

d. UPDATE ON ECR COMPLETE STREETS GAP CLOSURE PROJECT – R. OVADIA



Town of Atherton

TRANSPORTATION, BICYCLE AND PEDESTRIAN SAFETY COMMITTEE STAFF REPORT – REGULAR AGENDA

TO: HONORABLE CHAIR AND COMMITTEE

FROM: ROBERT OVADIA, PUBLIC WORKS DIRECTOR

DATE: JULY 23, 2024

SUBJECT: EL CAMINO REAL COMPLETE STREETS GAP CLOSURE STUDY

RECOMMENDATION

It is recommended that the Committee receive an update on the El Camino Real Complete Streets Gap Closure Study and provide feedback regarding current status and next steps.

BACKGROUND

The Town was awarded grant from the San Mateo Transportation Authority (TA) through their Pedestrian & Bicycle Program (Cycle 6) to evaluate the 1.5-mile segment of El Camino Real from north of Selby Lane to Valparaiso Avenue. With its lack of pedestrian and bicycle infrastructure, the need for improvement have been outlined in various state, regional, and local plans, including: the Town's Bicycle and Pedestrian Master Plan, the San Mateo County City/County Association of Governments (C/CAG) Comprehensive Bicycle and Pedestrian Plan, Caltrans District 4 Bicycle and Pedestrian Plan, Reimagine SamTrans initiative, and the Grand Boulevard Initiative. El Camino Real is a State highway, is a route of significance to the County and the region and serves the highest ridership bus route in the County.

As the roadway segment is under the State's jurisdiction, project ties into various communities (San Mateo County, Redwood City, Menlo Park), and will be of significant cost, it is not a project that the Town can address or fund on its own. The TA Pedestrian & Bicycle Grant provided an opportunity to fund the initial planning efforts and included technical support from the TA and their consultant, WSP, to evaluate existing conditions, conduct public outreach, and develop a conceptual design for bicycle and pedestrian facilities along this stretch of El Camino Real.

WSP has completed its evaluation of the existing conditions and its initial public outreach efforts regarding needs, issues and concerns regarding the roadway, traffic and bicycle and pedestrian mobility.

ANALYSIS

Existing Conditions:

In the Draft Existing Conditions Report, WSP documented traffic flow, safety, and multimodal accessibility data along a critical 1.5-mile segment of El Camino Real between Selby Lane and Valparaiso Ave in the Town of Atherton. The purpose of the memo, which is part of a larger Traffic Engineering Performance Assessment Report (TEPA), is to document and highlight the collected data. The Draft Existing Conditions Report is provided as Attachment 1.

Key Findings:

- **Traffic Volume and Flow:** Data from Turning Movement Counts (TMCs) and Automatic Traffic Recorders (ATR) reveal peak traffic volumes during key morning and evening hours. The El Camino Real bi-directional peak volumes reach 2,900 vehicles from 07:45 AM to 08:45 AM, and 2,980 vehicles from 04:30 PM to 05:30 PM. The bi-directional Average Daily Traffic (ADT) is 36,058 vehicles, emphasizing the corridor's essential role in local and regional mobility, underscoring the need for focused traffic management, and planning during these critical periods.
- **Crash Analysis:** An analysis spanning from 2018 to 2022 identified 73 injury crashes. Notably, two pedestrian fatalities were recorded, highlighting the need for safety interventions, particularly for non-motorized users.
- **Travel Characteristics:** StreetLight data analysis reveals distinct travel patterns among bicyclists, pedestrians, transit users, and vehicle drivers. An analysis was conducted to determine the difference between "local" and "through" vehicle trips, with local trips defined as those that begin or end in the five census tracts surrounding the project corridor and through trips defined as those that begin or end outside those five census tracts. The analysis of local and through vehicle trips indicates that for an average day and time, the project corridor facilitates more through trips within the study area, reflecting its role as a major north-south artery in the county. These patterns change by time of day, with more local trips in the AM peak and more through trips in the PM peak. Additionally, a significant percentage of vehicle trips are under five miles, indicating potential for a shift to bicycles if safer infrastructure is added.

Public Outreach:

As part of the initial phase of the study, the Town, the TA, and Winter Consulting engaged in a series of community outreach events to gather input from various stakeholders. The goal was to establish a shared understanding of the project and collect insights on existing conditions, opportunities, and challenges. In this engagement phase, the project team organized various engagement activities including one technical working group meeting, three pop-ups, four listening sessions, two focus groups with community-based organization (CBO) partners, and one virtual community meeting. These events were aimed at engaging corridor users, local residents,

property owners, advocacy groups, and school administrators, with a focus on reaching equity priority communities, including Spanish speakers and North Fair Oaks (NFO) residents.

While the format of each event dictated the methods in which feedback was collected from community members, discussions and interactive activities focused on the following questions:

- What challenges do you face while traveling on El Camino Real?
- What would make it easier for you to get around El Camino Real?
- What qualities of the street do you enjoy and want to maintain?
- Are there specific areas of the corridor that you would like to see improved?

The study and events were promoted via social media and newsletter through the TA and Town. Multilingual bus stop signage was posted and flyers were distributed along the corridor to promote participation of the online survey and map; as well as attendance for the virtual community meeting.

In total, there were 11 outreach events/meetings including: 1 Technical Working Group meeting, 3 Pop-Up events, 4 Listening Sessions, 1 Virtual Community Meeting, 2 Focus Group meetings, as well as canvassing of local businesses, comprising approximately 290 touchpoints with individuals. The online survey and activity map were active from April 21 to June 28, 2024. Overall, there were 320 responses to the online survey and 59 markers were added to the activity map to show locations that people enjoy visiting or where conditions make it challenging to get around. The online survey was promoted on the Town's website, through social media posts, shared by funding partners and neighboring cities, promoted at in-person and virtual events, included in outreach letters to local businesses, and posted on temporary signage that were installed at bus stops along El Camino Real within the study area.

The Draft Phase 1 Public Engagement Summary is provided as Attachment 2.

Key takeaways from the outreach events are highlighted as follows:

Pedestrian Safety and Infrastructure:

- Community members raised significant concerns about the quality of pedestrian infrastructure along El Camino Real.
- Community members emphasized the importance of adding continuous sidewalks along both sides of the corridor, particularly because rainy conditions make the dirt paths inaccessible.
- Many community members pointed out the risks of crossing multiple lanes of traffic on El Camino Real and mentioned crosswalks as currently built out are often ignored by drivers. Participants called for more crosswalks with flashing lights and pedestrian refuges midway through crossings.
- Many participants stressed how dangerous it is to walk along the corridor without lighting at night and early in the morning. Multiple participants expressed that they walk along this corridor during these times to get to work.
- Participants expressed a desire to be able to safely walk to the bus stops along El Camino Real.

Bicycle Lanes and Safety:

- Many community members expressed a willingness to travel more often by bike if infrastructure were improved to create a safe cycling experience. Key suggestions included:
 - Replacing dirt paths with paved sidewalks
 - Improving street level lighting
 - Adding protected bike lanes, particularly Class II bike lanes, without considering the gutter along sidewalks when determining the width of the lanes
 - Narrowing or reducing traffic lanes to make space for additional bike lanes
 - Converting parts of the street median into a bike or pedestrian trail.
- School administrators and Safe Routes to Schools coordinators offered varying opinions on whether improved bicycle and pedestrian infrastructure on El Camino Real would lead to an increase in students and staff members using active transportation along El Camino Real. Most parents across focus groups were hesitant to allow their children to bike along El Camino Real regardless of improved bicycle facilities.
- Some participants felt that a bike lane along this corridor would help improve connectivity across El Camino Real as a whole.

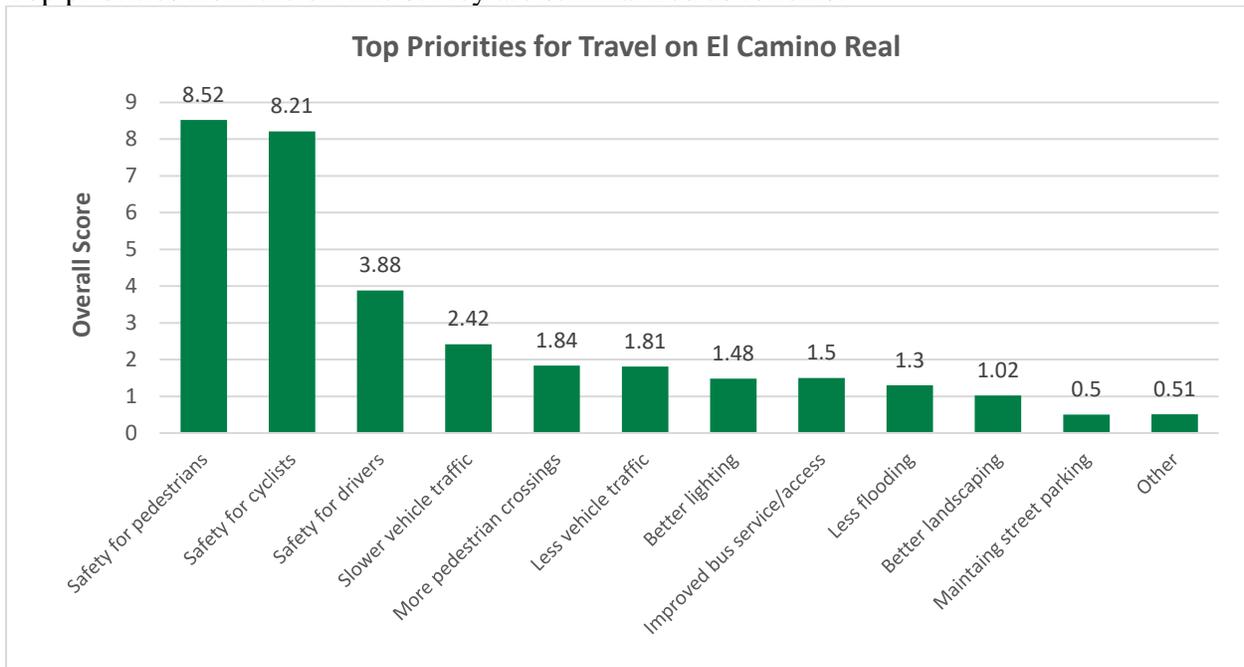
Public Transportation and Bus Stops:

- Many community members from North Fair Oaks and other surrounding equity priority communities depend on El Camino Real bus service to commute to work, run errands, and move through the larger area.
- Some North Fair Oaks community members shared that visibility surrounding bus stops is unsafe, particularly for those working in the service and hospitality sectors who have late evening/early morning work hours.
- School administrators, advocacy organizations, and residents along the corridor all highlighted difficulties accessing bus stops. Accessing bus stops is even more difficult during rain, as the dirt paths either flood or become muddy.
- Community members suggested installing protective coverings and seating to improve the waiting conditions at bus stops along El Camino Real.
- Some participants suggested installing bus islands for safer transit use.
- Participants heavily emphasized issues with bus service reliability, including delays and inaccurate schedules. Participants spoke about how the unreliable bus service negatively affects them when getting to work or other time-sensitive destinations.
- Participants also mentioned that because of the lack of lighting at the bus stops, drivers may not always see them at the stops and can be passed up.
- Community members called for bus stops to be more evenly spaced out along the corridor.
- Some participants felt that a bus lane on El Camino Real would not be worth the loss of a traffic lane considering how infrequently the bus currently runs, though Route ECR is supposed to be at 15-minute frequencies.
- Participants at the North Fair Oaks Community Council listening session identified a potential opportunity to align with the SamTrans Bus Stop Improvement Plan efforts.

Flooding on El Camino Real:

- Participants reported that flooding forces pedestrians and cyclists onto the road during rainy conditions and advocated for a complete sidewalk network to mitigate dangerous conditions.
- Community members also expressed flooding worsens traffic and the experience of commuting by car.
- Flooding on the southbound side of the corridor makes bus stops along the corridor inaccessible.

Top priorities from the on-line survey are summarized as follows:



Respondents were able to highlight their main areas of concern. The following figure shows noted areas where respondent mapped challenging places and desired locations of improvement

FISCAL IMPACT

N/A

GOAL ALIGNMENT

This Report and its contents are in alignment with the following Council Policy Goals:

- Goal Area B – Preserve Small Town Character and Quality of Life
- Goal Area D – Manage Circulation and Improve Safety
- Goal Area F – Be Forward-Thinking, Well-Managed, and Well-Planned

POLICY FOCUS

Policy focus should be on mobility needs and challenges associated with El Camino Real.

ATTACHMENTS

1. Draft El Camino Real Existing Conditions Report
2. Draft El Camino Real Complete Streets Public Engagement Summary

El Camino Real Complete Streets Corridor Study

Phase 1 Engagement Summary

Introduction and Overview of Events

In Phase 1 of the El Camino Real Complete Streets Corridor Study, the Town of Atherton, the San Mateo County Transportation Authority (TA), and Winter Consulting engaged in a series of community outreach events to gather input from various stakeholders. The goal was to establish a shared understanding of the project and collect insights on existing conditions, opportunities, and challenges. In Phase 1 of Engagement, the project team organized various engagement activities including one technical working group meeting, three pop-ups, four listening sessions, two focus groups with CBO partners, and one virtual community meeting. These events were aimed at engaging corridor users, local residents, property owners, advocacy groups, and school administrators, with a focus on reaching equity priority communities, including Spanish speakers and North Fair Oaks (NFO) residents.

While the format of each event dictated the methods in which feedback was collected from community members, discussions and interactive activities focused on the following questions:

- What challenges do you face while traveling on El Camino Real?
- What would make it easier for you to get around El Camino Real?
- What qualities of the street do you enjoy and want to maintain?
- Are there specific areas of the corridor that you would like to see improved?

