**Figure 24 Marked Crossing Spacing**

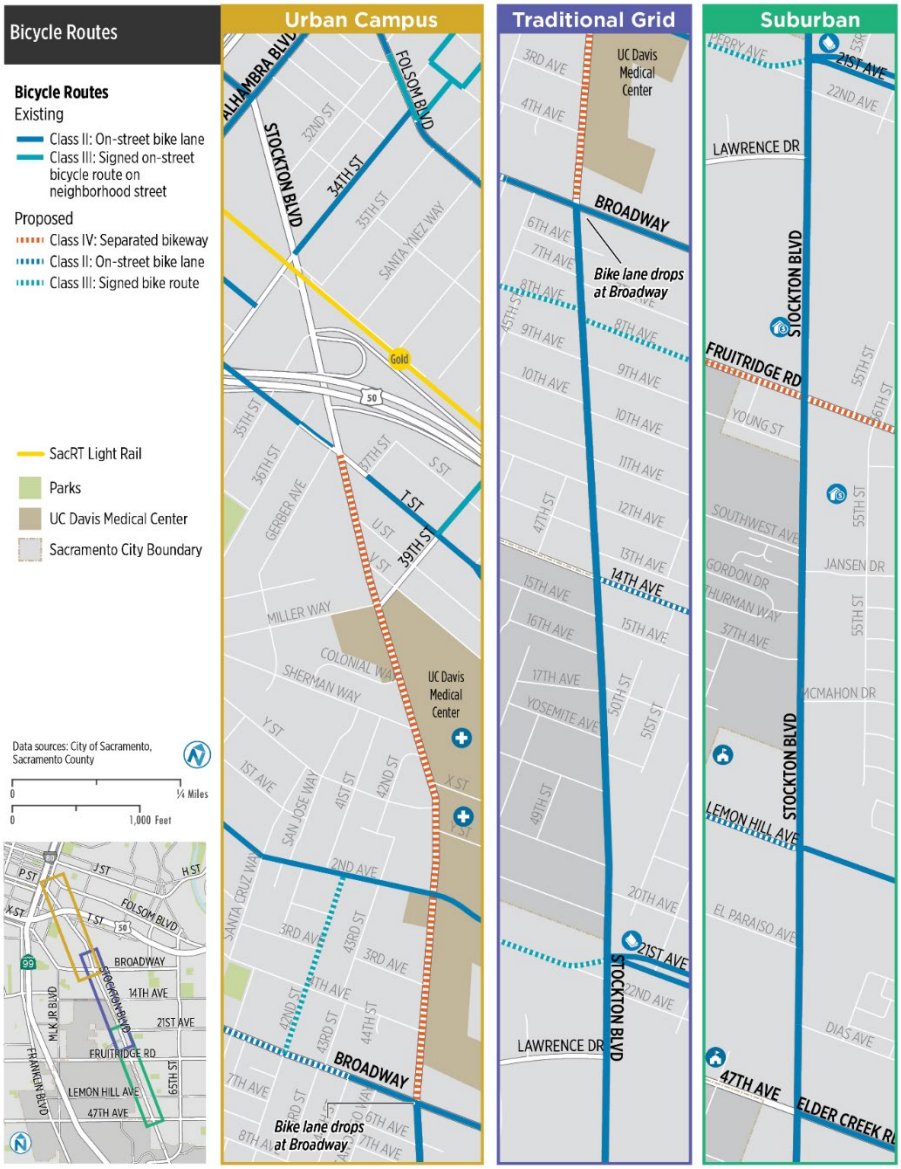


## BICYCLING

Stockton Boulevard is a key route in the city's bicycle network, with bike lanes present in the 5.4 miles from Broadway to Mack Road (Figure 25). A few bicycle lanes, including those along Broadway, 47th Avenue, and Lemon Hill Avenue support east-west travel; however, they span just a few blocks and do not connect to bicycle facilities east of the corridor.

Streets with more than one lane per direction, speed limits above 25 mph, and traffic volumes greater than 6,000 ADT — all of which apply to Stockton Boulevard — generally require some level of physical separation for riders of all ages and abilities to feel comfortable bicycling. Figure 25 shows that Sacramento's Bicycle Master Plan proposes adding separated bikeways along Stockton Boulevard north of Broadway near the UC Davis Medical Center to T Street, and along Fruitridge Road. These facilities will offer a greater level of physical protection from automobile traffic and may attract more riders to the area.

