City of Vista

Townsite Drive/W. Los Angeles Drive and N. Santa Fe Avenue Corridor Study

July 2018 Draft

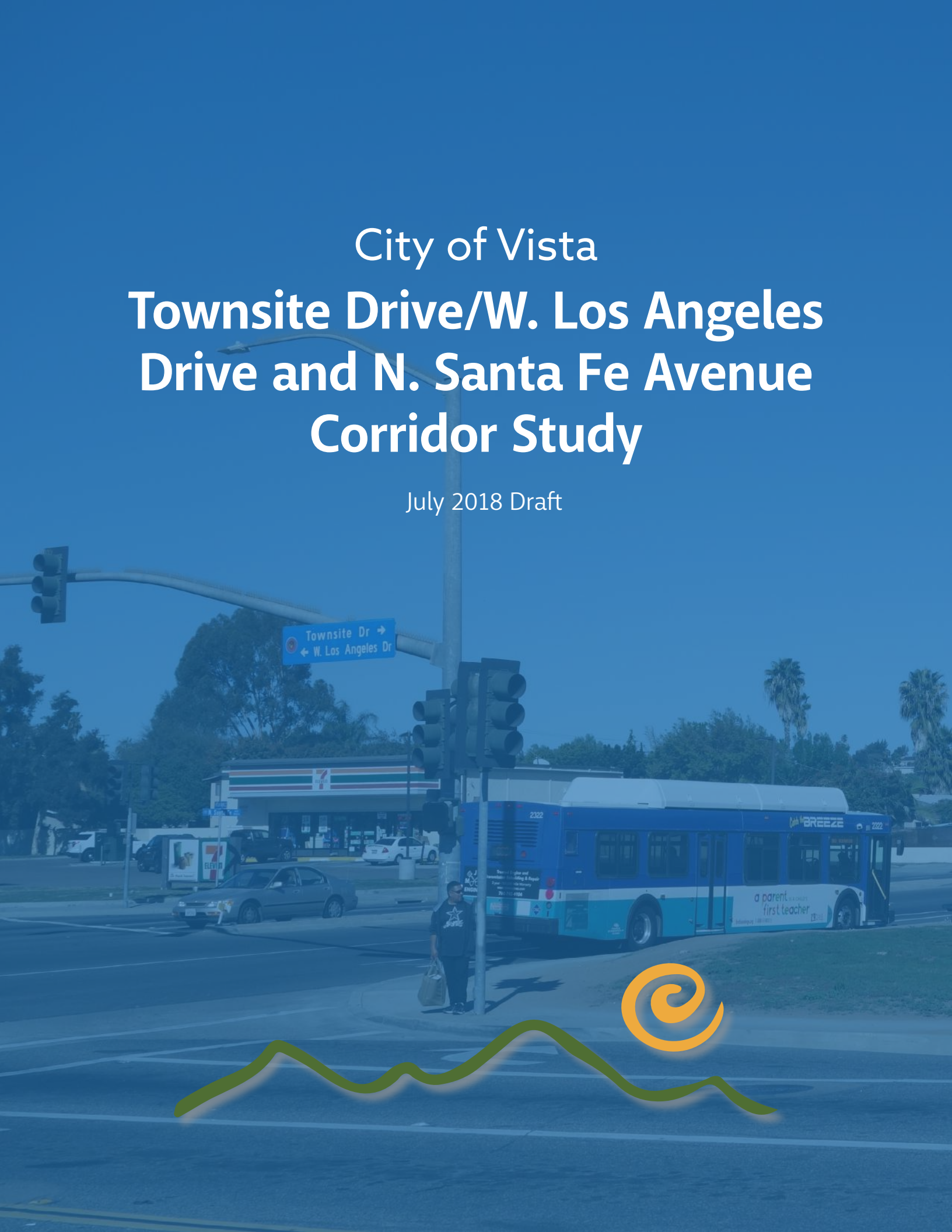

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Table of Contents

1 Introduction 1

Background 2
Project Purpose 2
Study Area 2
Planning Context 4

2 Existing Conditions 7

Overview 8
Field Observations of Existing Deficiencies 10
Pedestrian Facilities 14
Bicycle Facilities 16
Motor Vehicles 16
Transit 17
Land Use 18
Townsite Drive/W. Los Angeles Drive Collision Analysis 20
N. Santa Fe Avenue Collision Analysis 22

3 Community Engagement 25

Community Engagement Overview 26
Public Workshop No.1 28
Workshop No.1 Results for Townsite Dr & West Los Angeles Dr 30
Workshop No.1 Results for N. Santa Fe Ave 31
Community Workshop No.2 32
Workshop No.2 Results for Townsite Dr & West Los Angeles Dr 34
Workshop No.2 Results for N. Santa Fe Ave 35

4 Proposed Solutions **37**

Overview of Initial Concepts 38

Townsite Drive/W. Los Angeles Drive 38

N. Santa Fe Avenue 39

Final Concepts..... 44

Typical Sections 45

Cost Estimate 70

List of Figures

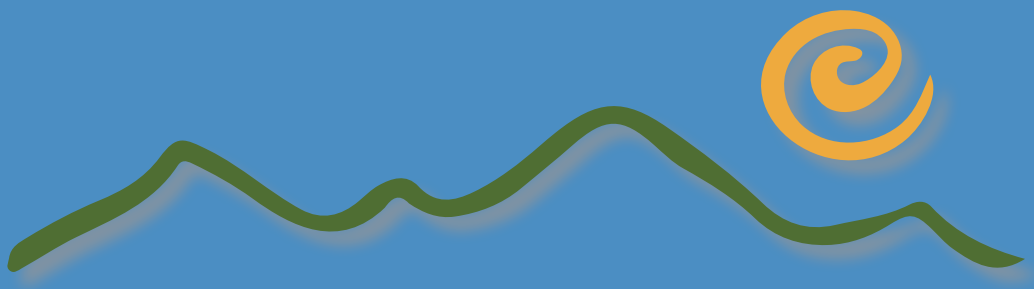
Figure 1-1: The Location of Emerald Drive..... 2
Figure 1-2: Project Location and Surrounding Area 3
Figure 2-1: Project Location 9
Figure 2-2: Townsite Drive / W. Los Angeles Drive Existing Condition Photos10
Figure 2-3: N. Santa Fe Avenue Existing Condition Photos 12
Figure 2-4: Existing Conditions of Right-of-Way, Sidewalk and Crosswalks 15
Figure 2-5: Bicycle and Pedestrian Counts 16
Figure 2-6: Transit Lines and Stops 17
Figure 2-7: Current and Future Land Use..... 18
Figure 2-8: Planned Land Use (SANDAG)..... 19
Figure 2-9: Townsite Drive/W. Los Angeles Drive Collision Heat Map 20
Figure 2-10: Charts of All Townsite Drive/W. Los Angeles Drive Collisions ... 21
Figure 2-11: N. Santa Fe Avenue Collision Heat Map..... 22
Figure 2-12: Charts of All N. Santa Fe Avenue Collisions 23
Figure 2-13: Summary Charts of Bicycle and Pedestrian-related Collisions for Townsite Dr/W. Los Angeles Dr and N. Santa Fe Avenue 24
Figure 3-1: Flyers in Spanish and English..... 26
Figure 3-2: Workshop Scene 27
Figure 3-3: Photos from Workshop No.1..... 28

Figure 3-4: Diagrams of Workshop No.1 Results for Townsite Dr & W. Los Angeles Dr..... 30
Figure 3-5: Diagrams of Workshop No.1 Results for N. Santa Fe Ave 31
Figure 3-6: Table Map Sample for N. Santa Fe Ave 31
Figure 3-7: Photos from Workshop No.2 32
Figure 3-8: Workshop No.2 Results Diagram for Townsite Dr & W. Los Angeles Dr 34
Figure 3-9: Workshop No.2 Results Diagram for N. Santa Fe Ave..... 35
Figure 4-1: Workshop No.2 Consolidated Comments for W. Los Angeles Drive 40
Figure 4-2: Workshop No.2 Consolidated Comments for Townsite Drive 41
Figure 4-3: Workshop No.2 Consolidated Comments for N. Santa Fe Ave ... 42
Figure 4-4: Workshop No.2 Consolidated Comments for N. Santa Fe Ave (Cont)..... 43
Figure 4-5: Sample Section of Buffered Bike Lanes..... 45
Figure 4-7: Sample Section of Sharrows..... 45
Figure 4-6: Sample 3-way Roundabout 45
Figure 4-8: Sample Section of Bike Lanes..... 45
Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design.. 46
Figure 4-10: Final N. Santa Fe Avenue Conceptual Design..... 62

Appendix

A. Counts

1 Introduction



Background

The County of San Diego's Live Well San Diego staff created the Healthy Cities Healthy Residents (HCHR) project. The main objective of the project is to create a more pedestrian and bicycle friendly environment and to facilitate access to healthy foods through what HCHR terms as policy, systems and environmental (PSE) change. The County awarded three grants for the HCHR project in March 2017, one of which went to the Vista Community Clinic (VCC).

As part of the HCHR project, the VCC has been holding regular meetings, where residents attend and discuss health and mobility issues they are facing. The group identified walking and biking in the Townsite area as a top priority. In discussions with the VCC, the City determined that the most effective way of working with residents to identify issues and solutions in a comprehensive way is to develop a mobility plan for the area.

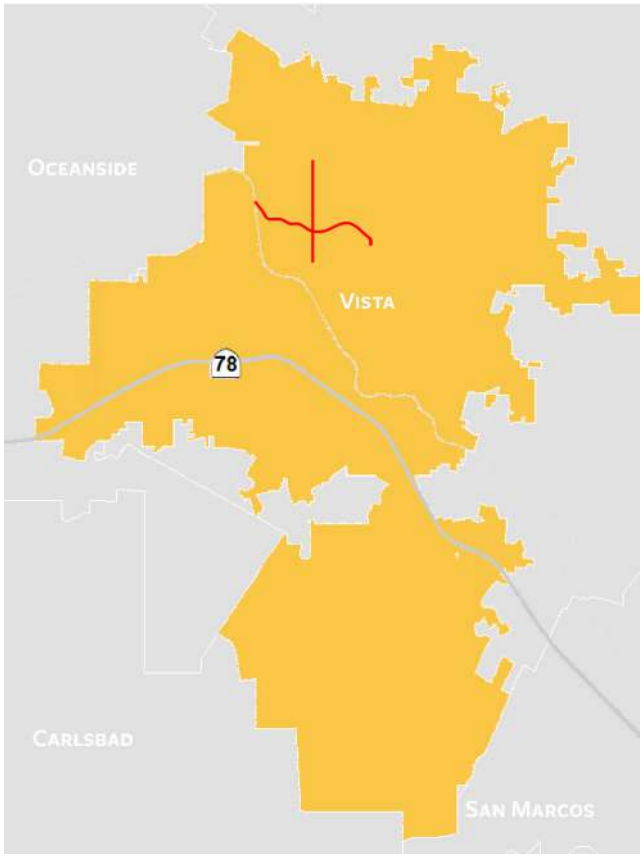


Figure 1-1: The Location of Emerald Drive

Project Purpose

This study aims to develop a conceptual complete street design for these corridors that:

1. Improves traffic safety
2. Creates a pedestrian and bicycle friendly environment
3. Improves access to schools and transit
4. Provide mobility options to access healthy foods and local retail
5. Reduces vehicular speeds

Study Area

This project studies two connecting corridors, Townsite Drive/W. Los Angeles Drive between East Drive and E. Vista Way and N. Santa Fe Avenue between Bobier Drive and California Avenue. They are located in North Vista as is shown in Figure 1-1.

Townsite Drive/W. Los Angeles Drive is primarily a residential street that serves as an important east-west pedestrian and bicycle corridor. This corridor is also an important school route as identified in the city's Master Safe Routes to School Plan. Townsite Drive/W. Los Angeles Drive has an incomplete sidewalk network, long blocks without safe crossing locations and experiences high motor vehicle speeds. Bisecting the Townsite Drive/W. Los Angeles Drive corridor is N. Santa Fe Avenue, a north-south major street that is primarily fronted by commercial land uses with some residential pockets throughout. Buffered bike lanes exist along this divided four-lane road, which has continuous sidewalks and bus stops. As is shown in Figure 1-2, there are several schools and parks, which these corridors provide access to such as Bobier Elementary, Maryland Elementary, Vista High School, Luz Duran Park and Raintree Park. They also function as key connection to downtown Vista and the Sprinter Station at Vista Transit Center.

The neighborhoods around these corridors are some of the most disadvantaged in the City. They meet the low median income thresholds established by the State. These corridors experience significant pedestrian activity due to the retail, transit, and nearby schools where many of the residents have few choices but to walk or ride to their destinations.

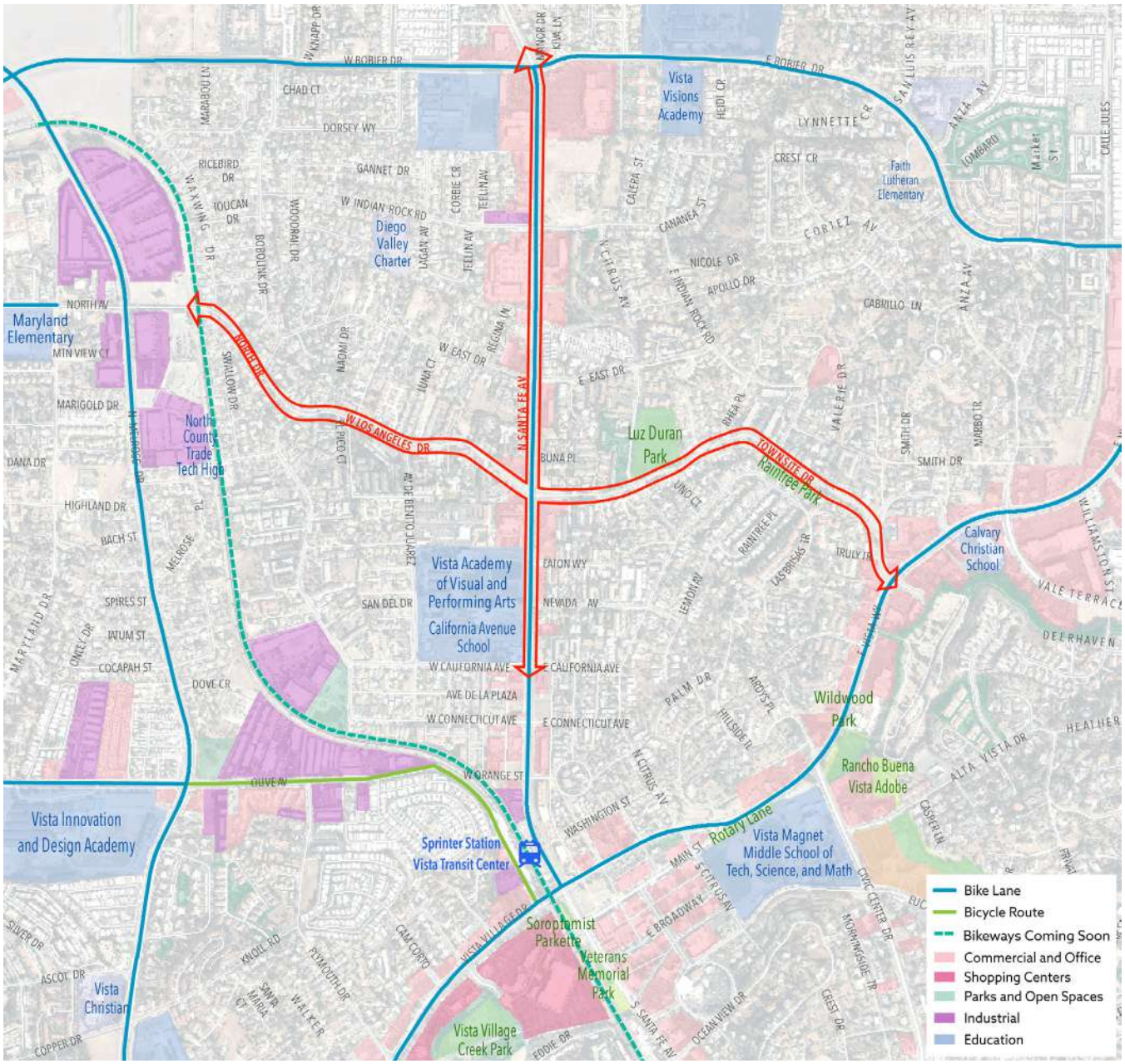


Figure 1-2: Project Location and Surrounding Area

Planning Context

The study takes into consideration the City's previous planning efforts related to these corridors and its vicinity. The following reports provide useful planning context for this study's efforts.

General Plan Circulation Element, 2011

The Circulation Element of the City of Vista General Plan 2030 establishes the policy foundation to guide future circulation- and transportation-related decision making to achieve the community's Vision 2030. The City seeks to enhance the safety, access, convenience and comfort of all users of all ages and abilities. The Circulation Element classifies Townsite Dr/W. Los Angeles Drive as a two-lane collector and two-lane light collector. N. Santa Fe Avenue is classified as four-lane major street. The following goals and policies are closely related to this study:

Circulation Element Goal 6:

Develop an efficient bicycle and pedestrian circulation system that improves access and linkages in a manner that is human- scaled, bicycle- and pedestrian- oriented, and transit accessible, encourages use of these facilities for recreation, and provides alternatives to the personal automobile.

CE Policy 6. 3.: Implement the bicycle plan and pedestrian plan improvements identified in this Circulation Element according to their identified priorities.

CE Policy 6. 6: Construct sidewalks and retrofit traffic signal light standards to include pedestrian crossing buttons, when feasible, on all primary and major roadways.

CE Policy 6. 8: Design and retrofit bicycle facilities in accordance with the design standards identified in the City' s Bicycle Master Plan.

CE Policy 6. 9: Retrofit light standards to include bicycle crossing buttons and, where feasible, use bicycle- sensitive traffic signal loop activation systems.

CE Policy 6. 10: Prohibit motorcycles and other motorized vehicles from using the bicycle and trail system.

CE Policy 6. 14: Maintain and expand, where possible and appropriate, the system of non-motorized connections that link neighborhoods to larger roadways, activity centers and nodes, businesses, community services, parks and recreational facilities, and transit stops and stations.

CE Policy 6. 3.5: Coordinate with surrounding jurisdictions to ensure that trails, sidewalks, bikeways, and other non - motorized facilities connect to like facilities within those jurisdictions. Adjustments to alignment, width, designation, or design may be made to create appropriate regional connections.

CE Policy 6. 3.8: Complete breaks in sidewalks and non - motorized paths where they are missing, especially along commercial corridors and routes to schools. Prioritization shall be given to such connections in development of the Capital Improvement Program (CIP).

CE Policy 6.20: Provide safe and adequate crossing facilities that minimize pedestrian exposure to vehicular traffic, such as curb extensions or refuge islands, wherever feasible.

Bicycle Master Plan, 2015

TIn 2015, the City of Vista completed a Bicycle Master Plan to guide the development and implementation of bicycle- related infrastructure, policies, and supporting programs within the City over the next 20 years. This plan recommends a Class III bike route for the Townsite Dr/W. Los Angeles Drive Corridor. Bike lanes exist on N. Santa Fe Avenue.

BMP Goal 1:

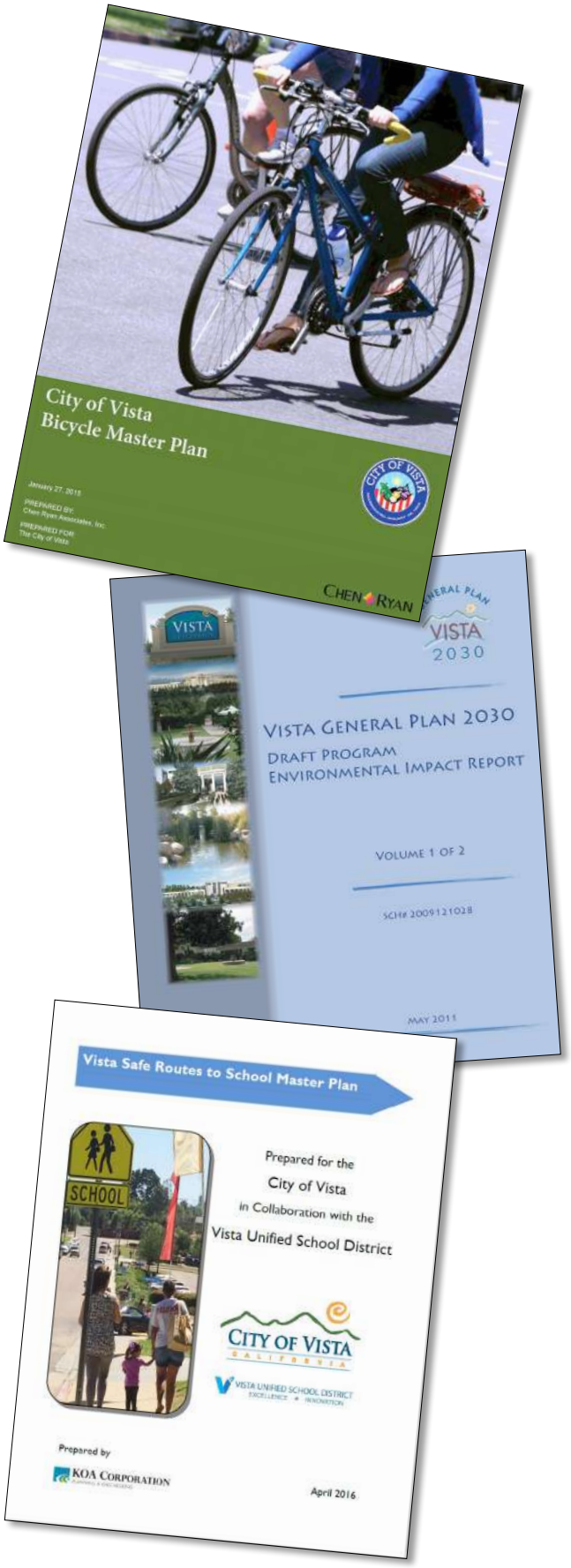
A complete bicycle network that provides connections between transit stops, residential neighborhoods, schools, recreational resources, employment centers, and activity nodes.

BMP Goal 2:

Safe and efficient bicycle facilities that are accessible to all users, with appropriate and necessary amenities.

BMP Goal 3:

Increased use of bicycle facilities for utilitarian and recreational trips.



Vista Safe Routes to School Master Plan, 2016

The Safe Routes to School (SRTS) program is intended to improve the health of students through increased exercise and reduce greenhouse gas and emissions by reducing the number of vehicle miles traveled through accommodating an increase in the number of students walking and cycling to school. The program promotes safe walking and cycling through the five E's:

Education – instruction in the benefits and opportunities of SRTS

Encouragement – incentives for walking and biking to school

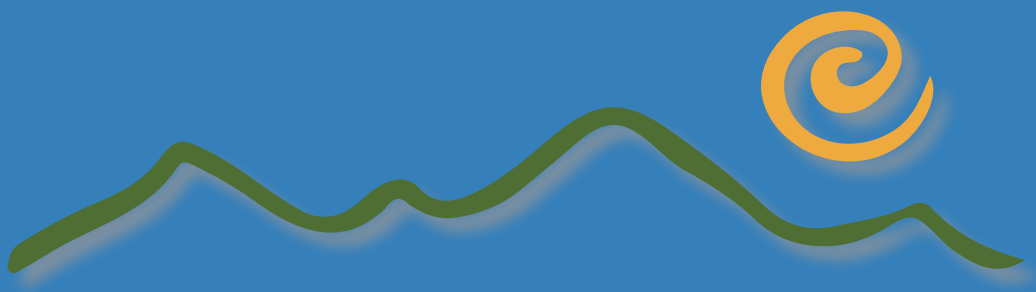
Enforcement – methods for ensuring compliance with regulations and ordinances

Engineering – improvement of infrastructure to accommodate safe walking and biking

Evaluation – comparison of pre-SRTS and post-plan implementation.

The Vista SRTS Master Plan specifically analyzed conditions at ten schools in the City and developed conceptual improvement projects through an interactive community engagement process that included school staff and parents. Traffic safety and pedestrian access on Emerald Drive were major concerns for the Grapevine Elementary community.

2 Existing Conditions



Overview

Townsite Drive / W. Los Angeles Drive and N. Santa Fe Avenue serve as major pedestrian connections for this part of the city. Transit, retail, schools, parks and residential all front these streets providing the various origins and destinations that make walking and bicycling a viable means of transportation. In addition, the need for walking and bicycling is prevalent due to the socioeconomic conditions of the neighborhoods. The varying right-of-way widths have also become a concern, which currently limits bicycle and pedestrian connectivity throughout the corridor due to erratic on-street parking patterns, utilities, private encroachments and overall maintenance of undeveloped infrastructure. Please see Figure 2-1 for a map of the study segments and the surrounding area.

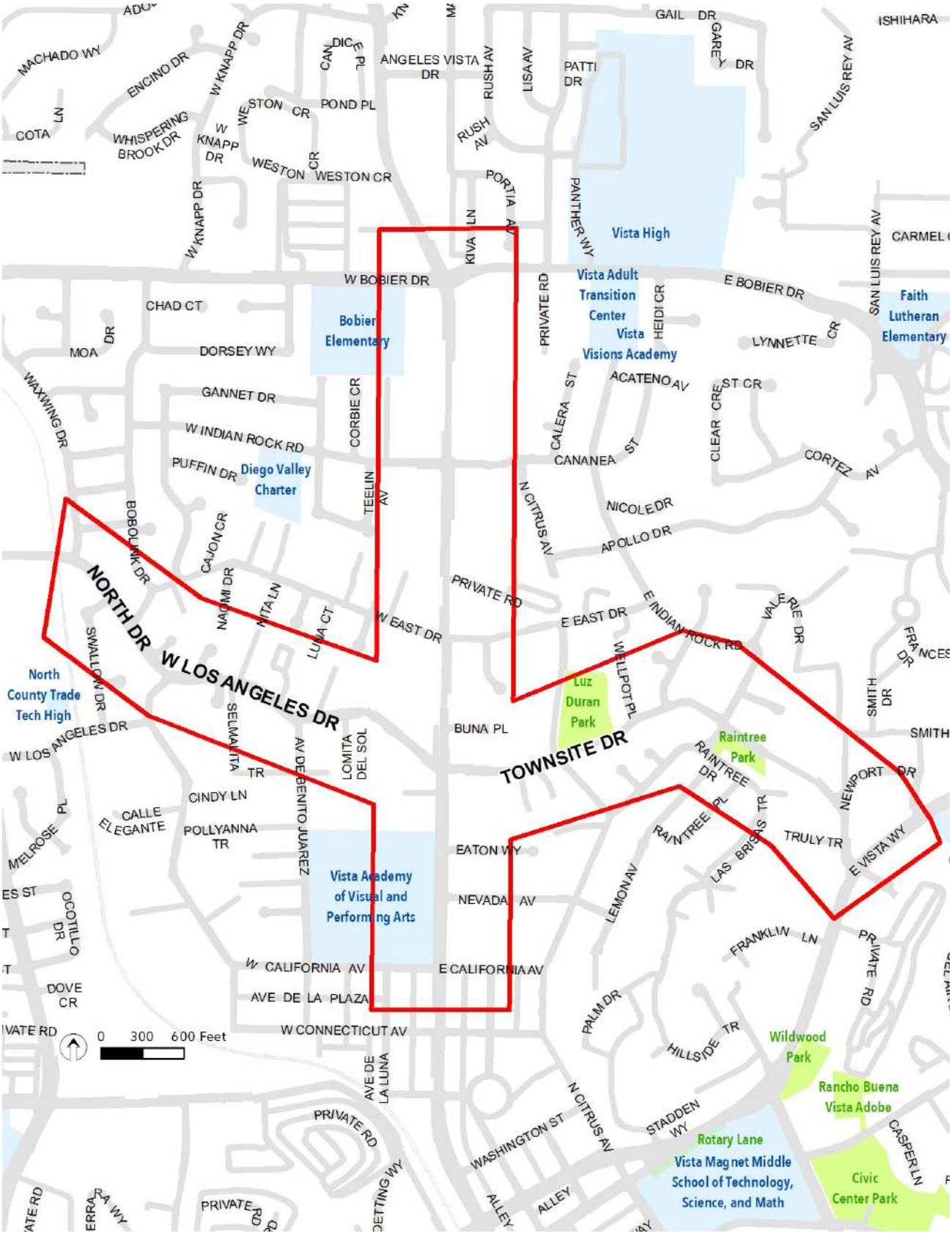


Figure 2-1: Project Location

Field Observations of Existing Deficiencies

The field-work observations help determine the appropriate recommendations needed to improve this corridor. There are bus routes on both corridors, but the bus stops lack sufficient amenities.

