

DEL MONTE GROVE LAGUNA GRANDE

TRAFFIC CALMING PLAN UPDATE

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BACKGROUND

The Del Monte Grove – Laguna Grande neighborhood is a residential area in the City of Monterey. It is bounded by Highway 1 to the west, North Fremont Street to the east, Laguna Grande Park to the north and Villa Del Monte Neighborhood to the south. The Del Monte Grove – Laguna Grande Neighborhood boundaries are shown in **Figure 1**.

The City of Monterey adopted a Traffic Calming Plan for the neighborhood in 2001 (when it was previously named the Del Monte Grove Neighborhood). Traffic conditions have since changed, and the Del Monte Grove – Laguna Grande neighborhood, through the Neighborhood and Community Improvement Program (NCIP) requested a new comprehensive traffic calming plan. This request was made by a resident and put before the NCIP committee for approval. Once approved by NCIP, City Council approved the request and appropriated funding for the plan. In order for traffic calming projects for a neighborhood to be approved and funded by NCIP, a neighborhood must have an approved neighborhood traffic calming plan. NCIP directs tourists generated dollars back to the community to decide what neighborhood and community improvements are needed. At least 16 percent of the money collected through hotel taxes (Transient Occupancy Tax) is allocated for this program.

Traffic calming plans must follow the City's comprehensive Traffic Calming Program. The goals of this program are to improve local residents' sense of well-being about their neighborhood streets and enhance traffic safety in residential areas, evaluate Monterey's neighborhood traffic problems and produce plans for each residential neighborhood, and provide a Neighborhood Traffic Calming Program format that is responsive to all neighborhoods in the City of Monterey. To do this the City has produced a number of objectives to ensure that these goals are met. Some of these objectives are to encourage positive driver behavior in residential areas, provide each neighborhood the opportunity to develop and implement a traffic calming plan for their neighborhood, enhance and maintain the primary visitor routes, and to allow communities to amend their traffic calming plans.

To ensure that the Traffic Calming Plans are addressing the issues encountered by each neighborhood, at least three meetings are held. The meetings are designed to engage the neighborhood residents while keeping key stakeholders and city agencies involved in the development and implementation of the traffic calming plan. For the Del Monte Grove – Laguna Grande Traffic Calming, three meetings were held. The first meeting was held to gather information on neighborhood concerns and traffic calming project suggestions. A second meeting was held to show preliminary traffic calming concepts and gather feedback. The third meeting was held to review newly collected data and to see if there were any additional concepts that could be developed.