**Figure 25 Bicycle Facilities**



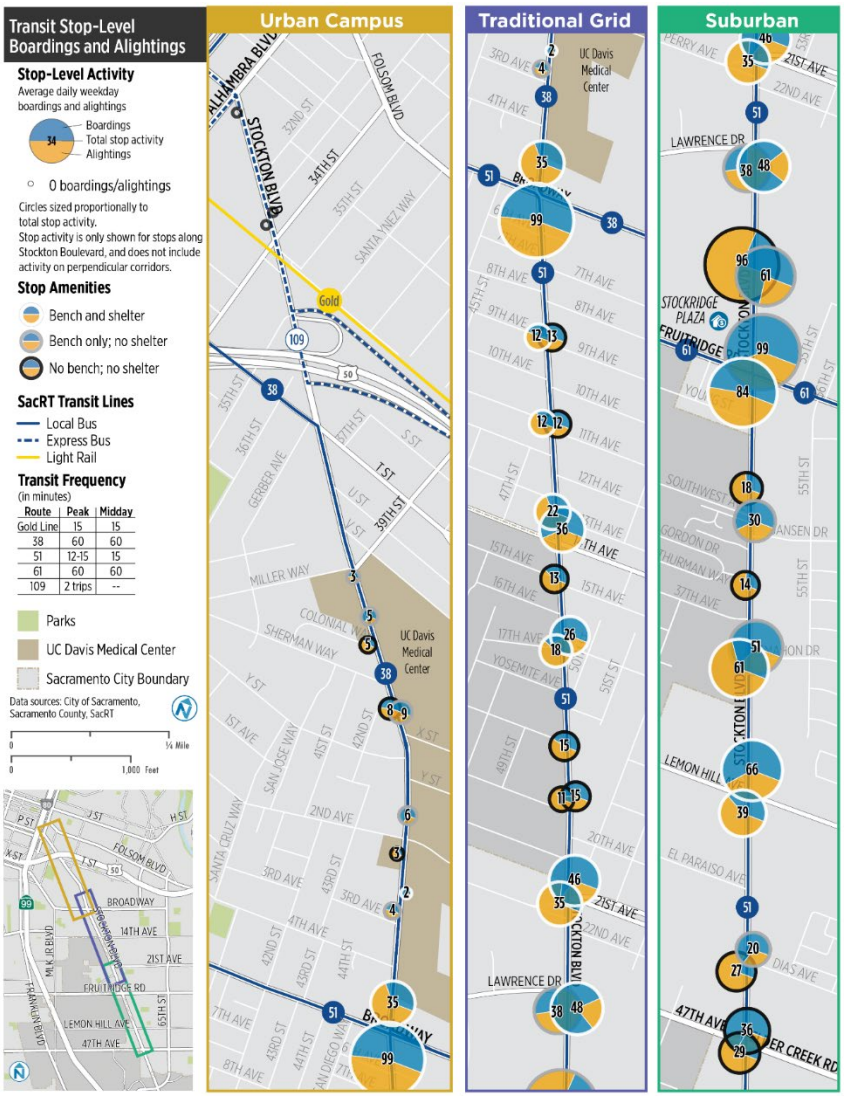
## TAKING TRANSIT

Several SacRT bus routes, including the 38, 51, 61 and the 109 Express, operate near or along Stockton Boulevard (Figure 26). The 51 Local is the most frequent route with 12- to 15-minute headways during peak travel times. The only route north of Broadway is the Local 38, which has 60-minute headways throughout the day. SacRT's Gold Line Train also passes through the Urban Campus segment and arrives every 15 minutes throughout the day.

The highest stop activity occurs at Broadway and Fruitridge Road, where the 51 intersects with the 38 and 61, respectively. As shown in Figure 26, stop activity along the 51 is highest in the Urban Campus and Suburban segments and lowest in the Traditional Grid segment.

Of the 42 stops within the study area, almost half are equipped with benches and a bus shelter. Stops with moderate to high boardings but minimal amenities are at Lawrence Drive southbound, Fruitridge Road northbound, at Stockridge Plaza Shopping Center northbound and southbound, and McMahon Drive northbound.