Townsite Drive / W. Los Angeles Drive is a curvilinear street with varying curb-to-curb width, many small side streets and fragmented sidewalks. The lack of any traffic control at intersections discourages crossing the corridor without pedestrians taking risks. The corridor also lacks bicycle facilities to connect to nearby schools, parks and adjacent bike facilities.

While sidewalks are continuous on N Santa Fe Ave, there is no mid-block crossing along the long blocks, causing pedestrians crossing midblock dangerously.

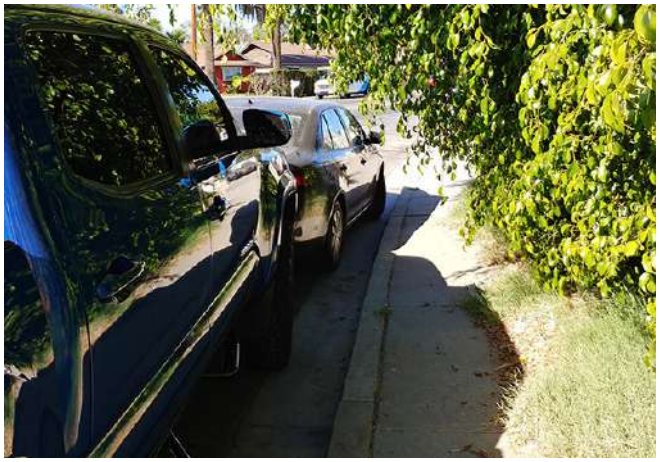
The two corridors' issues are barriers to access schools, parks and retail for the residents who have limited transportation options. Figure 2-2 and Figure 2-3 are photo exhibits showing the existing conditions of both corridors. The following items were observed:

- Sidewalk connectivity (including ADA accessibility)
- Lack of crosswalk locations
- Motor vehicle speed
- Long blocks to cross N. Santa Fe Ave
- Lack of bicycle facilities
- Bus stop conditions
- Varying right-of-ways
- User visibility

Varying right-of-way

Lack of bus shelter and bench at bus stops

Erratic on-street parking in areas where sidewalks are missing



Lack of sidewalk maintenance

Figure 2-2: Townsite Drive / W. Los Angeles Drive Existing Condition Photos

Figure 2-2: Townsite Drive / W. Los Angeles Drive Existing Condition Photos (Cont.)

Disconnected sidewalks and delineated foot paths/desire lines

Erratic on-street parking in areas where sidewalks are missing

Asphalt sidewalks with curbs

Varying right-of-way widths

Lack of sidewalks to access retail and curb delineation

Missing curb ramps and truncated domes

Figure 2-3: N. Santa Fe Avenue Existing Condition Photos

Median fence to deter midblock crossings

Buffered bike lanes

Bicycling against traffic

Large intersections to cross

Lack of bus shelters

Long intersections to cross with children and short pedestrian phases

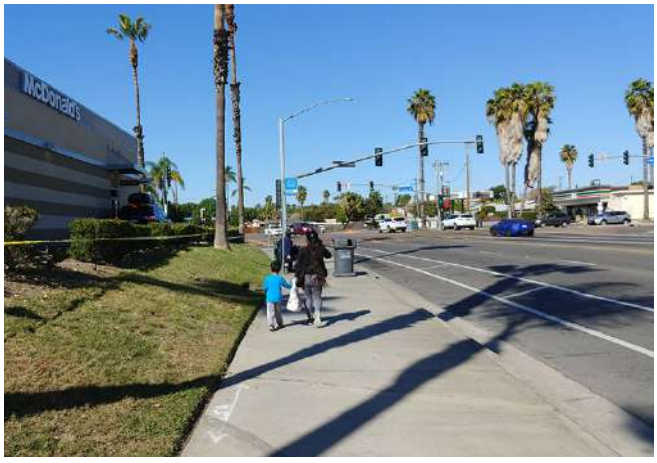
Figure 2-3: N. Santa Fe Avenue Existing Condition Photos (Cont.)

Lack of bus shelters and benches

Pedestrians crossing midblock

Pedestrians crossing midblock

Consistent use of buffered bike lanes throughout the day for all bicyclists with varying experience and comfort levels



Heavily used pedestrian corridor for families and transit users

Varying levels of sidewalk obstructions

Pedestrian Facilities

Sidewalks

Along Townsite Drive/W. Los Angeles Drive, sidewalks are intermittent and those that are present have been constructed either by the adjacent development or pedestrian paths being delineated by the City recently installing asphalt curbs to separate pedestrians from motor vehicle traffic. As is shown in Figure 2-4, sidewalk barriers range from sidewalks completely missing where pedestrians are walking in the street to existing sidewalks having some form of obstruction such as utility boxes and poles, parked cars or overgrown vegetation.

Sidewalks along N. Santa Fe Avenue are complete; however, some sections have pinch points such as the sidewalks on the east side, just north of East Drive. This section is an asphalt sidewalk with a wall separating the adjacent homes and N. Santa Fe Avenue. A raised curb and bike lanes separate the sidewalk from the travel lane.

Crosswalks

Crossing Townsite Drive/W. Los Angeles Drive is an issue that has also been raised by the residents. As is shown in Figure 2-4, there are very few safe crossing points along the corridor. In addition, the curvilinear design of the street makes visibility difficult to cross at certain intersections. While N. Santa Fe Avenue has signalized intersections, the long blocks between crossings have forced pedestrians to cross mid-block over the raised median, particularly between Townsite Drive/W. Los Angeles Drive and California Avenue and between Indian Rock Road/Cananea Street and East Drive.

School attendance boundaries, which includes Maryland Elementary, Bobier Elementary, Foothill Oak Elementary, Beaumont Elementary and Vista Academy all border the two study corridors. According to the City's Safe Routes to School Master Plan, many of the students walk to school. From the surveys taken, walking rates between these schools' range between 11% (Beaumont Elementary) to 47% (Foothill Oaks Elementary). Thirty-two percent of Maryland Elementary and 38% of Bobier Elementary walk to school. These two corridors experience high pedestrian volumes during the school year. In addition, Vista High School is adjacent to N. Santa Fe Avenue and has high rate to students who walk to and from school.

Volumes

Bike and pedestrian counts were conducted by National Data and Surveying services along these corridors at W. Los Angeles Drive/North Drive, Citrus Avenue, between Wellpott Place and Rhea Place, N. Santa Fe Drive/Townsite Drive, California Avenue, Indian Rock Road and Bobier Drive.

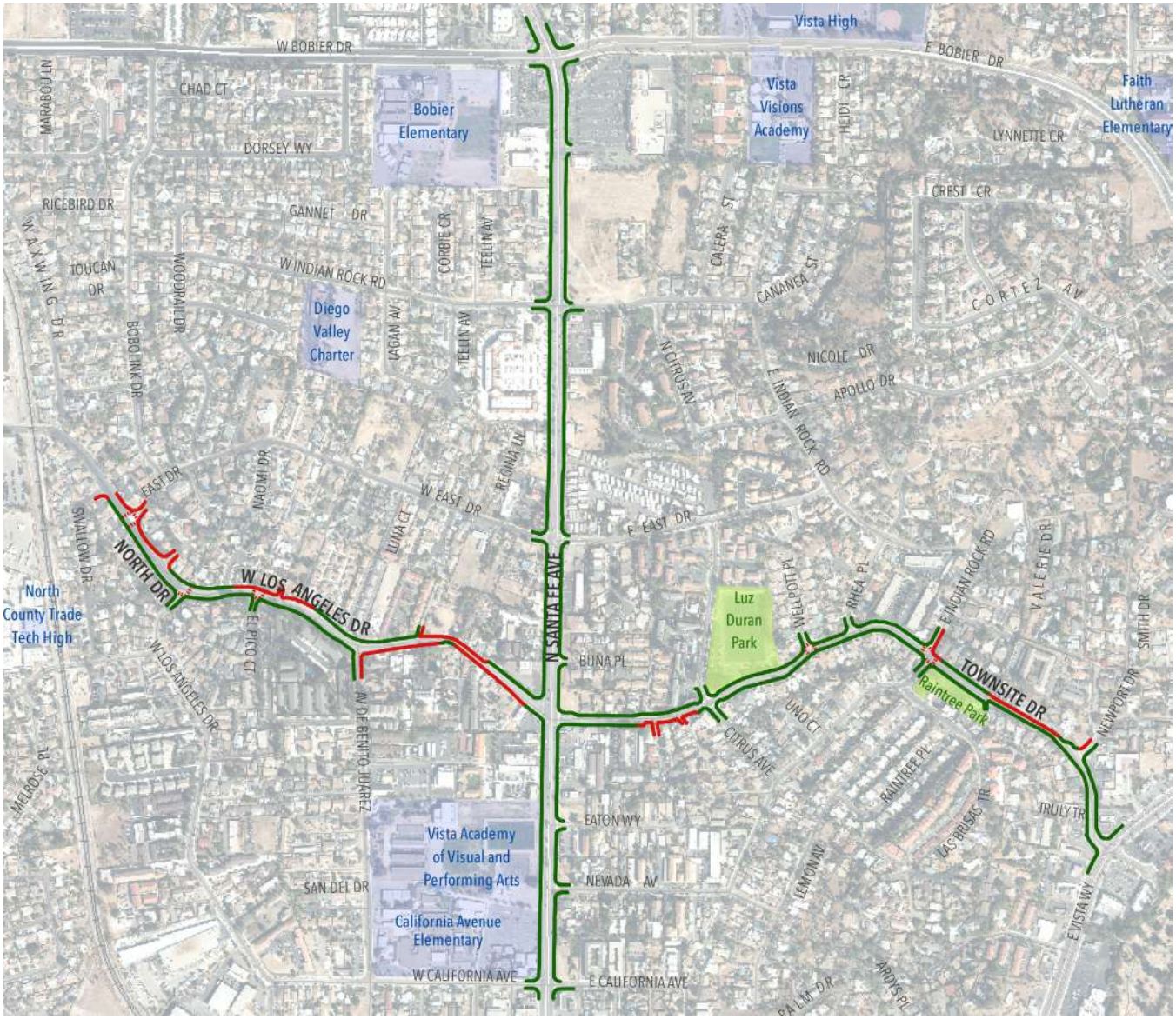


Figure 2-4: Existing Conditions of Right-of-Way, Sidewalk and Crosswalks

Figure 2-5 shows the results. Knowing that pedestrians are crossing mid-block on N. Santa Fe Drive, counts were conducted between Nevada Avenue and Eaton Way, and between East Drive and Indian Rock Road. These counts were conducted through video surveys, during the peak hours of 7am-9am and 2pm-4pm to coincide with school schedules.

The largest volumes of pedestrians occur on North Sante Fe Avenue since it directly connects to retail, transit and Bobier Elementary and Vista High School. Along Townsite Drive/W. Los Angeles Drive heavy pedestrian travel was accounted for at North Drive, Citrus Avenue and between Wellpott Place and Rhea Place. The counts revealed that many pedestrians are crossing at Citrus Avenue since it's a stop controlled intersection with crosswalks. Along N. Santa Fe Avenue counts showed over 72 pedestrians crossing at unsafe mid-block locations. This pedestrian activity coincides with the issues raised during the workshops about providing safer crossings to schools and at convenient and more frequent locations.

Bicycle Facilities

Currently, there are no existing bicycle facilities along Townsite Drive/W. Los Angeles Drive which is recommended as a Class 3 bike route according to the Bicycle Master Plan. Buffered bike lanes exist on N. Santa Fe Avenue.

Motor Vehicles

Motor vehicle volumes are consistent throughout the Townsite Drive/W. Los Angeles Drive corridor between North Drive and E. Vista Way, ranging between 4,270 and 4,814 average daily trips (ADTs) as a two-lane collector local street. N. Santa Fe Avenue's ADTs are 23,956 as a four-lane major road. A speed survey was also conducted on N. Santa Fe Avenue with the 85th percentile varying between 34-39 MPH throughout the corridor with speeds slightly higher in the northbound lanes. The posted speed limit on N. Santa Fe Avenue is 35 mph and 25 mph on Townsite Drive/W. Los Angeles Drive.

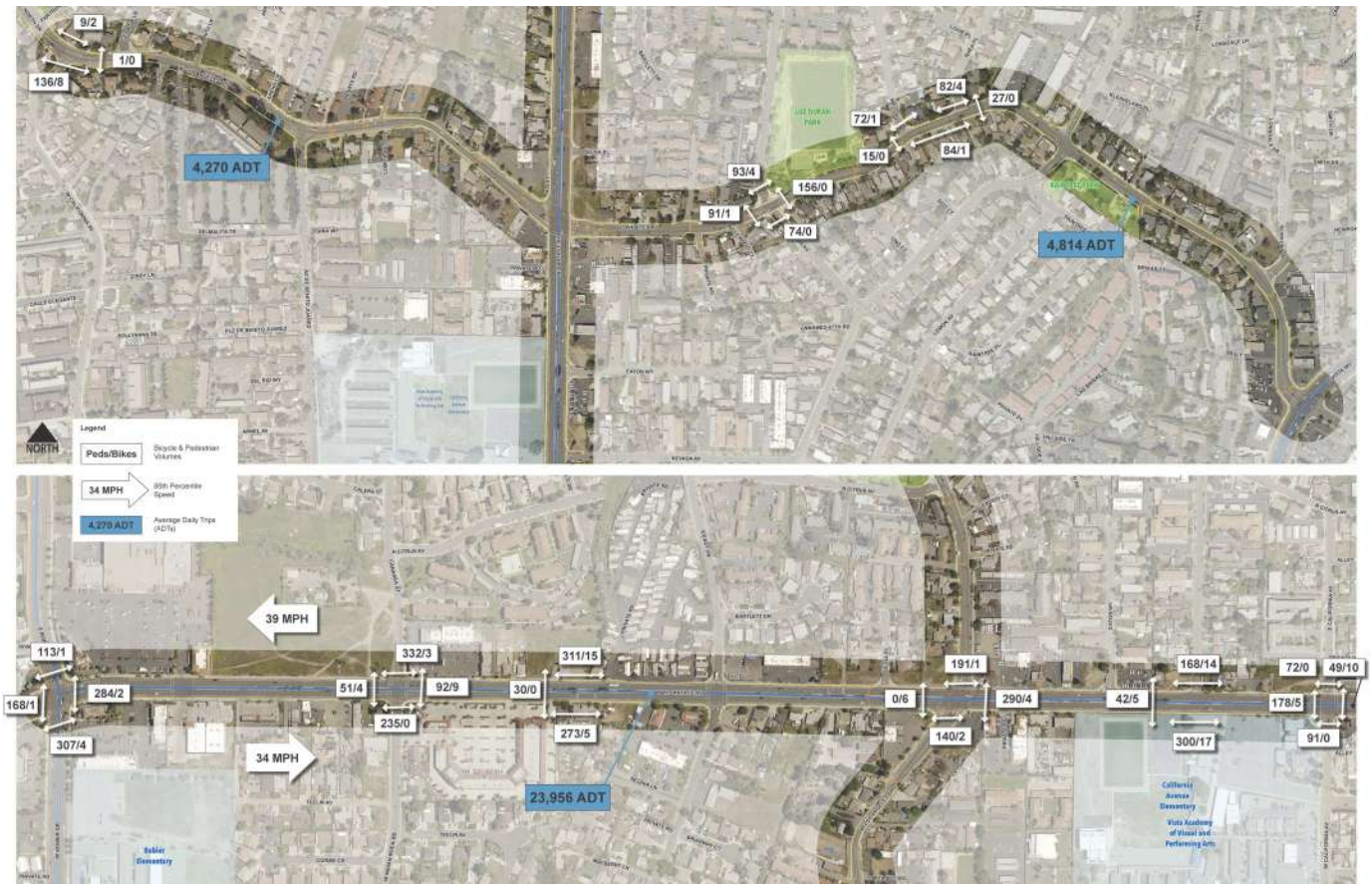


Figure 2-5: Bicycle and Pedestrian Counts

Transit

There are two bus routes that travel through these corridors, Route 303 travels along N. Santa Fe Avenue and Route 334 through Townsite Drive/W. Los Angeles Drive. Figure 2-6 displays these routes and bus stops. These bus routes are major connectors to local and regional destinations such as:

- Vista Transit Center
- City Hall, City Library
- Vista Community Clinic
- Brengle Terrace Park
- North County Health Services
- Vista High School
- Town Center North Shopping Center
- Mira Costa College
- City of Oceanside

None of the stops along Townsite Drive/W. Los Angeles Drive have shelters or benches. Only a few bus stops along N. Santa Fe Avenue have shelters and benches.

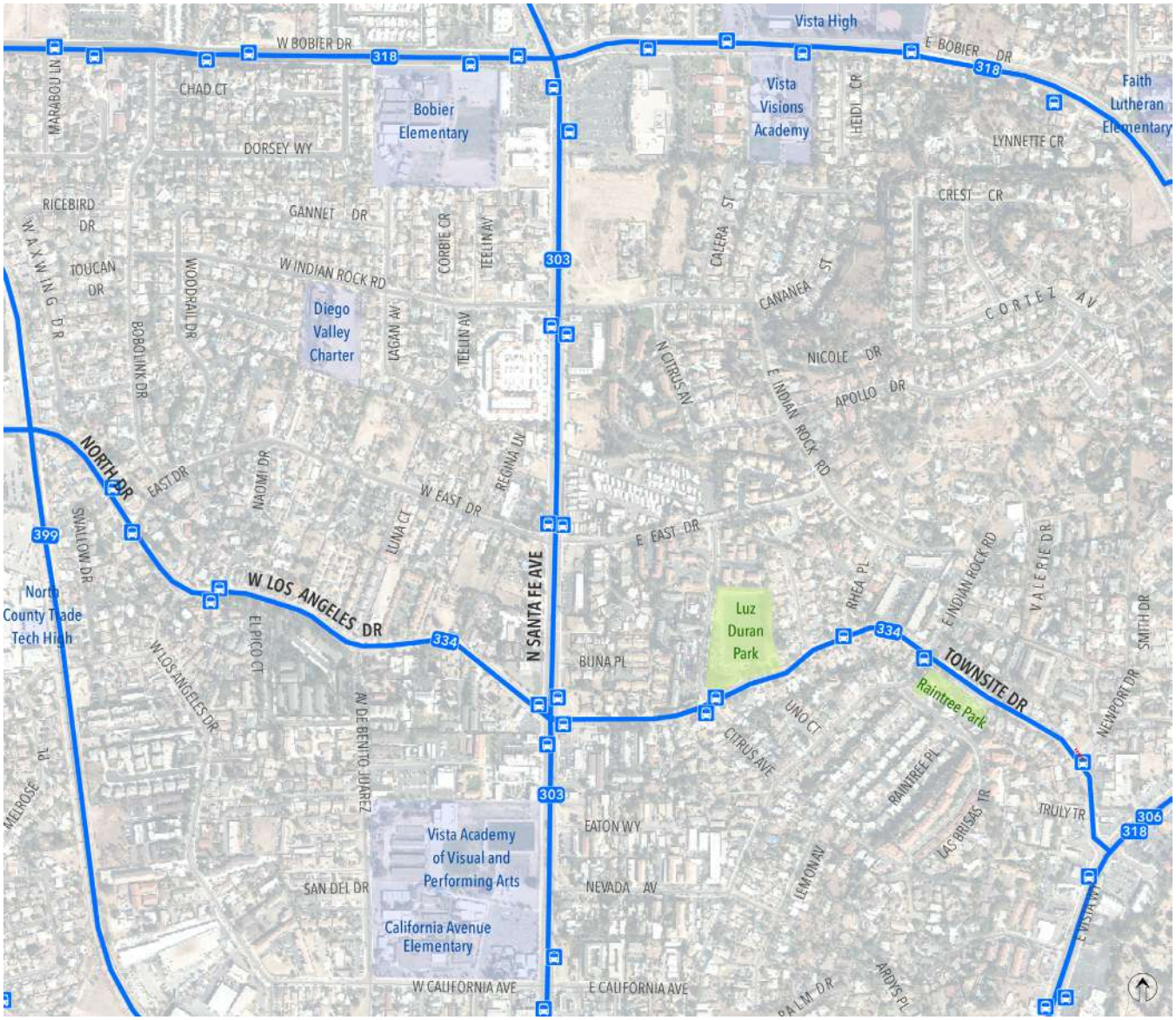


Figure 2-6: Transit Lines and Stops

Land Use

Land use along Townsite Drive/W. Los Angeles Drive is primarily single family residential with several blocks of homes fronting the street. Multi-family residential also exists, primarily on W. Los Angeles Drive, in addition to two parks, Luz Duran and Raintree. As shown on Figure 2-7, commercial land use is primarily located at the intersections of N. Santa Fe Avenue and E. Vista Way. Maryland Elementary is located one block west of N. Melrose Drive and Foothill-Oak Elementary one block east of E. Vista Way.

N. Santa Fe Avenue is primarily commercial land uses with a few single family residential homes on both sides of the street. Bobier Elementary School is located one block west of N. Santa Fe Avenue and Vista High School, one block east, both on Bobier Drive. Mixed use land use is planned along N. Santa Fe, as depicted in Figure 2-8 Planned Land Use.

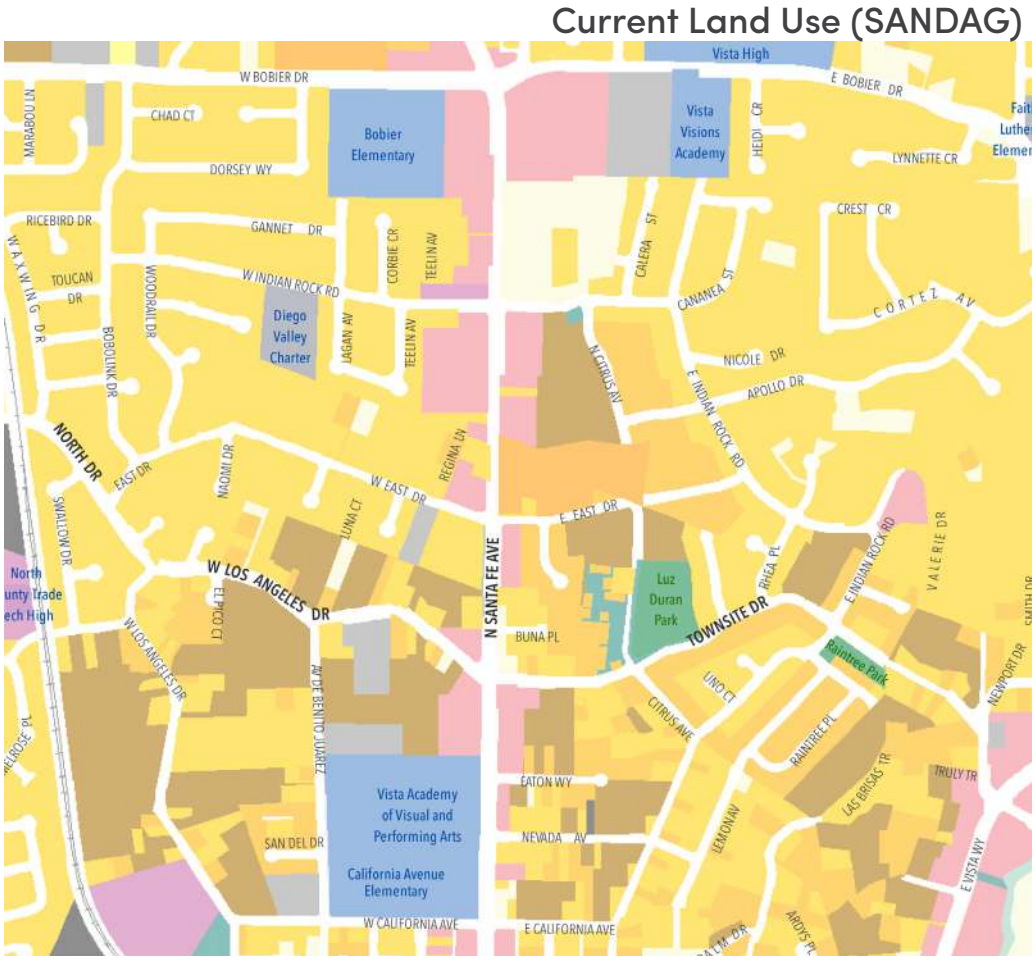
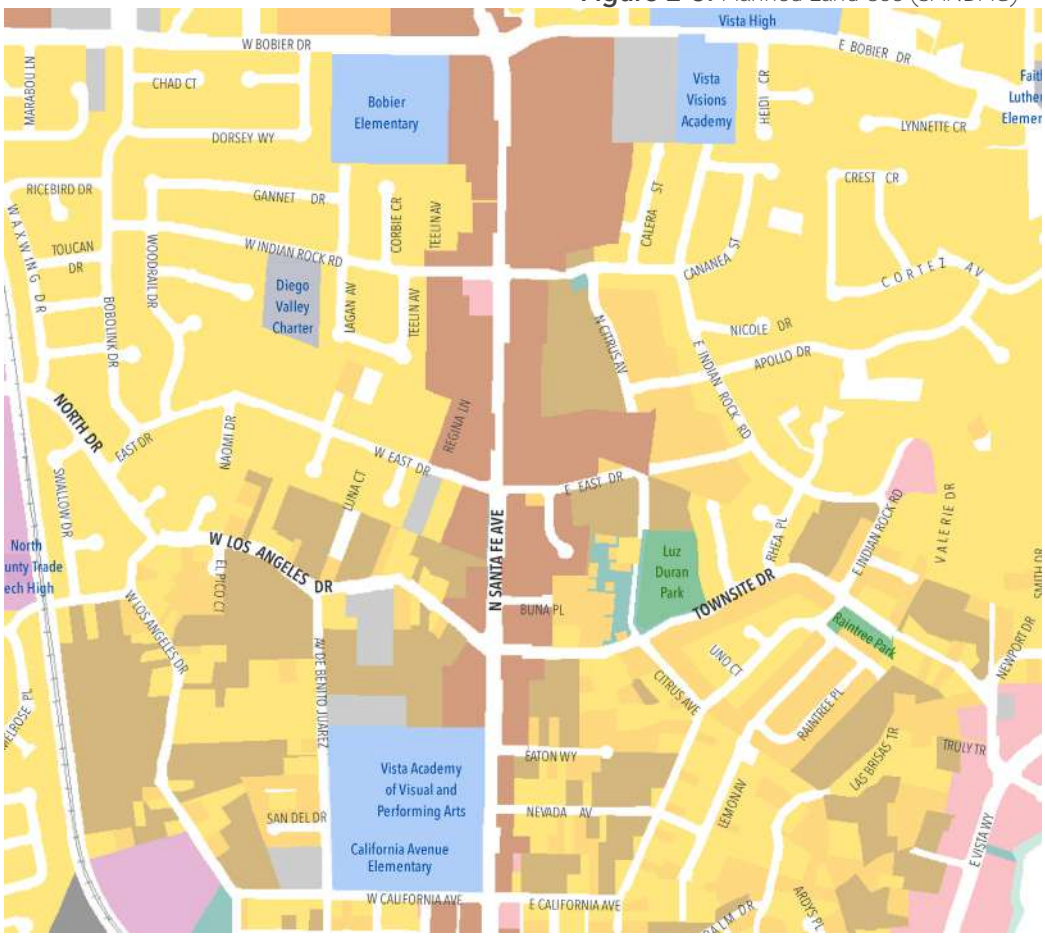


Figure 2-7: Current and Future Land Use

Figure 2-8: Planned Land Use (SANDAG)



Townsite Drive/W. Los Angeles Drive Collision Analysis

Data was collected through the City's Crossroads database to analyze the collision trends between 2012-2016 as summarized below.

