

TABLE 4.14.1 LIVE OAK ELEMENTARY SCHOOL RECOMMENDATIONS

ID	Improvement	Description	Location
1	Speed Feedback Sign	Install speed feedback sign	Southbound on Live Oak Avenue north of Sequoia Avenue
2	Rectangular Rapid Flashing Beacon (RRFB)	Add RRFB crossing Live Oak Avenue	Live Oak Avenue at Sequoia Avenue
3a	High-Visibility Crosswalk	Install high-visibility crosswalk on the west leg of the intersection	Live Oak Avenue at North School Parking Lot Entrance Driveway
3b	High-Visibility Crosswalk	Install high-visibility crosswalk on the west leg of the intersection	Live Oak Avenue at North School Parking Lot Exit Driveway
3c	High-Visibility Crosswalk	Install high-visibility crosswalk on the west and south legs of the intersection	Live Oak Avenue and Sequoia Avenue
3d	High-Visibility Crosswalk	Install high-visibility crosswalk on the east leg of the intersection	Live Oak Avenue at Manzanita Drive
4	Red Curb	Extend the red curb	Live Oak Avenue between North School Parking Lot Driveways
5	No Left-Turn Sign	Install no left turn sign for the eastbound approach	Live Oak Avenue at North School Parking Lot Exit Driveway
6	Pedestrian Push Button	Add a pedestrian push button closer to the curb ramp on both sides of the street at the existing RRFB on Live Oak Avenue	Live Oak Avenue and Manzanita Drive
7	Delineators	Add delineators on Live Oak Avenue to prevent northbound left turns movements	Live Oak Avenue and North School Parking Lot Entrance
8	School Zone Sign	Update existing 25 mph speed limit sign to include the school zone plaque	Live Oak Avenue between North School Parking Lot Exit Driveway and Manzanita Drive
9a	Sidewalk	Construct sidewalk	Live Oak Avenue (W) between Randall Avenue and Sequoia Avenue
9b	Sidewalk	Construct sidewalk	Live Oak Avenue (E) between Randall Avenue and Sequoia Avenue
9c	Sidewalk	Construct sidewalk	Live Oak Avenue (E) between Manzanita Drive and San Bernardino Avenue

4.15 SEQUOIA MIDDLE SCHOOL

9452 Hemlock Ave, Fontana, CA 92335
Fontana Unified School District

Sequoia Middle School is located in unincorporated San Bernardino County, California, within the City of Fontana Sphere of Influence, west of the city boundary. Sequoia Middle School is located west of Hemlock Avenue, between Randall Avenue and Manzanita Drive. The school is located approximately 1.0 mile north of the Interstate 10 (I-10) freeway and approximately 1.2 miles southeast of Auto Club Speedway, a Nascar racing track. The land uses surrounding Sequoia Middle School are primarily residential with some industrial land uses. Figure 4.15.1 shows the school area and the overall context of the school site.



Figure 4.15.1 Context Map

SCHOOL PROFILE

Sequoia Middle School is located in unincorporated San Bernardino County within the City of Fontana Sphere of Influence and is a part of the Fontana Unified School District. It serves approximately 800 students in 7th and 8th grades, with a student/teacher ratio of 20:1. The demographic composition of the students is shown in Figure 4.15.2, which shows that Sequoia Middle School has a majority Hispanic population according to the census estimates. Currently, approximately 92.8% of Sequoia Middle School students received free or reduced-price lunch during the 2023-2024 school year, which is significantly higher than the state and county averages. (Figure 4.15.3).