**Figure 26 Transit Stop Activity and Amenities**

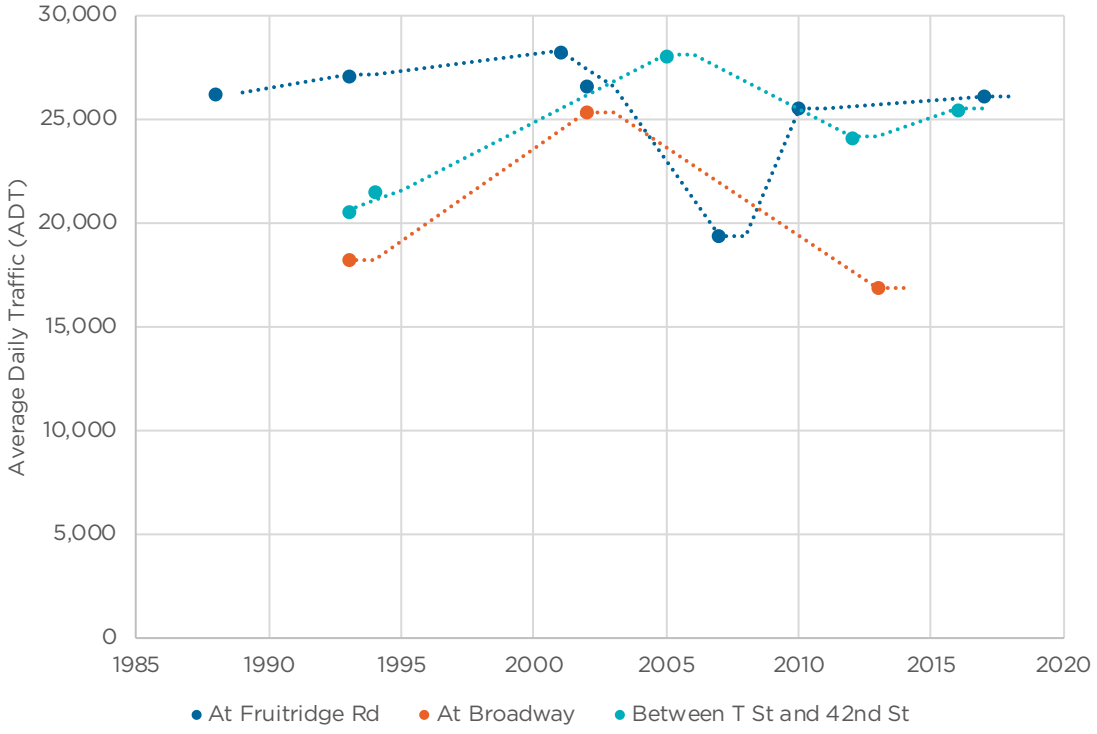


## DRIVING

In general Stockton Boulevard consists of four travel lanes and a center turn lane. The street widens at major intersections such as Highway 50, Fruitridge Road, and 47th Avenue. The posted speed is 30 mph between Alhambra Boulevard and 2nd Avenue, 35 mph between 2nd Avenue and Lemon Hill Avenue, and 40 mph from Lemon Hill Avenue to 47th Avenue.

As shown in Figure 27, historical traffic volumes along Stockton Boulevard at Fruitridge Road and at Broadway began to decline just prior to the early 2000s recession. This downward trend continued into the Great Recession. Similarly, Average Daily Traffic (ADT) volumes along Stockton Boulevard between T Street and 42nd Street also declined during the Great Recession but have since increased. The large dip in volumes at Fruitridge Road was caused by a construction project.

**Figure 27 Trends in Traffic Volume along Stockton Boulevard**




Source: City of Sacramento

Figure 28 shows ADT for segments of Stockton Boulevard. ADT is generally higher in the northbound direction compared to southbound for the length of Stockton Boulevard. ADT is higher in the northern and southern sections, and lowest in the middle near Broadway.

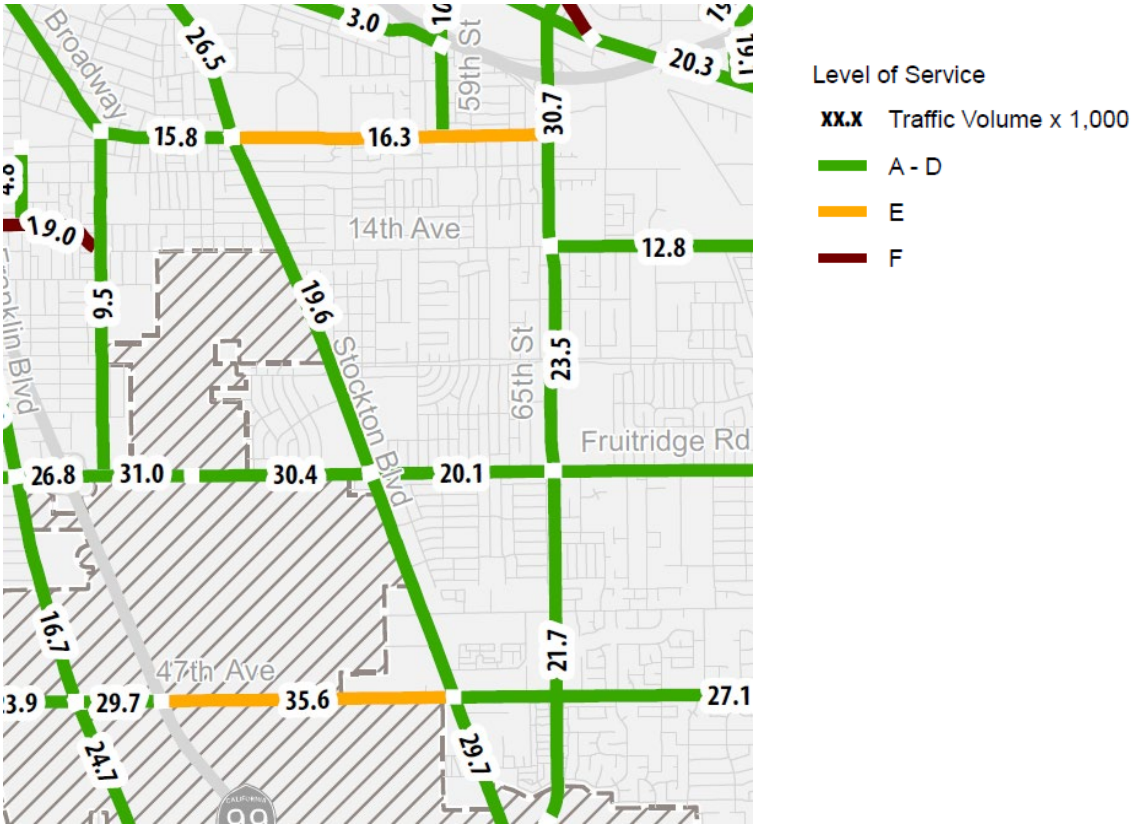
**Figure 28 Average Daily Traffic Volumes by Year and Direction**