There have been a total of 36 collisions reported with no fatalities and 12 injuries in the five-year span. Figure 2-9 is a collision heat map which also highlights the location of collisions and their types. Two collisions involved pedestrians and one bicyclist. Most of the collisions have occurred along three segments of this corridor. Seven have occurred between El Pico Court and Avenida de Benito Juarez, 13 between Inglewood Court and Rhea Place, including a pedestrian and six between Truly Terrace and E. Vista Way, including a pedestrian and bicyclist.

Figure 2-10 summarizes these collision data with bar charts. The top causes of collisions include violating another vehicle's right-of-way, driving under the influence and improper turning. Violating traffic signals and signs and vehicular speeding have also been high

36 Total Collisions, 2012-2016

Figure 2-9: Townsite Drive/W. Los Angeles Drive Collision Heat Map

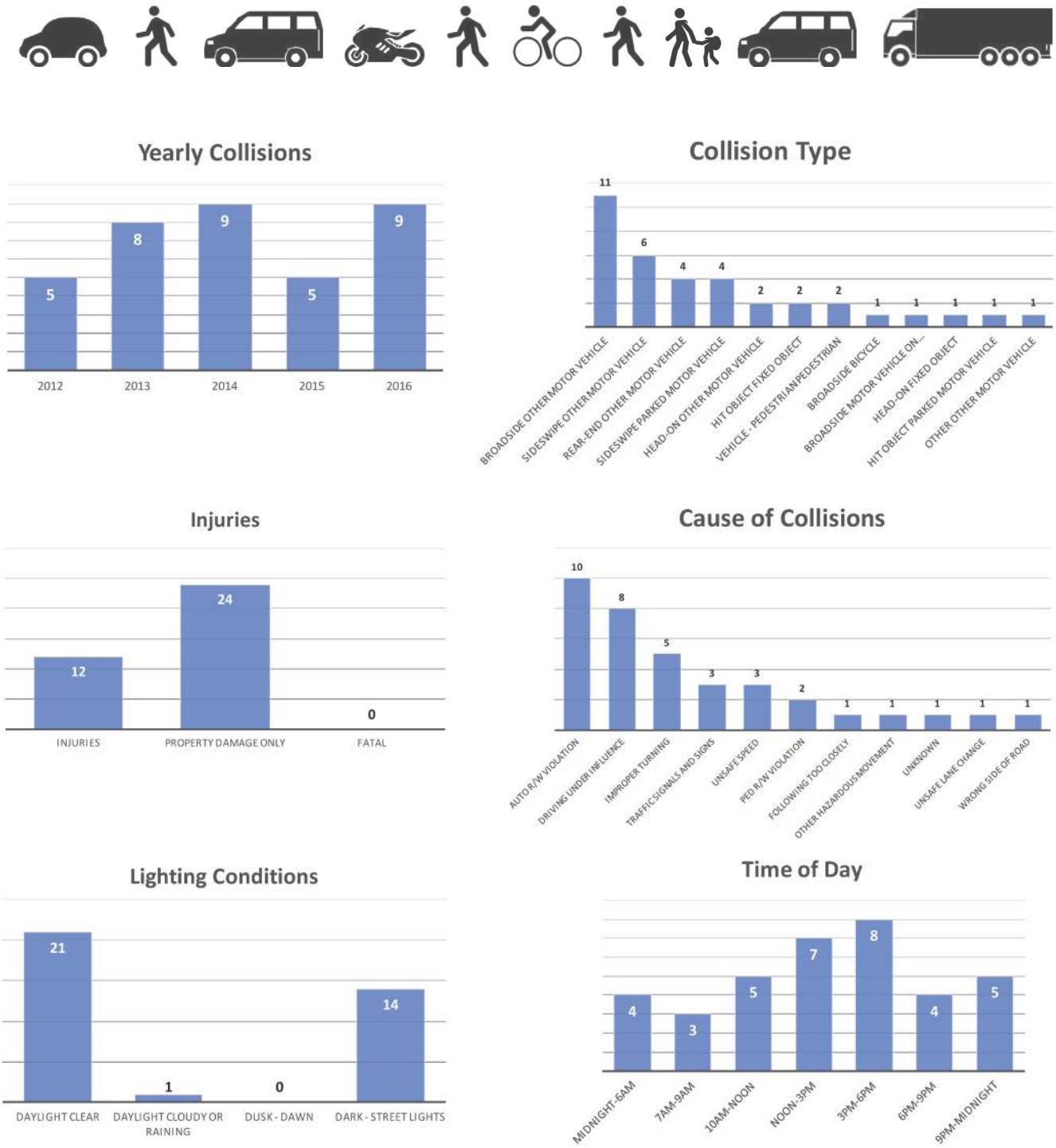


Figure 2-10: Charts of All Townsite Drive/W. Los Angeles Drive Collisions

frequency causes.

N. Santa Fe Avenue Collision Analysis

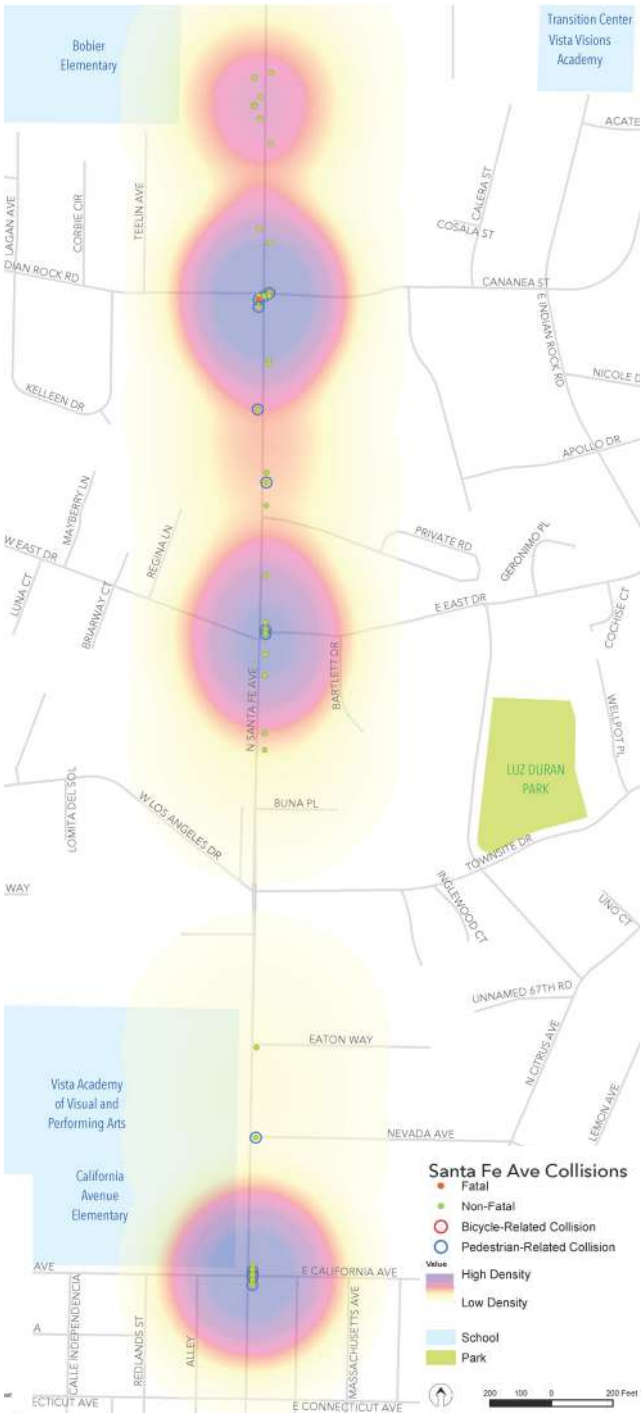
Between 2012-2016, there have been 57 collisions within the study area with 2015 having the most with 16. Figure 2-11 is a collision heat map which also highlights the location of collisions and their types. There have been 25 collisions resulting in injury with one pedestrian fatality at the intersection of Indian Rock Road.

Figure 2-12 summarizes these collision data with bar charts. The top causes along this corridor is motor vehicle speed, violating traffic signals and signs, and pedestrians violating the vehicular right-of way. The unsafe speed and disobeying traffic control has led to a high proportion of rear-end and broadside collisions throughout the corridor. The number of pedestrians violating vehicular right-of-way has led to thirteen pedestrian related collisions throughout this segment of N. Santa Fe Avenue. These pedestrian collisions coincide with the counts collected highlighting that pedestrians are crossing mid-block between California Avenue and Townsite Drive/W. Los Angeles Drive and between East Drive and Indian Rock Road/Cananea Street.

Most of collisions occur during the day with the highest frequency between 3 and 6pm. While this may indicate that these are primarily children involved due to the after-school time frame, the age of the pedestrians involved range from 14-54 years old, which demonstrates the high walking rates in this community.

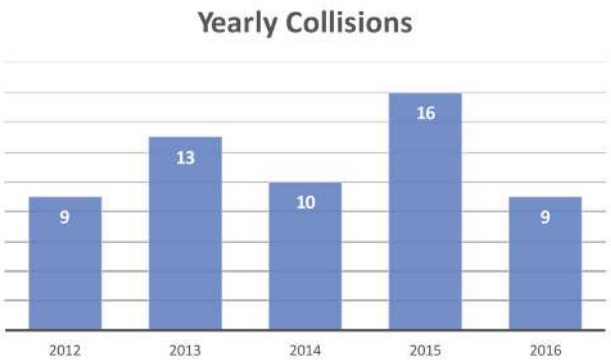
The following charts summarize the various collision characteristics provided by the Crossroads data.

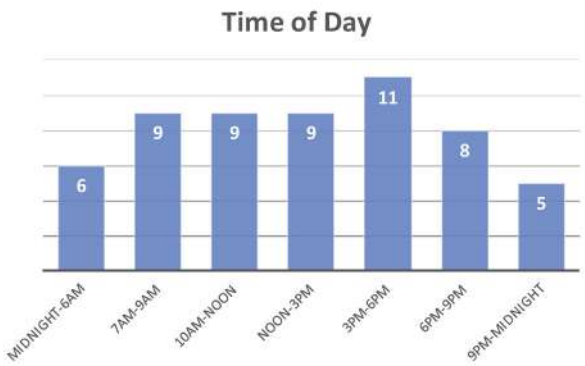
Figure 2-13 summarizes the bicycle and pedestrian related collisions for both corridors.

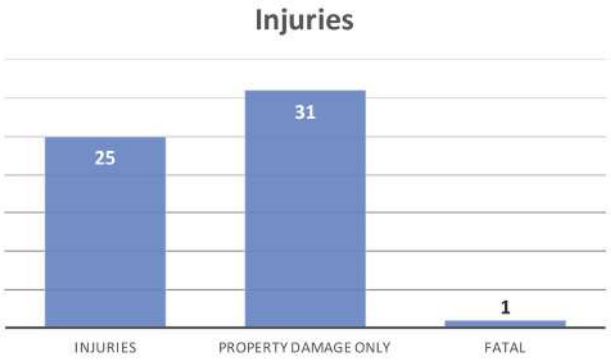


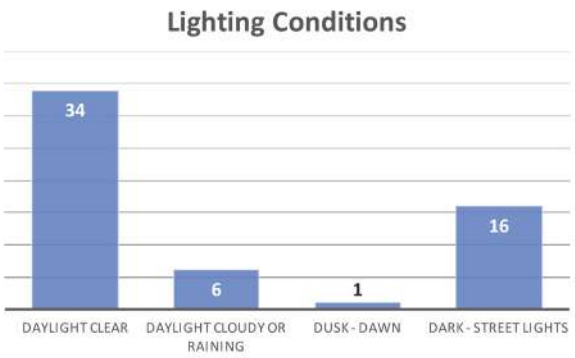
57 Total Collisions, 2012-2016

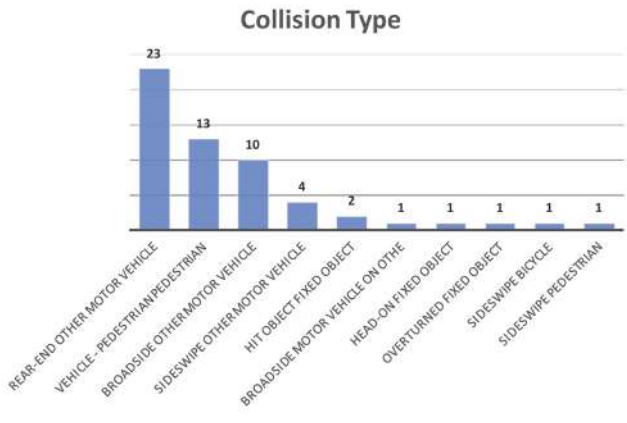
Figure 2-11: N. Santa Fe Avenue Collision Heat Map











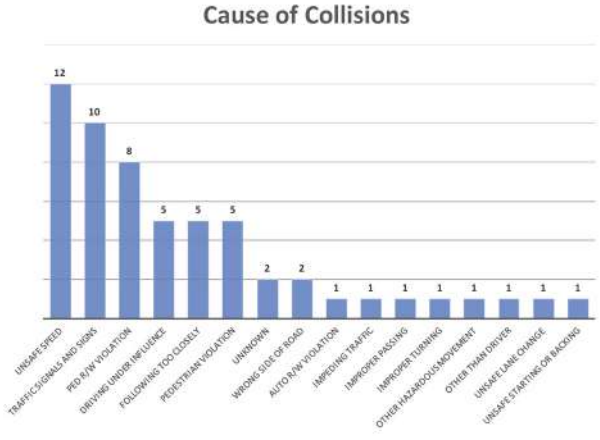
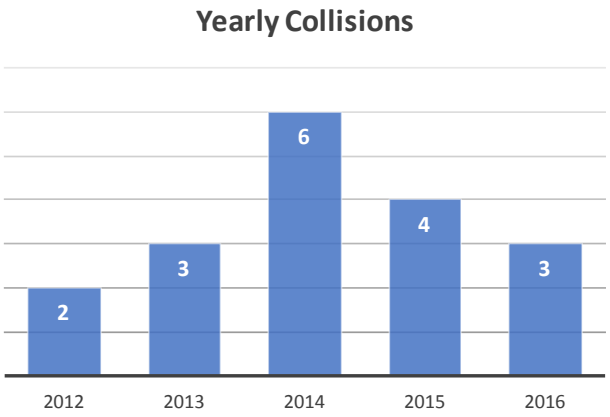
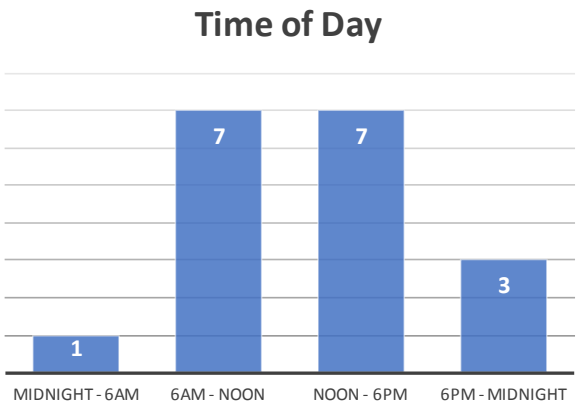
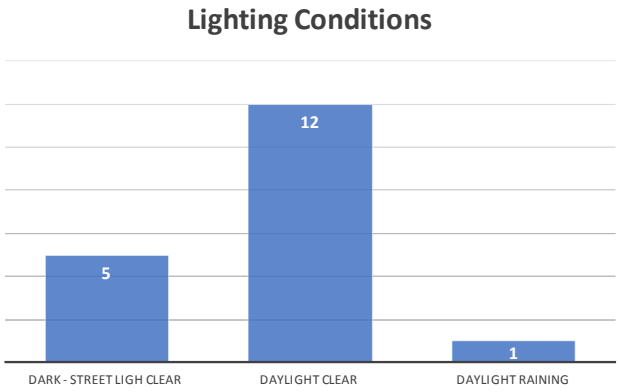
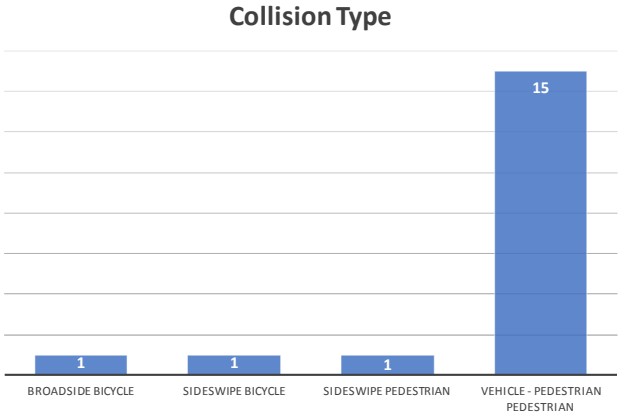


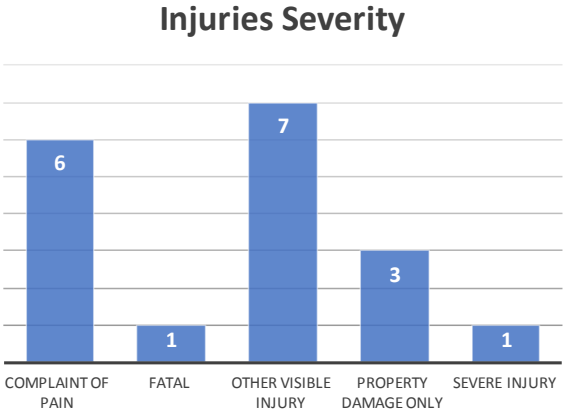
Figure 2-12: Charts of All N. Santa Fe Avenue Collisions











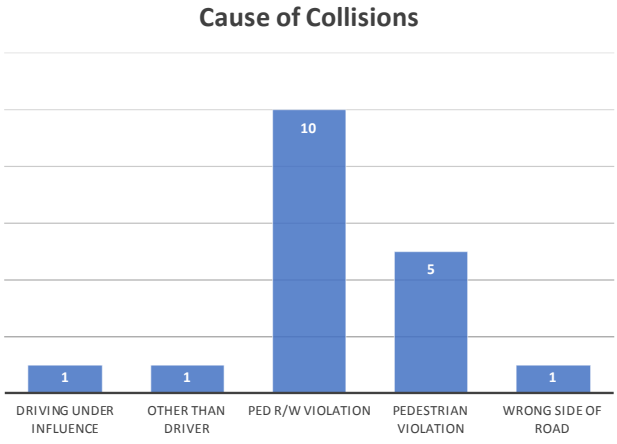
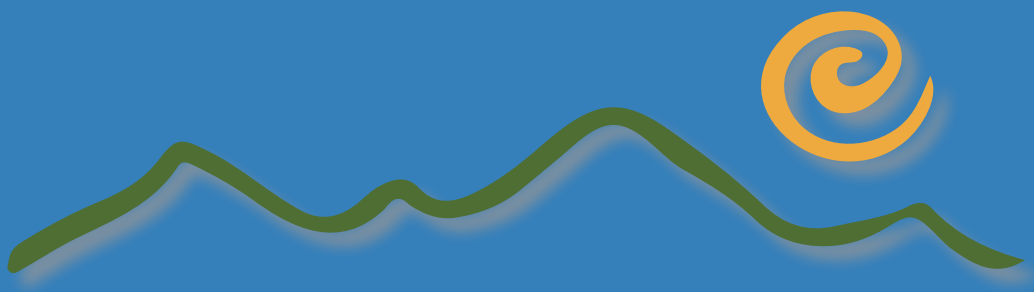


Figure 2-13: Summary Charts of Bicycle and Pedestrian-related Collisions for Townsite Dr/W. Los Angeles Dr and N. Santa Fe Avenue

3 Community Engagement



Community Engagement Overview

Community engagement consisted of two interactive workshops to listen to the residents, schools and local business and develop ideas for improvements along these corridors. Both workshops were conducted at the City's Civic Center. The first workshop was held on March 22, 2018 and focused on introducing the project and gathering issues and concerns. The second workshop, was held on April 18, 2018 which presented concepts based on the feedback from the first workshop for participants to review and provide comments.

A variety of outreach materials was designed to maximize community engagement. Because of Vista's multi-generational, Spanish-speaking population, all outreach materials were in English and Spanish. Materials that were developed included flyers and announcements that were published via appropriate City communication outlets. Figure 3-1 shows an example of the bilingual flyers created for the workshops. The City also sent notices to property owners and residents within 500 feet of the corridors for each workshop.

Both workshops include a presentation in the beginning, some exhibit boards showing statistics and overall information about the corridor, and large table maps as well as exemplary practice sheet on ea ch table to encourage participation and invite people to share their thoughts during the workshop activities. Figure 3-2 illustrates how these engagement tools are used through a typical workshop scene. Other materials used at the workshops to engage the attendants and obtain input included flyers and comment cards.

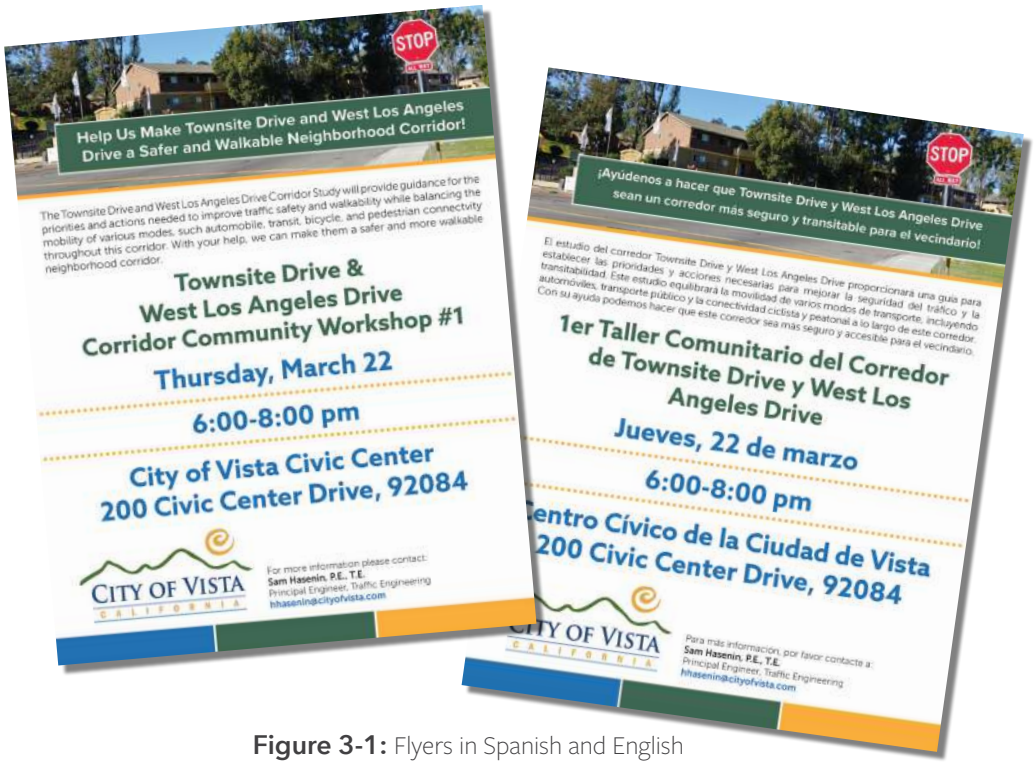


Figure 3-1: Flyers in Spanish and English

Figure 3-2: Workshop Scene

Public Workshop No.1

Date: March 22, 2018, 6:00-8:00 pm.
Format: Round Table Discussion

The agenda for Workshop No.1 consisted of a brief presentation introducing the project, and the project's goals, objectives and timeline and two exercises. The first exercise asked attendees to review existing conditions and discuss challenges they are experiencing along the corridors. Each table then collaborated to prioritize their highest concerns, and reported their results back to the group. Some of the issues raised through this exercise include;

- Missing sidewalks
- Lack of crosswalks
- Motor vehicle speeds
- Long blocks to cross the street
- Crossing time is too short at signalized intersections
- No shade or seating at bus shelters
- Lack of lighting
- Not enough parking

The second exercise consisted of discussing possible solutions to the priority issues raised in the first exercise. Once each table came to a consensus on the various solutions, and reported their results to the rest of the group. Some of the solutions include;

- Sidewalks
- Crosswalks
- Traffic circles/roundabouts
- Mid-block crossings on N. Santa Fe Avenue
- Bus shelters and benches
- Street trees

Workshop attendance was very successful with around 40 attendees of all ages. Attendees were primarily residents along Townsite Drive and W. Los Angeles Drive and connecting streets. Representatives from Maryland Elementary School, Vista Community Clinic and San Diego County Health and Human Services, City Heights Community Development Corporation and Vista Neighbors in Action were also present to discuss concerns along the corridors. In addition, Mayor Judy Ritter and Deputy Mayor John J. Aguilera were also present, participating in the table exercises and providing additional support for the project. As is shown in Figure 3-3, residents were active and speaking up at the event.

Figure 3-3: Photos from Workshop No.1

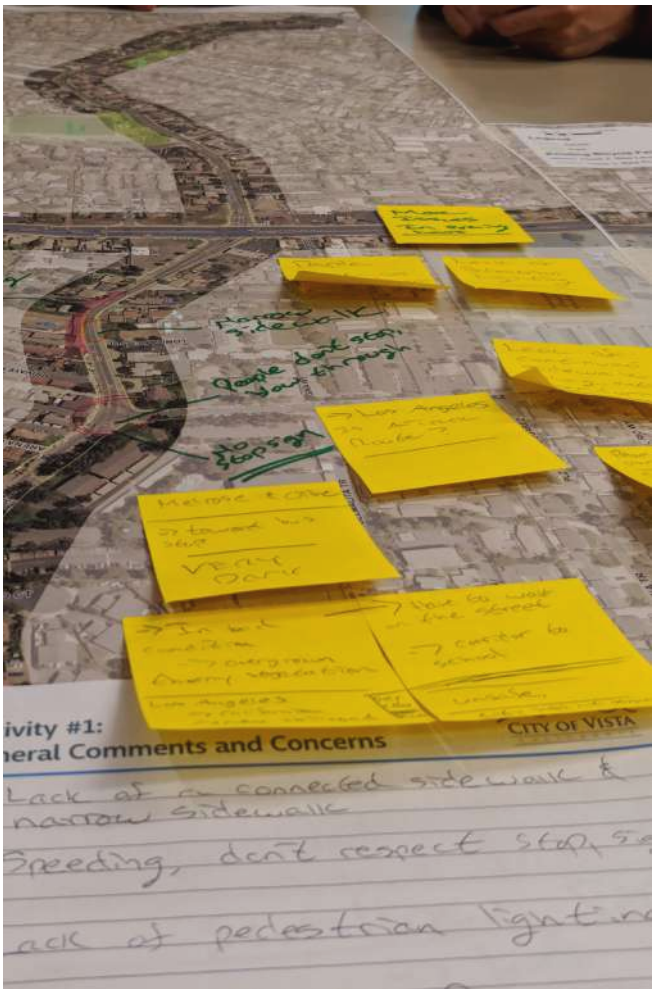


Figure 3-3: Photos from Workshop No.1 (Cont.)