The study and events were promoted via social media and newsletter through the TA and Town. Multilingual bus stop signage was posted and flyers were distributed along the corridor to promote participation of the online survey and map; as well as attendance for the virtual community meeting.

This summary highlights key findings and feedback from Phase 1 engagement activities.

Event	Date	Time	Touchpoints	Format
Technical Working Group Meeting #1	April 26, 2024	1:00 PM - 2:30 PM	Seven participants <ul style="list-style-type: none"> • Caltrans, County and city staff 	Virtual
Pop Up: Atherton Earth Day Festival	April 21, 2024	11:00 AM - 3:00 PM	80 individuals	In-person
Listening Session #1	May 15, 2024	2:30 PM - 3:30 PM	7 participants <ul style="list-style-type: none"> • School administrators 	Virtual



**El Camino Real Complete Streets Study
Phase 1 Engagement Summary**

Event	Date	Time	Touchpoints	Format
			<ul style="list-style-type: none"> Safe Routes to Schools coordinators 	
Listening Session #2 (Silicon Valley Bicycle Coalition)	May 23, 2024	12:00 PM - 1:00 PM	7 participants <ul style="list-style-type: none"> Advocacy group members 	Virtual
Listening Session #3	May 24, 2024	6:00 PM - 7:30 PM	1 participant <ul style="list-style-type: none"> Menlo College staff 	Virtual
Canvassing Businesses in the Study Area	July 10, 2024	9:30 AM – 11:30 AM	55 businesses invited to attend the community meeting and fill out the survey	In-person
Virtual Community Meeting	June 13, 2024	6:00 PM - 7:30 PM	12 participants <ul style="list-style-type: none"> Residents of neighborhoods along Selby Lane, Spruce Avenue, and within NFO 	Virtual
Pop Up: Fair Oaks Community Center	June 14, 2024	3:00 PM – 5:00 PM	41 individuals	In-person
Pop Up: Redwood City Music in the Park	June 26, 2024	5:00 PM - 8:00 PM	45 individuals	In-person
Focus Group: Acterra	June 27, 2024	4:00 PM - 5:00 PM	8 participants <ul style="list-style-type: none"> Residents of neighborhoods along the El Camino Real corridor 	In-person
Listening Session #4 (North Fair Oaks Community Council)	June 27, 2024	7:00 PM - 9:00 PM	18 participants <ul style="list-style-type: none"> Eight North Fair Oaks council members 10 members of the public 	Hybrid
Focus Group: El Concilio	July 2, 2024	6:00 PM - 7:00 PM	8 participants <ul style="list-style-type: none"> Residents of North Fair Oaks who drive and use transit along corridor 	In-person
Total Number of Touchpoints with Individuals:			289	



Overall, the project team had individual touchpoints with approx. 289 people throughout Phase 1.

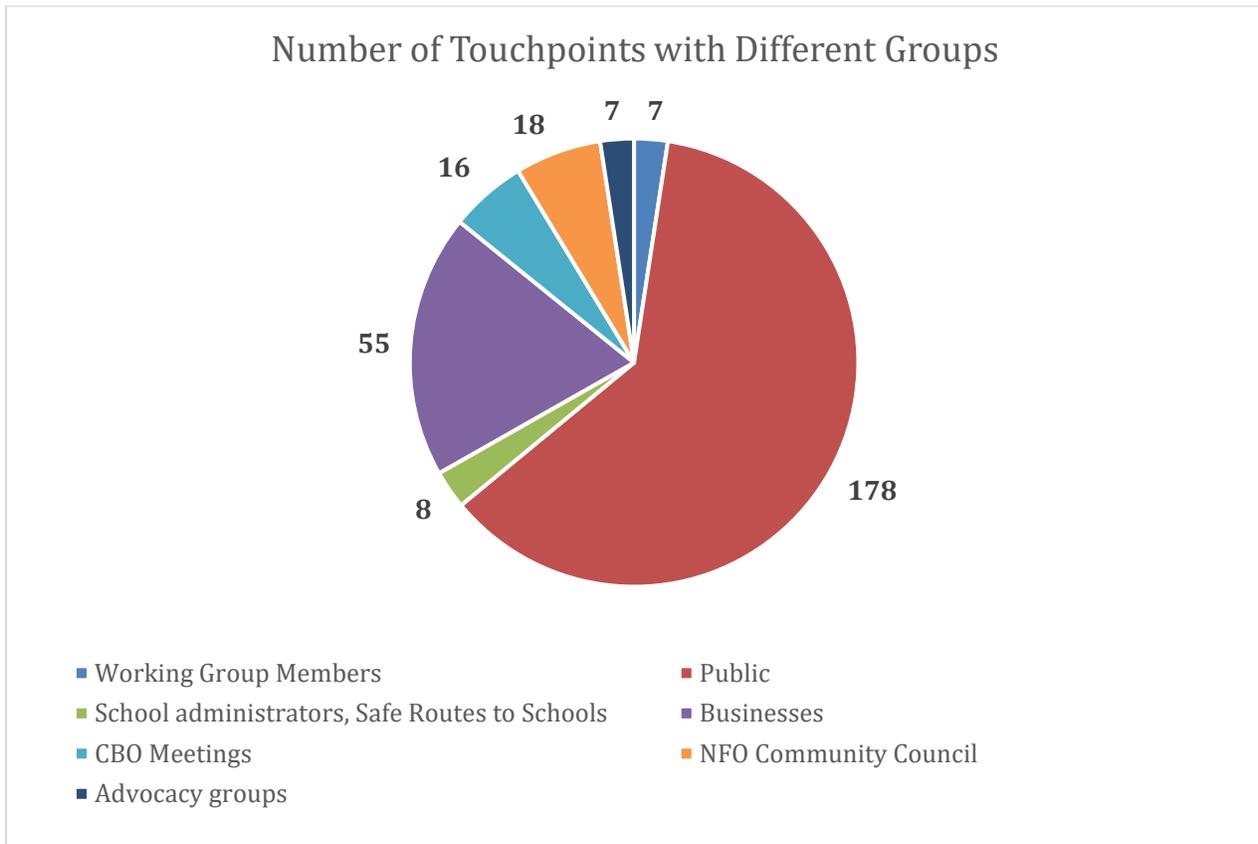


Chart 1: The number of touchpoints with individuals across all in-person and virtual engagement activities, broken down by audience type.

Key Takeaways on the Corridor

Pedestrian Safety and Infrastructure

- Community members raised significant concerns about the quality of pedestrian infrastructure along El Camino Real.
- Community members emphasized the importance of adding continuous sidewalks along both sides of the corridor, particularly because rainy conditions make the dirt paths inaccessible.
- Many community members pointed out the risks of crossing multiple lanes of traffic on El Camino Real and mentioned crosswalks as currently built out are often ignored by drivers. Participants called for more crosswalks with flashing lights and pedestrian refuges midway through crossings.
- Many participants stressed how dangerous it is to walk along the corridor without lighting at night and early in the morning. Multiple participants expressed that they walk along this corridor during these times to get to work.
- Participants expressed a desire to be able to safely walk to the bus stops along El Camino Real.

Bicycle Lanes and Safety

- Many community members expressed a willingness to travel more often by bike if infrastructure were improved to create a safe cycling experience. Key suggestions included:
 - Replacing dirt paths with paved sidewalks
 - Improving street level lighting
 - Adding protected bike lanes, particularly Class II bike lanes, without taking into account the gutter along sidewalks when determining the width of the lanes
 - Narrowing or reducing traffic lanes to make space for additional bike lanes
 - Converting parts of the street median into a bike or pedestrian trail.
- School administrators and Safe Routes to Schools coordinators offered varying opinions on whether improved bicycle and pedestrian infrastructure on El Camino Real would lead to an increase in students and staff members using active transportation along El Camino Real. Most parents across focus groups were hesitant to allow their children to bike along El Camino Real regardless of improved bicycle facilities.
- Some participants felt that a bike lane along this corridor would help improve connectivity across El Camino Real as a whole.

Public Transportation and Bus Stops

- Many community members from North Fair Oaks and other surrounding equity priority communities depend on El Camino Real bus service to commute to work, run errands, and move through the larger area.
- Some North Fair Oaks community members shared that visibility surrounding bus stops is unsafe, particularly for those working in the service and hospitality sectors who have late evening/early morning work hours.
- School administrators, advocacy organizations, and residents along the corridor all highlighted difficulties accessing bus stops. Accessing bus stops is even more difficult during rain, as the dirt paths either flood or become muddy.
- Community members suggested installing protective coverings and seating to improve the waiting conditions at bus stops along El Camino Real.
- Some participants suggested installing bus islands for safer transit use.
- Participants heavily emphasized issues with bus service reliability, including delays and inaccurate schedules. Participants spoke about how the unreliable bus service negatively affects them when getting to work or other time-sensitive destinations.
- Participants also mentioned that because of the lack of lighting at the bus stops, drivers may not always see them at the stops and can be passed up.
- Community members called for bus stops to be more evenly spaced out along the corridor.
- Some participants felt that a bus lane on El Camino Real would not be worth the loss of a traffic lane considering how infrequently the bus currently runs, though Route ECR is supposed to be at 15-minute frequencies.



- Participants at the North Fair Oaks Community Council listening session identified a potential opportunity to align with the SamTrans Bus Stop Improvement Plan efforts.

Traffic and the Driver Experience

- Drivers emphasized that a lack of lighting along the corridor makes it difficult for drivers to identify pedestrians walking along the corridor. Community members explained that additional lighting would make them feel safer when driving.
- Drivers described congestion caused by cars attempting to turn left on the corridor. Participants asked for either an increase in protected left turns or a decrease in intersections where left turns are allowed.
- Community members shared that it is stressful as a driver when pedestrians are forced to walk on the road shoulder due to narrow or lack of sidewalks.
- Community members reported visibility issues when turning onto El Camino Real. Drivers have to edge forward to see oncoming traffic, putting other drivers, crossing pedestrians, and bicyclists at risk.
- Community members advocated for reduced traffic speeds. School administrators stressed that speeding and unsafe maneuvering heightens risk during school pick up and drop off windows.
- Community members observed that drivers do not follow traffic safety rules. They've often observed drivers failing to use turn signals, ignoring pedestrian hybrid beacons and traffic lights, and driving over the speed limit.
- Some community members were concerned about whether parking would be reduced, while others supported reduced parking as drivers getting out of their cars will sometimes force drivers to swerve out of their lane to make space for opening doors.
- Community members supported maintaining the current landscaping and tree canopy due the aesthetic appeal, but cited this as sometimes causing visibility issues with shading.
- Improved landscaping and visibility were also highlighted by community members along with extending solid white lanes southbound on El Camino Real to prevent drivers from misusing the far-right lane as an express lane.

Flooding on El Camino Real

- Participants reported that flooding forces pedestrians and cyclists onto the road during rainy conditions and advocated for a complete sidewalk network to mitigate dangerous conditions.
- Community members also expressed flooding worsens traffic and the experience of commuting by car.
- Flooding on the southbound side of the corridor makes bus stops along the corridor inaccessible.



Feedback on Specific Intersections on El Camino Real

Intersection with ECR	Comments
5th Avenue	<ul style="list-style-type: none"> • Multiple comments reflecting dangerous driving, walking, and biking at this intersection • Suggestions for improved crosswalks with beacons • Concerns about students being able to access Selby School
Selby Lane	<ul style="list-style-type: none"> • Frustration about lack of progress and implementation of improvements previously identified as part of prior planning efforts • Multiple comments reflecting dangerous driving, walking, and biking at this intersection • Concerns about students being able to access Selby School • Comment about NFO residents not being considered during previous planning efforts at this intersection • Reported visibility issues when turning onto El Camino Real as a driver • Reported confusion and congestion caused by cars blocking the street and not using turn signals • Multiple comments that flooding near Selby Lane presents challenges • Multiple suggestions to install a stop sign at this intersection • Observations that the narrow pedestrian pathway at this intersection forces pedestrians to walk on the roads and causes stress for drivers
Atherton Avenue	<ul style="list-style-type: none"> • Challenging to cycle near this intersection due to lack of lighting • Reports of accidents at this intersection because drivers are trying to turn onto corridor
Valparaiso Avenue	<ul style="list-style-type: none"> • Multiple comments about this intersection being particularly high-traffic, partially due to drivers avoiding Santa Cruz Avenue • Multiple reports of drivers speeding through intersection • Increased pedestrian danger because of lack of sidewalks • Comments that cars don't stop at the traffic light • One suggestion to not add more parking northbound of this intersection to avoid making traffic even more difficult for drivers
Alejandra Avenue	<ul style="list-style-type: none"> • Comments from school administrators stressing the lack of traffic control during school pick up and drop off windows • Reports from school administrators of dangerous driving behavior, such as drivers getting out of their vehicles and activating the pedestrian hybrid beacon to then get in their vehicles to cross El Camino Real • Reports of drivers ignoring the pedestrian hybrid beacon when driving through the intersection on El Camino Real
Encinal Avenue	<ul style="list-style-type: none"> • Comment that time permitted for pedestrians to cross this intersection is insufficient • Comment that turning left is dangerous due to pedestrians and cyclists on the road shoulder



**El Camino Real Complete Streets Study
Phase 1 Engagement Summary**

Intersection with ECR	Comments
Almendral Avenue	<ul style="list-style-type: none"> • Reported speeding despite traffic calming measures at this intersection
Middlefield Road	<ul style="list-style-type: none"> • Visibility issues at this intersection
Spruce Avenue, Watkins Avenue	<ul style="list-style-type: none"> • Calls for additional lighting at these intersections to help drivers better see pedestrians
Oakwood Drive, Stockbridge Avenue	<ul style="list-style-type: none"> • Comment that participant prefers turning left at these intersections where there are traffic lights

Survey Results

The online survey and activity map were active from April 21 to June 28, 2024. Overall, there were 320 responses to the online survey and 59 markers were added to the activity map to show locations that people enjoy visiting or where conditions make it challenging to get around.