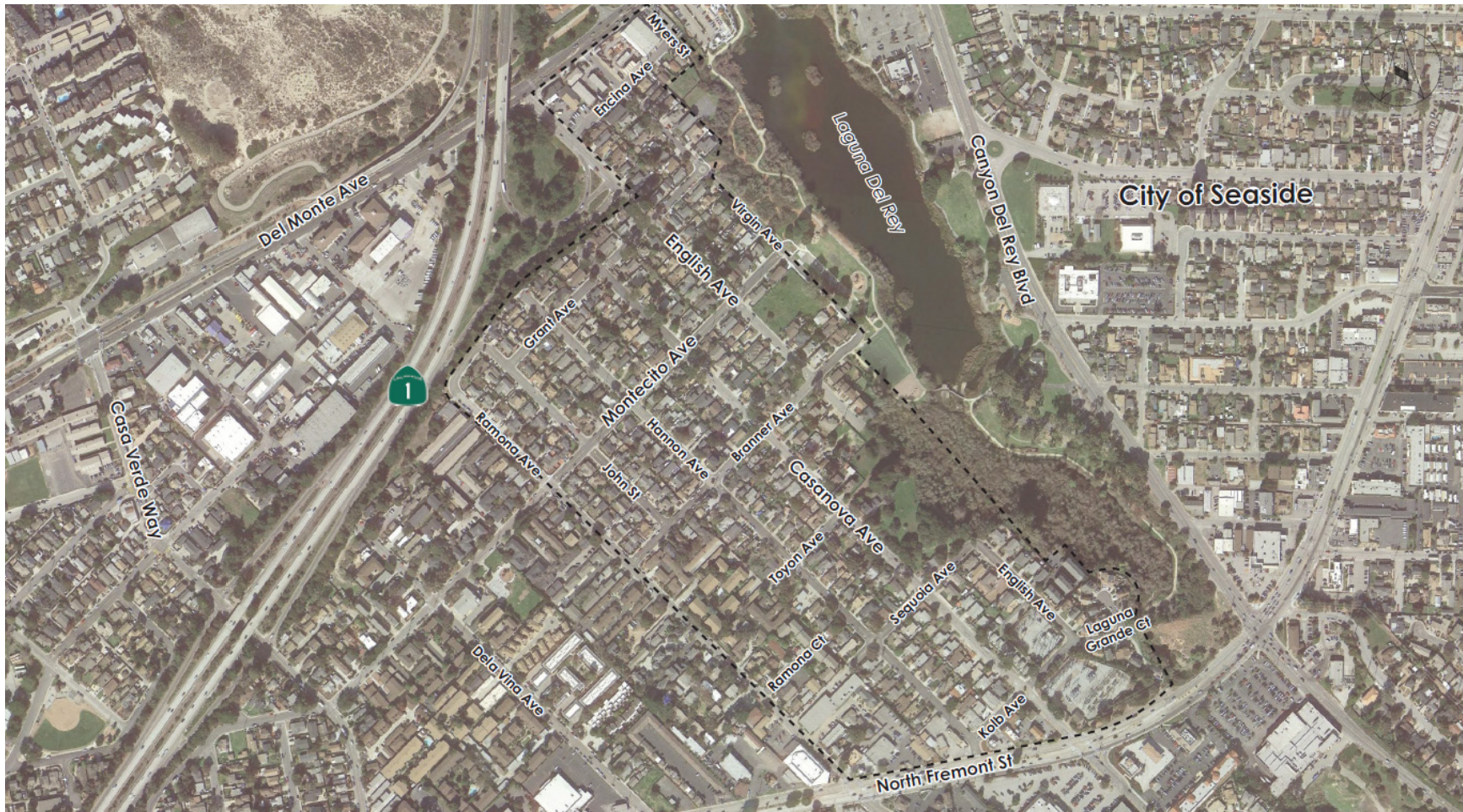


Figure 1 - Project Location Map

Source: Kimley-Horn, 2019

EXISTING CONDITIONS

The Del Monte Grove – Laguna Grande Neighborhood is a primarily residential neighborhood, with some commercial uses along the boundary of the neighborhood along Del Monte Avenue and North Fremont Street. The neighborhood has a mix of both single-family residences and multi-family dwellings, multi-family dwellings reside mostly in the southern section of the neighborhood, close to North Fremont Street.

Existing Transportation System

The following principal roadways are located within the study area:

Casanova Avenue is a north-south local street that extends from North Fremont Street and ends in a cul-de-sac east near Highway 1. Casanova Avenue is primarily a two-lane undivided roadway with a posted speed limit of 25 mile per hour (mph). The roadway width along Casanova Avenue is 40 feet, from North Fremont Street to Grant Avenue, and 35 feet, from Grant Avenue to the cul-de-sac. Casanova Avenue is considered a primary route of travel of the City Fire Department.

English Avenue is a north-south roadway that extends from Del Monte Avenue to an undeveloped parcel and begins again at the intersection with Sequoia Avenue to Kolb Avenue. English Avenue is a minor arterial from Del Monte Avenue to the Highway 1 ramps, then becomes a Collector street between Highway 1 and Montecito Avenue. English Avenue is a local street from Montecito Avenue to Kolb Avenue. English Avenue is primarily a two-lane undivided roadway with a posted speed limit of 25 mph. The roadway width along English Avenue ranges from 25 to 37 feet. English Avenue is considered a primary route of travel of the City Fire Department.

Montecito Avenue is an east-west collector roadway that extends from Virgin Avenue to the intersection of Ramona Avenue. Montecito Avenue is primarily a two-lane undivided roadway with a posted speed limit of 25 mph. The roadway width along Montecito Avenue is 35 feet within the neighborhood area. Montecito Avenue is considered a primary route of travel of the City Fire Department.

Ramona Avenue is a north-south local street that extends from North Fremont Street and ends in a cul-de-sac east near Highway 1. Ramona Avenue is primarily a two-lane undivided roadway with a posted speed limit of 25 mph. The roadway width along Ramona Avenue is 40 feet, from North Fremont Street to Sequoia Avenue, and 35 feet, from Sequoia Avenue to the cul-de-sac. Ramona Avenue is considered a primary route of travel of the City Fire Department.