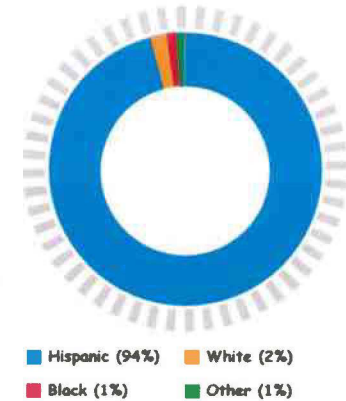


Figure 4.15.2 Demographic Composition

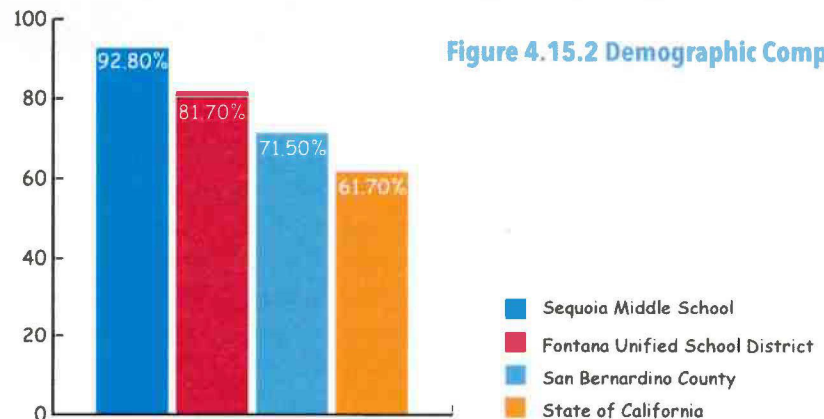


Figure 4.15.3 Free or Reduced Meals (Compare between district and county)

Student Tallies

The Safe Routes to School Student Arrival and Departure Tally Sheet was administered by Sequoia Middle School staff between January 29 and January 30, 2025, to better understand what mode(s) students use to travel to and from the campus. Although an online tally was administered as part of the school mobility assessment for Sequoia Middle School, unfortunately, no teachers participated in the student tally.

Mobility Assessment

A walk audit and on-site meeting for Sequoia Middle School in unincorporated San Bernardino County was conducted on January 30, 2025. The purpose of the event was to identify any issues related to student drop-off or pick-up operations that may make it unsafe or uncomfortable for students to walk, bike, and roll to and from school. Included in this assessment are discussions of observed deficiencies, such as substandard sidewalks, missing curb ramps and crosswalks, inadequate bicycle infrastructure and high traffic volumes and speeds around the school.

Those who attended the mobility assessment included Sequoia Middle School Principal and CR Associates staff.

Although an online survey was administered as part of the school mobility assessment for Sequoia Middle School, unfortunately, no parents/caregivers participated.



CalEnviroScreen 4.0

CalEnviroScreen (CES) is a tool developed by the California Office of Environmental Health Hazard Assessment (OEHHA) that identifies communities that are disproportionately burdened by pollutants. Factors used to identify communities include exposures (traffic, pesticides, and drinking water), environmental effects (cleanup sites, solid waste), sensitive populations (asthma, low birth weight) and socioeconomic factors (education, poverty, unemployment). Scores range from 0-100 with a higher score indicating a higher effect of pollutants for the area. Figure 4.15.4 illustrates the CES scores for Sequoia Middle School and its surrounding area scoring in the 90th to 100th percentile, which indicates the area is significantly burdened by pollutants.



Figure 4.15.4 CalEnviroScreen 4.0 Score - Sequoia Middle School

Healthy Place Index

The California Healthy Places Index (HPI), developed by the Public Health Alliance of Southern California, is a tool used to explore the community conditions that impact life expectancy. The HPI tool helps prioritize public and private investments, resources and programs in neighborhoods where they are needed the most. The HPI tool combines 23 community characteristics such as access to healthcare, housing, education and more. The tool produces a score ranging from 0-100, with a higher score representing a healthier community. The tool's indicators reflect widely recognized thematic areas of the social determinants of health and are consistent with those described by the Centers for Disease Control (CDC). Figure 4.15.5 illustrates the area surrounding Sequoia Middle School, which shows an HPI score of 14.0, indicating less healthy conditions surrounding the school.