The online survey was promoted on the Town’s website, through social media posts, shared by funding partners and neighboring cities, promoted at in-person and virtual events, included in outreach letters to local businesses, and posted on temporary signage that were installed at bus stops along El Camino Real within the study area.

Top Priorities to Improve Travel

The online survey asked respondents to select their top three priorities for travel along El Camino Real. The chart below indicates which options were ranked the highest based on what people selected as their top priorities. Safety for pedestrians, cyclists, and drivers were ranked the highest overall while concern for maintaining street parking was one of the lowest priorities for respondents.



**El Camino Real Complete Streets Study
Phase 1 Engagement Summary**

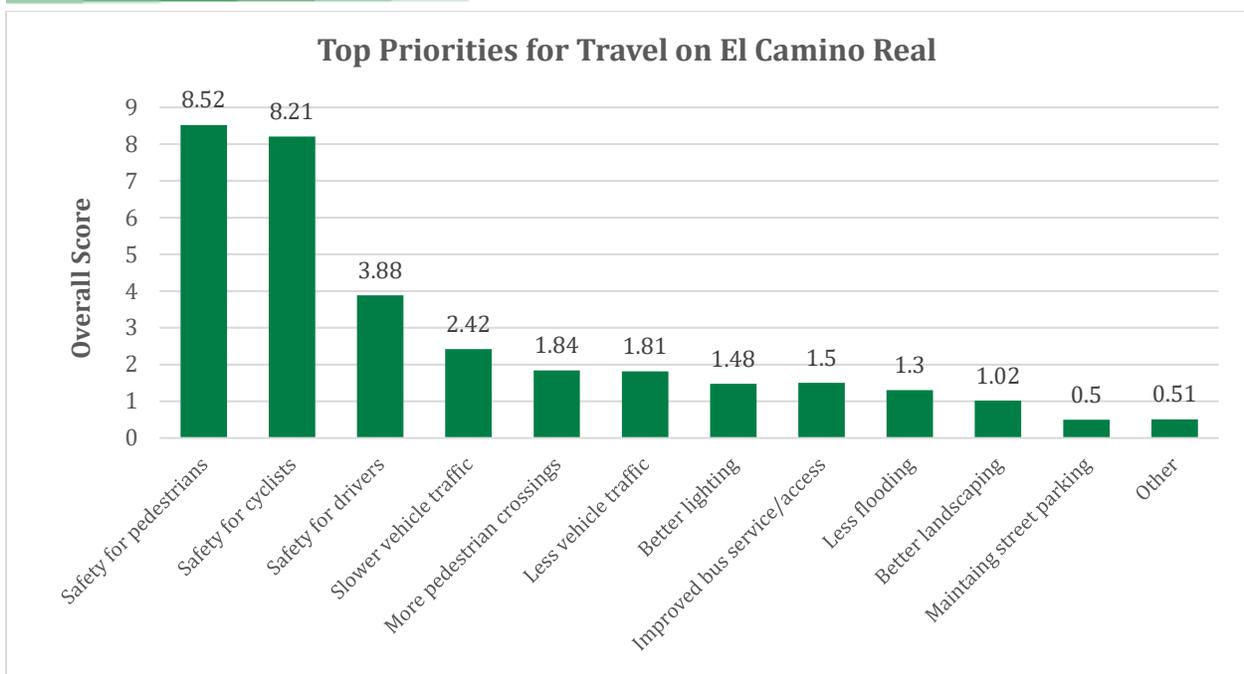


Chart 2: Ranked priorities for travel along El Camino Real. Note that the overall score is calculated as the sum of the weight of each ranked position, multiplied by the response count for the position choice, divided by the total contributions.

Map Data

Respondents were asked to add markers to the activity map to show the location of challenging places and desired locations.

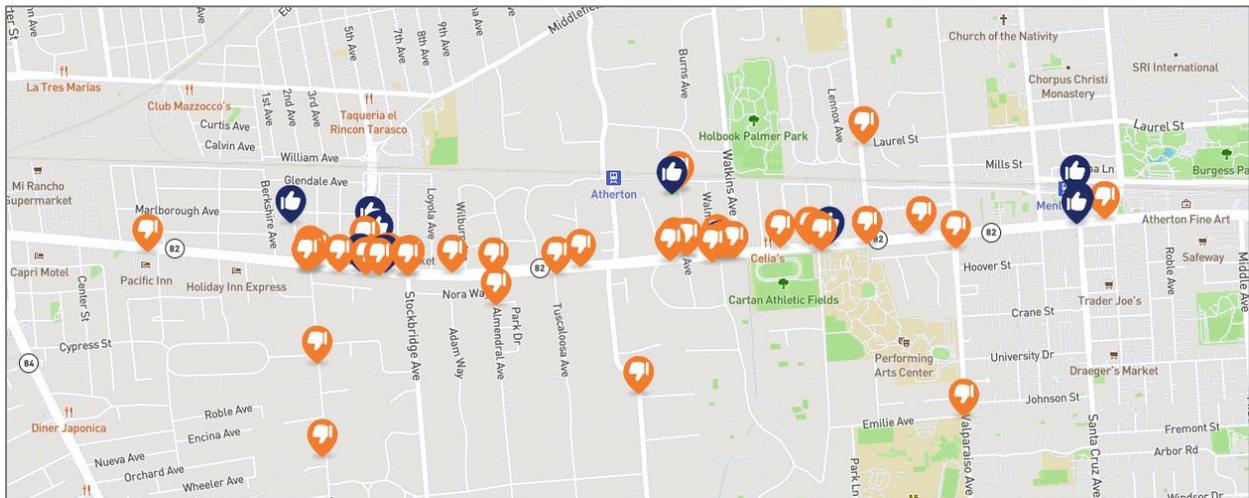


Figure 1: Markers placed on the activity map online.

Many respondents offered detailed comments to describe where they had experienced or witnessed a collision between vehicles, cyclists, or pedestrians (see Figure 2). Comments also cited specific locations where there is a desire to improve safety at intersections, add or improve pedestrian crosswalks, introduce paved sidewalks, or where bike lanes are needed (see Figure 3).



El Camino Real Complete Streets Study Phase 1 Engagement Summary

Figure 4 includes the location of desired locations that were specifically described in the online survey or as markers placed on the activity map. These destinations indicate where people would like to travel more on foot, by bike, or other forms of active transportation if conditions along El Camino Real were improved.

Atherton Phase 1 Survey Responses: Collisions & Near Misses

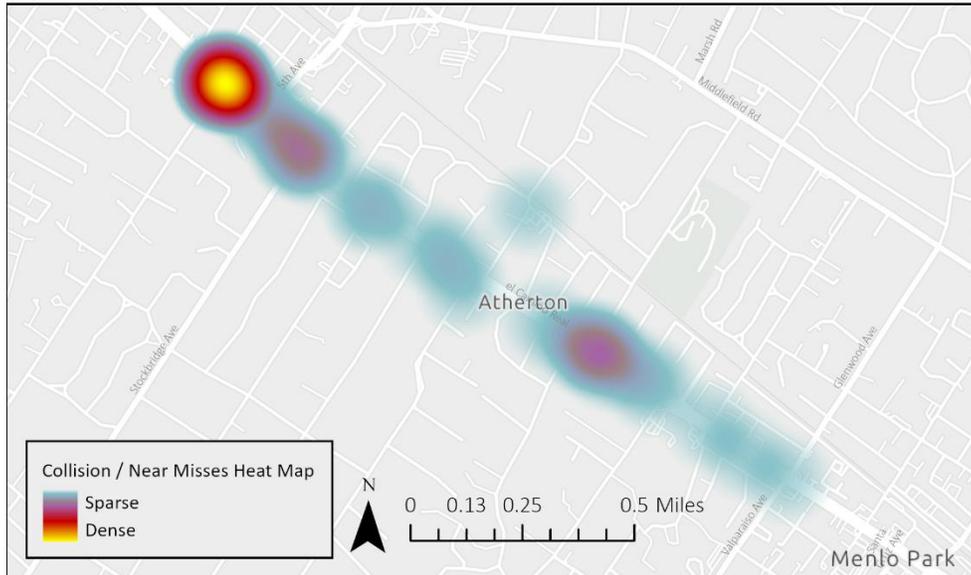


Figure 2: Mapped locations of collisions or near misses as reported by the public.

Atherton Phase 1 Survey Responses: Traffic Improvements

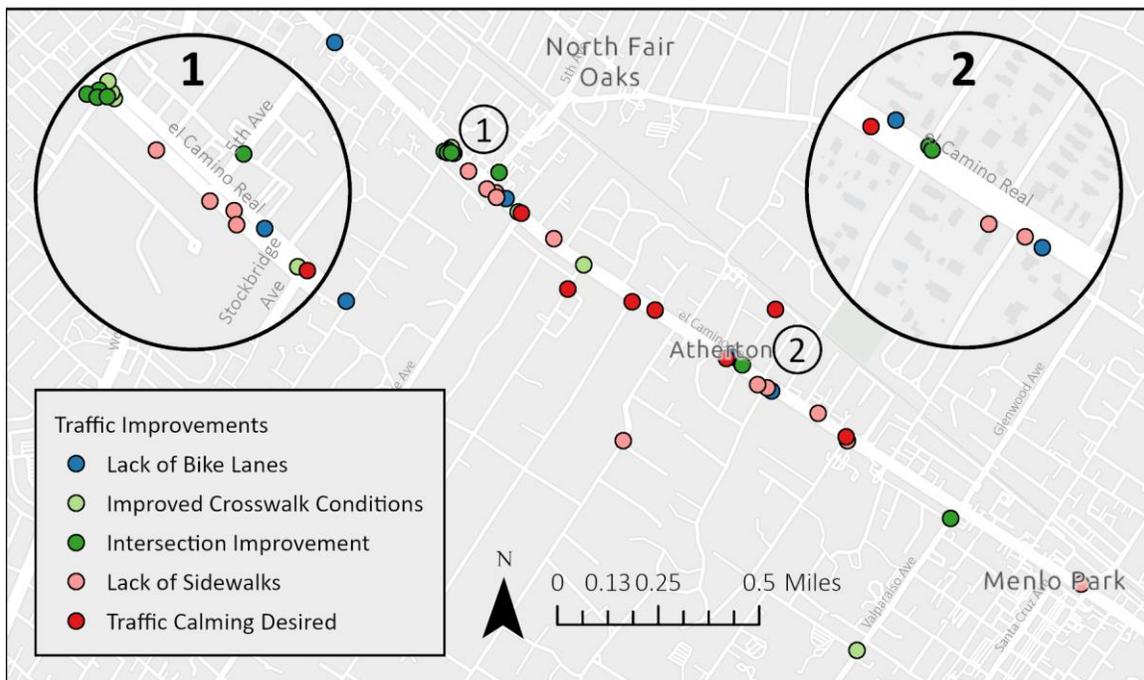


Figure 3: Map of locations where the public reported a need to improve safety or traffic conditions.

Atherton Phase 1 Survey Responses: Desired Destinations

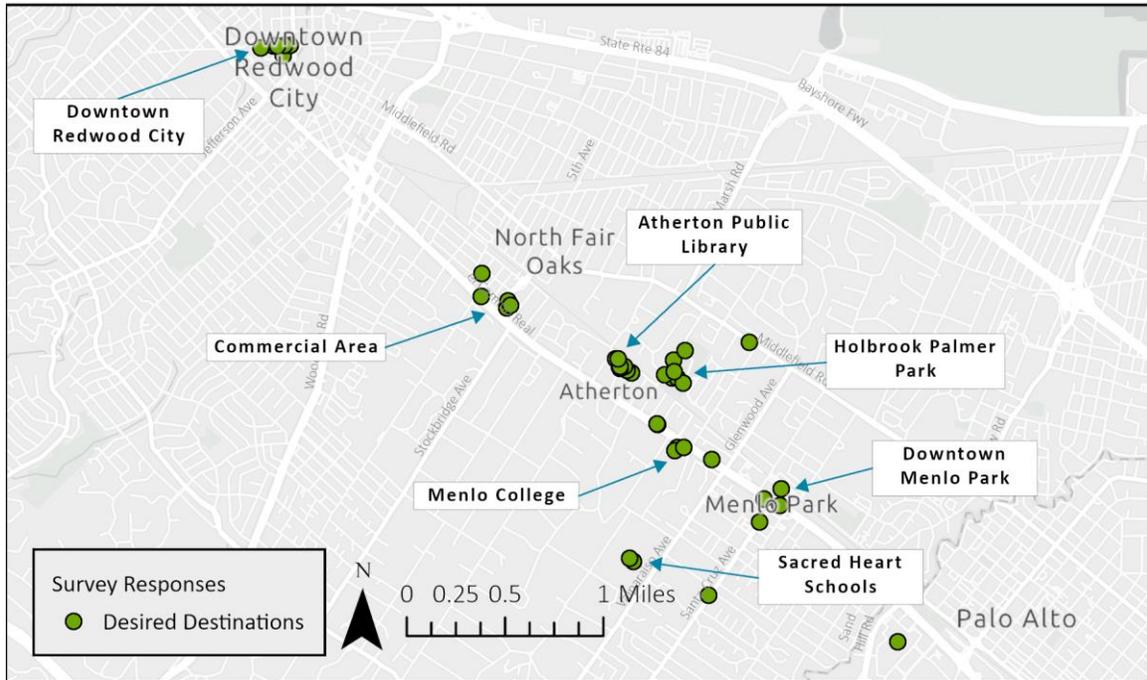


Figure 4: Mapped locations of desired destinations in proximity to the study area.