Virgin Avenue north-south local street that extends from Branner Avenue to Del Monte Avenue. Virgin Avenue is primarily a two-lane undivided roadway with a posted speed limit of 25 mph. The roadway width along Virgin Avenue is 40 feet, from North Fremont Street to Sequoia Avenue, and 35 feet, from Sequoia Avenue to the cul-de-sac. Virgin Avenue is considered a primary route of travel of the City Fire Department.

Approximate roadway widths for all streets within the neighborhood shown are in **Figure 2**.

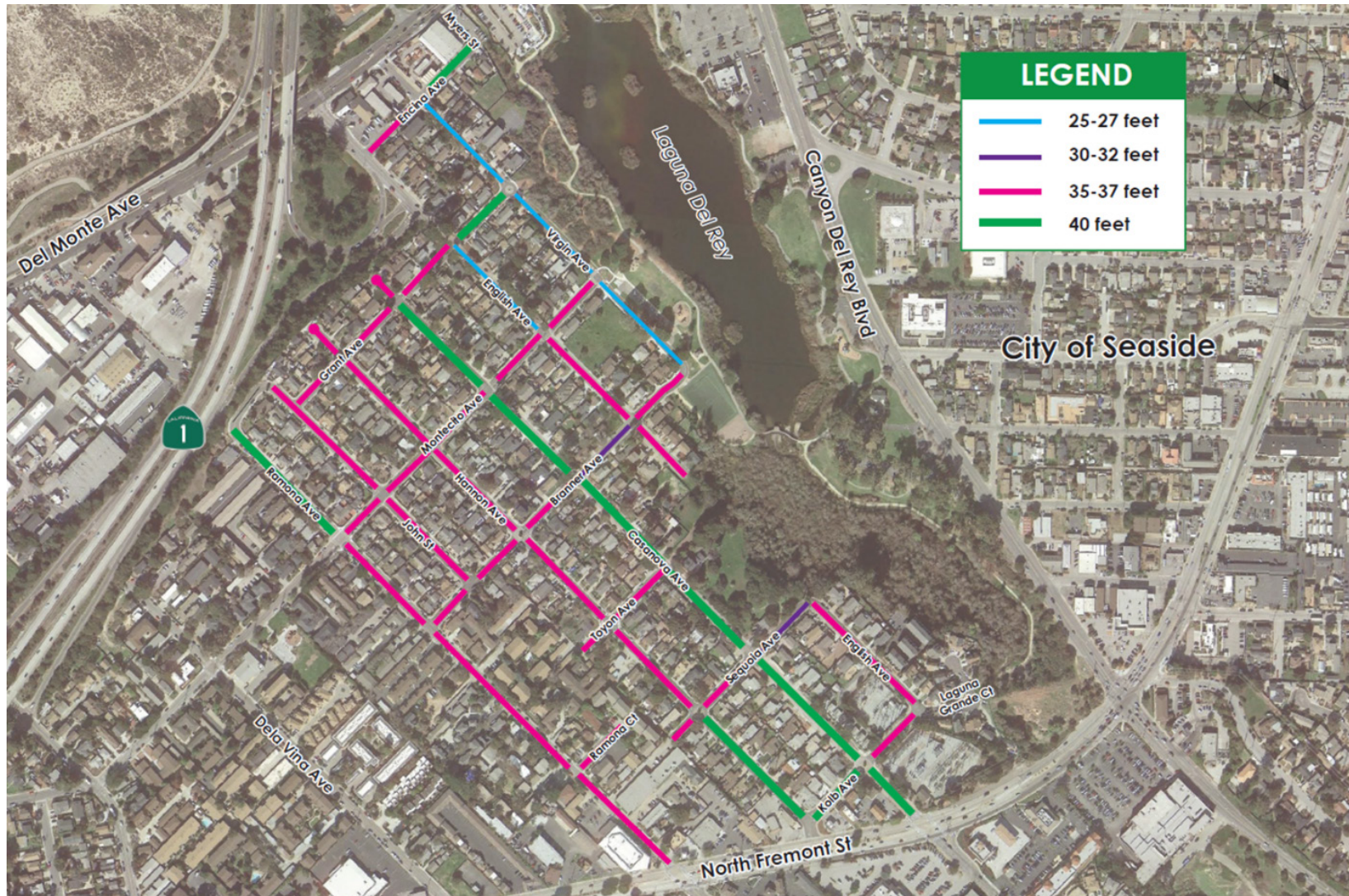


Figure 2 - Street Widths

Source: Kimley-Horn, 2019

Existing Transit Service

There are no Transit facilities within the neighborhood area; however, transit stops are located at the edges of the neighborhood. Along Del Monte Avenue at English Avenue and North Fremont Street at Casanova Avenue.