| Segment | Total | Year | SB ↓ | NB ↑ |
|---|---|---|---|---|
| Stockton between T and Miller/39th | 24,015 | 2012 | 11,084 | 12,931 |
| Stockton at Sherman Wy | 25,502 | 2016 | 11,829 | 13,673 |
| Stockton at Broadway | 16,874 | 2013 | 7,573 | 9,301 |
| Stockton between 14th and 21st St Ave | 17,690 | 2013 | 9,142 | 8,548 |
| Stockton at Fruitridge Rd | 26,093 | 2017 | 12,717 | 13,376 |
| Stockton at Lemon Hill Ave | 26,007 | 2013 | 13,652 | 12,355 |
| Stockton at 47th Ave | 29,877 | 2017 | 14,918 | 14,959 |

Source: City of Stockton

Average daily traffic and level of service (LOS) for 2019 are shown in Figure 29. The entire length of Stockton Boulevard within the study area is operating at LOS A – LOS D, as well as many adjacent and connecting arterial streets. FHWA's Road Diet Informational Guide states that roadways with 20,000 ADT make good candidates for road diets, but facilities with up to 24,000 ADT have been successfully transitioned from a four-lane to three-lane configuration.[1] The Urban Campus section from Alhambra to Broadway carries 26,500 ADT. From Broadway to Fruitridge, volumes drop to 19,600. South of Fruitridge, volumes jump back up to 29,700 per day.

**Figure 29 2019 ADT and LOS**




[1] https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/

# 4 COMMUNITY NEEDS

Community support is a key driver of success for this project. Engagement throughout the study process ensures that community concerns are well documented, and that final recommendations reflect the needs and desires of residents. This section outlines the various outreach methods, and summarizes the key themes gleaned from conversations with the community. Full details on outreach results are included in Appendix A, B, C, and D.

## OUTREACH METHODS

A variety of methods were used and will continue to be used to collect a wide array of feedback from diverse community members. Methods include targeted stakeholder group meetings and events targeted at the general public and are described below.

- **Online Presence -** a designated website for the project was created, providing community members with general information, an inventory of upcoming public engagement events, and links to pertinent items such as a one-page flyer for sharing and an online survey. Social media channels were used to communicate key milestones.
- **Stakeholder Phone Interviews -** The project team worked with city staff to identify key stakeholders who were unavailable to sit on a formal committee or only needed to provide targeted insight regarding the project for phone interviews. Additionally, two in-person conversations were hosted with representatives of Spanish speaking and Vietnamese communities.
- **Surveys -** The following survey tools were used for this study:
  - Bus passenger surveys were used to understand passenger travel patterns and assess the challenges to accessing transit service along Stockton Boulevard. A total of 358 bus passenger survey responses were collected during this effort from July 22 to July 26, 2019.
  - An online community survey collected information on how, where, when people use the corridor today, appetite for using transit/walking/biking, safety concerns, access challenges, and preferred improvements. A total of 292 online community survey responses were submitted during this effort from June 24 to July 21, 2019.
- **Going to the Community -** For this study, the outreach strategy deviated from standard approaches such as open houses that ask community members to attend a workshop to learn about the project. Instead, outreach met the community where they were through pop-up tabling events and community presentation at existing community events.

## STAKEHOLDER INTERVIEWS

The project team interviewed stakeholders with diverse perspectives in order to understand how their constituents use Stockton Boulevard today and to identify opportunities for change (see Appendix A for the list of discussion questions). The results of the stakeholder interviews will inform recommendations for future safety improvements along Stockton Boulevard.

## COMMUNITY EVENTS

Five tabling events were held to understand how the community uses Stockton Boulevard for both local and regional travel. Tabling events were held at several community events, including the Oak Park Farmer's Market, and at centrally located destinations.

Participants identified the following current walking and biking challenges along Stockton Boulevard: speeding vehicles, turning vehicles that do not yield, and narrow sidewalks and bicycle facilities. Participants suggested that the city implement more crossings and widen the sidewalks and existing bike lane on Stockton Boulevard. They also suggested adding more trees, parks, and destinations along the corridor to create a more inviting environment for pedestrians and to give the corridor a sense of place.