Respondent Demographics

The majority of respondents live in San Mateo County (84.74%), with 12.46% from Santa Clara, and less than 3% from other counties. The project team heard from a broad range of age groups as shown in Figure 5, while most respondents self-identified as white (63.29%), Asian (15.82%), or Hispanic/Latino (6%). There were 156 respondents who identify as female, 142 as male, 1 indicated 'other', while 21 declined to respond to this question.

**El Camino Real Complete Streets Study
Phase 1 Engagement Summary**

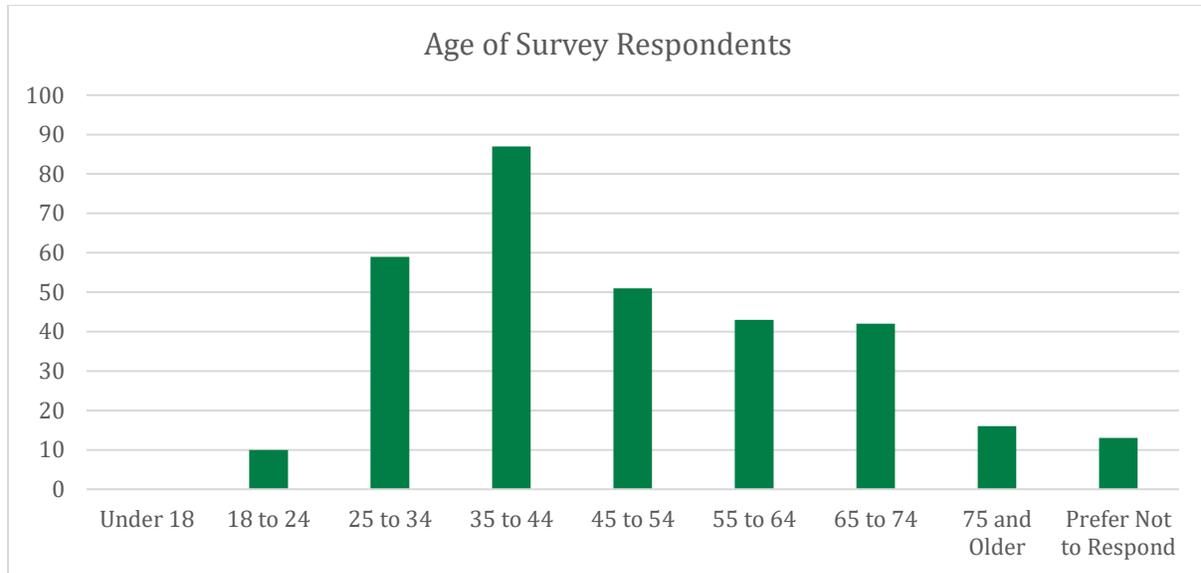


Figure 5: Age of survey respondents.

Most of the respondents reported an annual household income of \$150,000 or more. However, there were 64 respondents who reported an annual household income of less than \$150,000 and 77 people declined to respond.



El Camino Real Complete Streets Corridor Plan

SMCTA ON-CALL TRANSPORTATION,
PLANNING, MANAGEMENT AND SUPPORT SERVICES

CONTRACT NO. 20-T-P-008A
WDR NO. 993

Draft Data Collection Technical Memo

Version 3

JUNE 7, 2024



SAN MATEO COUNTY
**Transportation
Authority**



samTrans



PREPARED BY WSP USA

DRAFT

VERSION CONTROL				
VERSION	PURPOSE/CHANGE DESCRIPTION	AUTHORS	REVIEWERS	SUBMITTAL DATE
1.0	Initial Release	Akshaey Sabha,	Michael Trueblood,	5/1/24
2.0	2 nd Release	Erik Bird	Brady Nadell,	6/5/24
3.0	3 rd Release		Kim Douglas, Robert Ovardia Carolyn Mamaradlo	6/7/24

QAQC DOCUMENTATION

No.	Description	Req'd	OR	CH
1.	SCOPE—OBJECTIVE(S) OF THE WORK IS DEFINED AND CONFORMS TO CONTRACTUAL WORK SCOPE AND LEVEL OF COMPLETENESS AS MENTIONED IN TASK	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.	SCOPE—AS MENTIONED IN TASK 2.3, DOES THIS MEMO SUMMARIZE TRAFFIC, COLLISION DATA AND STREETLIGHT DATA	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.	ACCURACY—CALCULATION(S) HAVE BEEN CHECKED IN ACCORDANCE WITH QP-04	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.	STYLE—REPORT FORMATTING, GRAMMAR, SYNTAX, AND WRITING STYLE IS CONSISTENT WITH THE PROGRAM/PROJECT GUIDELINES	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5.	SUPPORTING DATA ARE INCLUDED OR REFERENCED	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.	DRAWINGS AND GRAPHICS (EXHIBITS OR REFERENCES) HAVE BEEN CHECKED AND REVIEWED	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7.	CLIENT/STAKEHOLDER COMMENTS BEEN ADDRESSED AND INCORPORATED	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8.	REVISIONS HAVE BEEN ADEQUATELY IDENTIFIED, IF REQUIRED FOR UPDATED DELIVERABLE	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9.	SUPPORTING DATA ARE INCLUDED OR REFERENCED	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

KEY: OR—Originator; CH—Checker

COMMENTS (e.g., for draft versions, explain if checklist items are required but not "checked")

Contents

Contents.....	3
1. EXECUTIVE SUMMARY.....	4
KEY FINDINGS:.....	4
NEXT STEPS:.....	4
2. BACKGROUND.....	5
OBJECTIVES.....	5
STUDY AREA OVERVIEW.....	6
DATA COLLECTION.....	8
3. CRASH ANALYSIS.....	10
4. TRAVEL DEMAND DATA COLLECTION.....	13
PEDESTRIAN AND BICYCLE DEMAND.....	14
5. TRAVEL CHARACTERISTICS.....	18
LOCAL VS THROUGH VEHICLE TRIPS.....	19
BICYCLE AND VEHICLE TRIP PATTERNS.....	23
KEY TAKEAWAYS.....	24
6. CONCLUSION.....	25

1. EXECUTIVE SUMMARY

This memo documents traffic flow, safety, and multimodal accessibility data along a critical 1.5-mile segment of El Camino Real between Selby Lane and Valparaiso Ave in the Town of Atherton. The purpose of this memo, which is part of a larger Traffic Engineering Performance Assessment Report (TEPA), is to document and highlight the collected data.

KEY FINDINGS:

Traffic Volume and Flow: Data from Turning Movement Counts (TMCs) and Automatic Traffic Recorders (ATR) reveal peak traffic volumes during key morning and evening hours. The El Camino Real bi-directional peak volumes reach 2,900 vehicles from 07:45 AM to 08:45 AM, and 2,980 vehicles from 04:30 PM to 05:30 PM. The bi-directional Average Daily Traffic (ADT) is 36,058 vehicles, emphasizing the corridor's essential role in local and regional mobility, underscoring the need for focused traffic management, and planning during these critical periods.

Crash Analysis: An analysis spanning from 2018 to 2022 identified 73 injury crashes. Notably, two pedestrian fatalities were recorded, highlighting the need for safety interventions, particularly for non-motorized users.

Travel Characteristics: StreetLight data analysis reveals distinct travel patterns among bicyclists, pedestrians, transit users, and vehicle drivers. An analysis was conducted to determine the difference between "local" and "through" vehicle trips, with local trips defined as those that begin or end in the five census tracts surrounding the project corridor and through trips defined as those that begin or end outside those five census tracts. The analysis of local and through vehicle trips indicates that for an average day and time, the project corridor facilitates more through trips within the study area, reflecting its role as a major north-south artery in the county. These patterns change by time of day, with more local trips in the AM peak and more through trips in the PM peak. Additionally, a significant percentage of vehicle trips are under five miles, indicating potential for a shift to bicycles if safer infrastructure is added.

NEXT STEPS:

1. **Safety Improvements:** Given the identified safety concerns, particularly regarding pedestrian fatalities, the project prioritizes pedestrian and bicycle safety improvements.
2. **Traffic Flow Optimization:** Recommendations include signal timing adjustments such as LPI (leading pedestrian intervals), timing optimization and roadway design modifications to improve pedestrian safety and better manage peak hour traffic volumes.
3. **Multimodal Accessibility:** Infrastructure improvements are recommended to bolster access for bicyclists and pedestrians, ensuring safe, efficient movement throughout the corridor.

This memo serves as the initial step in the Traffic Engineering Performance Assessment (TEPA) for the El Camino Real corridor, aimed to summarize the existing traffic conditions of the corridor.

2. BACKGROUND

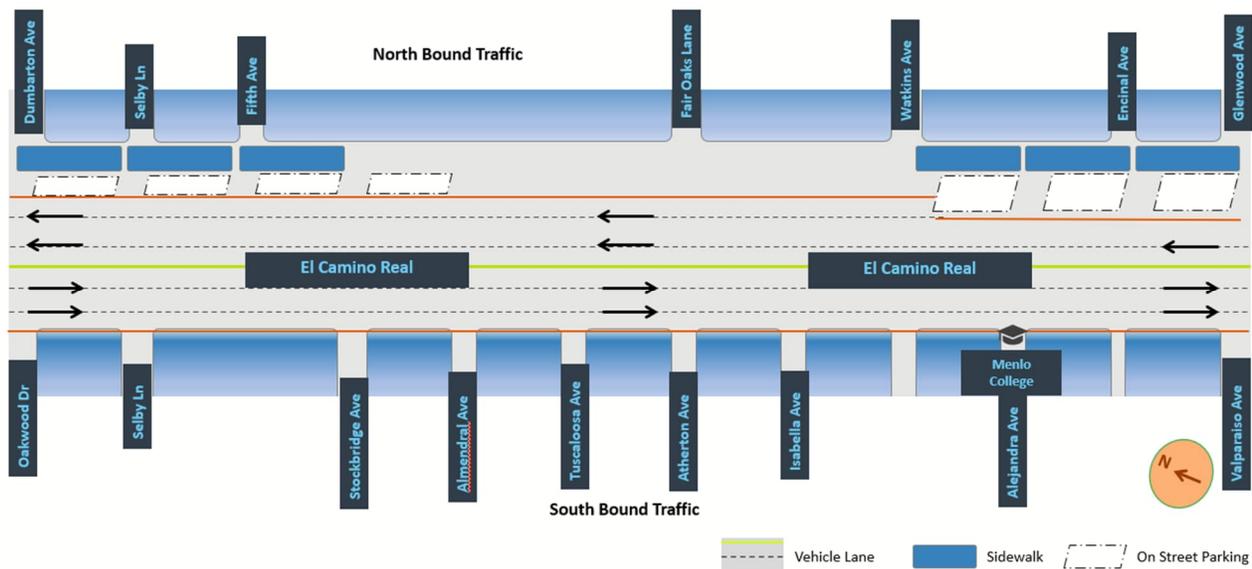
Following the Executive Summary, this section delves deeper into the El Camino Real Complete Streets Corridor Plan. The complete project extends for a distance of 1.5 miles from Selby Lane to Valparaiso Ave along El Camino Real, a key arterial road pivotal for regional mobility. This traffic analysis, however, specifically concentrates on a critical 1.76-mile segment between Oakland Dr and Valparaiso Ave and it has been selected for detailed study as it captures significant traffic impacts that are indicative of the entire study area.

OBJECTIVES

This traffic data collection memo serves as an essential foundational step in the broader Traffic Engineering Performance Assessment for the El Camino Real Complete Streets Corridor Plan. The objectives of this memo are specifically tailored towards the initial stages of data collection, providing critical inputs for comprehensive traffic and safety analysis. By systematically documenting traffic volumes, signal timings, and crash data, this memo lays the groundwork necessary for conducting detailed analyses, such as Synchro modeling to optimize traffic flow and identifying areas of concern for targeted safety improvements. The objective of the memo is as follows:

1. Understand Current Traffic Conditions: This objective entails collecting precise data on vehicle volumes and flow patterns along El Camino Real during both peak and off-peak hours.
2. Assess Safety Concerns: A thorough examination of historical crash data is vital for identifying safety concerns and determining necessary improvements within the project's scope.
3. Evaluate Multimodal Integration: Analyzing travel patterns from data sources including the StreetLight platform will reveal how well different transportation modes—such as driving, bicycling, walking, and public transit—are integrated along the corridor.

Figure 2.1: Existing Lane Configuration



STUDY AREA OVERVIEW

CORRIDOR SPECIFICATIONS: The El Camino Project Corridor extends over a distance of 1.5 miles and is classified as an Arterial Roadway. This corridor varies between five to six lanes with a shoulder (paved and unpaved) on both sides, supporting high volumes of bidirectional traffic. Its critical role in facilitating connectivity across local and regional transportation systems cannot be overstated. The posted speed limit in both NB and SB direction is 35 mph. Sidewalks are available intermittently and on the northbound side. Please refer to Table 2.1 for more detailed information on sidewalks, shoulder and on-street parking,

TRAFFIC AND INTERSECTION ANALYSIS: Detailed analysis of data between Oakwood Dr and Valparaiso Ave will consider the network of five signalized intersections, four unsignalized (stop-controlled) intersections and three pedestrian High Intensity Activated Crosswalk (HAWK) signal crossings focusing on improving safety and traffic flow.

LAND USE AND COMMUNITY IMPACT: Surrounding the corridor is a diverse landscape of single- and multi-family uses, educational facilities, and commercial zones. This mix significantly influences traffic patterns and underscores the need for a corridor that accommodates the dynamic needs of the community.