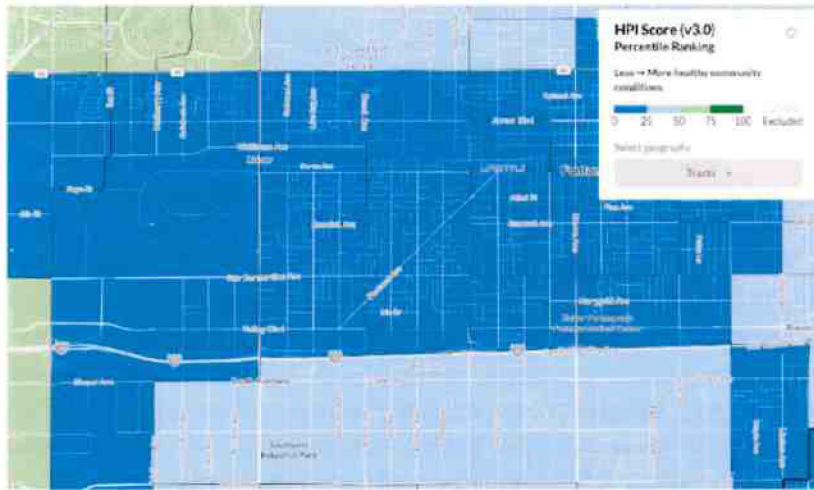


Figure 4.15.5 Healthy Place Index Score - Sequoia Middle School

Walking

Figure 4.15.6 provides an overview of the existing pedestrian network and challenges observed and analyzed. The sidewalk network surrounding Sequoia Middle School is incomplete. During the site visit, it was observed that there were no sidewalks on the east side of Hemlock Avenue. The east and west sides of Live Oak Avenue also have some missing sidewalk segments. Vehicles were observed parking on the dirt pathway blocking the path of travel, where there should be sidewalk, on the east side of Hemlock Avenue. These vehicles then reverse into the lane of travel to leave, stopping northbound traffic and creating potential conflict points.

Challenges to walking were evaluated using the Pedestrian Evaluation Score (PES) developed by CR Associates. Based on the physical environment, surrounding land uses, and the street environment, a PES score was developed for nearby roadways. Figure 4.15.7 shows the results of the PES scoring. A sidewalk network with medium and high PES scores indicates relatively low stress for walking, whereas a low or very low PES score can be considered a stressful walking environment. The roadways near Sequoia Middle School show primarily low PES scores, with very low scores on Randall Avenue, San Bernardino Avenue and Beech Avenue. This indicates a stressful walking environment near the school along these roadways and may create a barrier to walking.