The two most frequent comments regarding driving on the corridor were suggestions to implement traffic calming measures to address incidences of speeding and red-light running along the corridor. Participants also mentioned that congestion during peak hour and parking are significant factors impacting the driving experience along the corridor. Several participants reported that they would consider using public transit as an alternative if there were transit-only lanes and stop amenities like bus shelters, benches, and schedule information.

## COMMUNITY SURVEY

An online survey was open from June 24, 2019 to July 21, 2019 and received 292 responses, three of which were in Spanish.

### Methodology and Demographics

The goal of the community survey was to hear from people who use Stockton Boulevard and see what challenges they encounter and suggestions they have for improvement. The survey was administered via Maptionnaire, an online map-based survey platform that allows for location-specific feedback. The survey was available in English, Spanish, and Vietnamese.

The survey included a set of multiple-choice questions and two interactive map questions. The map allowed participants to select specific areas along the corridor and input current challenges they face and ideas they had for improvement.

### Challenges and ideas

Figure 30 provides a summary of the major themes from the challenges and ideas mapping tool comments. Transit and Driving challenges align over the lack of pedestrian crossing – bus riders frequently must cross in the middle of the street to make it to the bus stop. These uncontrolled crossings are exacerbated by confusing intersections and cars running red lights. Bicycle challenges revolved around lack of facilities and some survey respondents expressed feeling unsafe on Stockton Boulevard in general due to street harassment.

**Figure 30 Challenges and Ideas for Stockton Boulevard (N=292)**

| Mode | Comment themes | | Quotes |
|---|---|---|---|
| | **Challenges** | **Ideas** | |
| Bicycling | ▪ Poor/inconsistent bicycle facilities<br>▪ Cars don't look when turning<br>▪ Glass on roadway<br>▪ Dangerous to bike | ▪ Separated bikeways<br>▪ Bike routes connecting destinations<br>▪ Traffic calming measures | "It feels way too dangerous to ride a bike here even though I would like to" |
| Walking | ▪ Not enough crosswalks<br>▪ No shade<br>▪ Drivers don't stop for pedestrians/run red lights<br>▪ Speeding cars<br>▪ Feel unsafe walking (harassment and road conditions) | ▪ Shorter pedestrian crossings<br>▪ Wider sidewalks<br>▪ More protected crosswalks (at and between intersections)<br>▪ More shade trees / artwork | "People run red lights and enter intersection without looking." |
| Transit | ▪ Hard to cross street to transfer buses<br>▪ No shelter/protection from sun<br>▪ Stop locations are unclear<br>▪ Feel unsafe at bus stops<br>▪ Want light rail | ▪ Add light rail station<br>▪ Add shade trees<br>▪ Faster bus service<br>▪ Improve transit stops (benches, shelter, signage)<br>▪ Create a pedestrian overpass | "Once off the bus the option is to jay walk or walk all the way to a cross walk and then back to the residential street that you need to walk down" |
| Driving | ▪ No parking<br>▪ Poor lighting on roadway<br>▪ Pedestrians walk in the middle of traffic<br>▪ Turning left is hard<br>▪ Intersections feel dangerous/confusing<br>▪ Cars running red lights | ▪ More parking<br>▪ Expand resident parking program<br>▪ Add areas for pick-up/drop off<br>▪ Left turn signals | "Pedestrians are almost always stepping into the street or running for busses. Busses stop too close to the corner and make it difficult to make legal turns" |

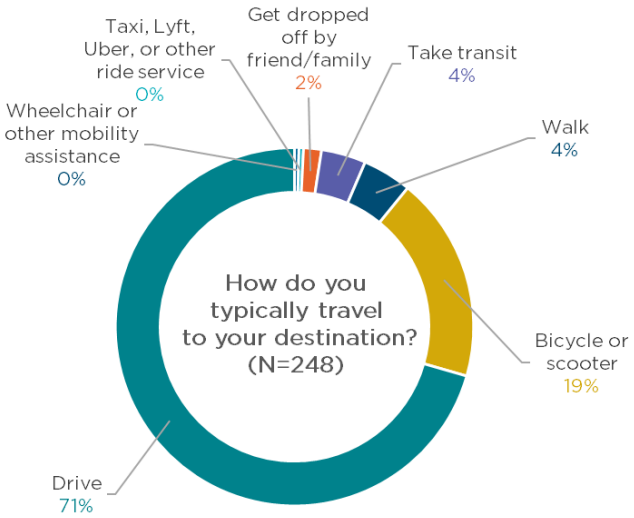
Additional detail on challenges and ideas by mode can be found in Appendix C.

## Traveling on Stockton Boulevard today

Of the survey respondents, more than half of people visit the corridor five or more days per week, and the amount of people passing through without stopping verses people who stop at one or more places along Stockton was split down the middle.

Figure 31 shows that the majority of survey respondents (71%) drive to Stockton Boulevard today. Only 4% of respondents walked to Stockton Boulevard. While 18.5% of respondents said they used a bicycle or scooter to travel to their destination on Stockton Boulevard (Figure 31), only 10% said they used it to travel to another destination along the corridor.