Figure 2.2: Project Map

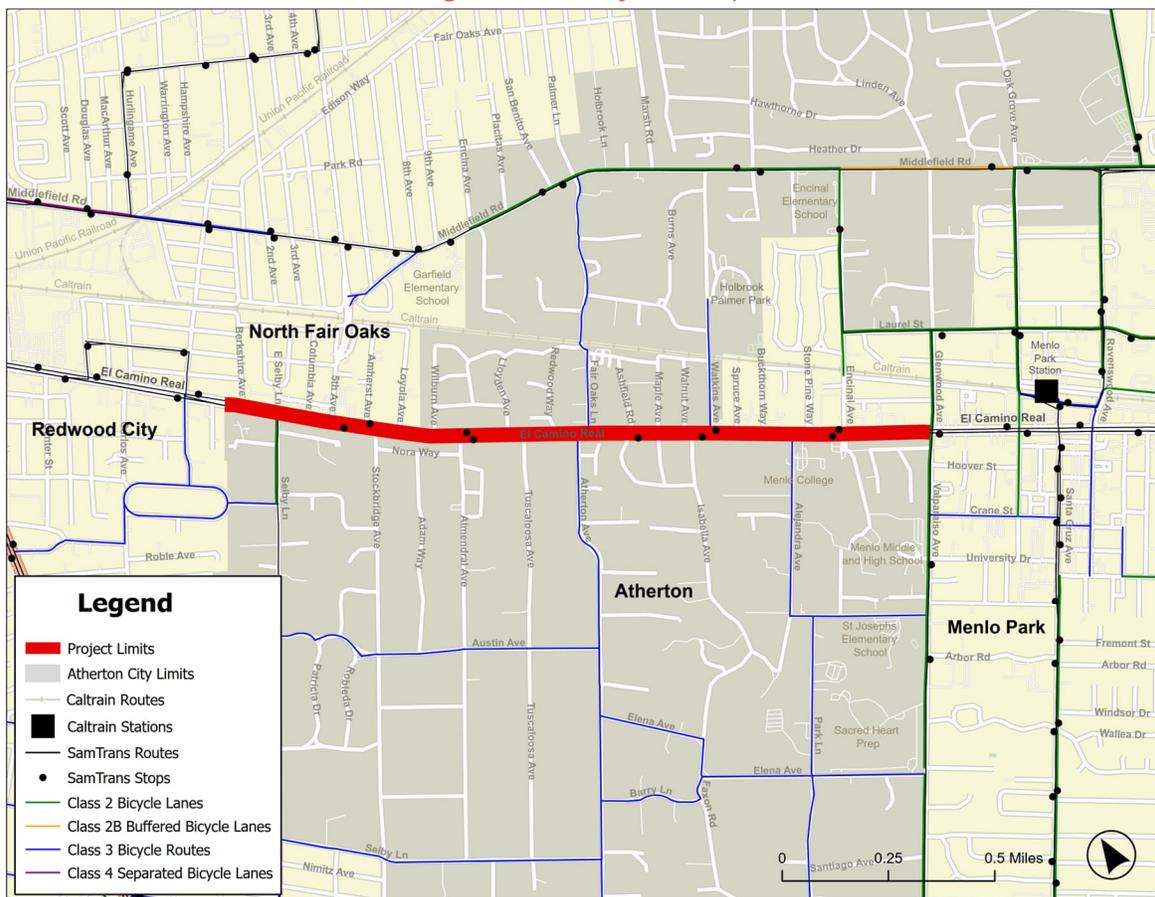


Table 2.1: El Camino Real Roadway Characteristics

EL CAMINO REAL RD		SIDEWALK		SHOULDER		PARKING	
From	To	NB	SB	NB	SB	NB	SB
Oakwood Dr	Selby Ln	✓	✗	✗	✓	✓	✗
Selby Ln	Fifth Ave	✓	✗	✗	✓	✓	✗
Fifth Ave	Stockbridge Ave	✓	✗	✗	✓	✓	✗
Stockbridge Ave	Almendral Ave	✗	✗	✗	✓	✓	✗
Almendral Ave	Tuscaloosa Ave	✗	✗	✓	✓	✗	✗
Tuscaloosa Ave	Atherton Ave	✗	✗	✓	✓	✗	✗
Atherton Ave	Isabella Ave	✗	✗	✓	✓	✗	✗
Isabella Ave	Watkins Ave	✗	✗	✓	✓	✗	✗
Watkins Ave	Alejandra Ave	✓	✗	✗	✓	✓	✗
Alejandra Ave	Encinal Ave	✓	✗	✗	✓	✓	✗
Encinal Ave	Valparaiso Ave	✓	✗	✗	✓	✓	✗
1) PARTIALLY COMPLETE OR NO SIDEWALKS BETWEEN SEGMENTS ARE MARKED AS ✗. ONLY SEGMENTS WITH COMPLETE SIDEWALK WILL BE MARKED AS ✓							
2) INCOMPLETE SHOULDERS (2' - 5') BETWEEN SEGMENTS ARE MARKED AS ✗. ONLY SEGMENTS WITH COMPLETE SHOULDER WILL BE MARKED AS ✓							
3) IF THERE IS ZERO ON-STREET PARKING, THE SEGMENTS ARE MARKED AS ✗. ONLY SEGMENTS WITH ON-STREET PARKING WILL BE MARKED AS ✓							

DATA COLLECTION

In preparation for a comprehensive analysis of the El Camino Real corridor, WSP implemented a multifaceted data collection strategy to capture current traffic patterns accurately:

1. **Turning Movement Counts (TMCs):** Conducted on Tuesday, March 12, 2024, these counts included vehicles, heavy vehicles, pedestrians, and bicycles at key locations depicted in Figure 1.3. This detailed data gathering aims to quantify the various movements within the study area, providing a clear picture of how different types of traffic interact.
2. **72-Hour Tube Counts (ADTs):** From March 12 to March 14, 2024, Automatic Average Daily Traffic counts were performed at four strategic locations, as detailed in Figure 1.3. This effort helps to ascertain the volume of traffic over a typical 72-hour period, offering insight into daily traffic fluctuations and patterns.
3. **Signal Timing:** Updated timing data for all seven signalized intersections within the study area, including five standard and two HAWK signalized intersections, were obtained from Caltrans on March 1, 2024. Understanding the current signal timing configurations is crucial for assessing how traffic flow is managed and identifying potential areas for optimization.
4. **Crash Data:** An analysis of the most recent annual crash records, spanning from January 1, 2018, to December 31, 2022, utilized data from the Statewide Integrated Traffic Records System (SWITRS) database. This analysis is essential for identifying high-risk areas within the corridor and determining the most effective measures to enhance safety.

This comprehensive data collection phase is foundational to the El Camino Real Complete Streets Corridor Plan, ensuring that any traffic flow, safety enhancements, and accessibility improvements are based on accurate, up-to-date information. With a detailed understanding of current conditions, the project can effectively target interventions that will significantly benefit the corridor's efficiency and safety.

The Background section has established a strong foundation for the El Camino Real Complete Streets Corridor Plan, highlighting its objectives and the comprehensive data collection efforts. In the next section, we will conduct detailed data analysis to uncover insights into the corridor's characteristics.

Figure 1.3 Traffic Demand Data Collection Location



3. CRASH ANALYSIS

This section of the Data Collection Memo focuses on analyzing crash data relevant to the El Camino Real Complete Streets Corridor Plan. A thorough examination of historical crash data is vital for identifying safety concerns and determining necessary improvements within the project's scope. Our analysis primarily relies on crash records obtained from the Statewide Integrated Traffic Records System (SWITRS), accessed through the Transportation Injury Mapping System (TIMS). Please refer to Appendix B for compiled crash raw data.

The most recent five-year dataset available from the SWITRS database spans from January 1, 2018, to December 31, 2022. Our findings from this period are as follows:

1. A total of 73 crashes have been recorded in the corridor (see Figure 3.4 for more details)
2. 53% of the crashes occurred at intersections, while the remaining 47% took place along roadway segments. (Refer to Figure 3.1)
3. The corridor experienced roughly 15-20 crashes annually. The significant reduction in 2020, with only 7 crashes, was likely due to the reduced travel demand during the COVID-19 pandemic when many people worked from home. As travel patterns normalize in 2024, crash numbers may revert to previous levels. The intersections of Selby Lane (11), Watkins Ave (5) and Alejandra Ave (4) with El Camino Real witnessed the highest number of crashes within the project area.
4. Rear end collisions account for 40% of the crashes, followed by Broadside or T-bone collisions accounts to 27% of crashes followed by sideswipe crash at 14%. (Refer to Figure 3.2)
5. Crashes involving non-motorized vehicles accounted for 19% of the total incidents. (Refer to Figure 3.3)
6. There were 2 fatal pedestrian crashes, attributed to midblock crossing near Watkins Ave and standing in the shoulder in Valparaiso Ave intersection. (Refer to Figure 3.4).

Figure 3: Crash Analysis Figures.

Crash Location Vs Year
Figure 3.1

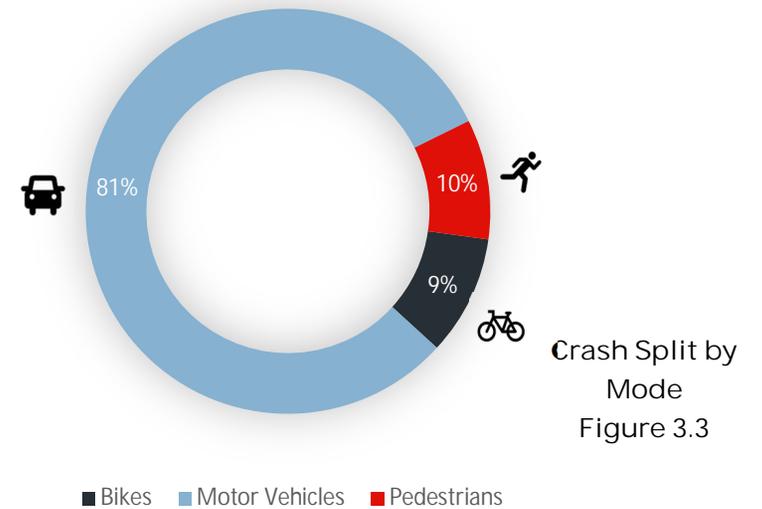
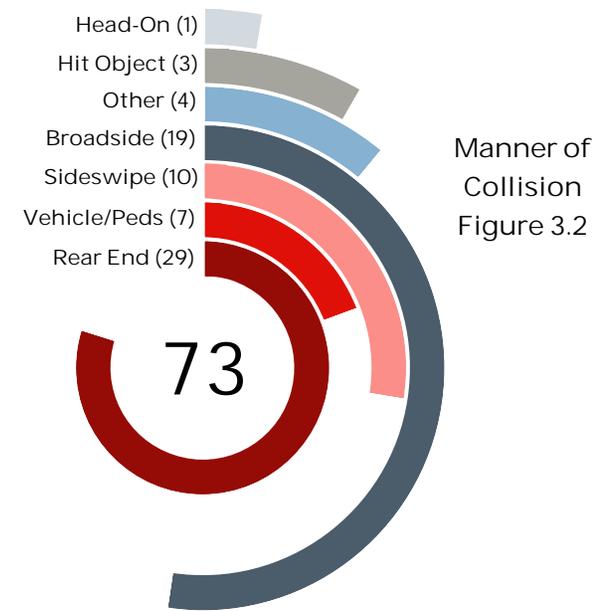
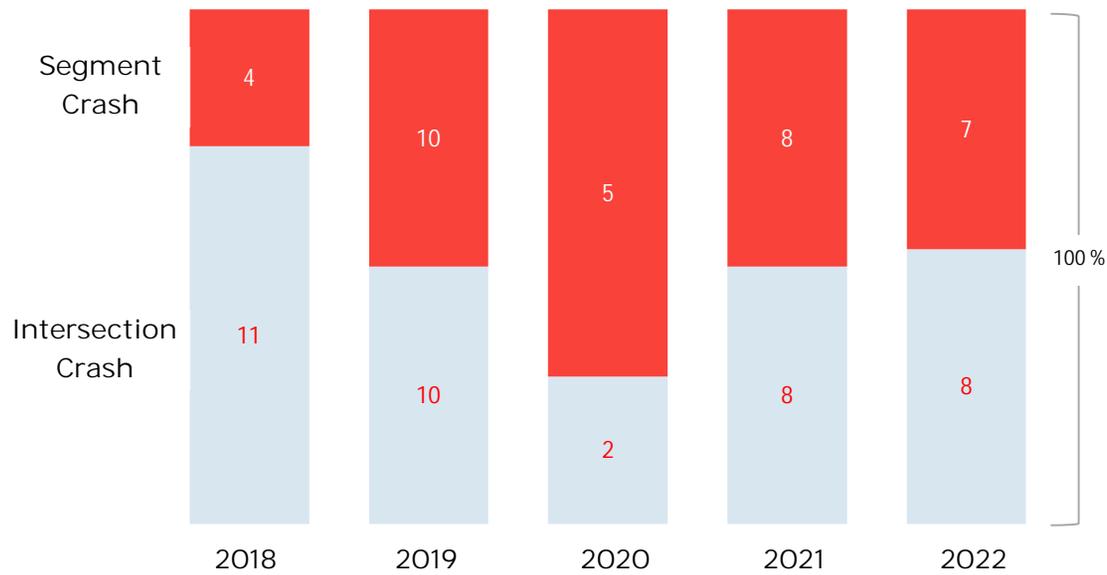
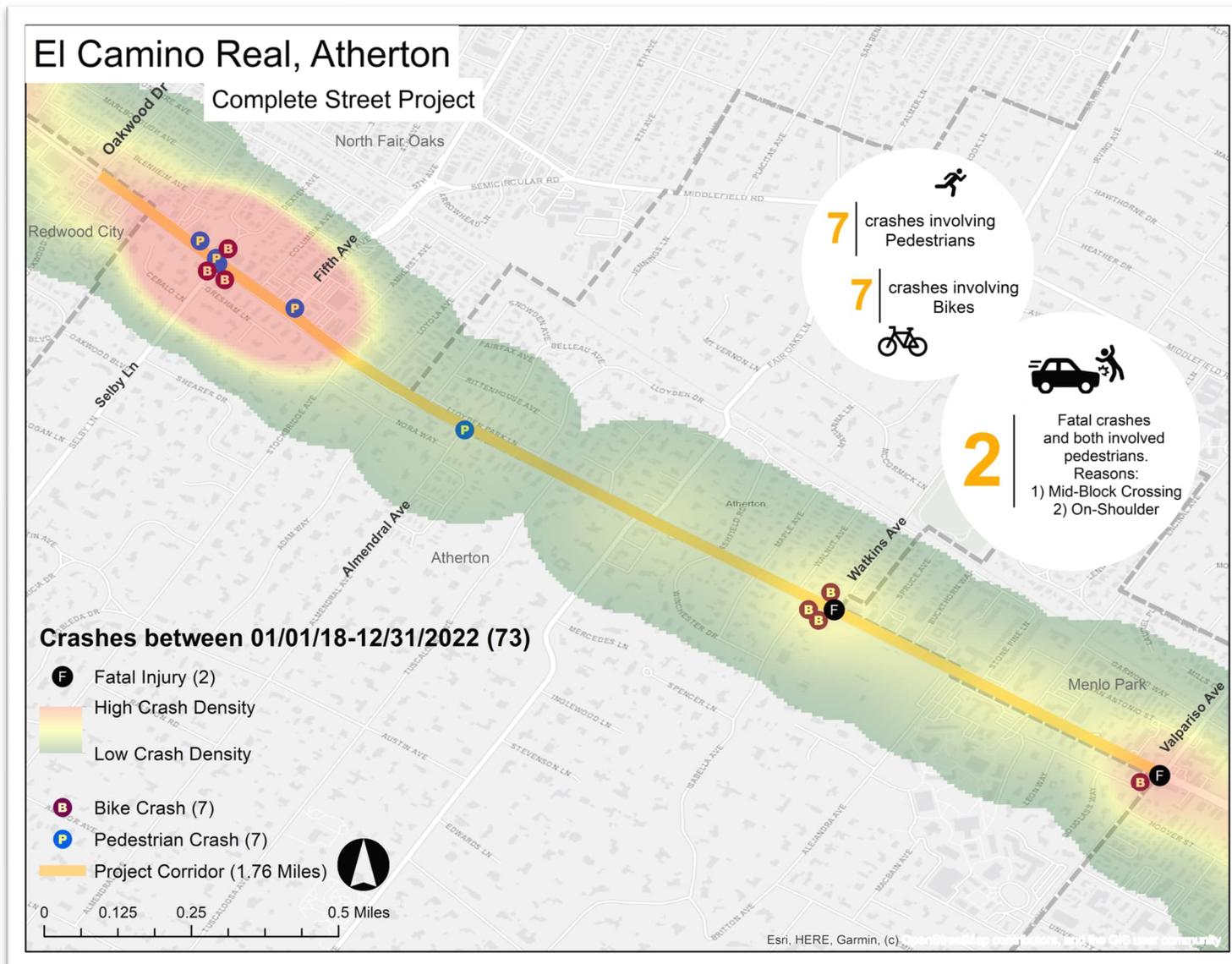