Workshop No.1 Results for Townsite Dr & West Los Angeles Dr

The workshop collected valuable inputs from local residents. Residents discussed and wrote about their location-specific comments on sticky notes and placed them on the table map. Figure 3-4 shows the summarized results in charts, which highlights the lack of sidewalks and crosswalks as the No. 1 issue along the corridor, followed by the lack of lighting and serious speeding issue. Residents are expecting more crosswalks and sidewalks, more lighting and roundabouts to slow the traffic. W. Los Angeles Fr and N. Santa Fe Ave are the cross streets that received the most complaints and comments.

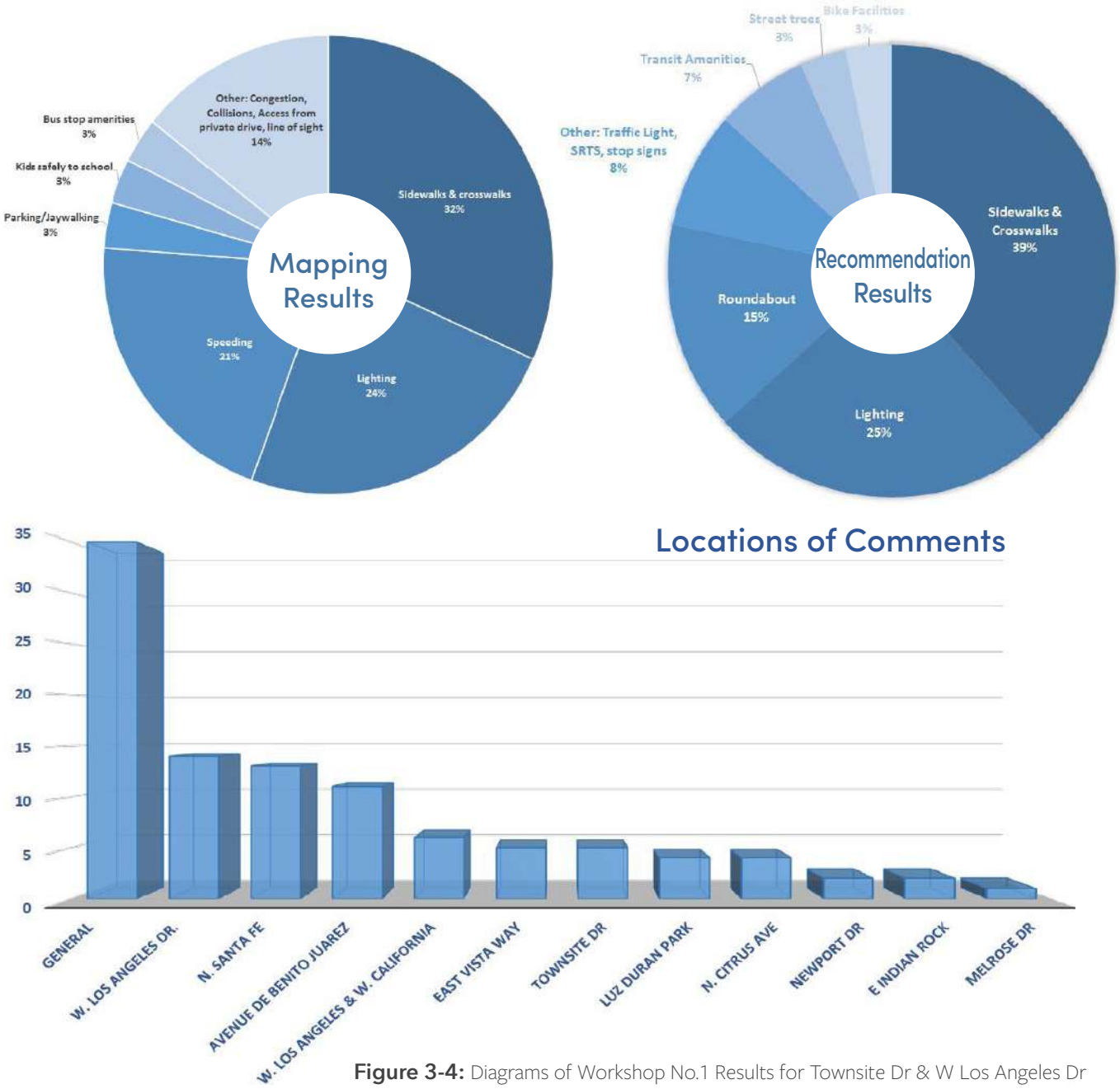


Figure 3-4: Diagrams of Workshop No.1 Results for Townsite Dr & W Los Angeles Dr

Workshop No.1 Results for N. Santa Fe Ave

The workshop also collected valuable inputs for North Santa Fe Avenue. Residents discussed and wrote about their location-specific comments on sticky notes and placed them on the table map. Figure 3-5 shows the summarized results in charts, which highlights the lack of sidewalks and lighting as being complained the most along the corridor, followed by the lack of crossing locations, collisions and speeding. Figure 3-6 shows one of the heavily used table map from the workshop. Residents are expecting more mid-block crossing locations, separated bike facilities, signal timing adjustment for pedestrian, shade, and bus shelters

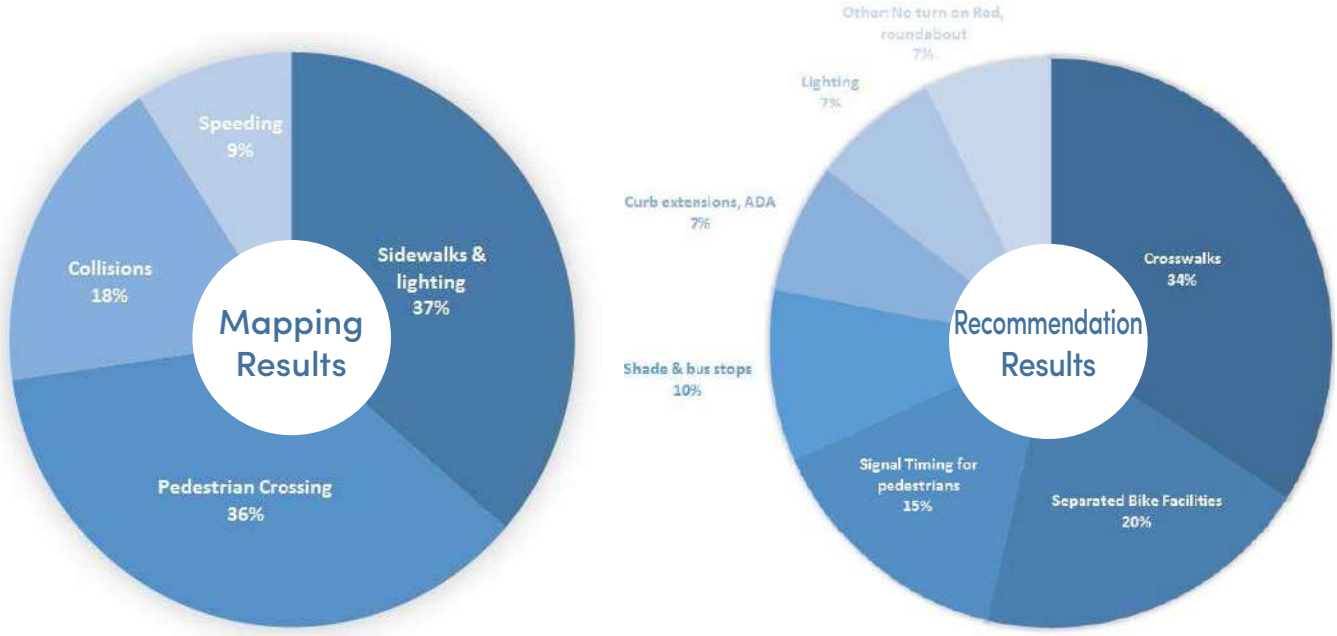


Figure 3-5: Diagrams of Workshop No.1 Results for N. Santa Fe Ave

Figure 3-6: Table Map Sample for N. Santa Fe Ave

Community Workshop No.2

Date: April 18, 2018, 6:00-8:00 pm.
Format: Open House Workshop

The second workshop was less formal and consisted of a brief presentation stating the project's goals, objectives, timeline and results of the first workshop. This open house format allowed participants to view the designs for both corridors. Due to the expected attendance, three copies of Townsite Drive/W. Los Angeles Drive and two copies of N. Santa Fe Avenue were provided to allow room to move about and discuss the improvements with other attendees and city and consultant staff.

Since the goal of this workshop was to come to a consensus on the various treatments, each participant was given a set of dots to place on the treatments they liked and to provide additional comments, as is shown in Figure 3-7. Around 36 participants attended this final workshop. Representatives from Vista Community Clinic, San Diego County Health and Human Services, California Department of Public Health, City Heights Community Development Corporation, Vista Neighbors in Action and Community Housing Works were all present and engaged for this second workshop.

Figure 3-7: Photos from Workshop No.2

Figure 3-7: Photos from Workshop No.2 (Cont.)

Workshop No.2 Results for Townsite Dr & West Los Angeles Dr

The workshop collected votes and comments from local residents, both for general treatments and treatments at specific locations. Residents walked through the entire stretch of the corridor, placed dots and sticky notes to the treatments on the table map. Figure 3-8 summarizes the voting results with a chart. ″Sidewalks east of North Santa Fe Avenue″ received the highest votes. The general traffic calming treatment of traffic circle has the same amount of votes with the over half votes contribute to rolled traffic circle instead of curbed. ″Additional on-street parking″, and ″ Bike Lane east of N Santa Fe Ave″ are also highly desired, followed by demand of ″High Visibility Crosswalks at N Santa Fe Ave″ and ″More Trees″.

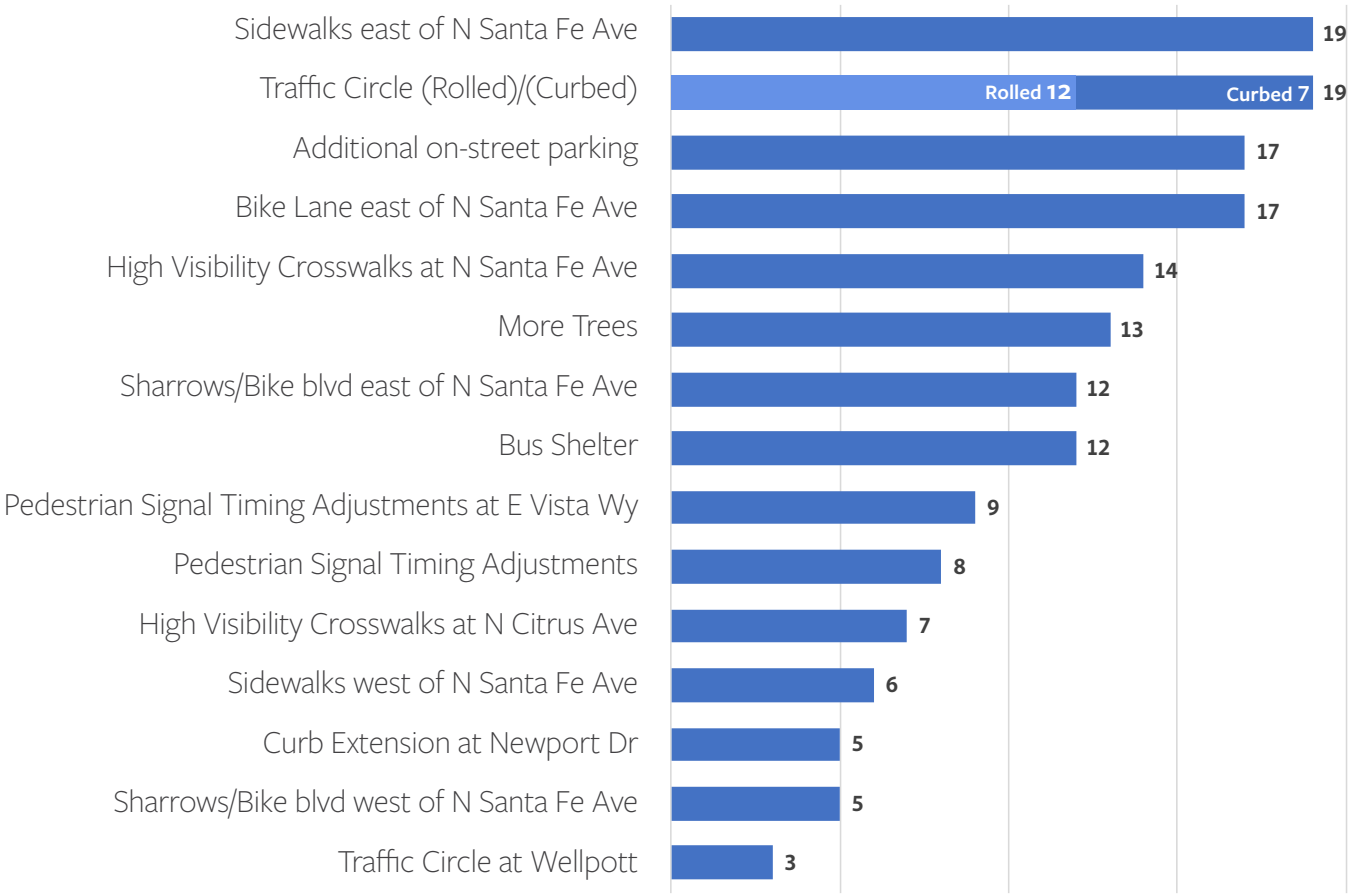


Figure 3-8: Workshop No.2 Results Diagram for Townsite Dr & W Los Angeles Dr

Workshop No.2 Results for N. Santa Fe Ave

The workshop collected votes and comments from local residents, both for general treatments and treatments at specific locations. Residents walked through the entire stretch of the corridor, placed dots and sticky notes to the treatments on the table map. Figure 3-9 summarizes the voting results with a chart. ″High Visibility Cross Walks″ and ″Pedestrian Signal Timing Adjustment″ at Cananea St received the highest votes, closely followed by mid-block crosswalk between Cananea St to East Dr and intersection treatments such as ″Pedestrian″ Scramble and ″Green Bike Lane Transition Striping″.

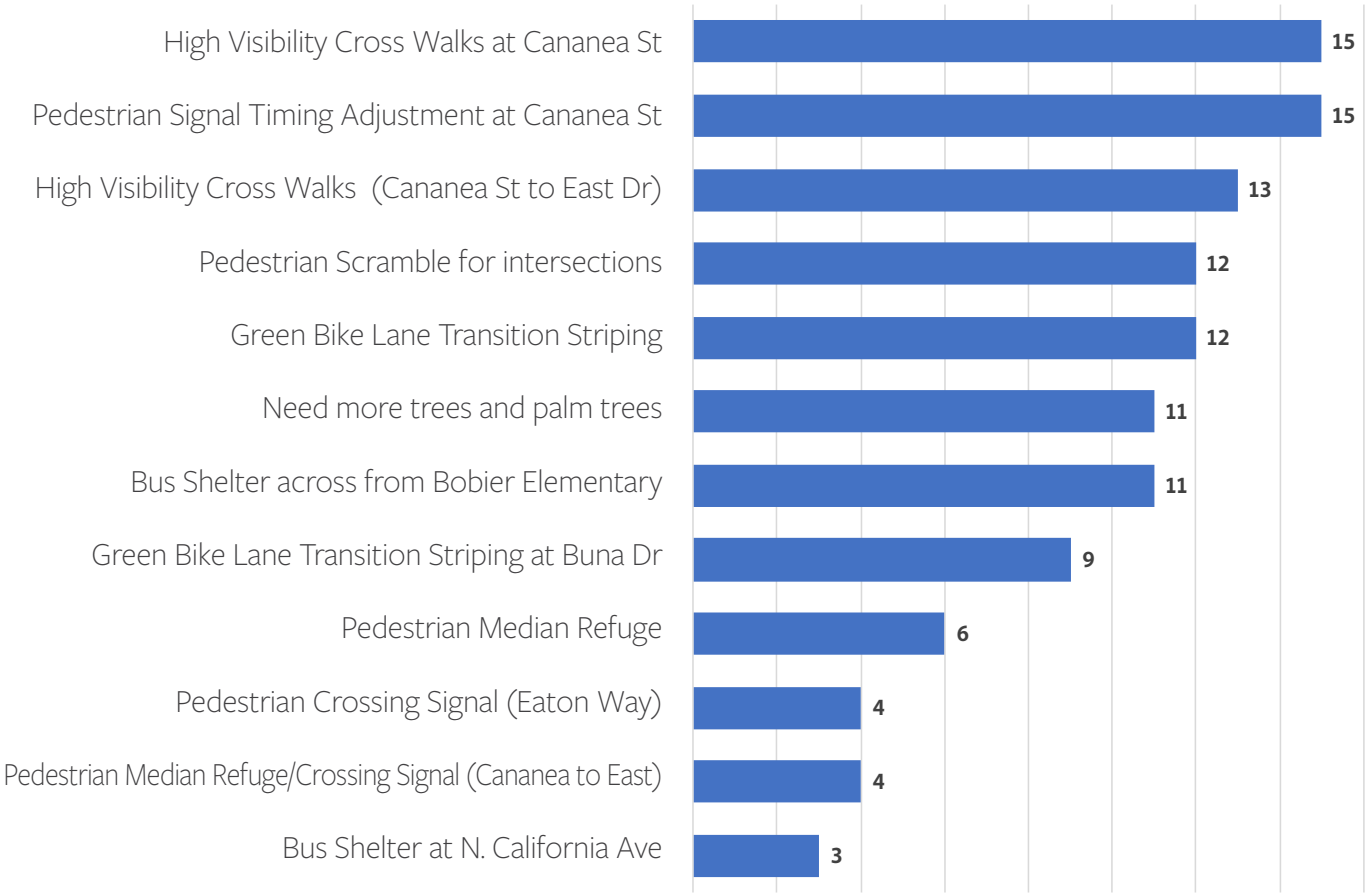
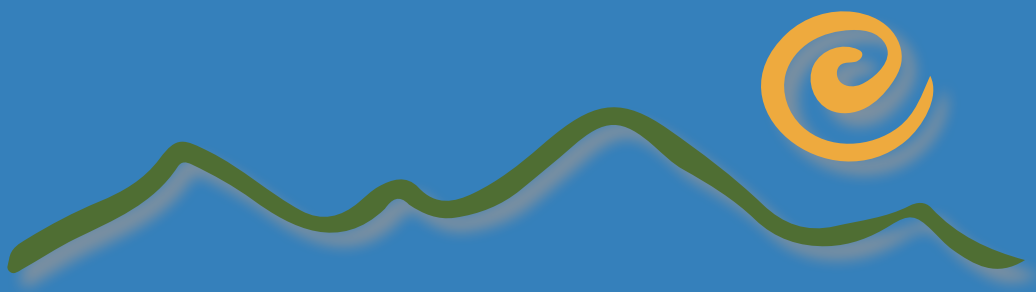


Figure 3-9: Workshop No.2 Results Diagram for N Santa Fe Ave

4 Proposed Solutions



Overview of Initial Concepts

Public comments from the first workshop and analysis provided valuable input into the initial conceptual design. With the right-of-way varying throughout the Townsite Drive/W. Los Angeles Drive corridor, it was important to keep consistent lane widths, on-street parking, bicycle facilities and connections to existing sidewalks. Major issues raised for both corridors through the community engagement process include a connected sidewalk network, additional crossing locations, bicycle facilities, motor vehicle speed reduction, increasing pedestrian crossing times at signalized intersections and transit shelters.

These corridors are heavily utilized by residents, especially students, who attend Maryland Elementary, Bobier Elementary and Vista High School. In addition to the community input, the bicycle and pedestrian counts confirmed the use of these corridors by pedestrians during school commute hours. The largest volumes of pedestrians occur on N. Sante Fe Avenue since it directly connects to retail, transit, Bobier Elementary and Vista High School. Along Townsite Drive/W. Los Angeles Drive heavy pedestrian travel was accounted for at North Drive, Citrus Avenue and between Wellpott Place and Rhea Place.

Townsite Drive/ W. Los Angeles Drive

Improvements for reducing motor vehicular speeding include a series of traffic circles throughout the corridor. Traffic circles were supported by the community as a solution because they serve several purposes such as speed reduction, improved side street access and visibility, and additional pedestrian crossings. The initial concept included traffic circles at W. Los Angeles Drive, El Pico Court, Avenida de Benito Juarez and Wellpott Place. Twentyfive new curb extensions and high visibility crosswalks are integrated with the traffic circles for a total of nineteen new crosswalk locations to better serve the residents and students using this corridor. The curb extensions shorten the crossing distance and allows more space for pedestrians to queue while waiting to cross the street, an important amenity for students walking to school. In addition, existing stop-controlled and signalized intersections are also improved with curb-extensions and high visibility crosswalks. Curb extensions and high visibility crosswalks are added to Georgia Lane, N. Santa Fe Avenue, E. Indian Rock Road and Newport Drive.

To access these new crossing locations, sidewalk gaps are closed on the south side of the street. The varying right-of-way, adjacent property lines, and locations of existing sidewalks limited space to add parkways throughout, but were added where space was available.

The City's Bicycle Master Plan identified Townsite Drive/W. Los Angeles Drive as a Class 3 bike route, or shared route. This project includes a combination of a bike route with five-foot bike lanes and buffered bike lanes which are standard five-foot bike lanes with three-foot buffers. Green transitional bike lanes are added at intersections and green-back Shared Lane Markings or "sharrows" were added along the bike route segments. These enhancements provide greater visibility and act as wayfinding for bicyclists. They also provide additional warning to drivers that bicyclists may be present. The location of these bicycle facilities was dictated by the available right-of-way and approaches entering and exiting traffic circles.

Between W. Los Angeles Drive and El Pico Court is a bike route with green-back sharrows that transition to buffered bike lanes between El Pico Court and Avenida de Benito Juarez. Bike lanes then continue before converting to a shared bike route until N. Santa Fe Avenue due to the limited available right-of-way. Bike lanes then begin on Townsite Drive until just past Luz Duran Park where the right-of-way narrows and a shared bike route continues to E. Indian Rock Road. However, between Rhea Place and E. Indian Rock Road, bike lanes are present for west bound travel due to available right-of-way on the north side and keeping the existing centerline. Bike lanes then continue for a short segment before transitioning to a shared bike route until E. Vista Way.

Currently, on-street parking is unorganized along the segments that lack sidewalks. Vehicles can be seen parked wherever there is space along the edge of the road. This project organizes on-street parking and adds additional parking along various segments of the corridor. The eastbound bus stop on the nearside of E. Indian Rock Road is relocated to the far-side so a curb extension can be added. The far-side bus stop also allows direct access to Raintree Park and more space for pick up and drop off. Bus shelters are also added.

N. Santa Fe Avenue

Along N. Santa Fe Avenue, the primary concerns were the long distances between crossing locations, not enough time to cross at signalized intersections and the need for shade and seating at bus stops. The primary design features for this corridor is providing signalized pedestrian mid-block crossings with a median refuge between W. Indian Rock Road/Cananea Street and East Drive and between Townsite Drive/W. Los Angeles Drive and Nevada Avenue. High-visibility pedestrian crosswalks are added at all the signalized intersections and side streets for more visibility for pedestrians throughout the day. Adjustment of pedestrian signal timing is also added at all signalized intersections, especially at the larger intersections such as Townsite Drive/W. Los Angeles Drive and Bobier Drive, where Bobier Elementary and Vista High School are located.

Curb extensions are added on the northwest and southeast corners to reduce motor vehicle speeds entering Townsite Drive and W. Los Angeles Drive while reducing the pedestrian crossing distance.

Since buffered bike lanes already exist, green transitional bike lanes are added at the side streets and through all the intersections. Bus shelters are additional amenities added wherever none currently exists.

The following are the initial corridor conceptual designs which were presented at the second workshop along with a summary of comments. Figure 4-1 and 4-2 summarizes all the comments to guide the refinement of the final Townsite Drive/W. Los Angeles Drive concept. Figure 4-3 and 4-4 summarizes all the comments to guide the refinement of N. Santa Fe Avenue.

The numbered orange dots indicates the amount of votes a certain location received from the workshop table map. Comments may apply to specific location or a stretch of the corridor.