Figure 4.15.6 Existing Pedestrian Conditions

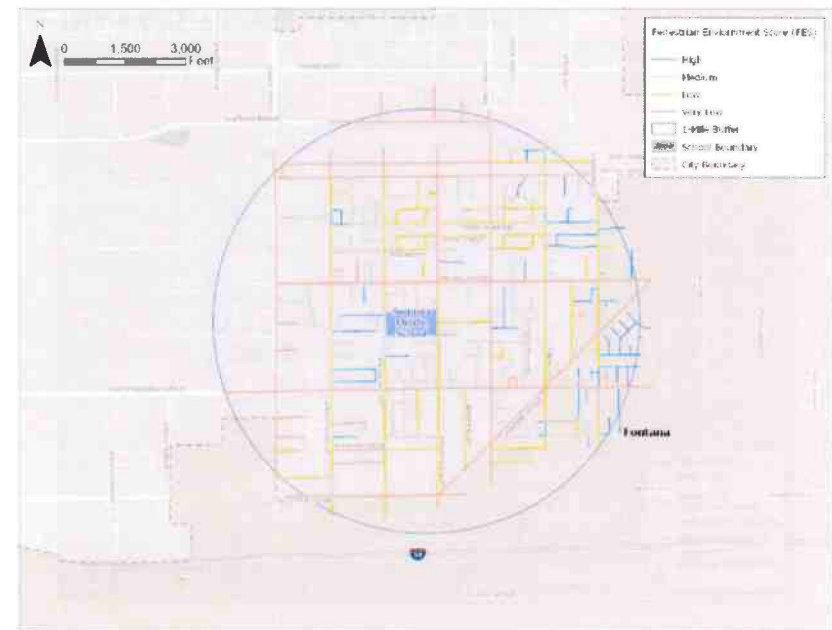


Figure 4.15.7 Pedestrian Evaluation Score

Figure 4.15.8 shows the walkshed for Sequoia Middle School. The walkshed shows the area where a student can walk one-half mile from the school. The walkshed has been reviewed for sidewalk connectivity and accessibility.

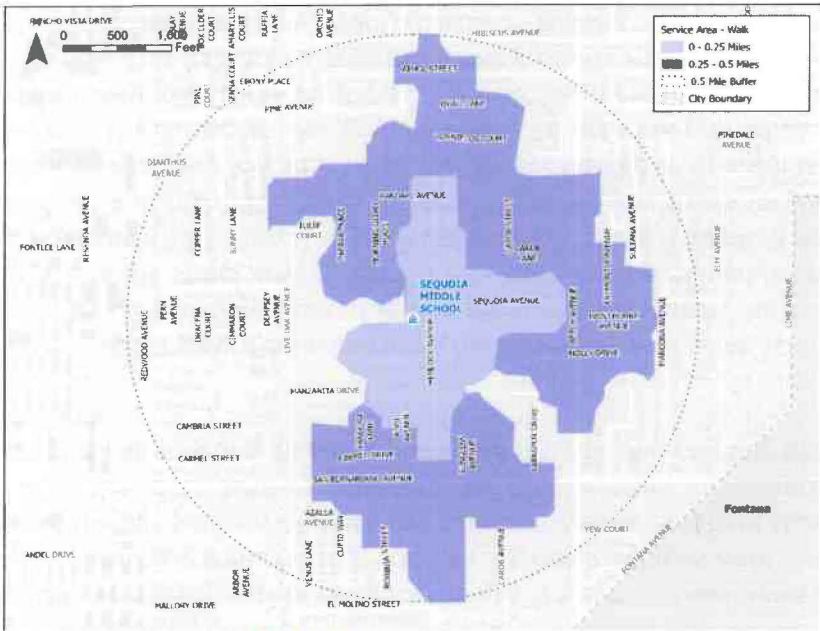


Figure 4.15.8 Existing Pedestrian Walkshed

Riding and Rolling

Currently, there are no bicycle facilities surrounding Sequoia Middle School. There are no plans to implement bicycle facilities within the school vicinity.

The bicycle environment was assessed using the bicycle Level of Traffic Stress (LTS) methodology for characterizing cycling environments, as developed by Mekuria et al. (2012) of the Mineta Transportation Institute. LTS classifies the street network into categories according to the level of stress it causes cyclists, taking into account a number of factors. The LTS assessment conducted by MBI concluded the roads immediately surrounding Sequoia Middle School have LTS scores of 4, indicating high stress levels for cyclists (Figure 4.15.9).

Figure 4.15.10 shows the bikeshed for Sequoia Middle School. The bikeshed shows the area where a student can bike one mile from the school.