Pedestrian and Bicycle Facilities

Pedestrians

Sidewalk exists throughout most of the neighborhood with a few missing links on John Street, Ramona Court, and along some of the commercial properties along Encina Avenue. **Figure 3** shows existing pedestrian facilities in the Del Monte Grove – Laguna Grande neighborhood.

Bicycles

Existing Class I and II bikeway facilities (within ½ mile of the neighborhood) are discussed below:

Class I facilities are paved bicycle paths that are physically separated from the vehicular travel lane. The Monterey Peninsula Recreational Trail (MPRT) is a Class I facility located along the northside of Del Monte Avenue. It is an approximately 18 miles total and runs from the City of Castroville to Pacific Grove, 3.3 miles of the trail are located within the City of Monterey. Bicycles may enter the recreational trail at the intersection of Del Monte Avenue and English Avenue.

Class II facilities, which are striped bike lanes along the street, exist along English Avenue from Del Monte Avenue to the Highway 1 Ramps.

Class III facilities, which are bicycle routes, bicycle routes are preferred routes for people on bikes. These facilities are often marked by signs and sharrows. There are no existing Class III facilities in the Del Monte Grove – Laguna Grande neighborhood.

Class IV facilities, which are protected bike lanes, were recently installed along North Fremont Street the protected bike lanes are located in the median and bicycle signals are provided to provide well-organized bicycle access.

Planned Bicycle Facilities

Several bicycle facilities have been planned in and around the Del Monte Grove – Laguna Grande Neighborhood. **Figure 3** shows existing and planned bicycle facilities in the Del Monte Grove – Laguna Grande neighborhood.

Monterey-on-the-Move Multi-Modal Plan

The City's multimodal plan, Monterey-on-the-Move, has two proposed bicycle projects within the Del Monte Grove – Laguna Grande neighborhood. These improvements will create bicycle connections throughout the City. One of the proposed bicycle projects is a trail crossing improvement at the intersection of Del Monte Avenue and English Avenue. This trail crossing improvement will connect the neighborhood to the Monterey Peninsula Recreational Trail.

The other proposed bicycle project is the Casanova, Montecito Avenue and English Avenue Bike Routes. These bicycle routes will provide a preferred path of travel for bicycle users in the neighborhood. This project would be Class III bicycle routes and sharrows and signage would be installed to alert vehicle to the presence of bicycles. The proposed bike routes also connect to the North Fremont Street project, the Laguna Grande Park, and the Monterey Peninsula Recreational Trail.

Fort Ord Regional Trail and Greenway

The Fort Ord Regional Trail and Greenway, informally known as FORTAG, is a proposed regional active transportation route that will serve as a safe pedestrian and bicycle corridor connecting Seaside, Marina, Del Rey Oaks, Monterey and unincorporated community residents, to California State University Monterey Bay, the Fort Ord National Monument and the Monterey Bay Sanctuary Scenic Trail. In total, FORTAG will be a 27-mile-long trail system throughout the Monterey Peninsula that will connect with the existing and planned active transportation network. The project is proposed to have connections to the neighborhood at the intersection of Casanova Avenue and North Fremont Street, Grant Avenue, English Avenue and Laguna Grande Park.

Casanova Gap Closure Project

In October 2019, the City of Monterey and Transportation Agency for Monterey County submitted a grant application for the competitive Prop 68 Grant. This grant would provide a Class I multiuse path which would connect the Del Monte Grove – Laguna Grande Neighborhood with Laguna Grande Park, future FORTAG trail, Casanova Oak Knoll Neighborhood, and business along North Fremont. Additionally, it would construct the section of the FORTAG trail which connects Laguna Grande Park to the Coastal Trail located north of the neighborhood.