Figure 4-1: Workshop No.2 Consolidated Comments for W Los Angeles Drive

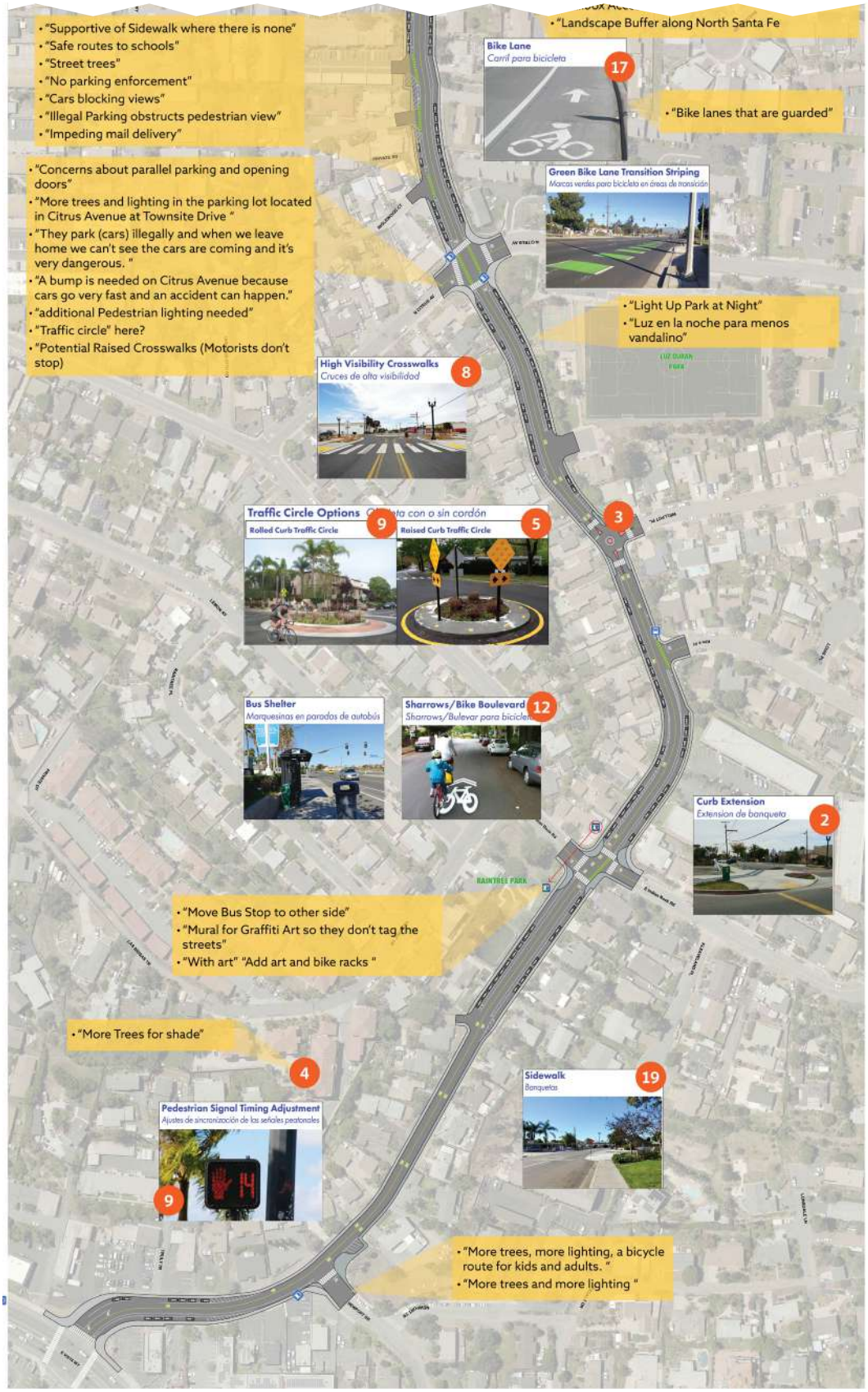


Figure 4-2: Workshop No.2 Consolidated Comments for Townsite Drive

Figure 4-3: Workshop No.2 Consolidated Comments for N Santa Fe Ave

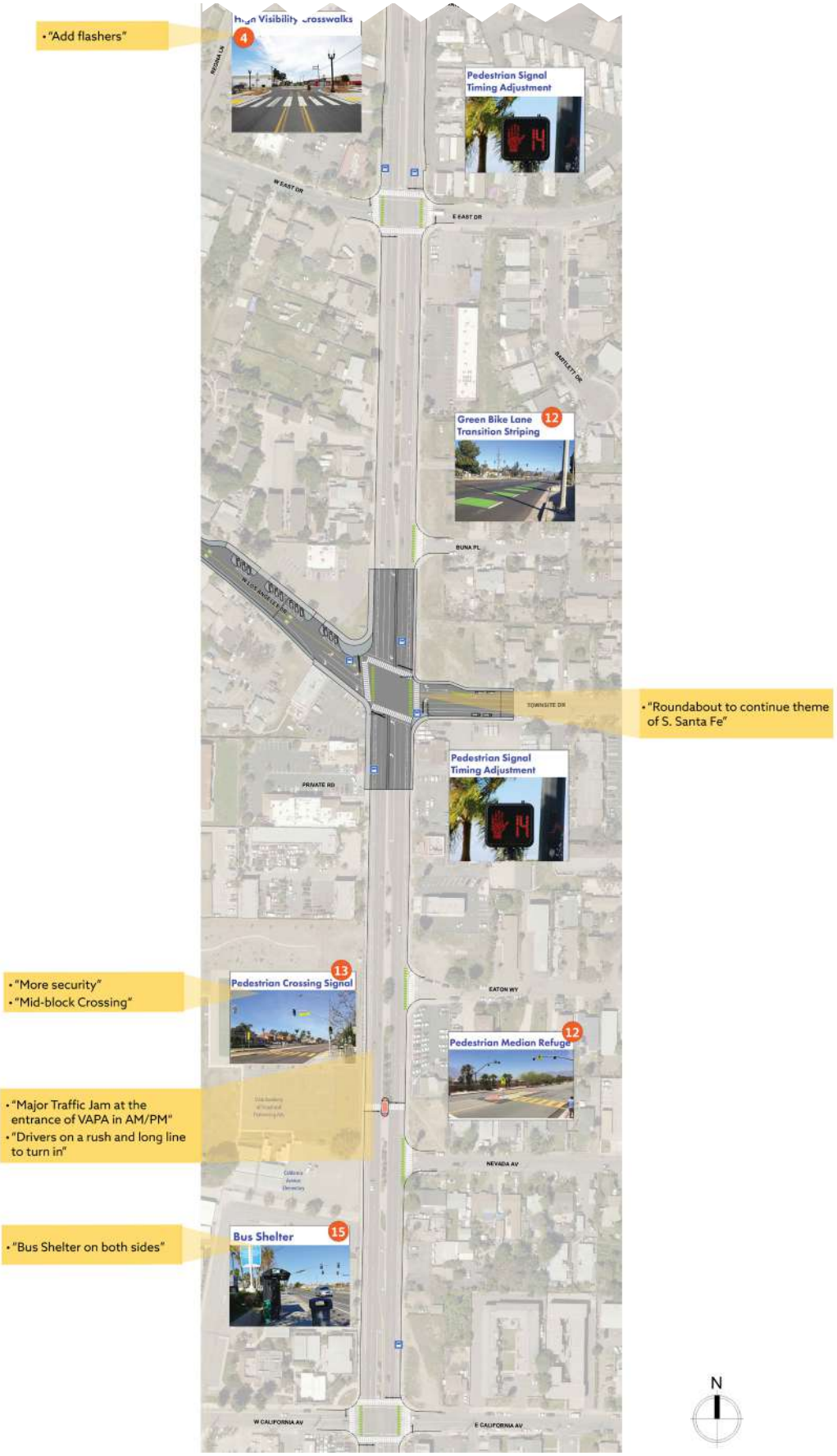


Figure 4-4: Workshop No.2 Consolidated Comments for N Santa Fe Ave (Cont)

Final Concepts

During the second community workshop, participants were receptive to the idea of the traffic circles along the Townsite Drive/W. Los Angeles Drive corridor, since these countermeasures help with traffic calming and allow better visibility at intersections and added additional crossing locations. The curvilinear nature of the street was noted to add problems with visibility when entering and exiting this corridor from side streets. The addition of sidewalks and curb extensions was well received since the design connected sidewalks along the entire southern side of the street. It was noted that adding bike lanes would encourage more bicycle riding which residents preferred. The signalized midblock crossings on N. Santa Fe Drive was well received and encouraged as a priority. Bus shelters was an amenity that was heavily supported. One overarching comment for both corridors was to try and implement as many street trees where appropriate and additional lighting.

Upon completion of the second workshop, a few refinements were made based on the input provided. The traffic circle on W. Los Angeles Drive was removed and installed at East Drive to provide separation between the El Pico Court traffic circle. This new traffic circle reduces the right-of-way width on East Drive to provide additional traffic calming and East Drive access from North Drive. All the traffic circles were widened to provide additional deflection to further reduce motor vehicle speeds. Just west of N. Santa Fe Drive, angled parking is included to utilize the available right-of-way, add a few more parking spaces, and additional buffer space between parked cars and the travel lane and a curb extension to slow motor vehicles making a right turn on W. Los Angeles Drive. This curb extension also narrows the pedestrian crossing distance at this intersection.

Along N. Santa Fe Avenue, the only refinement needed was adjusting the northwest curb extension on W. Los Angeles Drive.

Figure 4-5 - 4-8 depicts typical cross sections of the various recommendations and sample illustration of a traffic circle.

Figure 4-9 shows the final Townsite Drive/W. Los Angeles Drive concepts. Figure 4-10 show the final N. Santa Fe Avenue final concepts.

Typical Sections

W. Los Angeles Dr to Avenue De Benito Juarez

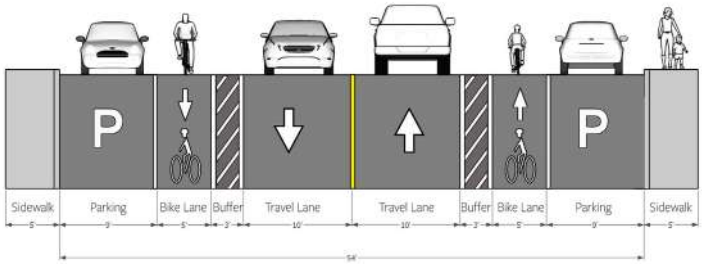


Figure 4-5: Sample Section of Buffered Bike Lanes

Roundabout at Avenue De Benito Juarez

Figure 4-6: Sample 3-way Roundabout

Avenue De Benito Juarez to N. Santa Fe

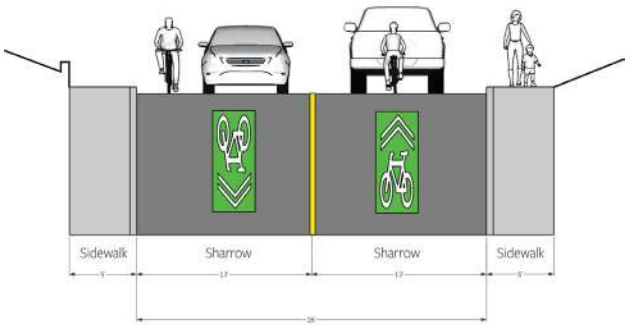


Figure 4-7: Sample Section of Sharrows

N. Santa Fe to Luz Duran Park

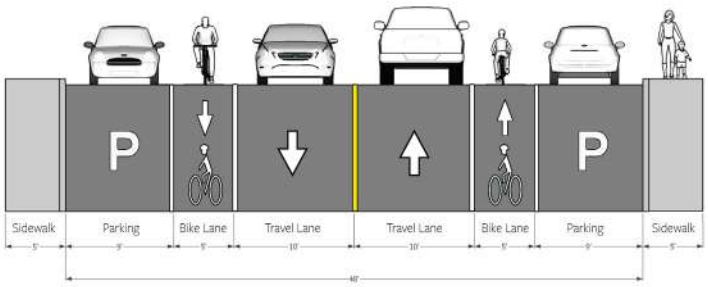


Figure 4-8: Sample Section of Bike Lanes

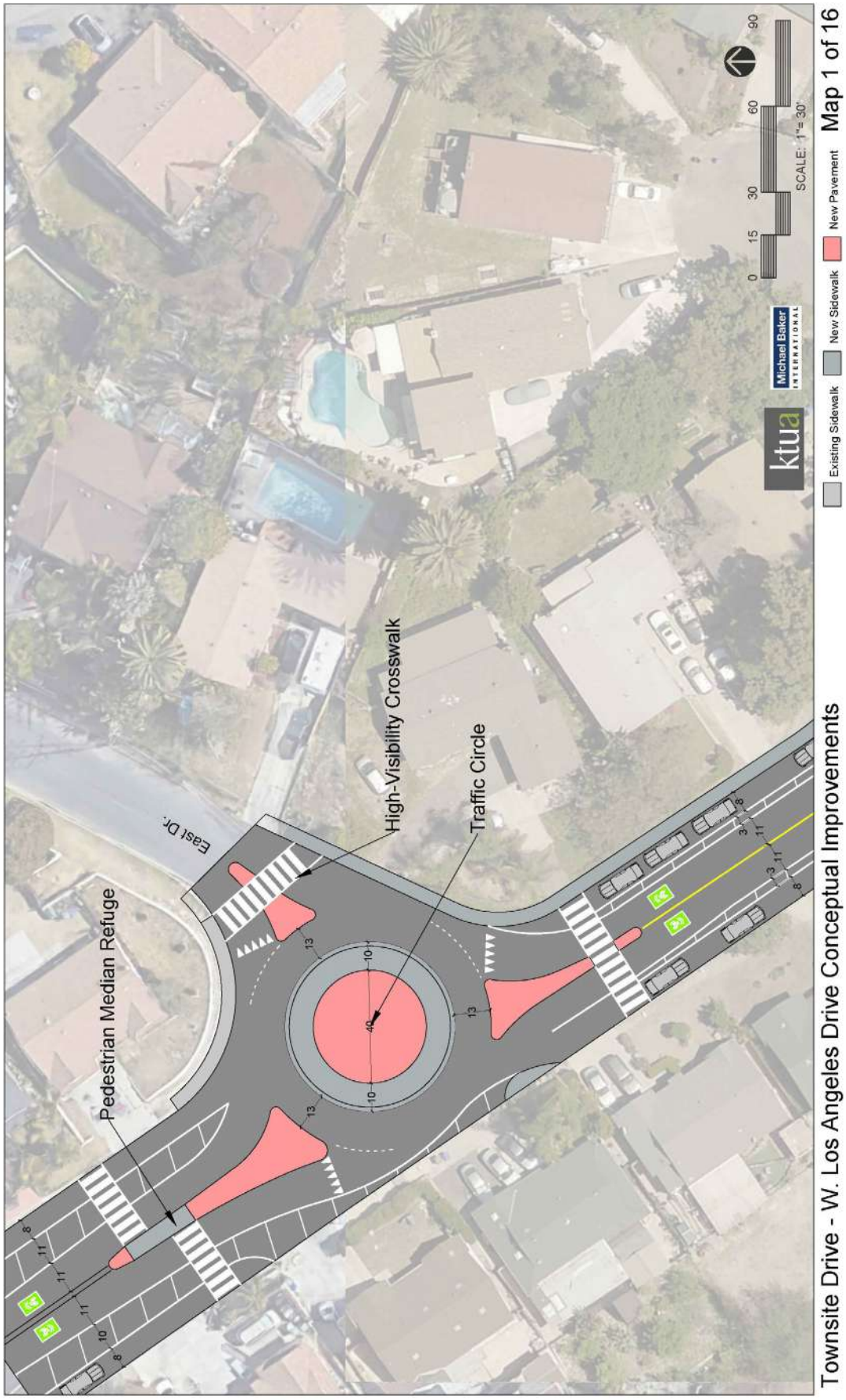


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design

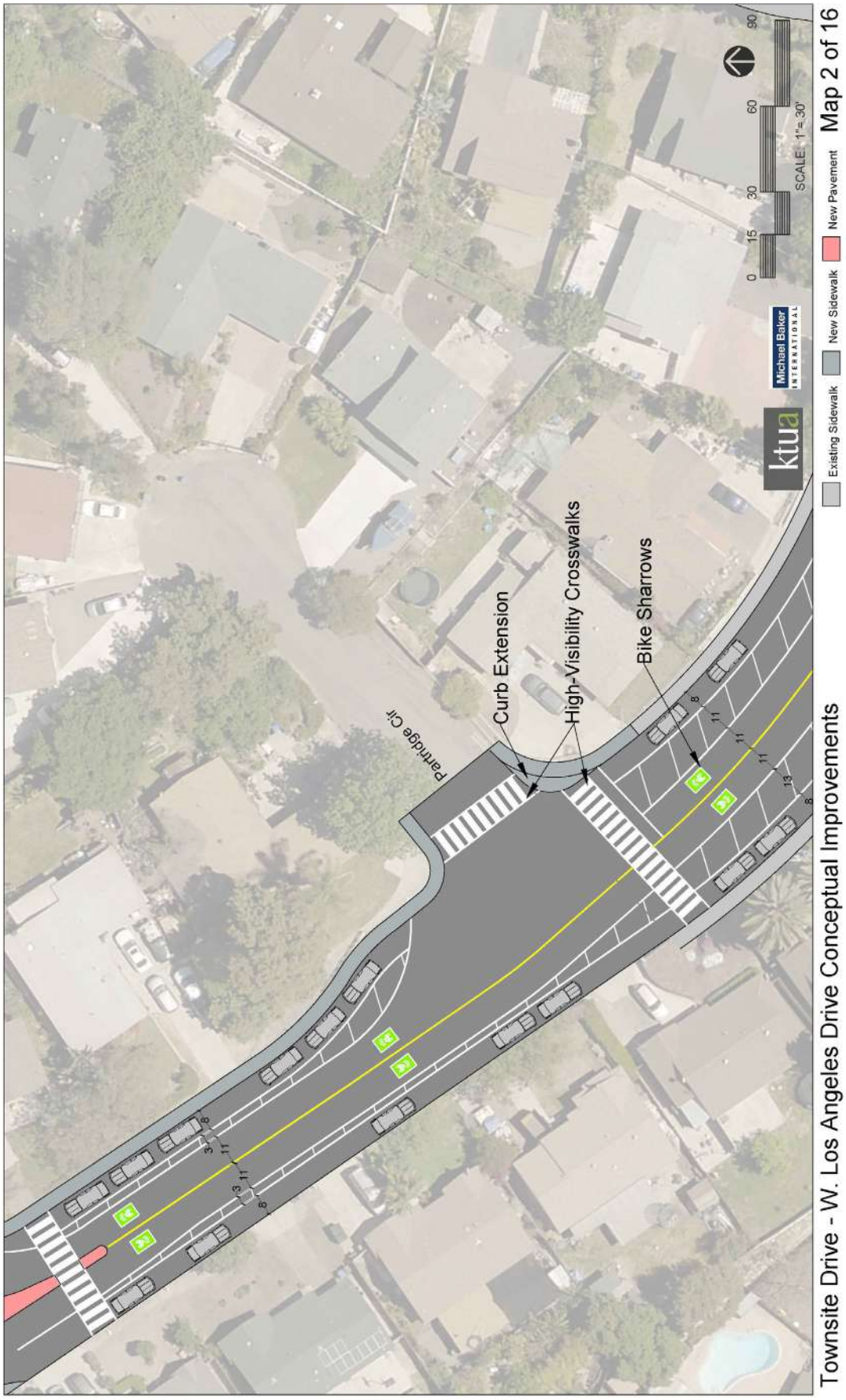
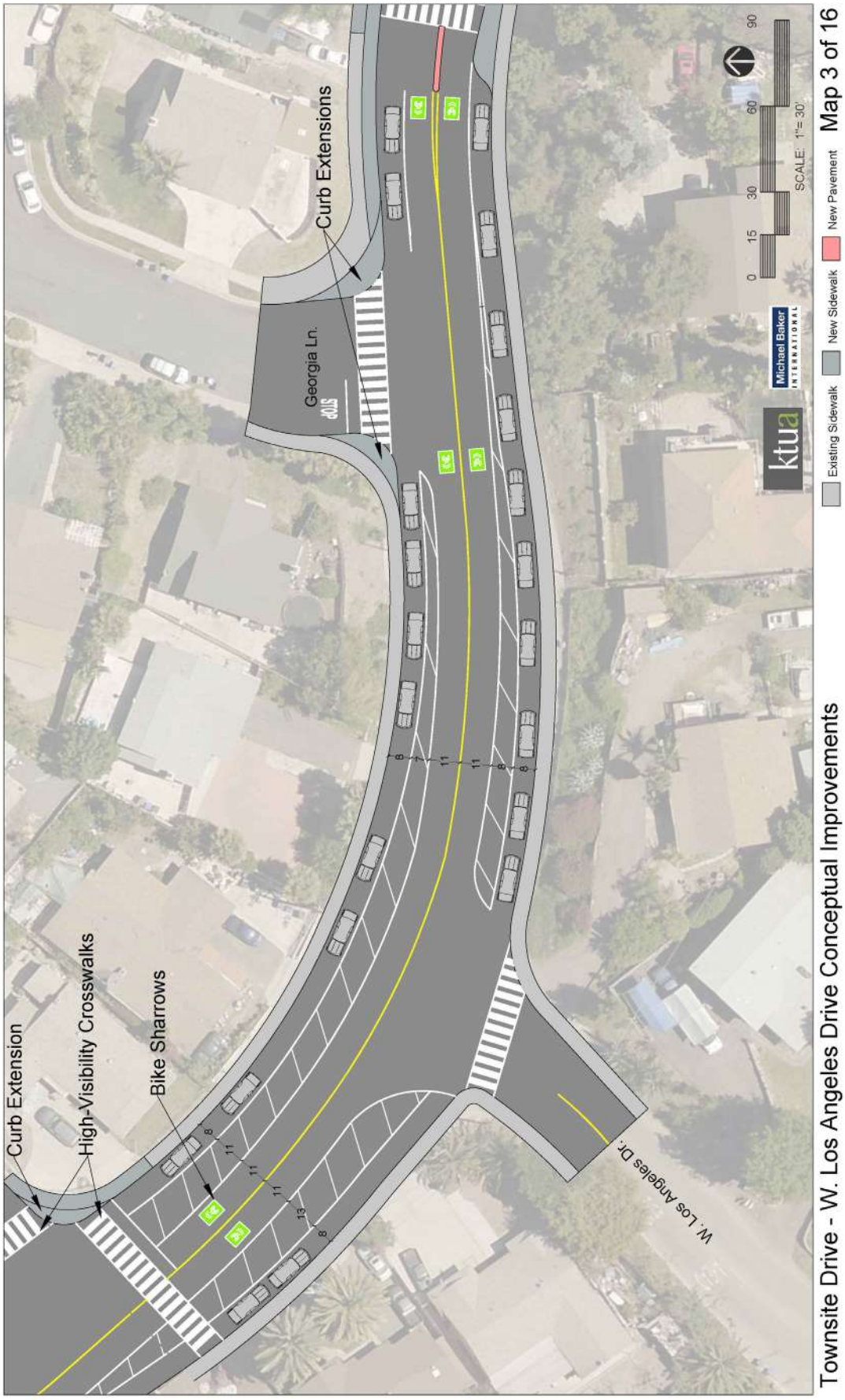


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)



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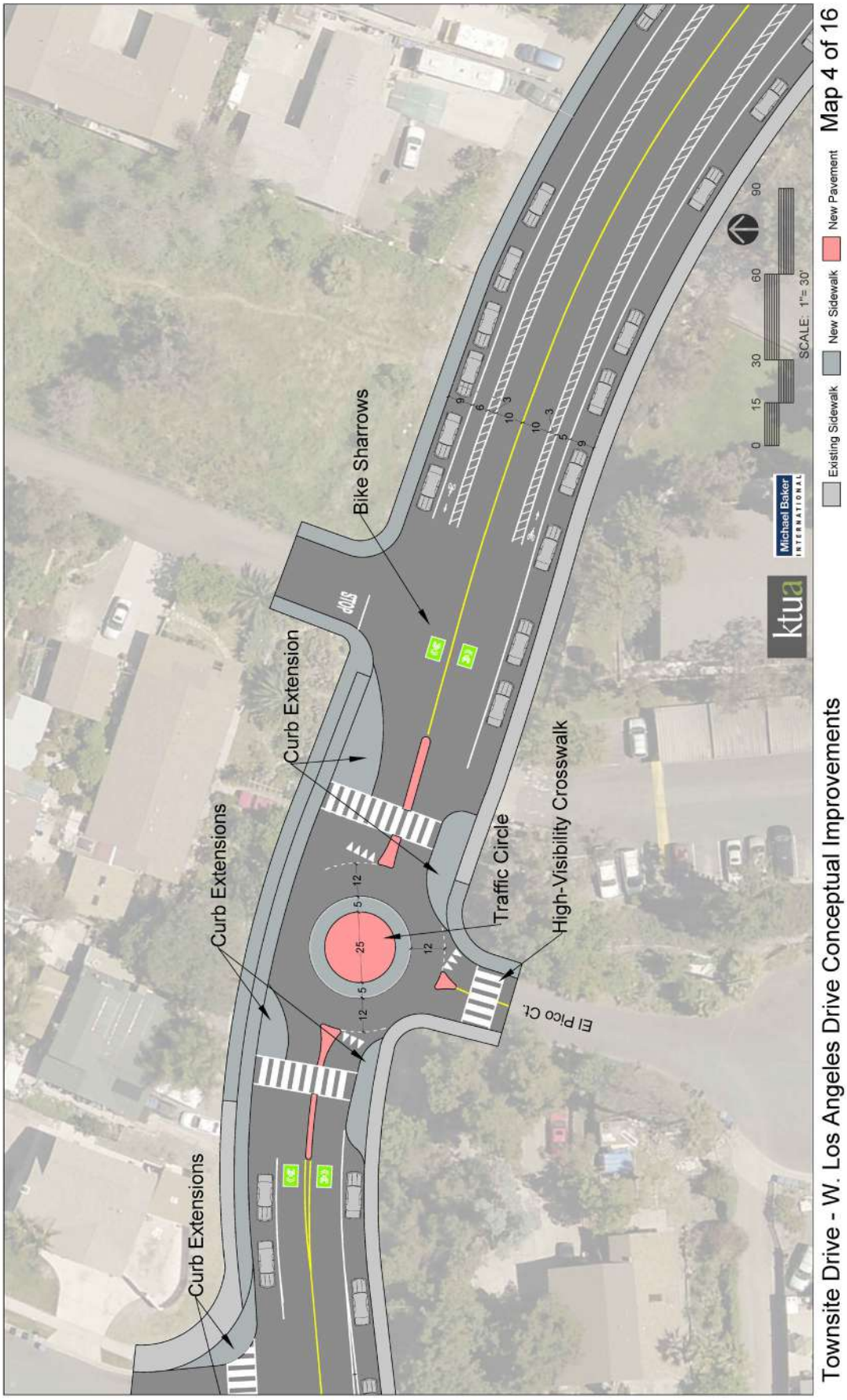