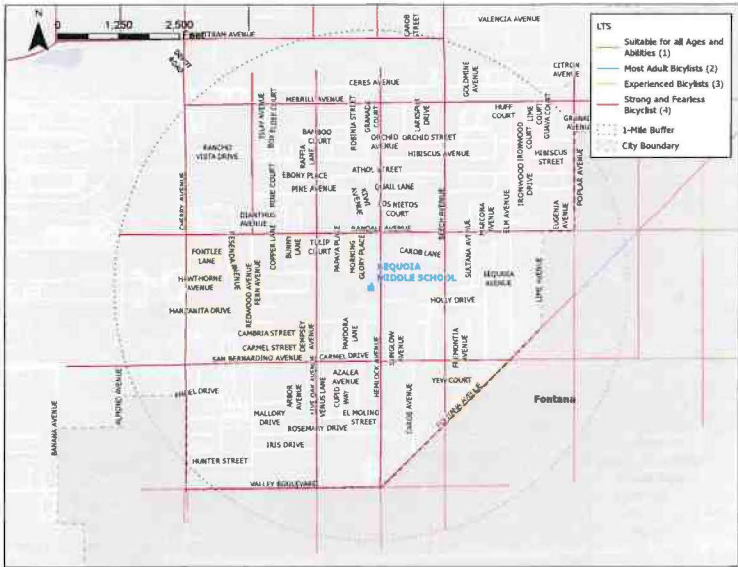


Figure 4.15.9 Bicycle Level of Traffic Stress

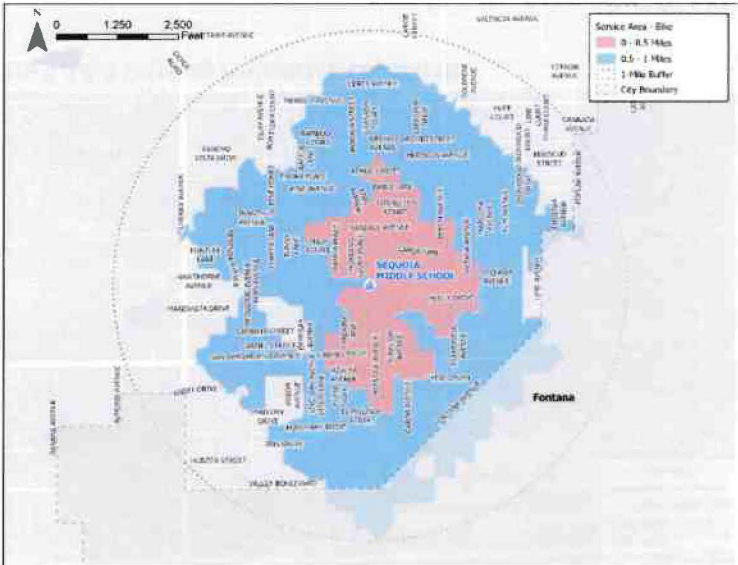


Figure 4.15.10 Existing Bikeshed

Pick-Up and Drop-Off

Sequoia Middle School is accessed via Hemlock Avenue and Sequoia Avenue. Figure 11 illustrates the existing conditions, and the behaviors observed during the mobility assessment.

There is currently one crossing guard at the intersection of Manzanita Drive and Live Oak Avenue. This intersection includes a Rectangular Rapid Flashing Beacon (RRFB) crossing with a high-visibility crosswalk and signage.

The following signs are present along the east and west sides of Hemlock Avenue:

- "School Crossing Ahead"
- "No U-Turns"
- "No Commercial Trucks Over 7 Tons"
- "No Stopping Anytime".

Parents that are dropping off their children are noted to park along the east side of Hemlock Avenue and cross the street with their children.

Drop-off and pick-up currently occur primarily at the school parking lot on Hemlock Avenue. During the site visit, parents were observed arriving approximately 15 minutes prior to the dismissal bell. Many of the early arrival parents park along the school curbside of Hemlock Avenue to pick up students, while the late arrival parents were seen picking up students in the travel lane on Hemlock Avenue. Staff members were seen blocking off the main pick-up/drop-off entrance for the first 5 to 8 minutes of the dismissal bell to make sure there is clear access for school buses in the school parking lot. School staff recognize that vehicles park in unofficial spots to pick up students at the unpaved pathway on the east side of Hemlock Avenue across the school parking lot.