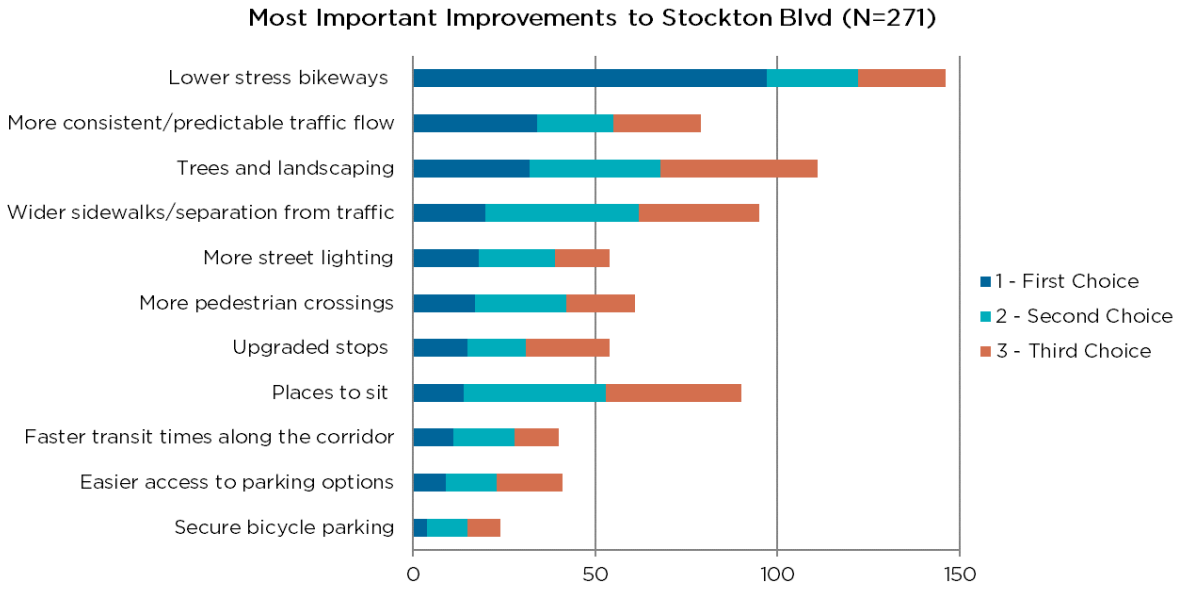
**Figure 31 How do you typically travel to your destination?**




## Changes to Stockton Boulevard

Survey respondents were asked to rank the top three things that would make Stockton Boulevard more attractive to them. Figure 32 shows that lower Stress Bikeways were by far the highest ranked improvement, with 97 people ranking it number 1.

**Figure 32 Top Improvements Ranked**




More Consistent/Predictable Traffic Flow received the second most number 1 ranking (34 people) and Trees and Landscaping received the third highest amount of number one rankings (32 people). When you incorporate second and third place rankings, the top three improvements were Lower Stress Bikeways, Trees and Landscaping, and Wider Sidewalks/More Separation from Moving Traffic, respectively.

Figure 33 uses a weighted average to provide a detailed look at the rankings and calls out the improvements that received the most number 1 rankings[2].

**Figure 33 Weighted Average of improvements and Top 5 ranked most important (N=271)**

| Category | Improvement | Top 5 most important, based on total of #1 rank votes | Weighted Average (3 = most important, 0 = not important) |
|---|---|---|---|
| Bicycling | Lower stress bikeways | 1 | 1.35 |
| Placemaking | Trees and landscaping | 3 | 0.78 |
| Walking | Wider sidewalks/separation from traffic | 4 | 0.65 |
| Driving | More consistent/predictable traffic flow | 2 | 0.62 |
| Placemaking | Places to sit | | 0.58 |
| Walking | More pedestrian crossings | | 0.44 |
| Placemaking | More street lighting | 5 | 0.41 |
| Transit | Upgraded stops | | 0.37 |
| Transit | Faster transit times along the corridor | | 0.29 |
| Driving | Easier access to parking options | | 0.27 |
| Bicycling | Secure bicycle parking | | 0.16 |

Lower Stress Bikeways were most popular among people who chose Bicycling or Scooter and Driving as their mode of travel to Stockton Boulevard. Twenty-eight percent of drivers ranked Lower Stress Bikeways as their number one improvement, compared to only 15% of drivers who voted More Consistent/Predictable Traffic Flow as their number one choice.

## TRANSIT RIDER SURVEY

A transit rider survey was administered in English and Spanish on board SacRT Route 51 in July 2019 and yielded 358 responses.

### Methodology

By default, transit riders are active users of Stockton Boulevard and typically walk to and from bus stops. A survey of transit riders was geared at understanding origins and destinations, perceptions of safety and comfort accessing transit by all modes, and demographic characteristics.