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

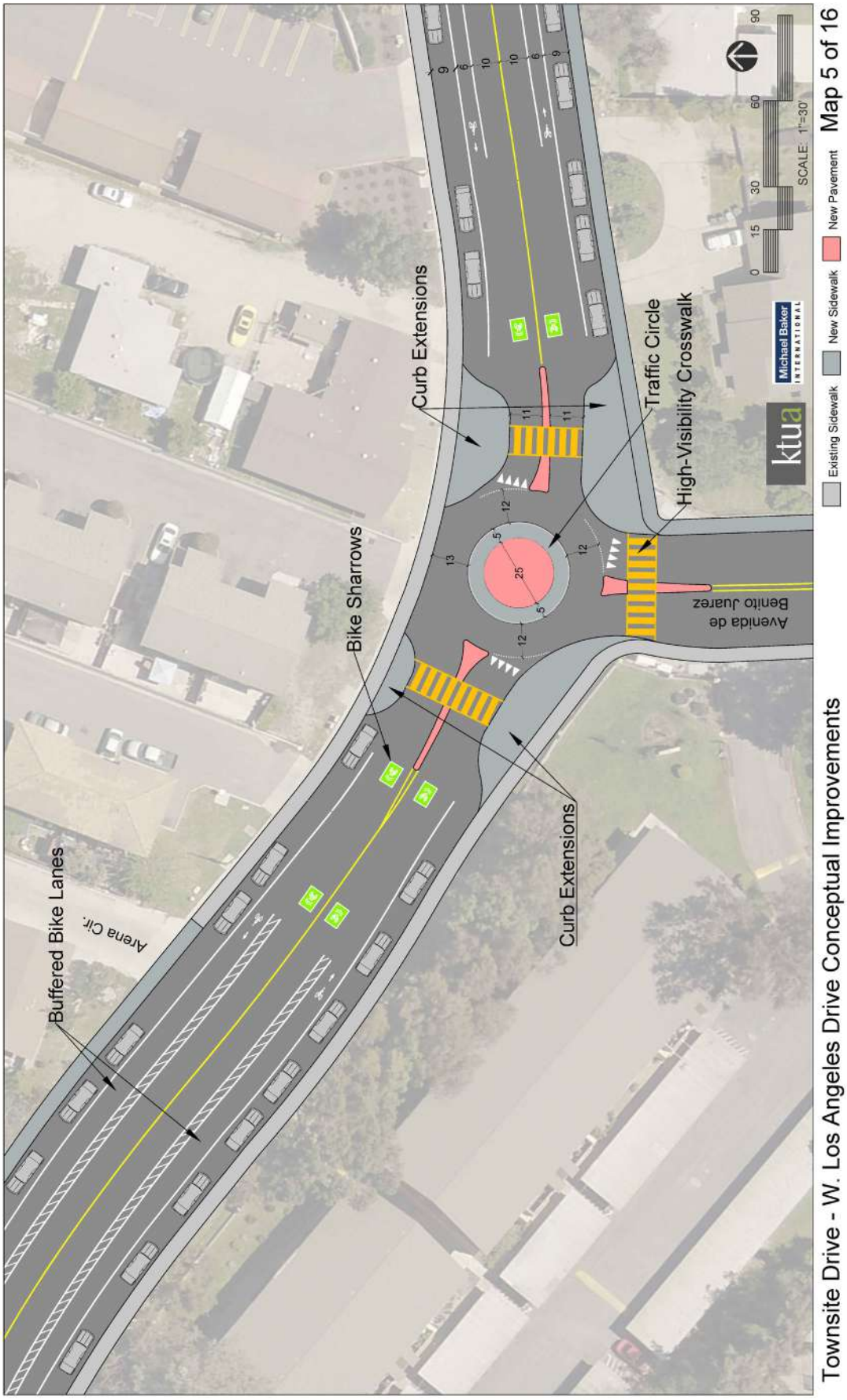


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

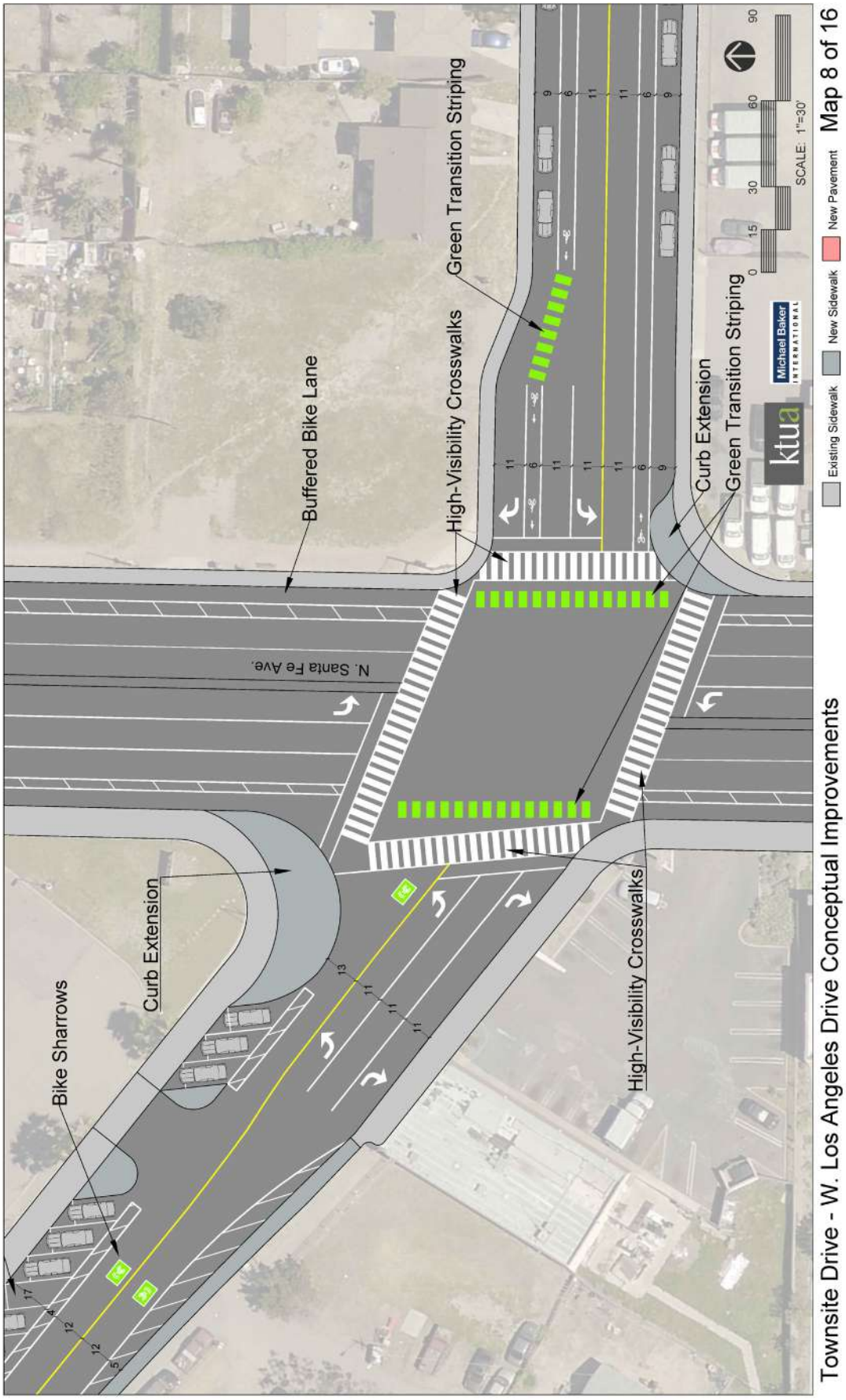


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

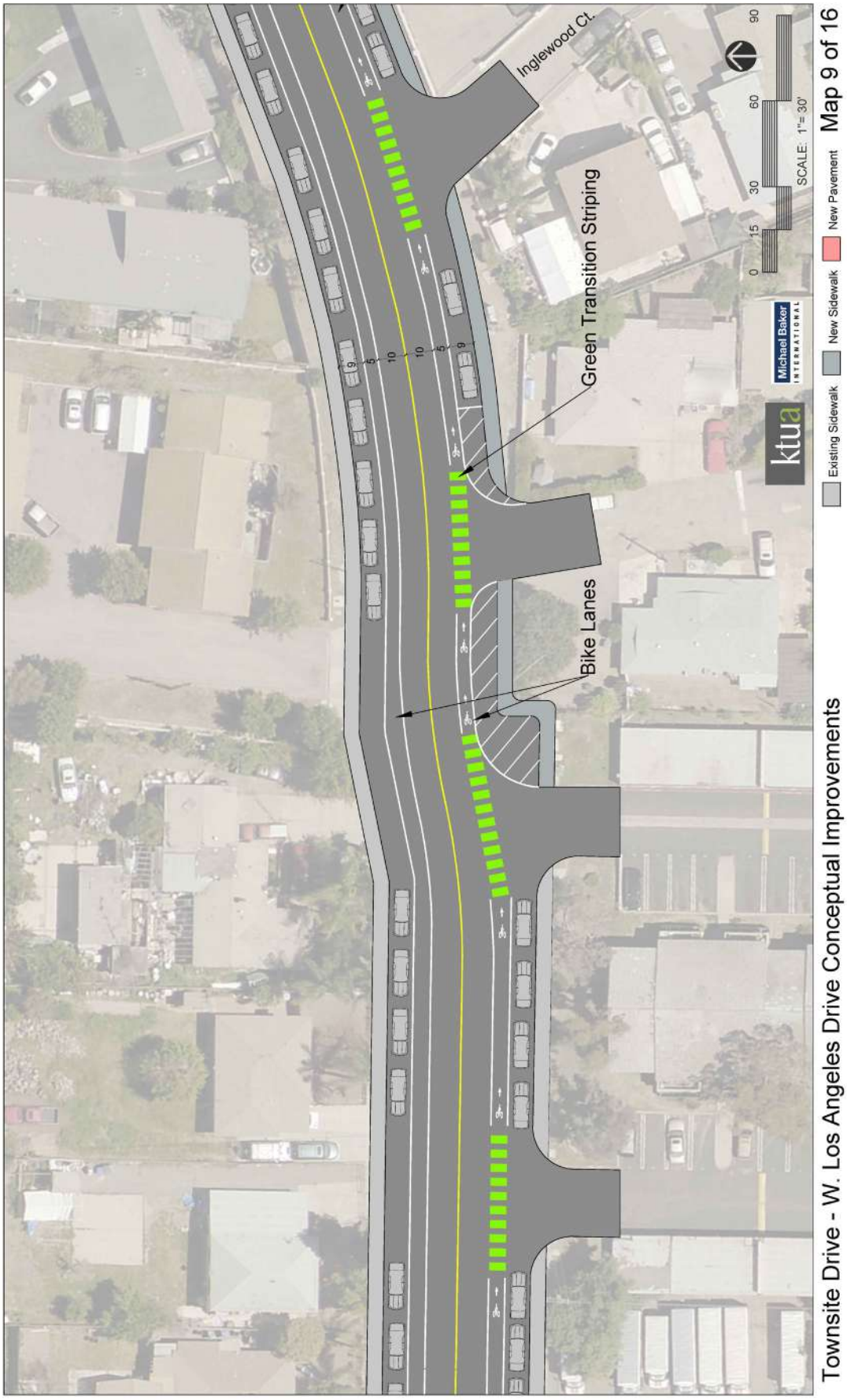


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

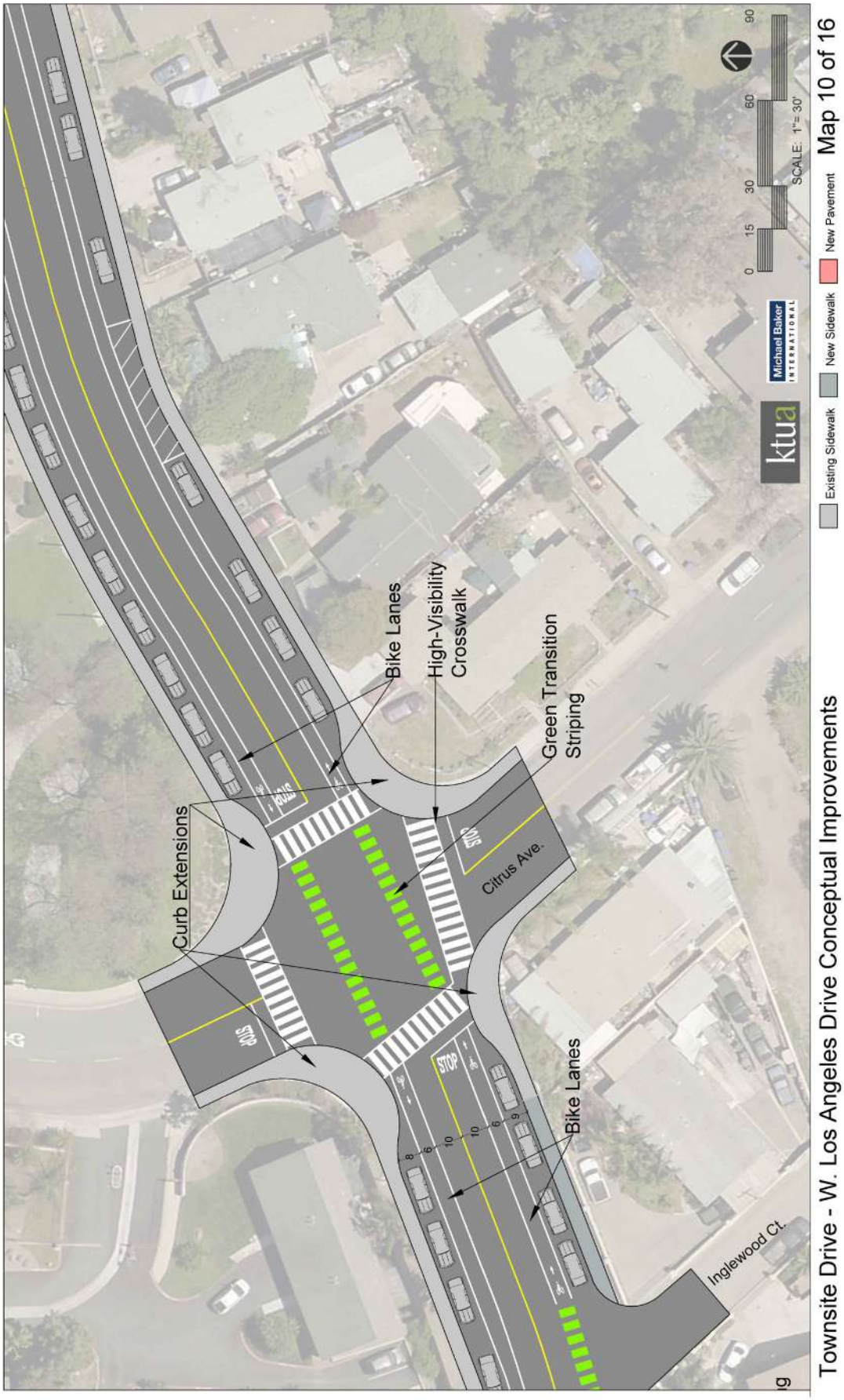


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

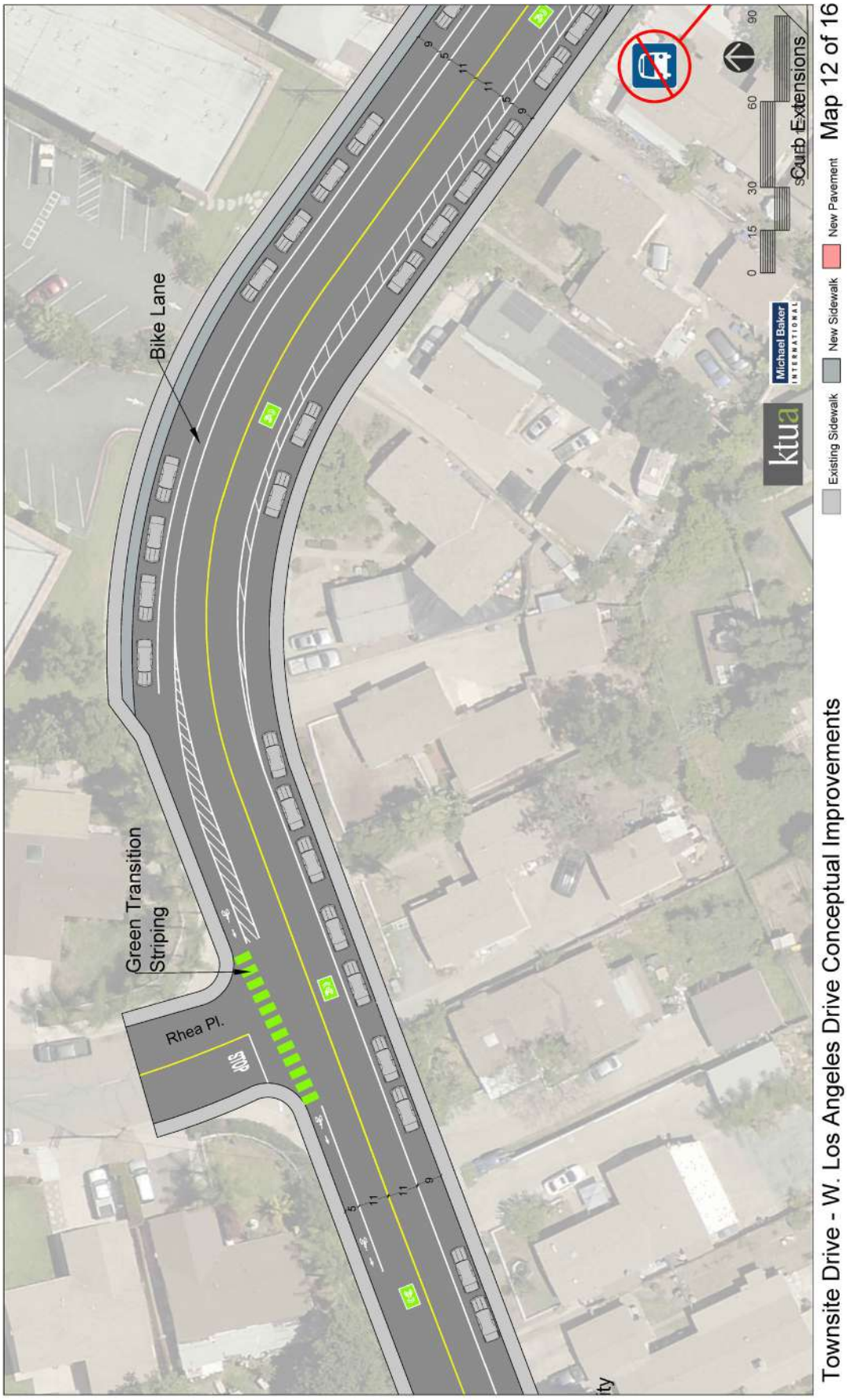


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

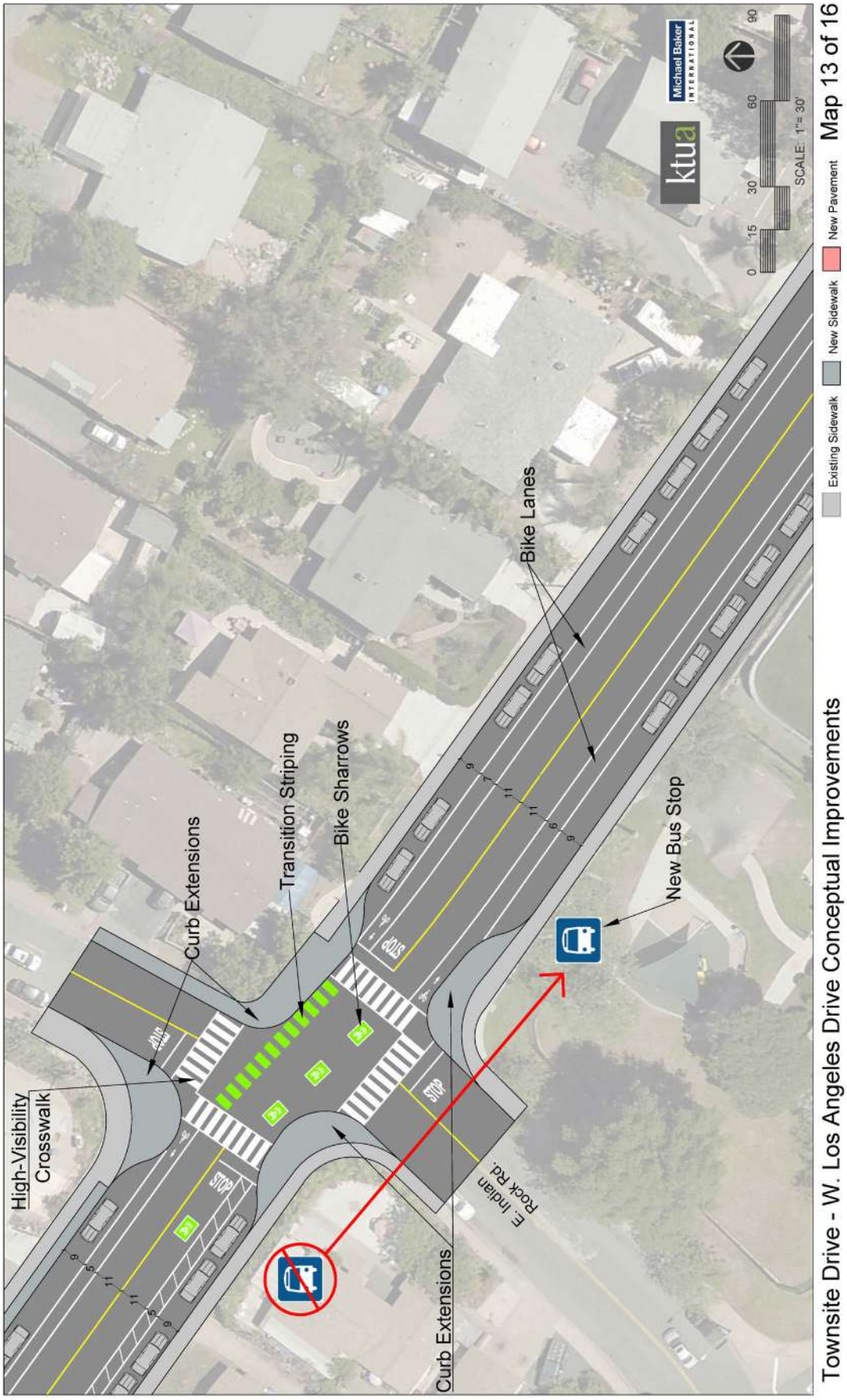


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

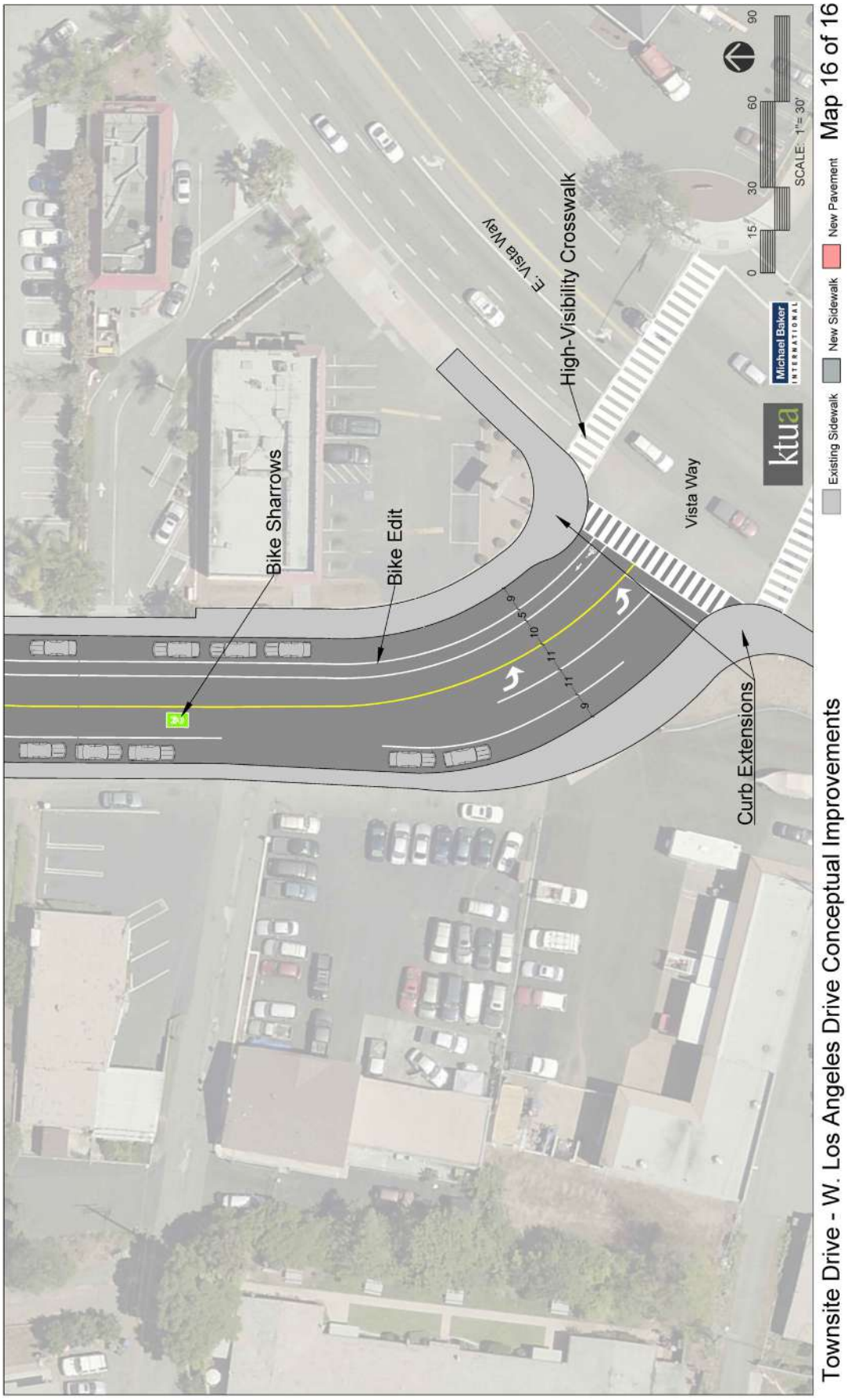


Figure 4-9: Final Townsite Drive/W. Los Angeles Drive Conceptual Design (cont)

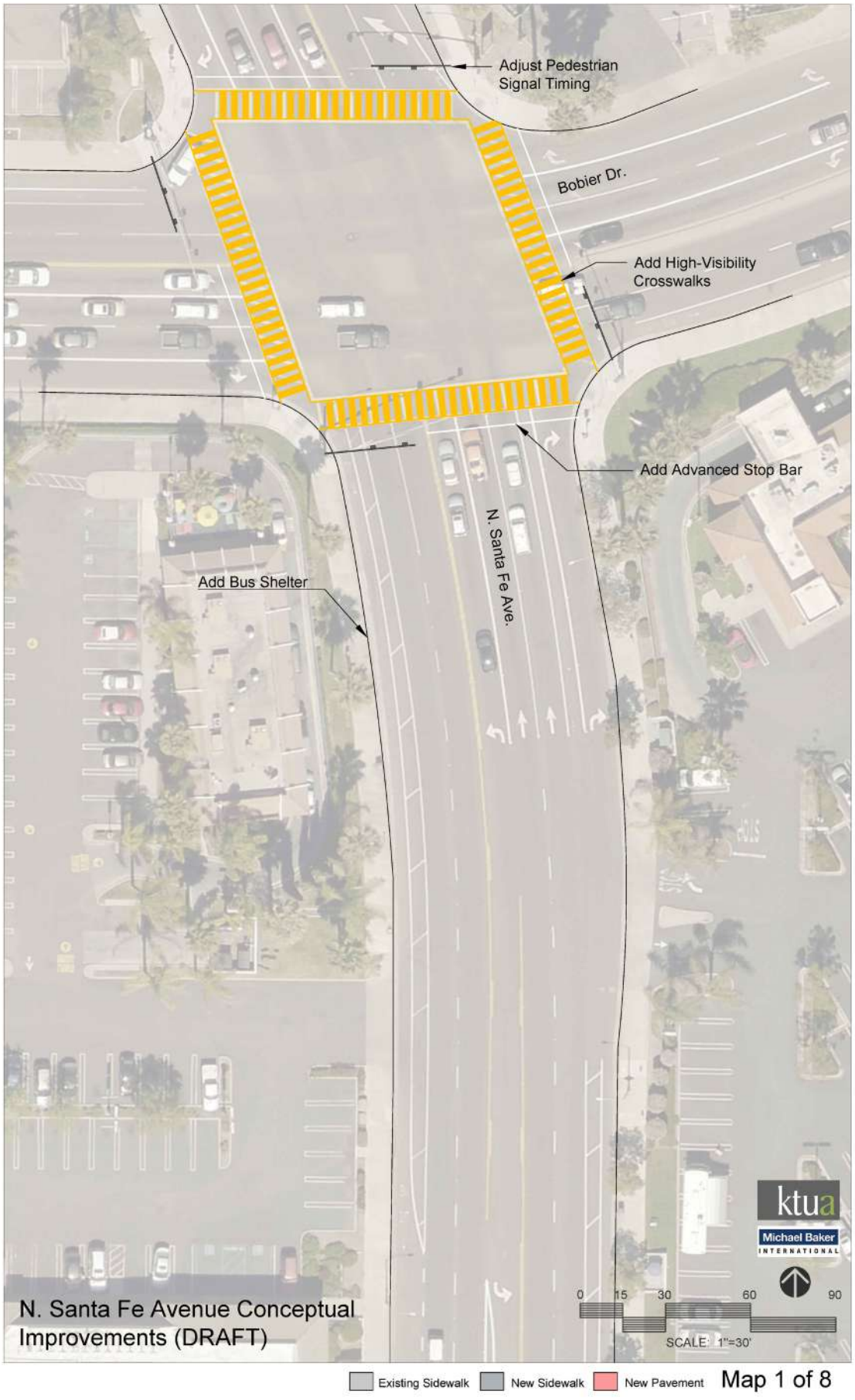


Figure 4-10: Final N. Santa Fe Avenue Conceptual Design

Figure 4-10: Final N. Santa Fe Avenue Conceptual Design (cont)

Figure 4-10: Final N. Santa Fe Avenue Conceptual Design (cont)

Figure 4-10: Final N. Santa Fe Avenue Conceptual Design (cont)