Figure 3.4: Crash Analysis Schematic.



4. TRAVEL DEMAND DATA COLLECTION

As part of this study, traffic volume data was obtained, and this data formed the foundation of the traffic analysis. The methodology involved includes conducting turning movement counts (TMCs) at all 12 study intersections, as detailed in Figure 1.3, during the peak periods of a Tuesday (7-9 AM and 4-6 PM). Additionally, this approach included gathering 72-hour Automatic Traffic Recorder (ATR) data at four strategically chosen locations to provide a comprehensive view of traffic volumes and patterns during typical weekday conditions. The TMC data were systematically collected on Wednesday, March 12, 2024, while the ADT data were collected from March 12 to March 14, 2024. This approach ensured a comprehensive capture of traffic dynamics across varied time frames and conditions. The compilation of both TMC and ATR data, meticulously gathered as part of this study, is thoroughly documented in Appendix A, providing a detailed resource for further analysis and insights. Table 4.1 summarizes the ADT data summarized from all the counters.

	AM PEAK HOUR	PM PEAK HOUR	WEEKDAY AVERAGE
Time Period	07:45 AM - 08:45 AM	04:30 PM - 05:30 PM	Typical Weekday
Traffic Volume ¹	2,812	2,980	36,058
K-Factor ²	7.8%	8.3%	N/A
Directional Distribution	68% SB / 32% NB	41% SB / 59% NB	50% SB / 50% NB
¹ vpd = volume per day, vph = volume per hour, based on ADT data (Mar 12-14, 2024), unadjusted. Traffic volumes entered are bi-directional.			
² percent of daily traffic that occurs during the peak hour			

Table 4.1: Summary of Average ADT Data

For the 2024 traffic volume analysis of the El Camino Real State Highway (SH 82) between Selby Lane and Valparaiso Ave, the Average Daily Traffic (ADT) is documented at 36,058 vehicles per day (vpd). The analysis identifies peak traffic periods in the morning, between 7:45 to 8:45 AM, contributing to 7.8% of the daily volume, and in the evening, between 4:30 to 5:30 PM, representing 8.3% of daily volume. However, it should be noted that Turning Movement Counts were collected on a Tuesday and the PM peak hour for all the intersections were 3:45 to 4:45 PM. Directional flow analysis during these peak periods reveals a distribution of 68% southbound and 32% northbound traffic in the AM, with a shift to 41% southbound and 59% northbound in the PM. Additionally, Figure 4.1 represents the Annual Average Daily Traffic (ADT) on El Camino Real State Highway (SH 82), showcasing northbound, southbound, and total traffic volumes. Figures 4.2 and 4.3 illustrate the 2024 existing weekday morning and evening peak hour traffic volumes including pedestrians and bicycles.

PEDESTRIAN AND BICYCLE DEMAND

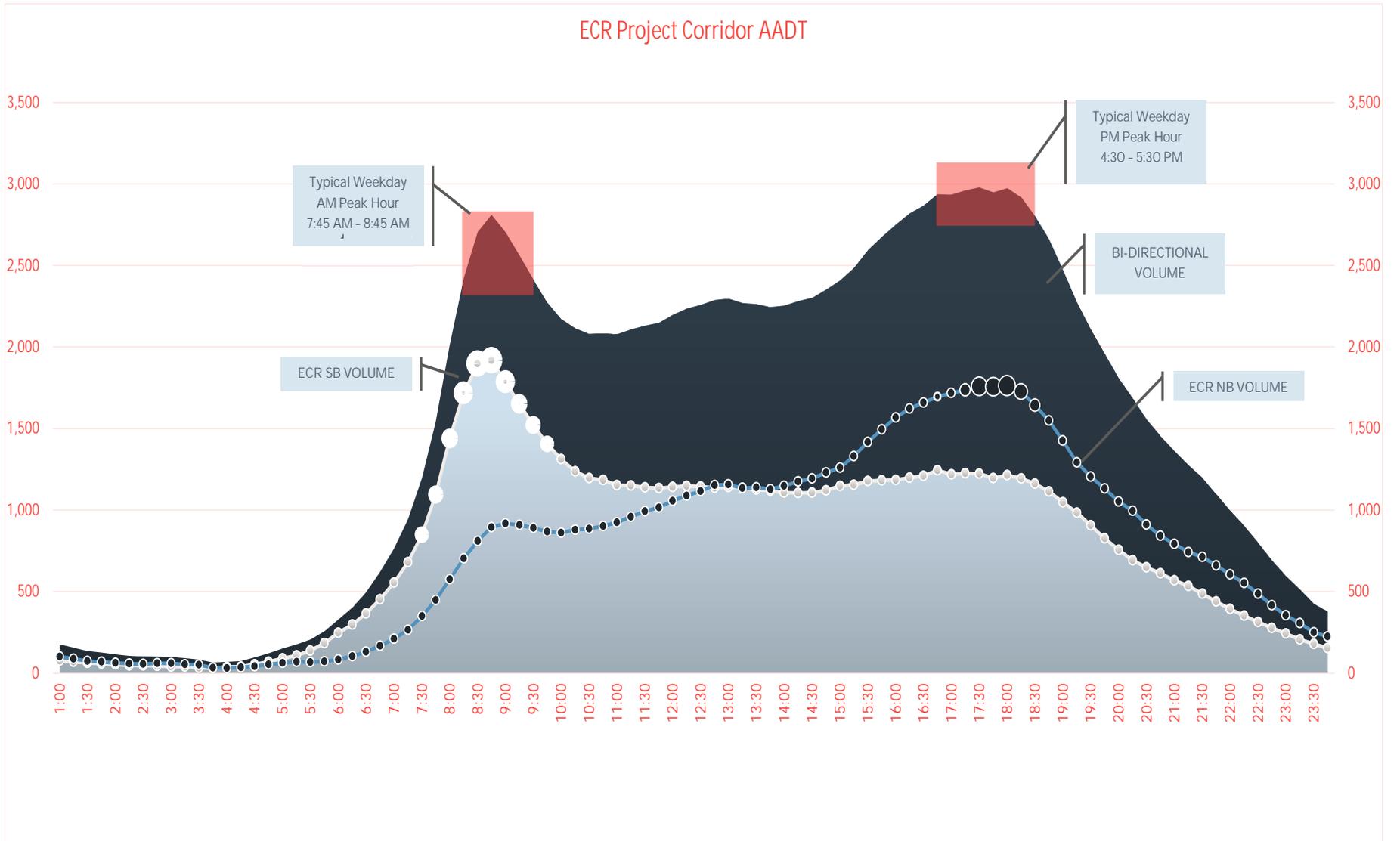
The TMCs also captured pedestrian and bicycle movements at the 12 intersections during peak hours. The data reveals significant variations in pedestrian and bicycle demand across different intersections and times of the day. Below is a summary of key findings and refer Table 4.2.

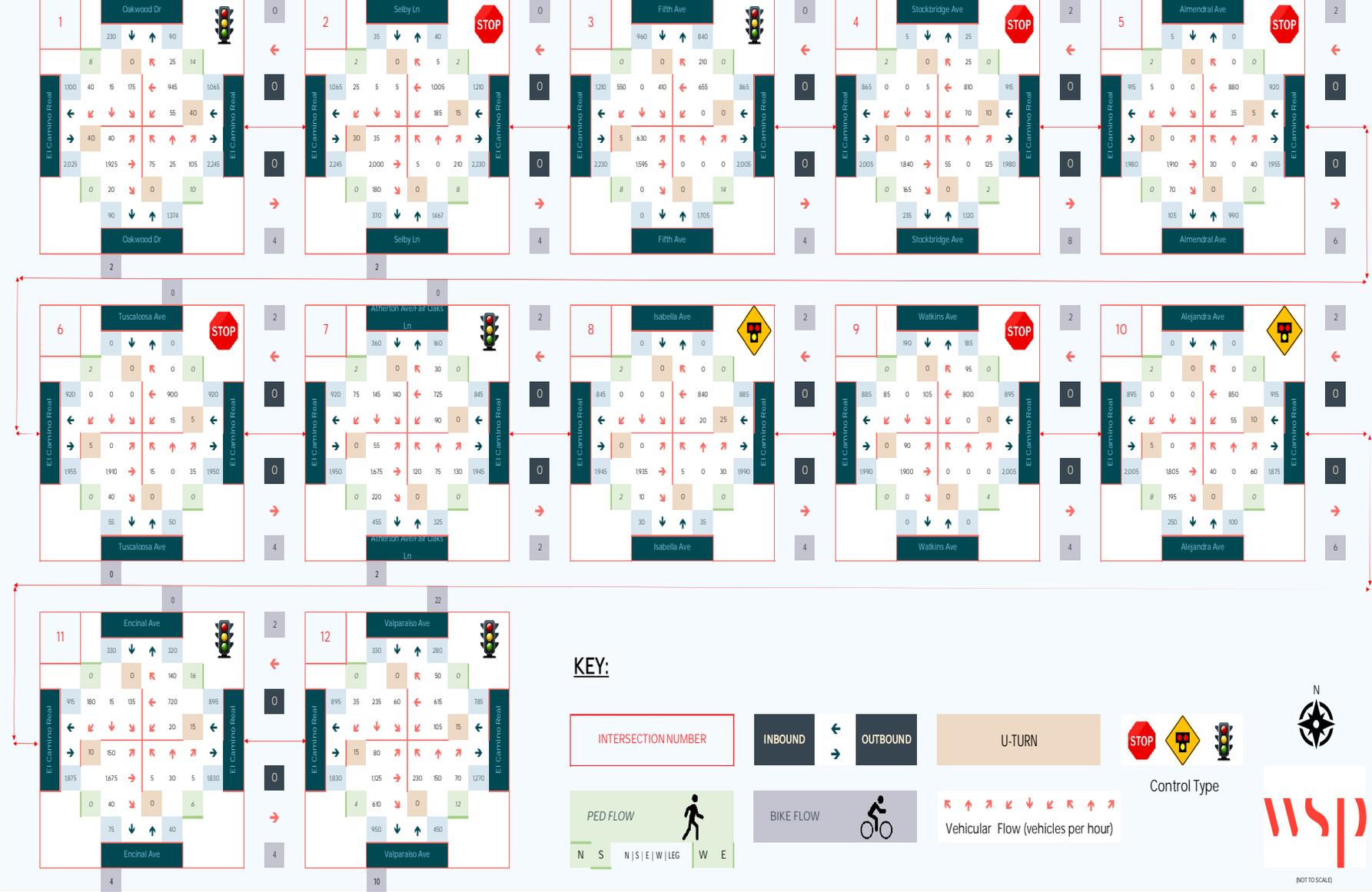
- Highest Pedestrian Demand (AM Peak): El Camino Real & Fifth Ave (East leg: 13, South leg: 7)
- Highest Pedestrian Demand (PM Peak): El Camino Real & Fifth Ave (East leg: 30, South leg: 10)
- Highest Bike Demand (AM Peak): El Camino Real & Valparaiso Ave (Eastbound: 21, Westbound: 10)
- Highest Bike Demand (PM Peak): El Camino Real & Atherton Ave/Fair Oaks Ln (Northbound: 38, Southbound: 17)