### Origins and Destinations

Walking is by far the most popular way to reach the bus stop (Figure 34) — this held true across gender, race, and income. Figure 35 shows that walking is also the most popular way to get from the bus to a final destination. Transferring from or to another bus was the second largest group of

[2]Weighted average calculated by weighting items ranked number one as three, two with two, third place ranking with a weight of one, and non-votes with a rank of zero. The weighted total was then divided by the total number of survey responses.

responses. Of non-drive alone modes, men were more likely than women to ride a bicycle or scooter, or use a ride share service (Taxi, Lyft/Uber) to get to and from the bus stop.

**Figure 34 How did you get to the bus stop?**

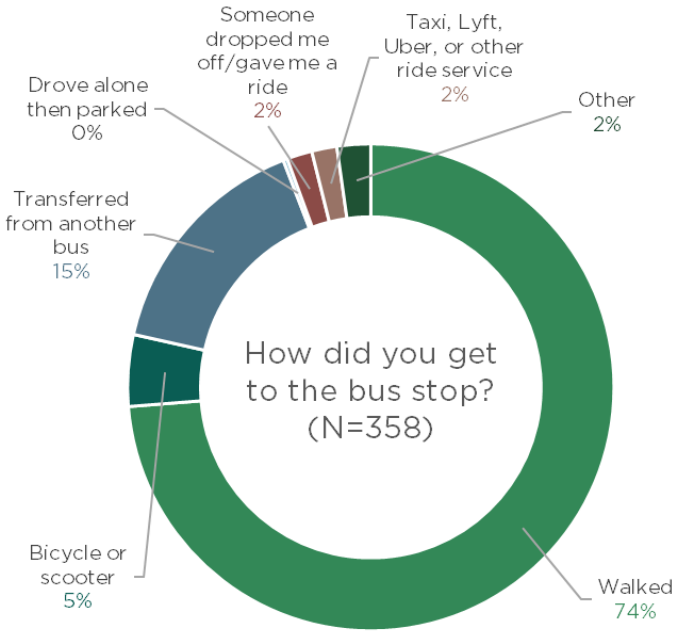
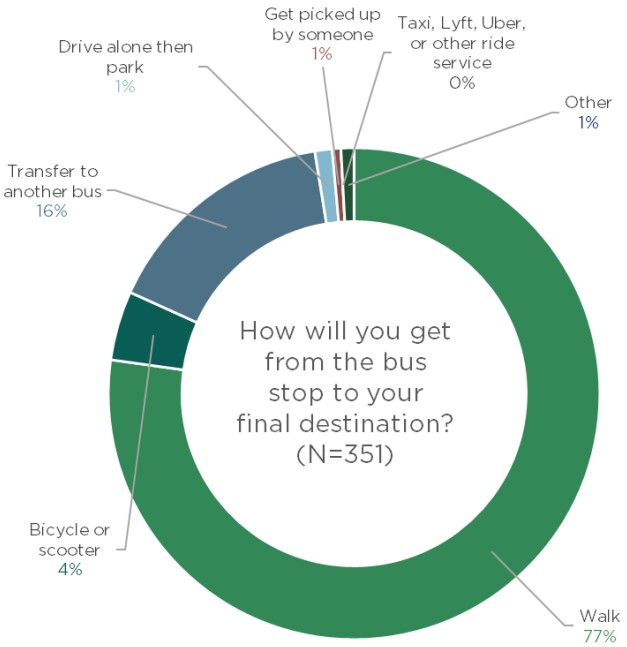



**Figure 35 How will you get from the bus stop to your final destination**



# 5 ISSUES & OPPORTUNITIES

Figure 36 summarizes key issues and opportunities for the Stockton Boulevard corridor. These issues and opportunities will be explored in greater detail through the project's upcoming alternatives development and evaluation framework phases.

**Figure 36 Key Issues and Opportunities**

| Topic | Issue | Opportunity |
|---|---|---|
| **Walking** | ▪ Long distances between marked/safe crossing opportunities, especially in Urban Campus and Suburban segments<br>▪ Poor yielding behavior at existing marked unprotected crosswalks in Traditional Grid segment<br>▪ Narrow sidewalks in some areas (to 5' in width)<br>▪ High pedestrian demand at Colonial Theater results in people spilling out into street<br>▪ Lack of buffer between sidewalk and vehicle travel lanes, especially in Suburban segment<br>▪ Many students walk to school and must cross Stockton Boulevard with no crossing guards<br>▪ At marked crossings, many have long crossing distances<br>▪ High number and density of driveways | ▪ Identify areas for additional mid-block crossings<br>▪ 14th Avenue to 21st Avenue identified in Pedestrian Master Plan as areas for improved or additional crossings<br>▪ Add signalization to existing marked unprotected crosswalks in Traditional Grid segment<br>▪ Create a pedestrian-focused zone from Broadway to 14th Ave<br>▪ Additional right-of-way exists beyond the outer edge of the sidewalk in many areas. This space could be repurposed to add buffer areas and/or expand existing sidewalks.<br>▪ Consider deploying school crossing guards at locations that are common student crossing points and exhibit safety concerns, such as Lemon Hill Avenue<br>▪ Shorten crossing distances with curb extensions, lane reductions, median crossing islands, or reduced corner radii<br>▪ As parcels redevelop, implement access management standards and consolidate driveways |
| **Biking** | ▪ Bike volumes are low to moderate, but consistent, along the corridor<br>▪ Existing bike facilities are narrow; 2-3 feet of the bike lane is often gutter, with an edge between the gutter and paved area<br>▪ There are no bike facilities north of Broadway<br>▪ Protected bike lanes identified in Bicycle Master Plan from Broadway to T Street | ▪ Widen existing bike facilities<br>▪ Low traffic volumes from Colonial Way to 21st Avenue present opportunity for roadway redesign<br>▪ Increase visibility of existing facilities, through green paint or other pavement markings through conflict points<br>▪ Add protected facilities from Broadway to T Street |