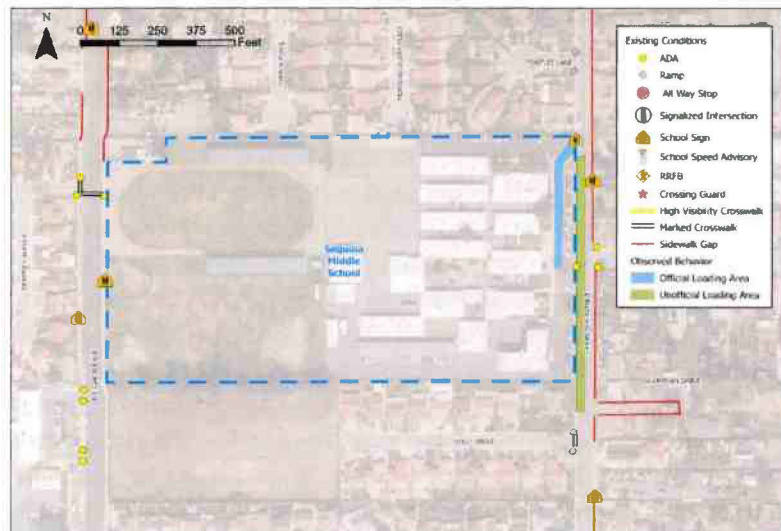


Figure 4.15.11 Existing Pick-Up and Drop-Off Vehicle Behavior

Safety Analysis

Between 2019 and 2023, there were 12 bicycle and pedestrian collisions within a one-half mile radius of Sequoia Middle School. Of the 12 collisions, there were two collisions involving a pedestrian who sustained severe injuries and one which was fatal. These were on Hemlock Avenue near Quail Lane (2021) and on Live Oak Avenue near San Bernardino Avenue (2022) (Figure 4.15.12).



Figure 4.15.12 Bicycle and Pedestrian Involved Collisions (2019-2023)



Travel Pattern Analysis

A travel pattern analysis was conducted for Sequoia Middle School to understand how students may be traveling to the campus. Origin-Destination data was downloaded from the Replica Big Data platform, and ArcGIS and Python were the tools used to process the data. Featuring the school site as the destination, the analysis provides insights into the magnitude of trips made to and from the surrounding neighborhoods. The neighborhoods are defined by Traffic Analysis Zones (TAZs) that fall within the school's attendance boundary. The analysis is performed by travel mode for both active travel, which includes walking and biking, and auto travel, which refers to travel by car. The resulting maps display the number of trips by these two modes between the neighborhood TAZs and the TAZ where the school is located.

For each neighborhood, the number of trips made by each travel type was shown using lines on a map (Figure 13 and Figure 14 for active trip and auto trip maps, respectively). A thicker line means more people are estimated to travel using that mode of transportation from that neighborhood. Line thickness can be compared within the same type of travel, such as comparing two walking routes. One can also get a general sense of how walking and driving compare by looking at both sets of lines side by side. However, the lines are scaled differently for each mode of travel, so they should not be compared directly. This data helps reveal how people tend to travel based on several factors, such as the existing walking or biking environment, land uses, physical barriers, population densities and the layout of the roadway network.

For Sequoia Middle School, auto and active modes have similar magnitudes for each respective mode. It should be noted that TAZs that are further away from the school TAZ, particularly to the west, north, and east, show slightly higher activity for auto trips. The slight difference in activity in the further away TAZs may be due to poor active transportation connectivity to the school, active infrastructure barriers, more car-dominant lifestyles, or a longer distance between the school and the respective TAZ compared to other TAZs.