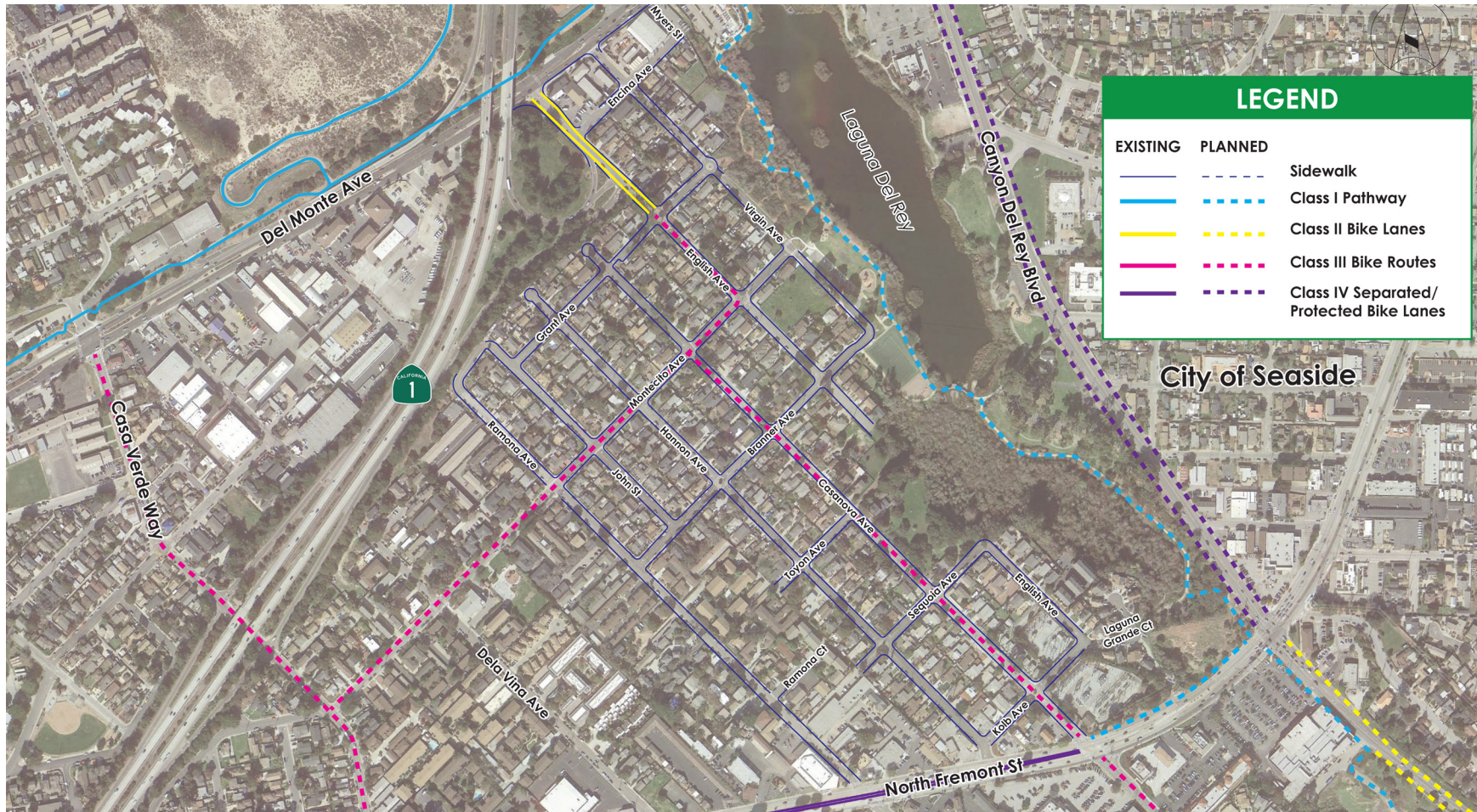


Figure 3 - Neighborhood Bicycle and Pedestrian Facilities

Source: Kimley-Horn, 2019

Traffic Data Collection

Traffic data was collected for one week from December 2-8, 2018. Data was collected while school was in session. Data collection occurred along the following segments:

1. **English Avenue**, from Grant Avenue to Montecito Avenue;
2. **Montecito Avenue**, from Casanova Avenue to Hannon Avenue;
3. **Montecito Avenue**, from Hannon Avenue to John Street;
4. **Casanova Avenue**, from Toyon Avenue to Sequoia Avenue;
5. **Casanova Avenue**, from North Fremont Street to Kolb Avenue;
6. **Ramona Avenue**, west of North Fremont Street; and
7. **Virgin Avenue**, from Grant Avenue to Montecito Avenue

Vehicle volume, speed and functional classification was collected using pneumatic tube counters. Traffic data can be found in **Appendix A**.