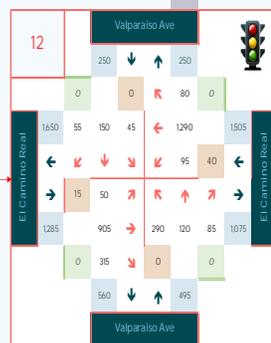
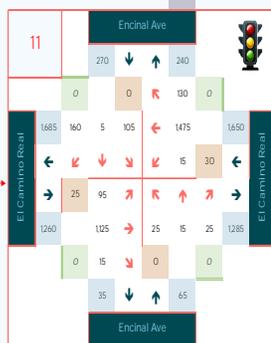
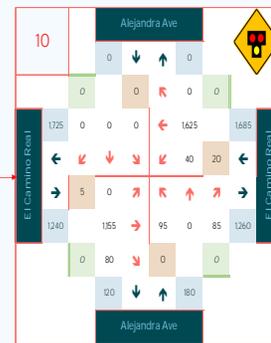
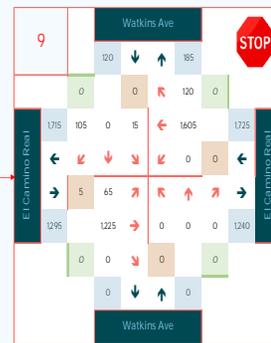
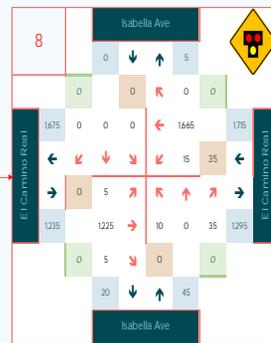
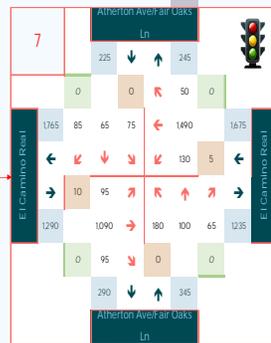
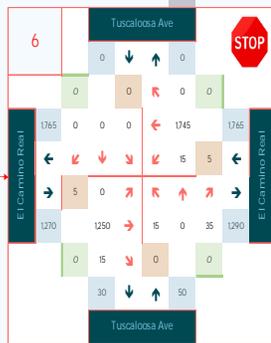
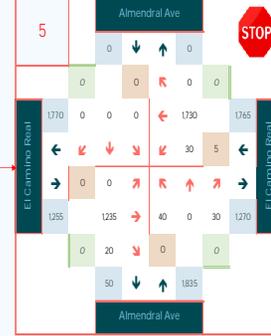
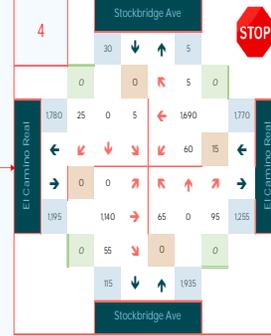
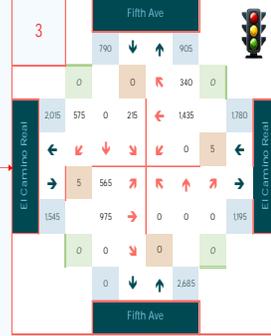
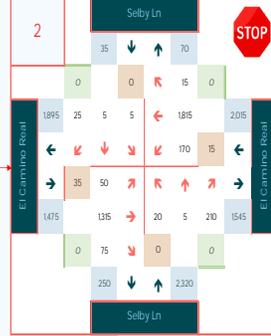
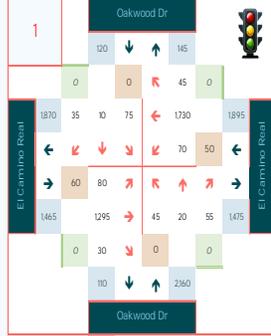
INTERSECTION	CONTROL TYPE	AM PEAK PED DEMAND	PM PEAK PED DEMAND	AM PEAK BIKE DEMAND	PM PEAK BIKE DEMAND
Oakwood Dr	Signalized	E: 10, N: 14	E: 18, N: 13	EB: 6, SB: 4	SB: 9, NB: 6
Fifth Ave	Signalized	E: 13, S: 7	E: 30, S: 10	SB: 4	NB, SB: 4
Atherton Ave	Hawk Beacon	W: 2	E, W: 2	WB: 2, SB: 2	SB: 17, NB: 38
Valparaiso Ave	Signalized	E: 11, S: 3	E: 17, N: 5	EB: 21, WB: 10	EB: 5

Table 4.2: Summary of High Micro-modal Data

Figure 4.1: ADT Schematic







KEY:

INTERSECTION NUMBER

INBOUND

OUTBOUND

U-TURN



Control Type

PED FLOW

N S N | S | E | W | LEG W E

BIKE FLOW

Vehicular Flow (vehicles per hour)



5. TRAVEL CHARACTERISTICS

In addition to the data described above, WSP utilized data from StreetLight Data, Inc. to determine travel patterns for various modes within the defined study area. StreetLight is an on-demand mobility analytics platform that takes travel data from mobile devices to analyze origin/destination patterns, travel times, and other travel patterns. Due to the number of assumptions built into the StreetLight data processing methodology, the results should be viewed as a high-level snapshot of travel patterns within the study area rather than an accurate estimate of total travel volumes.

WSP first worked with the Town of Atherton to determine the extent of the study area, which included 48 census tracts within San Mateo County, as shown in Figure 5.1. Data is not available for trips outside of San Mateo County, so all data shown is for intra-county trips. WSP analyzed origin/destination patterns by utilizing the *Middle Filter* tool to view trips to and from the census tracts within the study area that use the portion of El Camino Real between Selby Lane and Valparaiso Avenue. Unfortunately, this specific type of analysis is only available for vehicle and bicycle data.

Figure 5.1: Study Area for StreetLight Data



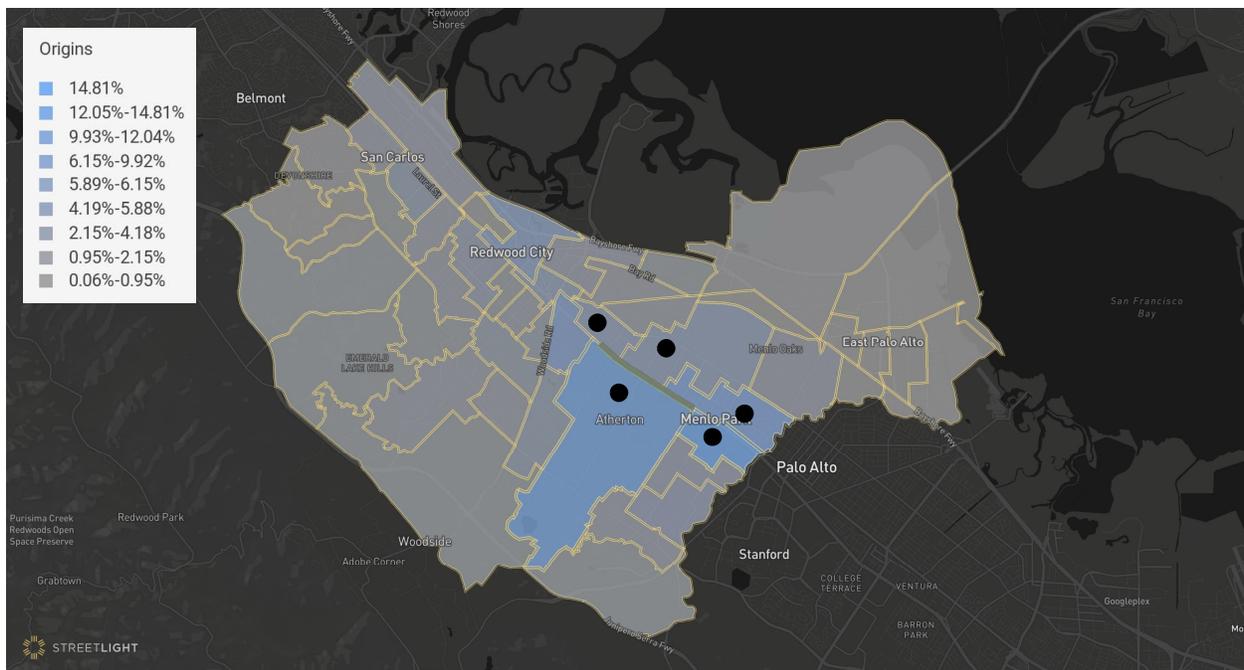
Aggregated trip data was obtained for March, April, September, and October 2021. This included aggregated trips from all days of the week at all times.

LOCAL VS THROUGH VEHICLE TRIPS

Through discussions with the Town of Atherton, WSP focused on analyzing two components of the StreetLight data. The first was the difference between “local” and “through” vehicle trips. WSP utilized the data from StreetLight’s Middle Filter tool described above to determine origin and destination patterns for vehicle trips using the project corridor. Local trips are defined as those that begin or end in the five census tracts surrounding the project corridor while through trips are defined as those that begin or end outside those five census tracts.

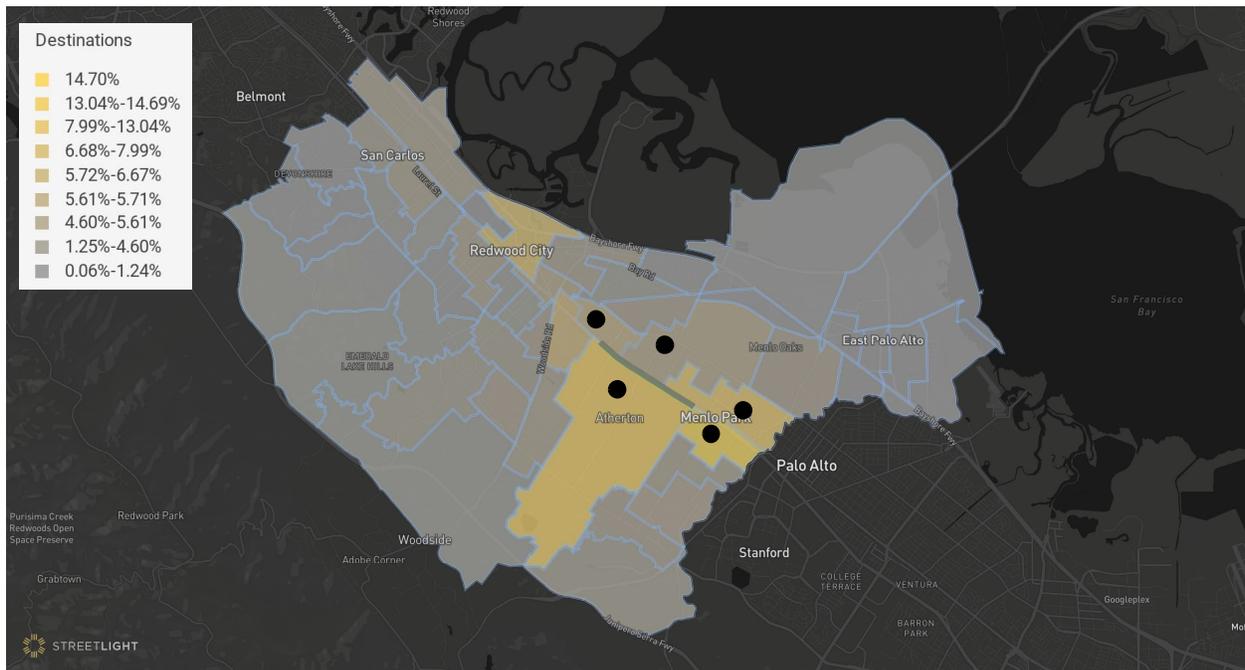
To gain perspective of overall trip patterns, Figure 5.1 and Figure 5.2 show the percentage of vehicle trip origins and destinations by census tract using the project corridor. The census tracts with the highest percentage of vehicle trip origins primarily border the project corridor, with some higher percentages in Redwood City as well.

Figure 5.2: Origins of Vehicle Trips Using the Project Corridor



● *Census tracts that are included in local trips*

Figure 5.3: Destinations of Vehicle Trips Using the Project Corridor



● *Census tracts that are included in local trips*

WSP determined the percentage of local and through vehicle trip origins for weekday and weekend day types and further analyzed the data by time period (AM peak and PM peak). As shown in Table 5.1 and Figure 5.4, the percentages are similar for an average day and time (46% local vs 54% through). However, the largest disparities are in the AM peak with a larger percentage of through trips. This is most likely due to the need for residents from throughout the project area to use the corridor to access jobs or potentially key transit nodes (i.e. Caltrain stations).