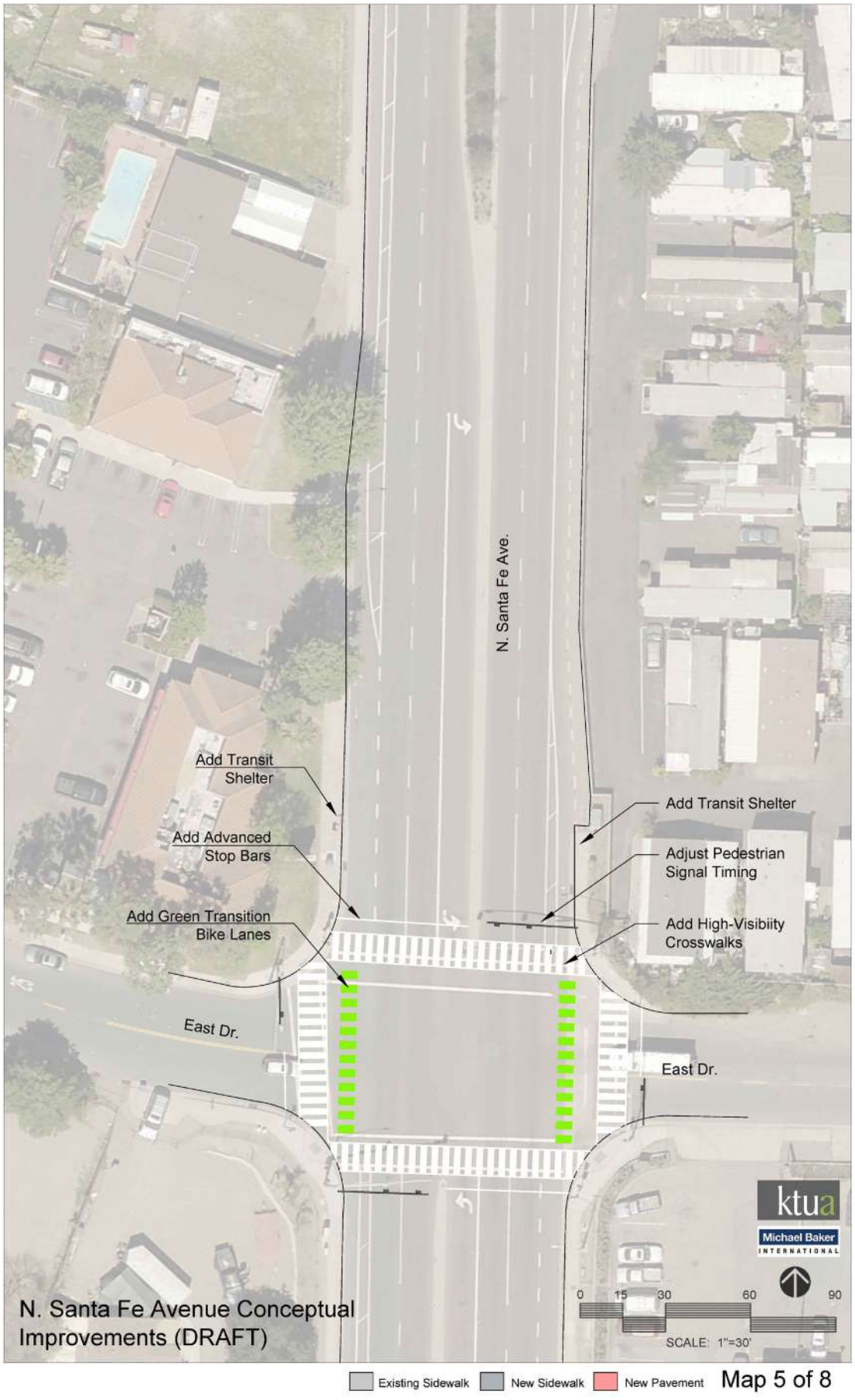


Figure 4-10: Final N. Santa Fe Avenue Conceptual Design (cont)

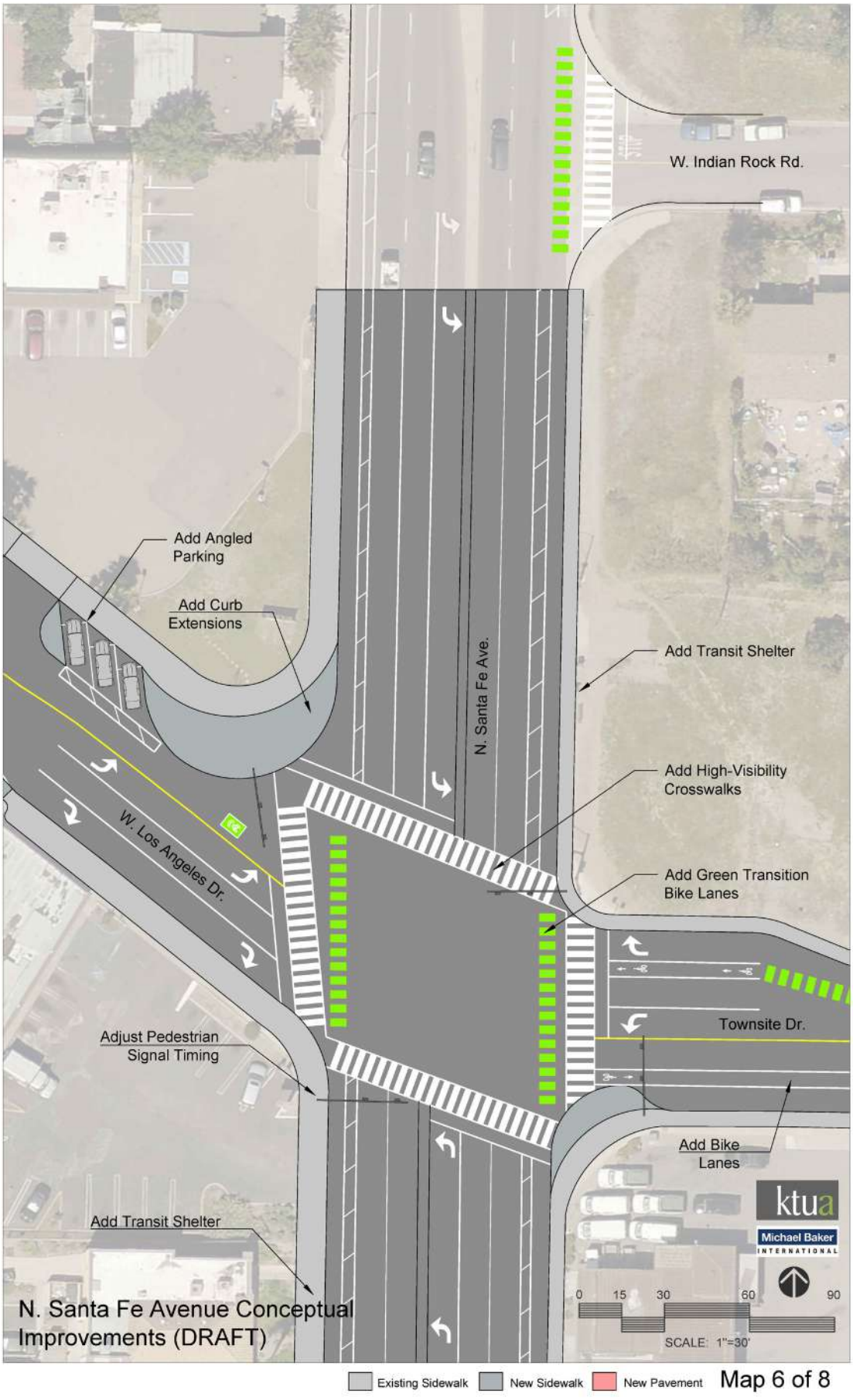


Figure 4-10: Final N. Santa Fe Avenue Conceptual Design (cont)

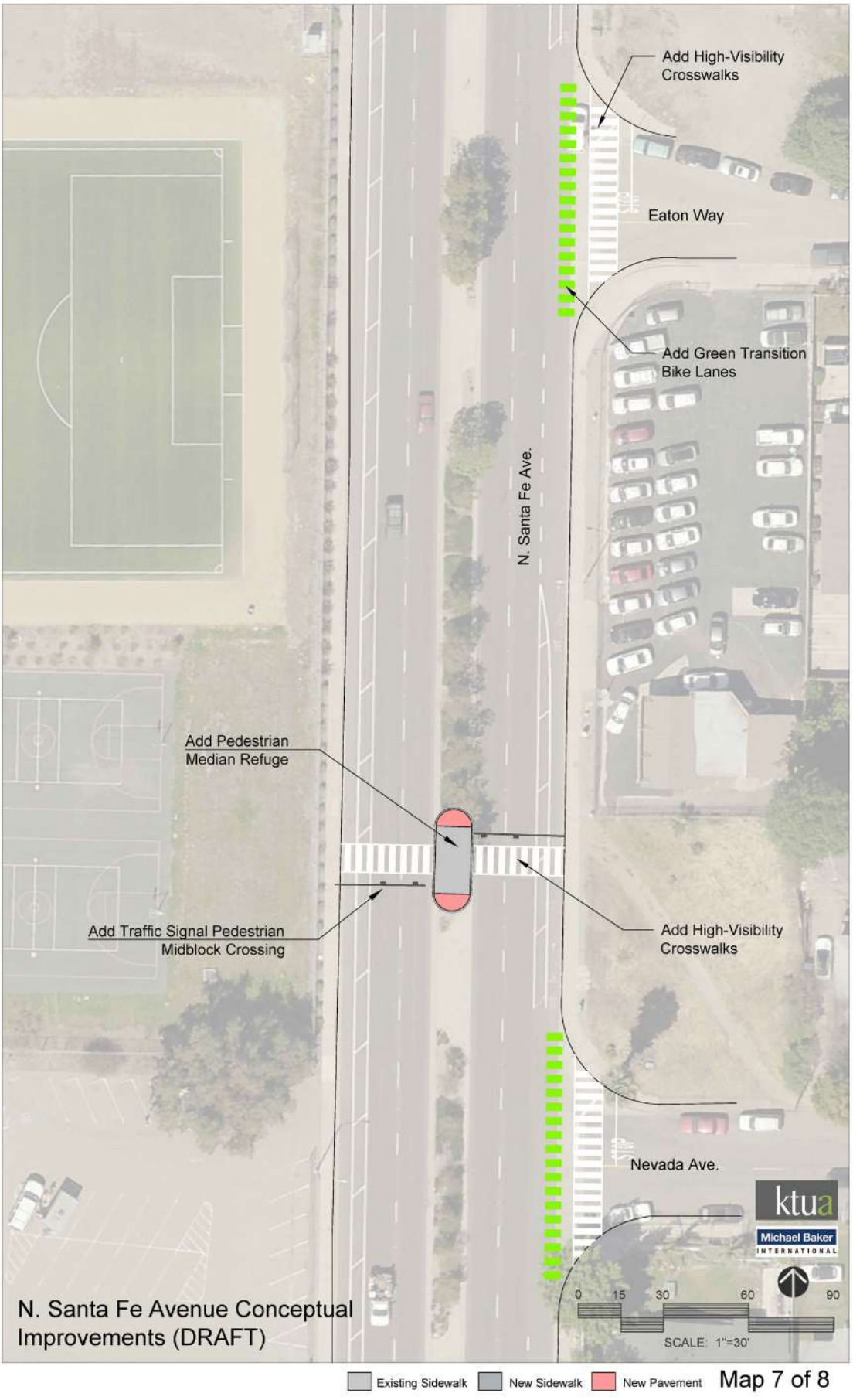


Figure 4-10: Final N. Santa Fe Avenue Conceptual Design (cont)

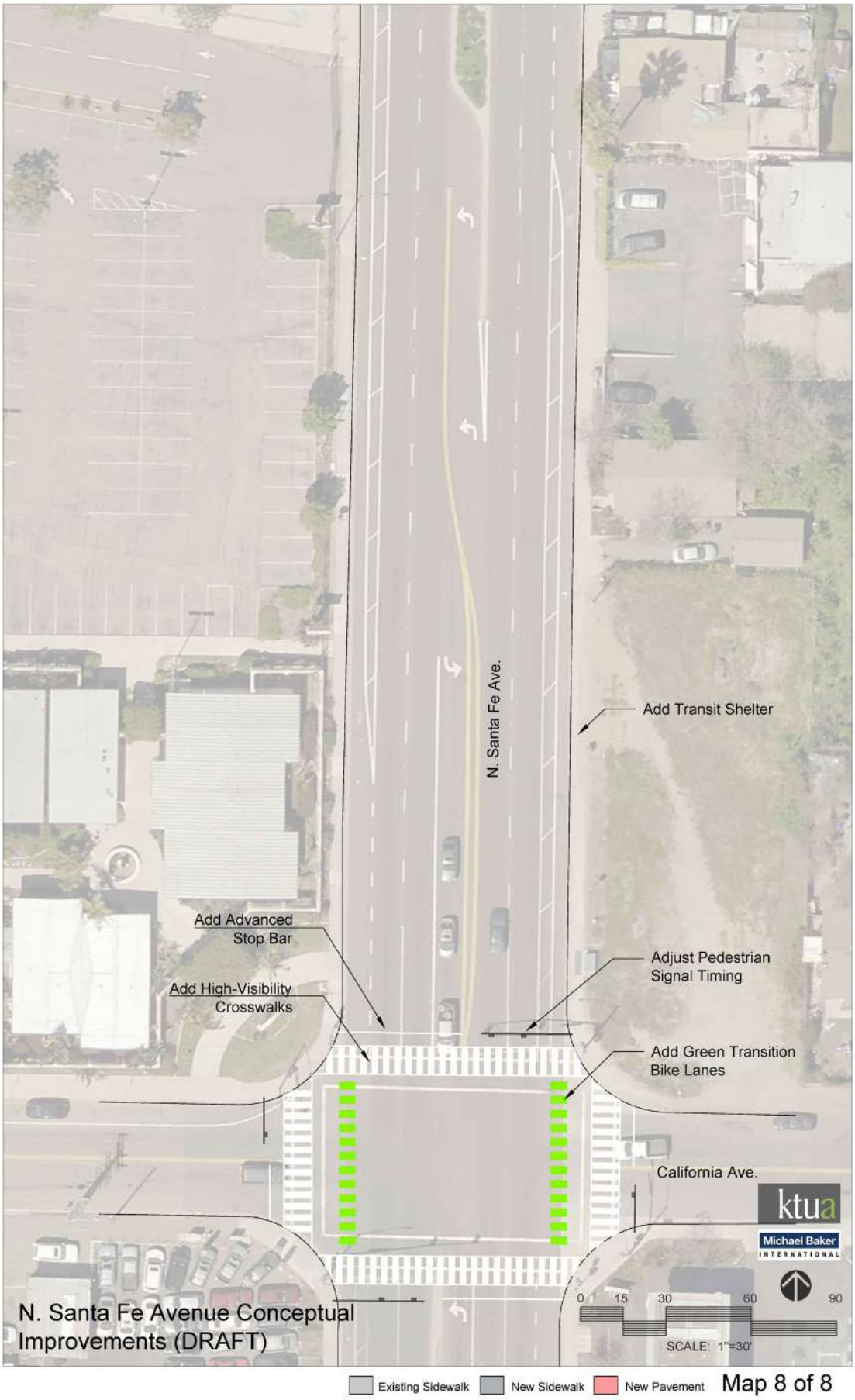


Figure 4-10: Final N. Santa Fe Avenue Conceptual Design (cont)

Cost Estimate

Important: Read the Instructions in the first sheet (tab) before entering data. Do not enter data in shaded fields (with formulas).

Project Information:

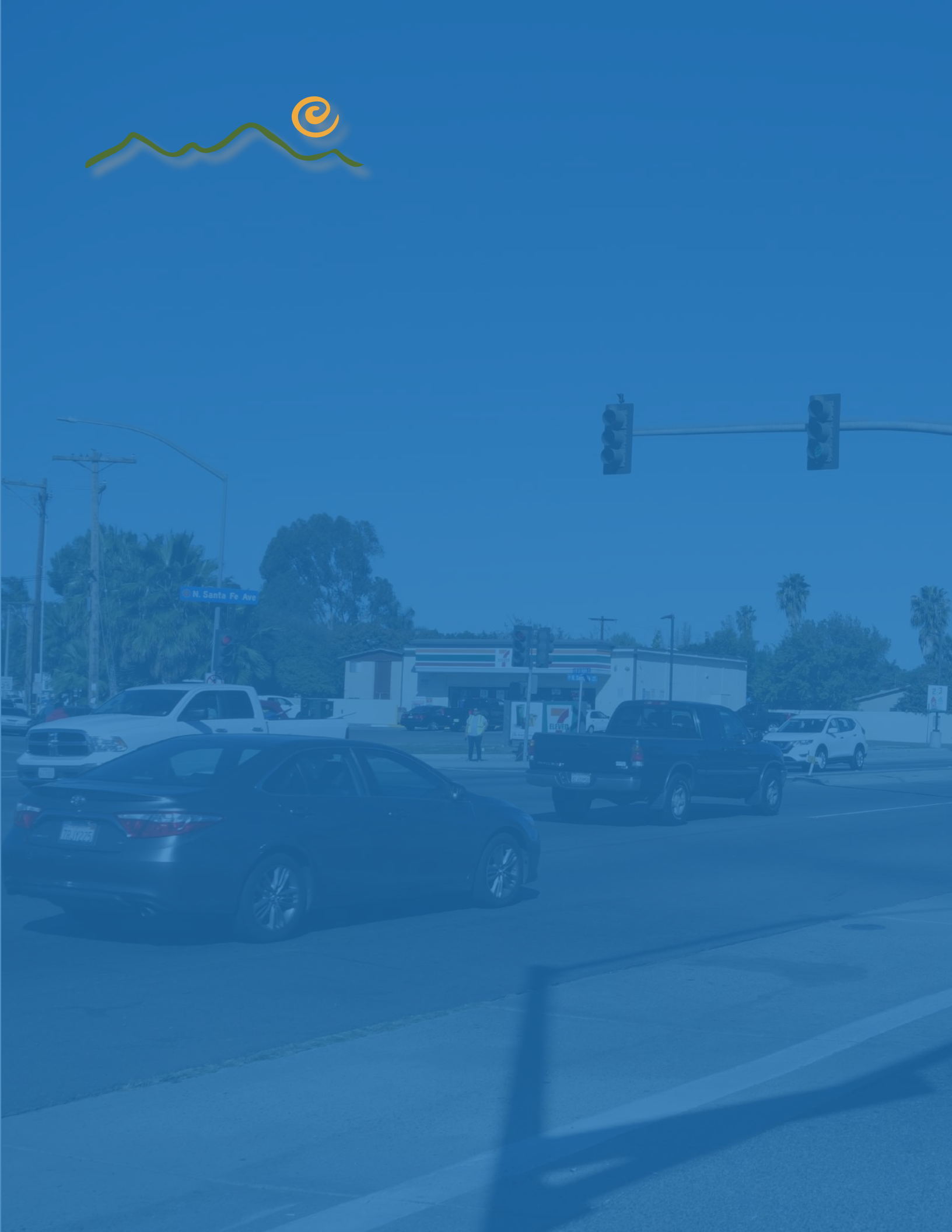
Agency:	City of Vista	**Date:**	18-Jul-18
Project Description:	Closes sidewalk gaps to schools, parks, and retail, adds bike facilities, traffic calming elements; traffic circles and curb exten		
Project Location:	Townsite Drive from Partridge Circle to Vista Way & Santa Fe Drive from Bobier Drive to California Avenue		
Licensed Engineer in responsible charge of preparing or reviewing this PSR-Equivalent Cost Estimate:	Ryan Zellers	**License #:**	CA 69470

Engineer's Estimate and Cost Breakdown:

Engineer's Estimate (for Construction Items Only)					Cost Breakdown: ATP Eligible Costs/Items		ATP Ineligible Costs/Items		Corps/CCC to construct	
Item	Quantity	Units	Unit Cost	Total Item Cost	%	$	%	$	%	$
al Overhead-Related Construction Items										
Mobilization	1	LS	$120,000.00	$120,000	100%	$120,000				
Traffic Control	1	LS	$100,000.00	$100,000	100%	$100,000				
Stormwater Protection Plan	1	LS	$30,000.00	$30,000	100%	$30,000				
Monument Preservation & Restoration	1	LS	$50,000.00	$50,000	100%	$50,000				
Utility Relocation Coordination	1	LS	$10,000.00	$10,000	100%	$10,000				
al Construction Items (non-decorative only)										
Full depth AC pavement removal	30160	SF	$3.00	$90,480	100%	$90,480				
Clear and grub	8300	SF	$4.00	$33,200	100%	$33,200				
Remove existing curb and gutter	1660	LF	$3.50	$5,810	100%	$5,810				
Install PCC median	4370	SF	$10.00	$43,700	100%	$43,700				
Install full depth AC pavement	14160	SF	$7.00	$99,120	100%	$99,120				
Install PCC sidewalk	24000	SF	$6.50	$156,000	100%	$156,000				
Install median curb	1280	LF	$28.00	$35,840	100%	$35,840				
Install 6" curb and gutter	4770	LF	$33.00	$157,410	100%	$157,410				
Install ADA ramp	50	EA	$3,000.00	$150,000	100%	$150,000				
Install transit shelter	8	EA	$12,000.00	$96,000	100%	$96,000				
Insall pedestrian refuge island	2	EA	$10,000.00	$20,000	100%	$20,000				
Install new PCC driveway	2400	SF	$10.00	$24,000	100%	$24,000				
Remove and Replace PCC driveway	2750	SF	$13.00	$35,750	100%	$35,750				
Signing and striping (inlc. removal)	1	LS	$225,000.00	$225,000	100%	$225,000				
Install pedestrian traffic signal	2	EA	$150,000.00	$300,000	100%	$300,000				
Traffic signal mod (Townsite/Santa Fe)	1	LS	$40,000.00	$40,000	100%	$40,000				
Traffic signal mod (Santa Fe/Bobier)	1	LS	$27,000.00	$27,000	100%	$27,000				
Traffic signal mod (Santa Fe/Pvt Dvwy)	1	LS	$10,000.00	$10,000	100%	$10,000				
Traffic signal mod (Santa Fe/Cananea)	1	LS	$20,000.00	$20,000	100%	$20,000				
Traffic signal mod (Santa Fe/East)	1	LS	$20,000.00	$20,000	100%	$20,000				
Traffic signal mod (Santa Fe/California)	1	LS	$20,000.00	$20,000	100%	$20,000				
Slurry seal	290000	SF	$0.70	$203,000	100%	$203,000				
Street Lighting	1	LS	$100,000.00	$100,000	100%	$100,000				
Water Quality	1	LS	$175,000.00	$175,000	100%	$175,000				
Grind and Overlay (to match edge cond.)	1	LS	$75,000.00	$75,000	100%	$75,000				
Drainage	1	LS	$150,000.00	$150,000	100%	$150,000				
							100%			
							100%			
Subtotal of Construction Items:				$2,622,310		$2,622,310				
Construction Item Contingencies (% of Construction Items):			**25.00%**	$655,578		$655,578				
Total (Construction Items & Contingencies) cost:				**$3,277,888**		**$3,277,888**				

Project Delivery Costs:

Type of Project Cost	Cost $	ATP Eligible Costs	Non-participating Costs	"PE" costs / "CON" costs	
Preliminary Engineering (PE)					
Environmental Studies and Permits(PA&ED):	$ 100,000	$100,000			
Plans, Specifications and Estimates (PS&E):	$ 400,000	$400,000			
Total PE:	$ 500,000	**$500,000**		15%	25% Max
Right of Way (RW)					
Right of Way Engineering:	$ -				
Acquisitions and Utilities:	$ -				
Total RW:	$ -				
Construction Engineering (CE)				"CE" costs / "CON" costs	
Construction Engineering (CE):	$ 400,000	$400,000		12%	15% Max
Total Project Delivery:	$900,000	**$900,000**			
Total Construction Costs:	$3,677,888	**$3,677,888**			
		ATP Eligible Costs	Non-participating Costs		
Total Project Cost:	$4,177,888	**$4,177,888**			


N. Santa Fe Ave

Townsite Drive / W. Los Angeles Drive and N. Santa Fe Corridor Study

Appendix A
Counts

Prepared by National Data & Surveying Services

Pedestrian

Location: North Dr/E/O Partridge Cir
City: Vista

Date: 2/15/2018
Day: Thursday

TIME	Peds (Sidewalk)				
	North Leg		South Leg		
	EB	WB	EB	WB	TOTAL
7:00 AM	2	0	5	4	***11***
7:15 AM	0	1	2	9	***12***
7:30 AM	0	0	5	23	***28***
7:45 AM	0	0	2	1	***3***
8:00 AM	1	0	1	3	***5***
8:15 AM	1	0	1	0	***2***
8:30 AM	1	0	2	0	***3***
8:45 AM	0	0	2	2	***4***
2:00 PM	1	0	0	4	***5***
2:15 PM	0	0	1	1	***2***
2:30 PM	0	0	29	1	***30***
2:45 PM	0	0	7	3	***10***
3:00 PM	0	0	1	9	***10***
3:15 PM	1	0	1	2	***4***
3:30 PM	1	0	2	5	***8***
3:45 PM	0	0	1	7	***8***
Totals	***8***	***1***	***62***	***74***	***145***

TIME	Peds (Midblock)		
	NT	ST	TOTAL
7:00 AM	0	0	***0***
7:15 AM	0	0	***0***
7:30 AM	0	0	***0***
7:45 AM	0	0	***0***
8:00 AM	0	0	***0***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
2:00 PM	0	0	***0***
2:15 PM	0	0	***0***
2:30 PM	0	0	***0***
2:45 PM	0	0	***0***
3:00 PM	0	0	***0***
3:15 PM	0	0	***0***
3:30 PM	0	0	***0***
3:45 PM	1	0	***1***
Totals	***1***	***0***	***1***

Prepared by National Data & Surveying Services

Bikes

Location: North Dr/E/O Partridge Cir

City: Vista

TIME	Bikes (Sidewalk)				
	North Leg		South Leg		
	EB	WB	EB	WB	TOTAL
7:00 AM	0	0	0	0	***0***
7:15 AM	0	0	0	0	***0***
7:30 AM	0	0	0	0	***0***
7:45 AM	0	0	0	0	***0***
8:00 AM	0	1	0	0	***1***
8:15 AM	0	0	0	0	***0***
8:30 AM	0	0	0	0	***0***
8:45 AM	0	0	4	2	***6***
2:00 PM	0	1	0	0	***1***
2:15 PM	0	0	0	0	***0***
2:30 PM	0	0	0	0	***0***
2:45 PM	0	0	1	0	***1***
3:00 PM	0	0	0	0	***0***
3:15 PM	0	0	0	0	***0***
3:30 PM	0	0	0	1	***1***
3:45 PM	0	0	0	0	***0***
Totals	***0***	***2***	***5***	***3***	***10***

Date: 2/15/2018

Day: Thursday

TIME	Bikes (Midblock)		
	NT	ST	TOTAL
7:00 AM	0	0	***0***
7:15 AM	0	0	***0***
7:30 AM	0	0	***0***
7:45 AM	0	0	***0***
8:00 AM	0	0	***0***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
2:00 PM	0	0	***0***
2:15 PM	0	0	***0***
2:30 PM	0	0	***0***
2:45 PM	0	0	***0***
3:00 PM	0	0	***0***
3:15 PM	0	0	***0***
3:30 PM	0	0	***0***
3:45 PM	0	0	***0***
Totals	***0***	***0***	***0***

Prepared by National Data & Surveying Services

Bikes

Location: Santa Fe Ave/bet. Cananea St & East Dr
City: Vista

Date: 2/15/2018
Day: Thursday

TIME	Bikes (Sidewalk)				
	East Leg		West Leg		
	NB	SB	NB	SB	TOTAL
7:00 AM	2	0	0	0	***2***
7:15 AM	1	0	0	0	***1***
7:30 AM	0	0	0	0	***0***
7:45 AM	0	0	0	2	***2***
8:00 AM	0	0	0	0	***0***
8:15 AM	0	0	0	0	***0***
8:30 AM	2	0	0	0	***2***
8:45 AM	1	0	0	0	***1***
2:00 PM	0	0	0	1	***1***
2:15 PM	2	0	0	0	***2***
2:30 PM	0	0	0	1	***1***
2:45 PM	2	1	0	0	***3***
3:00 PM	0	1	0	0	***1***
3:15 PM	0	0	0	0	***0***
3:30 PM	2	0	0	1	***3***
3:45 PM	0	1	0	0	***1***
Totals	***12***	***3***	***0***	***5***	***20***

TIME	Bikes (Midblock)		
	ET	WT	TOTAL
7:00 AM	0	0	***0***
7:15 AM	0	0	***0***
7:30 AM	0	0	***0***
7:45 AM	0	0	***0***
8:00 AM	0	0	***0***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
2:00 PM	0	0	***0***
2:15 PM	0	0	***0***
2:30 PM	0	0	***0***
2:45 PM	0	0	***0***
3:00 PM	0	0	***0***
3:15 PM	0	0	***0***
3:30 PM	0	0	***0***
3:45 PM	0	0	***0***
Totals	***0***	***0***	***0***