| Topic | Issue | Opportunity |
|---|---|---|
| | ▪ Bike lanes are dropped at intersections, the place with the most conflict points<br>▪ Debris in the roadway and poor pavement conditions make bicycling unpleasant | ▪ Explore protected bicycle facilities from T Street into Downtown<br>▪ Stripe bicycle lanes to and through intersections along and crossing Stockton Boulevard<br>▪ Conduct regular maintenance to keep street surface free of debris |
| **Transit** | ▪ 35% of stops along the study corridor have no seating or shelter<br>▪ Transit stop amenities do not match boarding/alighting activity:<br>– Fruitridge, but southbound stop at Stockridge Plaza has no bench or shelter but high ridership<br>▪ Transit is difficult to use for people who have limited English proficiency | ▪ SacRT High Capacity Bus Corridor study likely to target Line 51 and Stockton Boulevard for improvements such as dedicated transit lanes, real-time schedule information, and service/frequency upgrades<br>▪ Upgrade stop amenities at key locations<br>▪ Consider stop consolidation to improve transit travel times<br>▪ Expand multi-lingual transit information to make SacRT service more welcoming and accessible – Cantonese, Vietnamese |
| **Driving/Parking** | ▪ Heavy right turn volumes at Broadway and other locations<br>▪ Many segments have numerous closely spaced driveways and curb cuts<br>▪ Interest in adding on-street parking 14th Ave to Broadway<br>▪ Poor yielding behavior for right-turning drivers as people cross with green signal<br>▪ Increase in distracted driving<br>▪ Parking on sidewalks is common, especially during events around Colonial Theater<br>▪ Median limits left turn opportunities<br>▪ U-turns conflict with right turn on red movement | ▪ Enforce yielding behavior at locations with heavy turn volumes<br>▪ Implement access management to consolidate and close driveways where possible<br>▪ Explore on-street parking 14th Ave to Broadway<br>▪ Tighten up intersections to increase visibility and reduce conflicts<br>▪ Conduct safety awareness education campaign |
| **Placemaking** | ▪ Lack of distinctive area identity / no sense of place<br>▪ Numerous vacant parcels<br>▪ Area under US-50 overpass is unpleasant and feels unsafe for walking and bicycling | ▪ Repurpose public realm to invest in streetscape amenities as many vacant parcels are redeveloped<br>▪ Add more pedestrian-scale street lighting<br>▪ Project with Stockton Boulevard Partnership and SACOG Civic Labs may provide opportunity to improve public amenities between 22nd Avenue and Jansen Drive<br>▪ County's Special Planning Area may offer zoning framework to improve public realm<br>– West side between 14th Avenue and 21st Avenue<br>– West side between Young Street and north of Lemon Hill Avenue<br>▪ Host public events on the corridor |

| Topic | Issue | Opportunity |
|---|---|---|
| | | ▪ Add lighting and public art to underpass<br>▪ Create a gateway around UC Davis or Broadway<br>▪ Add trees and landscaping |
| **Safety and Street Design** | ▪ Excessive speed is the biggest safety issue, according to community feedback<br>▪ Drivers frequently run red lights<br>▪ Patrol officers see speeds of 50-55 mph in the Traditional Grid area<br>▪ People bicycle against the flow of traffic, and people riding Jump bikes are perceived to ride unsafely<br>▪ Light rail crossing is a safety hazard<br>▪ Poor lighting on roadway<br>▪ Personal security/homelessness<br>▪ Awkward and challenging intersections at T Street, Alhambra, Broadway, 14th Ave, 21st Ave, Fruitridge Ave, Dias Ave, and 47th Ave | ▪ Traffic calming measures including reduced lane capacity possible, especially in low-volume area from Colonial Way to 21st Avenue<br>▪ Pedestrian-scale lighting would improve safety by making people walking and biking more visible to people driving<br>▪ Increase enforcement of red light violations<br>▪ Target Stockton Boulevard Partnership security personnel on reducing homelessness in public areas<br>▪ Examine signal timing, geometry, and traffic volume usage at key intersections for design and operations adjustments |