Table 5.1: Percentages of Local and Through Vehicle Trip Origins

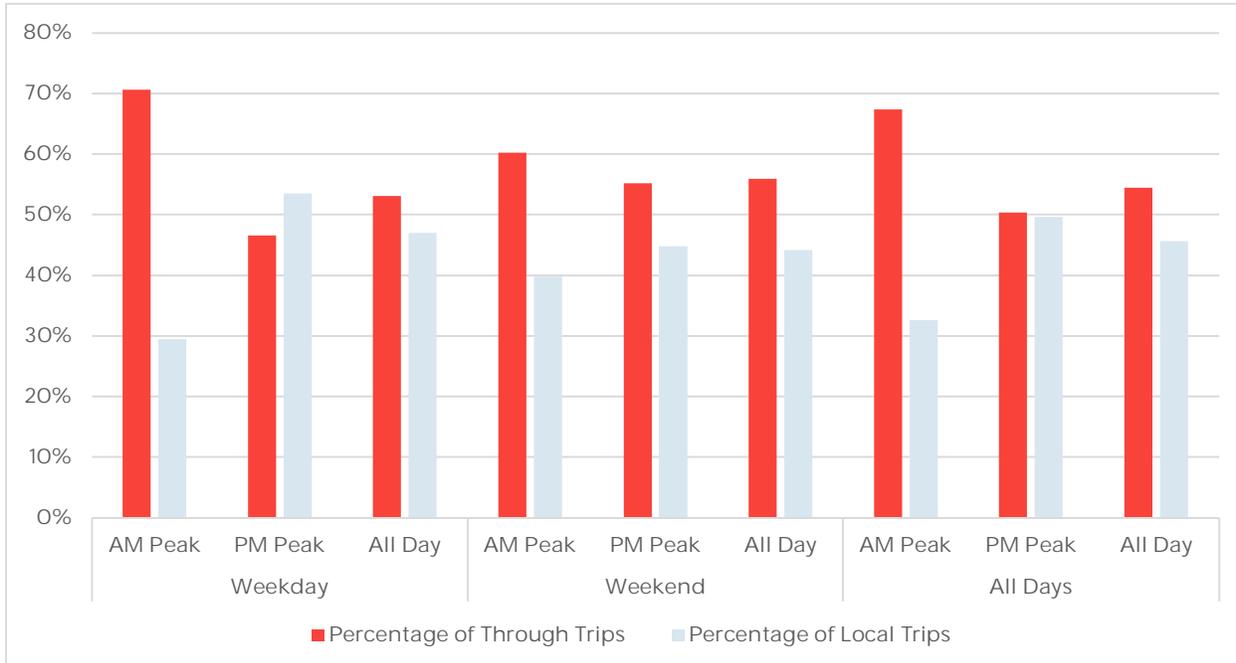
	TIME PERIOD ¹	PERCENTAGE OF LOCAL TRIPS ²	PERCENTAGE OF THROUGH TRIPS ³
Weekday	AM Peak	29%	71%
	PM Peak	53%	47%
	All Day	47%	53%
Weekend	AM Peak	40%	60%
	PM Peak	45%	55%
	All Day	44%	56%
All Days	AM Peak	33%	67%
	PM Peak	50%	50%
	All Day	46%	54%

¹ AM Peak is 6:00-10:00 AM, PM Peak is 3:00-7:00 PM

² through trips are defined as those originating outside the five census tracts bordering the portion of El Camino Real between Selby Lane and Valparaiso Avenue

³ local trips are defined as those originating in the five census tracts bordering the portion of El Camino Real between Selby Lane and Valparaiso Avenue

Figure 5.4: Percentages of Local and Through Vehicle Trip Origins



Similarly, WSP determined the percentage of local and through vehicle trip destinations for weekday and weekend day types and further analyzed the data by time period (AM peak and PM peak). As shown in Table 5.2 and Figure 5.4, there are larger percentages of local trip

destinations than through trips during weekday and all day AM peak periods. The corresponding larger percentage of through trips in the PM peak could be caused by residents returning home from work or school and using the corridor to access a wider range of destinations.

Table 5.2: Percentages of Local and Through Vehicle Trip Destinations

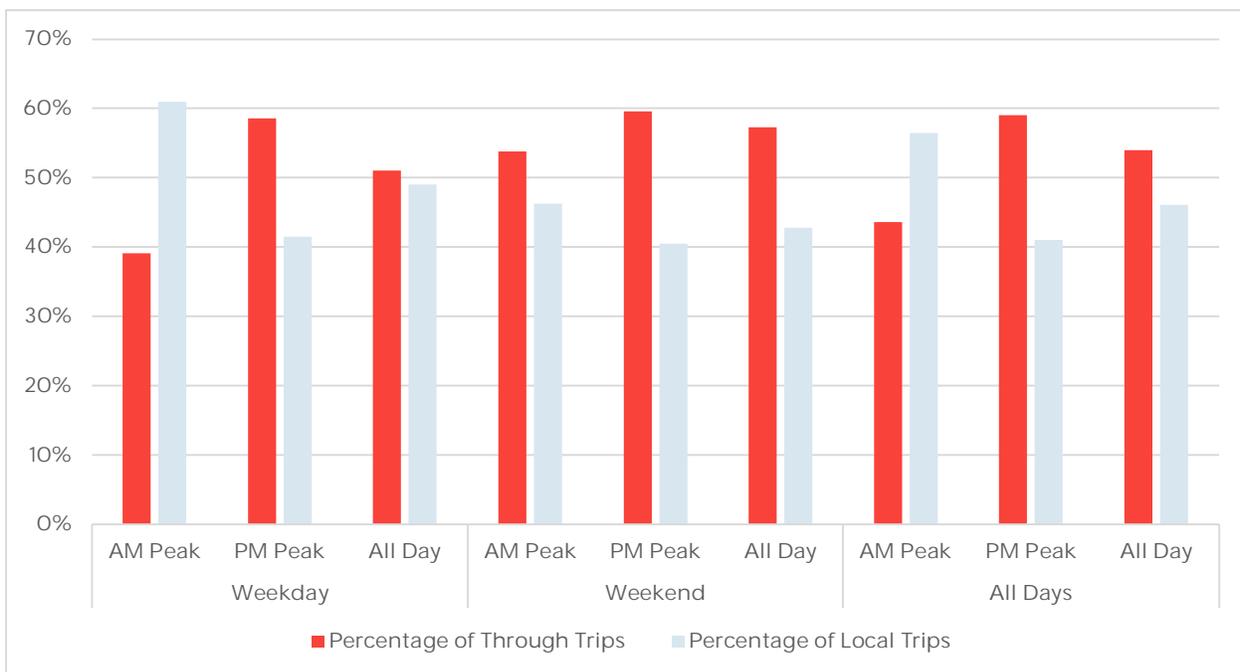
	TIME PERIOD ¹	PERCENTAGE OF VEHICLE LOCAL TRIPS ²	PERCENTAGE OF VEHICLE THROUGH TRIPS ³
Weekday	AM Peak	61%	39%
	PM Peak	41%	59%
	All Day	49%	51%
Weekend	AM Peak	46%	54%
	PM Peak	40%	60%
	All Day	43%	57%
All Days	AM Peak	56%	44%
	PM Peak	41%	59%
	All Day	46%	54%

¹ AM Peak is 6:00-10:00 AM, PM Peak is 3:00-7:00 PM

² through trips are defined as those originating outside the five census tracts bordering the portion of El Camino Real between Selby Lane and Valparaiso Avenue

³ local trips are defined as those originating in the five census tracts bordering the portion of El Camino Real between Selby Lane and Valparaiso Avenue

Figure 5.5: Percentages of Local and Through Vehicle Trip Destinations



BICYCLE AND VEHICLE TRIP PATTERNS

The second set of data analyzed was bicycle and vehicle trip patterns. As evidenced by the data in Section 3, using a bicycle along El Camino Real can be dangerous. Despite being a major north-south corridor within the county, bicyclists are forced to share two travel lanes and a parking lane in each direction with vehicles that are often moving faster than the posted speed limit of 35 miles per hour. According to Streetlight data, only 101 bicyclists within the study area use the project corridor compared to nearly 3,400 bicycle trips that are taken anywhere within the study area regardless of corridor (3%). This can be due to several factors, with the most important being the lack of safe bicycle infrastructure along the corridor.

Despite the low number of bicyclists currently using the project corridor, there is a possibility that could change with improved infrastructure. According to the National Association of City Transportation Officials, a typical urban bicycle trip is anywhere between two and five miles.¹ Table 5.3 and Figure 5.6 show that over 50% of trips throughout the day using the project corridor are under five miles. This indicates that there's potential for some of those trips to be completed via bicycle (particularly with an electric bicycle which increases the possible distance traveled).

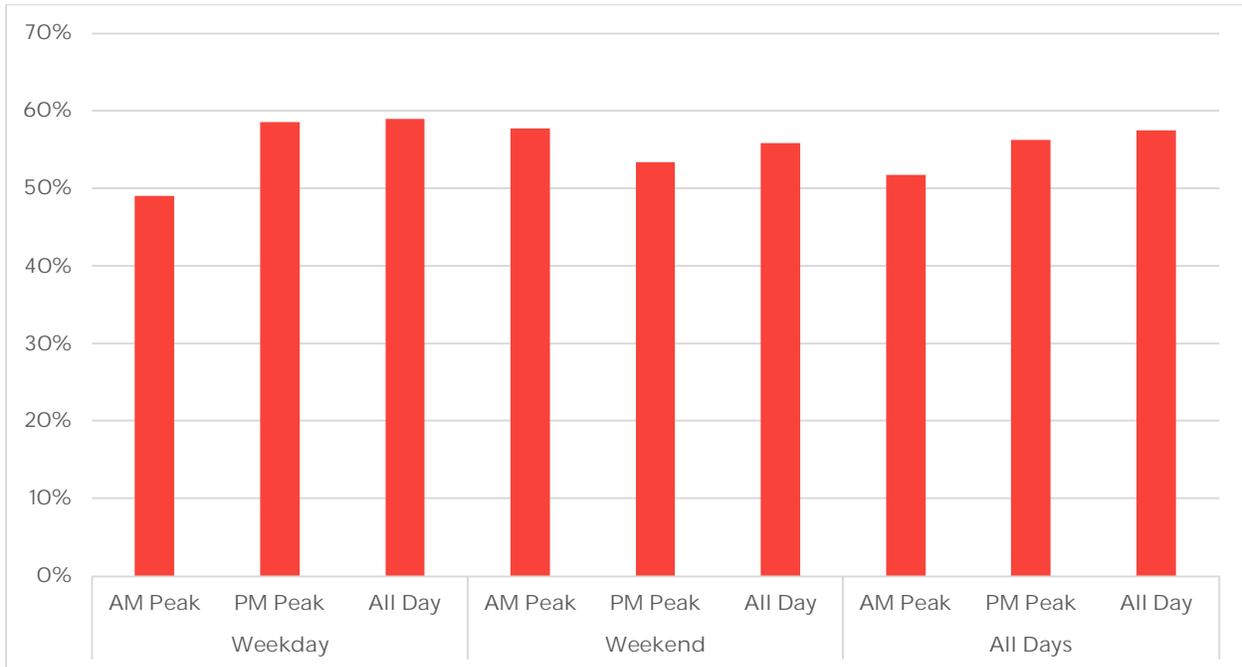
Table 5.3: Percentage of Vehicle Trips Under Five Miles

	TIME PERIOD ¹	PERCENTAGE OF VEHICLE TRIPS UNDER FIVE MILES
Weekday	AM Peak	49%
	PM Peak	59%
	All Day	59%
Weekend	AM Peak	58%
	PM Peak	53%
	All Day	56%
All Days	AM Peak	52%
	PM Peak	56%
	All Day	57%

¹ AM Peak is 6:00-10:00 AM, PM Peak is 3:00-7:00 PM

¹ Source: "Route Planning", National Association of City Transportation Officials, 2023, <https://nacto.org/publication/urban-bikeway-design-guide/bicycle-boulevards/route-planning/>.

Figure 5.6: Percentage of Vehicle Trips Under Five Miles



KEY TAKEAWAYS

The analysis of local and through vehicle trips indicates that for an average day and time, the project corridor is facilitating more trips accessing areas outside those adjacent to the corridor. This makes sense considering this is one of the few major north-south corridors serving the county. However, these patterns change based on the time of day. Particularly during weekdays, AM peak periods experience more local trip origins than destinations, with the opposite occurring in the PM peak. The average distance for through trips is just over eight miles, while the average distance for local trips is just under three miles.

Additionally, the large percentage of vehicle trips under five miles indicates the potential for mode shift to bicycles for completing those trips if safe infrastructure is added to the corridor. Currently, the corridor is not conducive to bicycles which is shown by the low number of counts for bicycle trips using the project corridor.

Results from the outreach phases of the project should be monitored to determine how residents are using the project corridor, as well as the desire for improved bicycle infrastructure along the project corridor. The results will be compared to the data in this memo, along with further analysis during the Alternatives Analysis and Concept Designs portion of the project, to determine the impacts of converting existing travel lanes to accommodate dedicated bicycle infrastructure.

6. CONCLUSION

In summarizing the collected data for the El Camino Real Complete Streets Corridor Plan, the crash analysis indicates safety concern for micro-mobility modes and demand data indicates challenges in managing traffic flow during peak times. The crash data highlights a critical need for safety improvements at key intersections, while travel demand data emphasizes the corridor's pivotal role in facilitating more trips accessing areas outside those adjacent to the corridor. Additionally, StreetLight data shed light on the corridor's significance in facilitating varied travel patterns, pointing towards the necessity for better multimodal infrastructure to support safe and efficient transportation for all users.

Next Steps

Moving ahead, the focus will shift to completing the traffic analysis to thoroughly evaluate current traffic conditions and pinpoint opportunities for enhancing multimodal safety, connectivity, and traffic flow efficiency. This analysis will lay the groundwork for the Traffic Engineering Performance Assessment Report (TEPA), aiming to provide a detailed look into the corridor's traffic dynamics and suggesting practical measures for its improvement. By improving infrastructure to support a diverse range of transport modes, the project seeks to establish a safer, more accessible, and efficiently navigated corridor, addressing both present and anticipatory community needs.