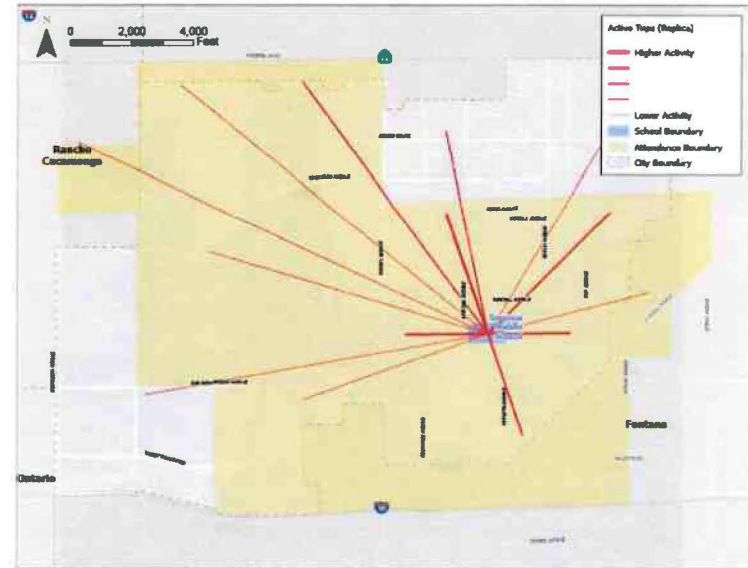


Figure 4.15.13 Active Travel Pattern

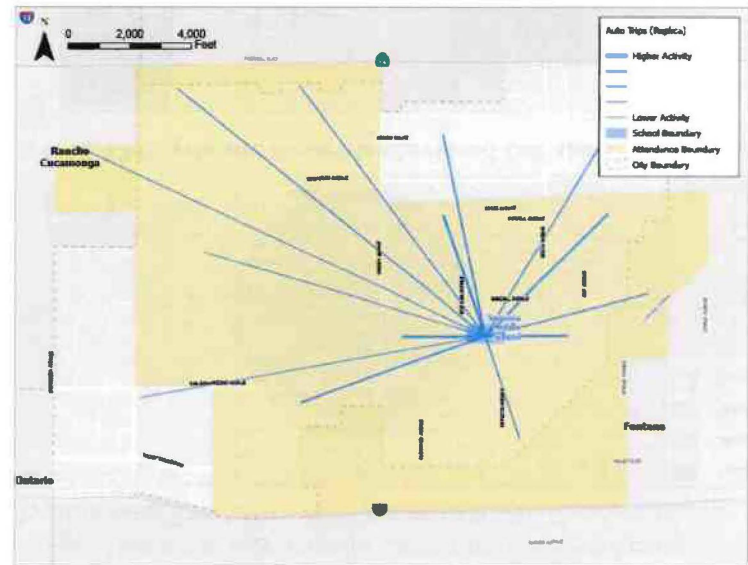


Figure 4.15.14 Auto Travel Pattern

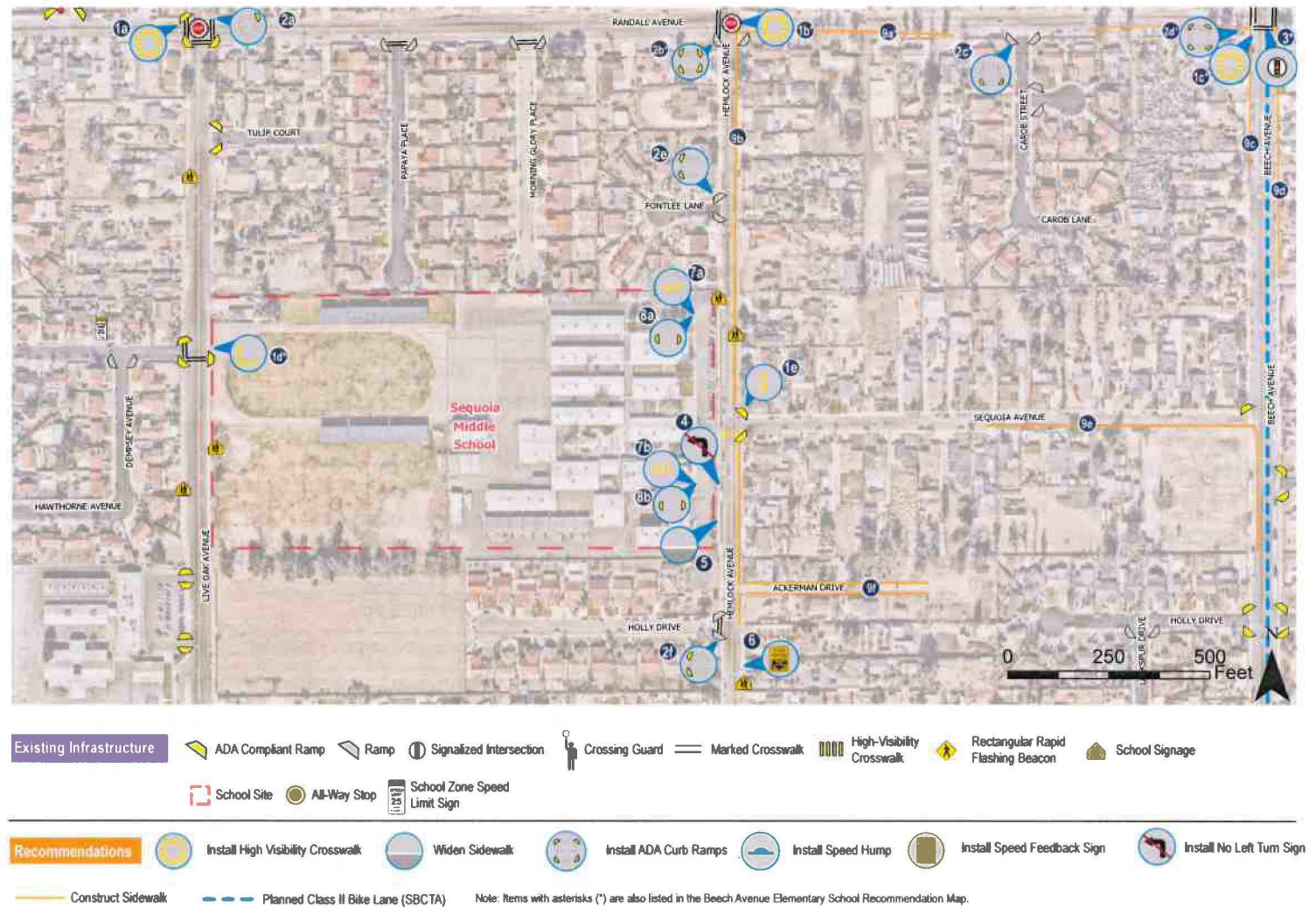
SCHOOL RECOMMENDATIONS

Several improvement opportunities were identified in the mobility assessment conducted for Sequoia Middle School. Through the student tallies, it was found that the primary mode of travel for most students commuting to and from Sequoia Middle School was the use of a family vehicle. Parents during the walk audit explained this was due to the pedestrian environment, as they felt it was unsafe with the lack of sidewalks and the existing uneven sidewalk sections that may cause tripping hazards.

Speeding was cited as a concern on Hemlock Avenue. This is visible along Hemlock Avenue where drivers were seen increasing their speed. A speed feedback sign is recommended along Hemlock Avenue south of Sequoia Middle School to discourage speeding in the northbound direction towards the school.

Another issue noted was vehicles making U-turn movements on Hemlock Avenue near the school exit driveway. To prevent northbound U-turn movements near the school exit-only driveway, a "No Left Turn" sign is recommended at the intersection of Hemlock Avenue and the school exit-only driveway to reinforce appropriate turning movements near Sequoia Middle School.

To improve visibility and accessibility, high visibility crosswalks, ADA-compliant curb ramps, and sidewalks are recommended at the school frontage and surrounding intersections. These recommendations are highlighted in Figure 4.15.15. A summary list of recommendations is provided on Table 4.15.1.



SEQUOIA MIDDLE SCHOOL