Prepared by National Data & Surveying Services

Pedestrian

Location: Santa Fe Ave/bet. Cananea St & East Dr
City: Vista

Date: 2/15/2018
Day: Thursday

TIME	Peds (Sidewalk)				
	East Leg		West Leg		
	NB	SB	NB	SB	TOTAL
7:00 AM	44	2	17	0	***63***
7:15 AM	16	2	30	1	***49***
7:30 AM	20	0	18	2	***40***
7:45 AM	2	2	16	3	***23***
8:00 AM	6	4	2	2	***14***
8:15 AM	4	2	4	4	***14***
8:30 AM	1	3	1	4	***9***
8:45 AM	2	1	1	2	***6***
2:00 PM	5	4	3	0	***12***
2:15 PM	1	3	6	5	***15***
2:30 PM	3	15	4	6	***28***
2:45 PM	1	87	8	36	***132***
3:00 PM	6	23	0	38	***67***
3:15 PM	0	13	2	10	***25***
3:30 PM	0	17	3	29	***49***
3:45 PM	5	17	4	12	***38***
Totals	***116***	***195***	***119***	***154***	***584***

TIME	Peds (Midblock)		
	ET	WT	TOTAL
7:00 AM	0	1	***1***
7:15 AM	3	0	***3***
7:30 AM	3	0	***3***
7:45 AM	0	0	***0***
8:00 AM	2	1	***3***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
2:00 PM	3	1	***4***
2:15 PM	2	3	***5***
2:30 PM	1	0	***1***
2:45 PM	0	2	***2***
3:00 PM	3	3	***6***
3:15 PM	0	0	***0***
3:30 PM	0	2	***2***
3:45 PM	0	0	***0***
Totals	***17***	***13***	***30***

Prepared by National Data & Surveying Services

Bikes

Location: Santa Fe Ave/bet. Townsite Dr & California Ave
City: Vista

Date: 2/15/2018
Day: Thursday

TIME	Bikes (Sidewalk)				
	East Leg		West Leg		
	NB	SB	NB	SB	TOTAL
7:00 AM	1	0	0	1	***2***
7:15 AM	0	0	0	1	***1***
7:30 AM	0	0	0	0	***0***
7:45 AM	0	1	0	3	***4***
8:00 AM	0	0	1	0	***1***
8:15 AM	1	0	0	0	***1***
8:30 AM	0	0	1	2	***3***
8:45 AM	1	0	0	0	***1***
2:00 PM	1	0	0	0	***1***
2:15 PM	1	0	1	0	***2***
2:30 PM	0	1	0	0	***1***
2:45 PM	2	1	0	0	***3***
3:00 PM	1	0	1	0	***2***
3:15 PM	2	0	0	0	***2***
3:30 PM	0	0	0	2	***2***
3:45 PM	1	0	0	4	***5***
Totals	***11***	***3***	***4***	***13***	***31***

TIME	Bikes (Midblock)		
	ET	WT	TOTAL
7:00 AM	0	0	***0***
7:15 AM	0	0	***0***
7:30 AM	0	0	***0***
7:45 AM	0	0	***0***
8:00 AM	0	0	***0***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
2:00 PM	0	0	***0***
2:15 PM	1	0	***1***
2:30 PM	2	0	***2***
2:45 PM	1	0	***1***
3:00 PM	0	1	***1***
3:15 PM	0	0	***0***
3:30 PM	0	0	***0***
3:45 PM	0	0	***0***
Totals	***4***	***1***	***5***

Prepared by National Data & Surveying Services

Pedestrian

Location: Santa Fe Ave/bet. Townsite Dr & California Ave

City: Vista

Date: 2/15/2018

Day: Thursday

TIME	Peds (Sidewalk)				
	East Leg		West Leg		
	NB	SB	NB	SB	TOTAL
7:00 AM	5	6	0	4	***15***
7:15 AM	7	5	1	11	***24***
7:30 AM	7	6	7	18	***38***
7:45 AM	0	9	8	34	***51***
8:00 AM	5	9	13	33	***60***
8:15 AM	2	1	0	8	***11***
8:30 AM	4	1	2	1	***8***
8:45 AM	0	1	0	2	***3***
2:00 PM	2	1	9	7	***19***
2:15 PM	7	2	5	10	***24***
2:30 PM	4	6	51	7	***68***
2:45 PM	4	27	18	7	***56***
3:00 PM	2	16	2	17	***37***
3:15 PM	4	7	6	5	***22***
3:30 PM	2	9	4	3	***18***
3:45 PM	3	4	4	3	***14***
Totals	***58***	***110***	***130***	***170***	***468***

TIME	Peds (Midblock)		
	ET	WT	TOTAL
7:00 AM	0	0	***0***
7:15 AM	0	1	***1***
7:30 AM	1	1	***2***
7:45 AM	0	0	***0***
8:00 AM	4	5	***9***
8:15 AM	1	0	***1***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
2:00 PM	0	0	***0***
2:15 PM	2	2	***4***
2:30 PM	7	1	***8***
2:45 PM	4	2	***6***
3:00 PM	4	4	***8***
3:15 PM	2	1	***3***
3:30 PM	0	0	***0***
3:45 PM	0	0	***0***
Totals	***25***	***17***	***42***

Prepared by National Data & Surveying Services

Pedestrian

Location: Townsite Dr E/O Citrus Ave
City: Vista

Date: 2/21/2018
Day: Wednesday

TIME	Peds (Sidewalk)				
	North Leg		South Leg		
	EB	WB	EB	WB	TOTAL
7:00 AM	2	2	2	2	***8***
7:15 AM	1	2	2	0	***5***
7:30 AM	0	3	1	0	***4***
7:45 AM	1	2	0	0	***3***
8:00 AM	3	1	0	0	***4***
8:15 AM	1	0	3	0	***4***
8:30 AM	0	1	0	2	***3***
8:45 AM	0	0	0	1	***1***
2:00 PM	0	3	0	0	***3***
2:15 PM	0	1	1	4	***6***
2:30 PM	2	0	0	3	***5***
2:45 PM	3	0	2	1	***6***
3:00 PM	5	2	1	1	***9***
3:15 PM	5	4	2	3	***14***
3:30 PM	22	2	1	1	***26***
3:45 PM	3	1	4	0	***8***
Totals	***48***	***24***	***19***	***18***	***109***

TIME	Peds (Midblock)		
	NT	ST	TOTAL
7:00 AM	1	1	***2***
7:15 AM	0	1	***1***
7:30 AM	0	0	***0***
7:45 AM	0	0	***0***
8:00 AM	0	0	***0***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
2:00 PM	0	0	***0***
2:15 PM	0	0	***0***
2:30 PM	0	1	***1***
2:45 PM	0	2	***2***
3:00 PM	2	3	***5***
3:15 PM	0	1	***1***
3:30 PM	1	0	***1***
3:45 PM	0	2	***2***
Totals	***4***	***11***	***15***

Prepared by National Data & Surveying Services

Bikes

Location: Townsite Dr E/O Citrus Ave
City: Vista

Date: 2/21/2018
Day: Wednesday

TIME	Bikes (Sidewalk)				
	North Leg		South Leg		
	EB	WB	EB	WB	TOTAL
7:00 AM	0	0	0	0	***0***
7:15 AM	0	0	0	0	***0***
7:30 AM	0	0	0	0	***0***
7:45 AM	0	0	0	0	***0***
8:00 AM	0	0	0	0	***0***
8:15 AM	0	0	0	0	***0***
8:30 AM	0	0	0	0	***0***
8:45 AM	0	0	0	0	***0***
2:00 PM	0	0	0	0	***0***
2:15 PM	0	0	0	0	***0***
2:30 PM	0	0	0	0	***0***
2:45 PM	0	0	0	0	***0***
3:00 PM	0	0	0	0	***0***
3:15 PM	0	0	0	0	***0***
3:30 PM	0	1	0	0	***1***
3:45 PM	0	0	0	0	***0***
Totals	***0***	***1***	***0***	***0***	***1***

TIME	Bikes (Midblock)		
	NT	ST	TOTAL
7:00 AM	0	0	***0***
7:15 AM	0	0	***0***
7:30 AM	0	0	***0***
7:45 AM	0	0	***0***
8:00 AM	0	0	***0***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
2:00 PM	0	0	***0***
2:15 PM	0	0	***0***
2:30 PM	0	0	***0***
2:45 PM	0	0	***0***
3:00 PM	0	0	***0***
3:15 PM	0	0	***0***
3:30 PM	0	0	***0***
3:45 PM	0	0	***0***
Totals	***0***	***0***	***0***

Prepared by National Data & Surveying Services

Pedestrian

Location: Townsite Dr W/O E Indian Rock RD
City: Vista

Date: 2/21/2018
Day: Wednesday

TIME	Peds (Sidewalk)				
	North Leg		South Leg		
	EB	WB	EB	WB	TOTAL
7:00 AM	0	5	3	4	***12***
7:15 AM	0	1	0	1	***2***
7:30 AM	0	10	6	2	***18***
7:45 AM	1	8	1	0	***10***
8:00 AM	3	1	0	1	***5***
8:15 AM	0	1	3	0	***4***
8:30 AM	0	2	0	0	***2***
8:45 AM	0	0	0	0	***0***
2:00 PM	0	3	0	0	***3***
2:15 PM	0	3	1	5	***9***
2:30 PM	3	0	1	1	***5***
2:45 PM	6	0	4	1	***11***
3:00 PM	4	1	1	1	***7***
3:15 PM	5	4	1	3	***13***
3:30 PM	15	0	1	3	***19***
3:45 PM	6	0	3	0	***9***
Totals	***43***	***39***	***25***	***22***	***129***

TIME	Peds (Midblock)		
	NT	ST	TOTAL
7:00 AM	3	1	***4***
7:15 AM	3	0	***3***
7:30 AM	0	1	***1***
7:45 AM	1	1	***2***
8:00 AM	1	0	***1***
8:15 AM	0	0	***0***
8:30 AM	0	2	***2***
8:45 AM	0	1	***1***
2:00 PM	0	1	***1***
2:15 PM	1	1	***2***
2:30 PM	0	2	***2***
2:45 PM	1	1	***2***
3:00 PM	0	1	***1***
3:15 PM	1	0	***1***
3:30 PM	1	1	***2***
3:45 PM	1	1	***2***
Totals	***13***	***14***	***27***

Prepared by National Data & Surveying Services

Bikes

Location: Townsite Dr W/O E Indian Rock RD
City: Vista

Date: 2/21/2018
Day: Wednesday

TIME	Bikes (Sidewalk)				
	North Leg		South Leg		
	EB	WB	EB	WB	TOTAL
7:00 AM	0	0	0	0	***0***
7:15 AM	0	0	0	0	***0***
7:30 AM	0	0	0	0	***0***
7:45 AM	0	0	0	0	***0***
8:00 AM	0	0	0	0	***0***
8:15 AM	0	1	0	0	***1***
8:30 AM	0	0	0	0	***0***
8:45 AM	1	0	0	1	***2***
2:00 PM	0	1	0	0	***1***
2:15 PM	0	0	0	0	***0***
2:30 PM	0	0	0	0	***0***
2:45 PM	0	0	0	0	***0***
3:00 PM	0	0	0	0	***0***
3:15 PM	0	0	0	0	***0***
3:30 PM	0	1	0	0	***1***
3:45 PM	0	0	0	0	***0***
Totals	***1***	***3***	***0***	***1***	***5***

TIME	Bikes (Midblock)		
	NT	WT	TOTAL
7:00 AM	0	0	***0***
7:15 AM	0	0	***0***
7:30 AM	0	0	***0***
7:45 AM	0	0	***0***
8:00 AM	0	0	***0***
8:15 AM	0	0	***0***
8:30 AM	0	0	***0***
8:45 AM	0	0	***0***
2:00 PM	0	0	***0***
2:15 PM	0	0	***0***
2:30 PM	0	0	***0***
2:45 PM	0	0	***0***
3:00 PM	0	0	***0***
3:15 PM	0	0	***0***
3:30 PM	0	0	***0***
3:45 PM	0	0	***0***
Totals	***0***	***0***	***0***

Prepared by National Data & Surveying Services

Santa Fe Ave & Bobier Dr

Peak Hour Turning Movement Count

ID: 18-04044-009
City: Vista

Day: Thursday
Date: 02/15/2018

PEAK HOURS	COUNT PERIODS
07:00 AM - 08:00 AM	07:00 AM - 09:00 AM
NONE	NONE
02:30 PM - 03:30 PM	02:00 PM - 04:00 PM

Santa Fe Ave — SOUTHBOUND

AM	247	720	244	0	707	AM
NOON	0	0	0	0	0	NOON
PM	118	482	200	0	923	PM

EASTBOUND (Bobier Dr)

AM	NOON	PM		
1094	0	806	⇦	
0	0	0	↶	0
153	0	189	↱	1
538	0	627	→	2
194	0	154	↳	1
AM	NOON	PM		

WESTBOUND (Bobier Dr)

PM	NOON	AM		
202	0	168	↰	1
484	0	658	←	2
188	0	237	↰	1
0	0	0	↶	0
1021	0	987	⇨	
PM	NOON	AM		

NORTHBOUND — Santa Fe Ave

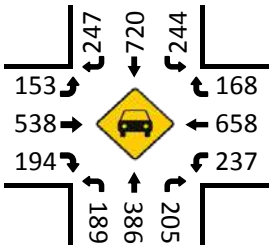
PM	824	0	204	532	194	PM
NOON	0	0	0	0	0	NOON
AM	1151	0	189	386	205	AM

CONTROL

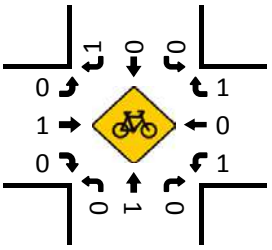
Signalized

TEV	3939 AM	0 NOON	3574 PM
PHF	0.85		0.94

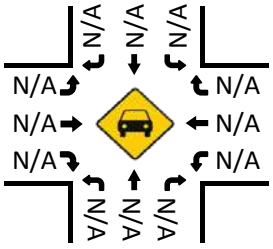
Total Vehicles (AM)



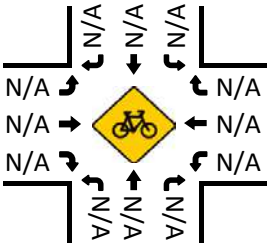
Bikes (AM)



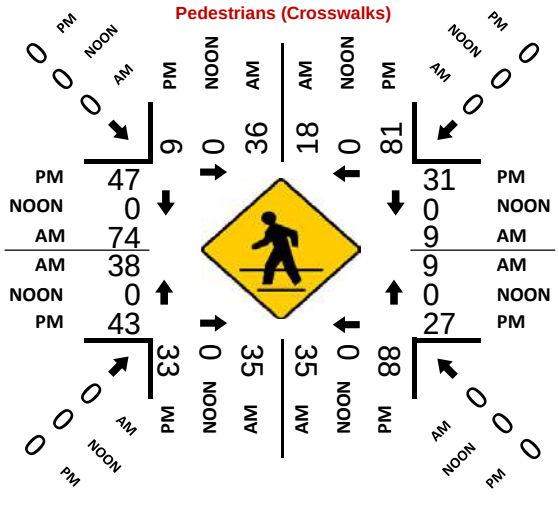
Total Vehicles (Noon)



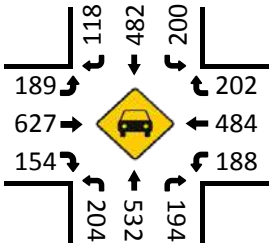
Bikes (NOON)



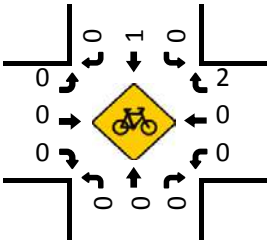
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Santa Fe Ave & Indian Rock Rd/Cananea St

Peak Hour Turning Movement Count

ID: 18-04044-010
City: Vista

Day: Thursday
Date: 02/15/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
02:45 PM - 03:45 PM	02:00 PM - 04:00 PM

Santa Fe Ave — SOUTHBOUND

AM	85	1129	71	6	796	AM
NOON	0	0	0	0	0	NOON
PM	76	816	92	23	1014	PM

Indian Rock Rd/Cananea St — EASTBOUND

AM	NOON	PM	
160	0	162	
0	0	0	0
63	0	56	0
18	0	28	1
51	0	31	0
AM	NOON	PM	

Indian Rock Rd/Cananea St — WESTBOUND

PM	NOON	AM	
68	0	118	0
28	0	31	1
37	0	46	0
0	0	0	0
167	0	116	
PM	NOON	AM	

Santa Fe Ave — NORTHBOUND

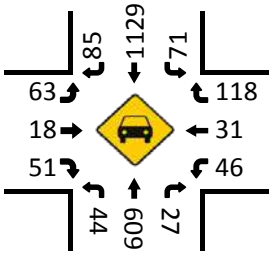
PM	916	32	58	867	47	PM
NOON	0	0	0	0	0	NOON
AM	1236	10	44	609	27	AM

	0	2	1	0
	0	1	2	0

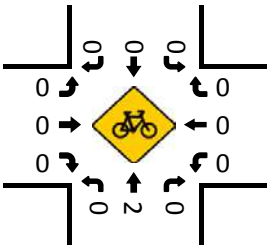
CONTROL: Signalized

TEV	2308 AM	0 NOON	2259 PM
PHF	0.87		0.91

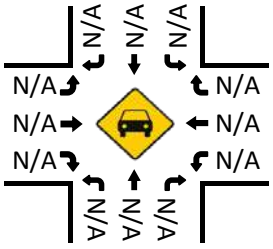
Total Vehicles (AM)



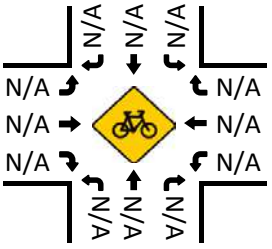
Bikes (AM)



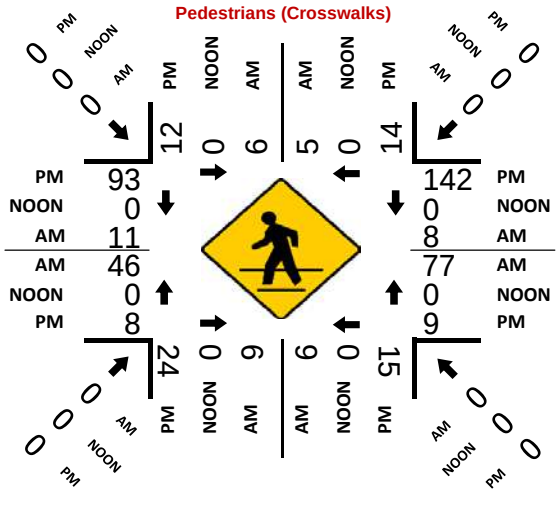
Total Vehicles (Noon)



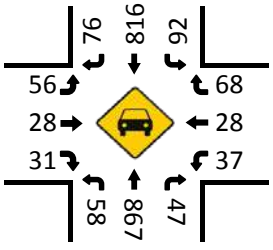
Bikes (NOON)



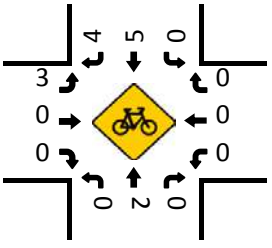
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Santa Fe Ave & Townsite Dr

Peak Hour Turning Movement Count

ID: 18-04044-011
City: Vista

Day: Thursday
Date: 02/15/2018

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	02:45 PM - 03:45 PM	02:00 PM - 04:00 PM

Santa Fe Ave — SOUTHBOUND

	Right	Through	Left	U-Turn	Departing
AM	140	1036	90	4	632
NOON	0	0	0	0	0
PM	106	686	74	22	1034
Lanes	0	2	1	0	

Townsite Dr — EASTBOUND

	AM	NOON	PM	Lanes
Departing	334	0	300	
U-Turn	0	0	0	0
Left	102	0	106	1
Through	126	0	151	1
Right	165	0	119	1

Townsite Dr — WESTBOUND

	PM	NOON	AM	Lanes
Right	78	0	70	1
Through	96	0	108	1
Left	52	0	100	1
U-Turn	0	0	0	0
Departing	280	0	256	

Santa Fe Ave — NORTHBOUND

	Departing	U-Turn	Left	Through	Right
Lanes		0	1	2	0
PM	889	32	98	828	55
NOON	0	0	0	0	0
AM	1348	47	86	456	40

CONTROL

Signalized

	AM	NOON	PM
TEV	2570	0	2503
PHF	0.96		0.90

Total Vehicles (AM)

Approach	Left	Through	Right
Southbound	90	1036	140
Eastbound	102	126	165
Westbound	100	108	70
Northbound	86	456	40

Total Vehicles (Noon)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach	Left	Through	Right
Southbound	74	686	106
Eastbound	106	151	119
Westbound	52	96	78
Northbound	98	828	55

Bikes (AM)

Approach	Left	Through	Right
Southbound	0	3	0
Eastbound	0	0	0
Westbound	0	1	0
Northbound	0	0	0

Bikes (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Bikes (PM)

Approach	Left	Through	Right
Southbound	0	1	0
Eastbound	0	1	0
Westbound	0	1	0
Northbound	0	4	2

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North leg	Eastbound	0	0	0
North leg	Westbound	0	0	0
West leg	Southbound	30	0	32
West leg	Northbound	12	0	16
East leg	Southbound	23	0	75
East leg	Northbound	35	0	14
South leg	Eastbound	40	0	72
South leg	Westbound	68	0	30
NW diagonal		0	0	0
NE diagonal		0	0	0
SW diagonal		0	0	0
SE diagonal		0	0	0

Prepared by National Data & Surveying Services

Santa Fe Ave & California Ave

Peak Hour Turning Movement Count

ID: 18-04044-012
City: Vista

Day: Thursday
Date: 02/15/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
02:45 PM - 03:45 PM	02:00 PM - 04:00 PM

SOUTHBOUND (Santa Fe Ave)

AM	56	1027	42	24	678	AM
NOON	0	0	0	0	0	NOON
PM	65	694	64	53	1050	PM

EASTBOUND (California Ave)

AM	NOON	PM	
224	0	214	
0	0	0	0
93	0	102	0
82	0	65	1
142	0	109	0

WESTBOUND (California Ave)

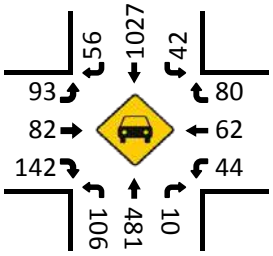
PM	NOON	AM	
58	0	80	0
45	0	62	1
27	0	44	0
0	0	0	0
150	0	134	

NORTHBOUND (Santa Fe Ave)

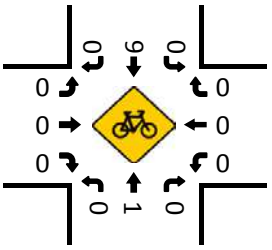
PM	843	13	104	837	21	PM
NOON	0	0	0	0	0	NOON
AM	1218	5	106	481	10	AM

CONTROL			
Signalized			
TEV	2254 AM	0 NOON	2257 PM
PHF	0.98		0.88

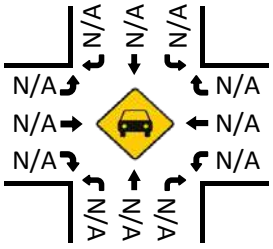
Total Vehicles (AM)



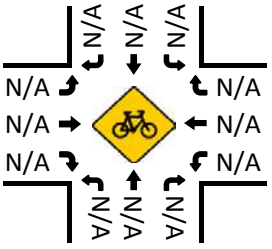
Bikes (AM)



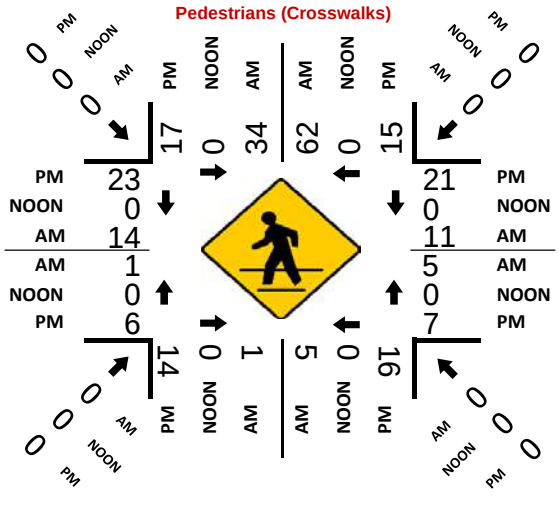
Total Vehicles (Noon)



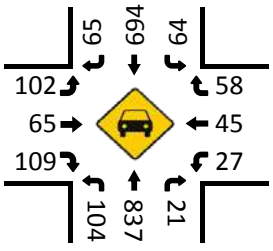
Bikes (NOON)



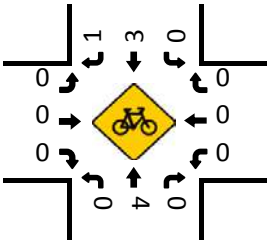
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Citrus Ave & Townsite Dr

Peak Hour Turning Movement Count

ID: 18-04044-013
City: Vista

Day: Thursday
Date: 02/15/2018

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
03:00 PM - 04:00 PM	02:00 PM - 04:00 PM

SOUTHBOUND (Citrus Ave)

AM	35	38	7	0	55	AM
NOON	0	0	0	0	0	NOON
PM	24	20	9	0	66	PM

EASTBOUND (Townsite Dr)

AM	NOON	PM	
245	0	221	
0	0	0	0
14	0	26	1
167	0	177	1
52	0	56	0
AM	NOON	PM	

WESTBOUND (Townsite Dr)

PM	NOON	AM	
23	0	13	0
169	0	168	1
7	0	6	1
0	0	0	0
199	0	179	
PM	NOON	AM	

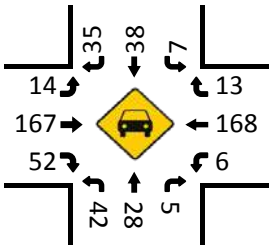
NORTHBOUND (Citrus Ave)

PM	83	0	28	17	13	PM
NOON	0	0	0	0	0	NOON
AM	96	0	42	28	5	AM

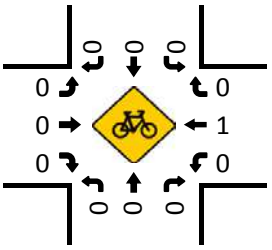
CONTROL: 4-Way Stop

	AM	NOON	PM
TEV	575	0	569
PHF	0.96		0.89

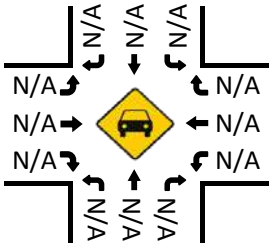
Total Vehicles (AM)



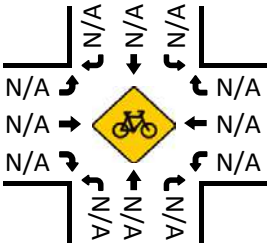
Bikes (AM)



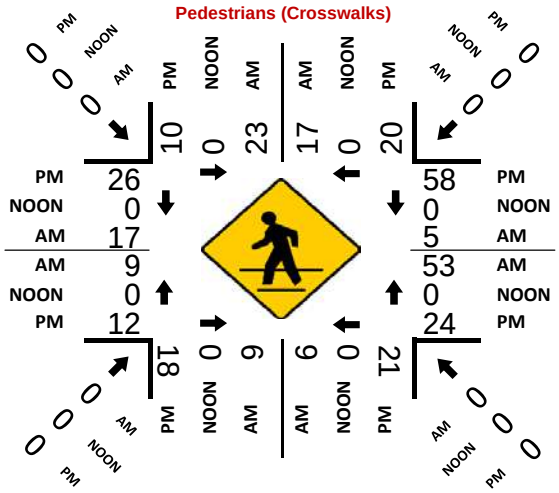
Total Vehicles (NOON)



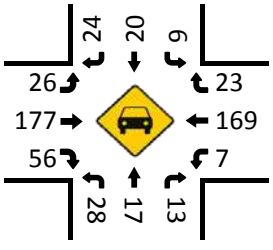
Bikes (NOON)



Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)