Traffic Volumes

The traffic volumes for the Del Monte Grove – Laguna Grande neighborhood can be seen in **Figure 4**. Weekday volumes are consistently higher than weekend volumes. The peak travel periods on each segment can be seen in **Table 1**. Weekday and Weekend average daily volumes by location are shown on **Figure 5** and **6**, respectively.

Table 1 - Del Monte Grove – Laguna Grande Peak Periods

| | English Ave | Montecito Ave | | Casanova Ave | | Ramona Ave | Virgin Ave |
|---------------------|--------------------|--------------------|----------------|------------------|-------------------|-------------------|--------------------|
| | Grant to Montecito | Casanova to Hannon | Hannon to John | Toyon to Sequoia | N Fremont to Kolb | West of N Fremont | Grant to Montecito |
| AM Peak | 7:15 AM | 7:15 AM | 7:30 AM | 7:15 AM | 7:15 AM | 8:00 AM | 7:45 AM |
| PM Peak | 4:30 PM | 4:30 PM | 4:30 PM | 4:30 PM | 4:15 PM | 3:45 PM | 4:45 PM |
| Weekend Peak | 3:15 PM | 3:45 PM | 2:30 PM | 1:00 PM | 12:15 PM | 2:15 PM | 2:30 PM |

Source: Kimley-Horn, 2019

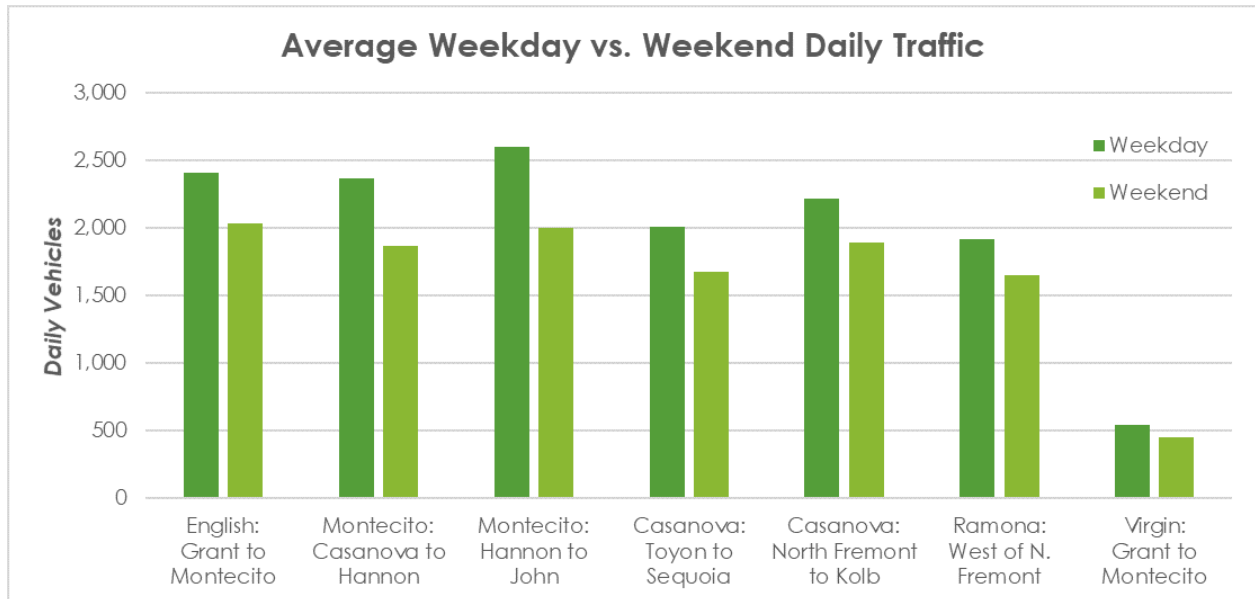


Figure 4 - Weekday and Weekend Daily Traffic

Source: Kimley-Horn, 2019



Figure 5 - Weekday Daily Traffic

Source: Kimley-Horn, 2019

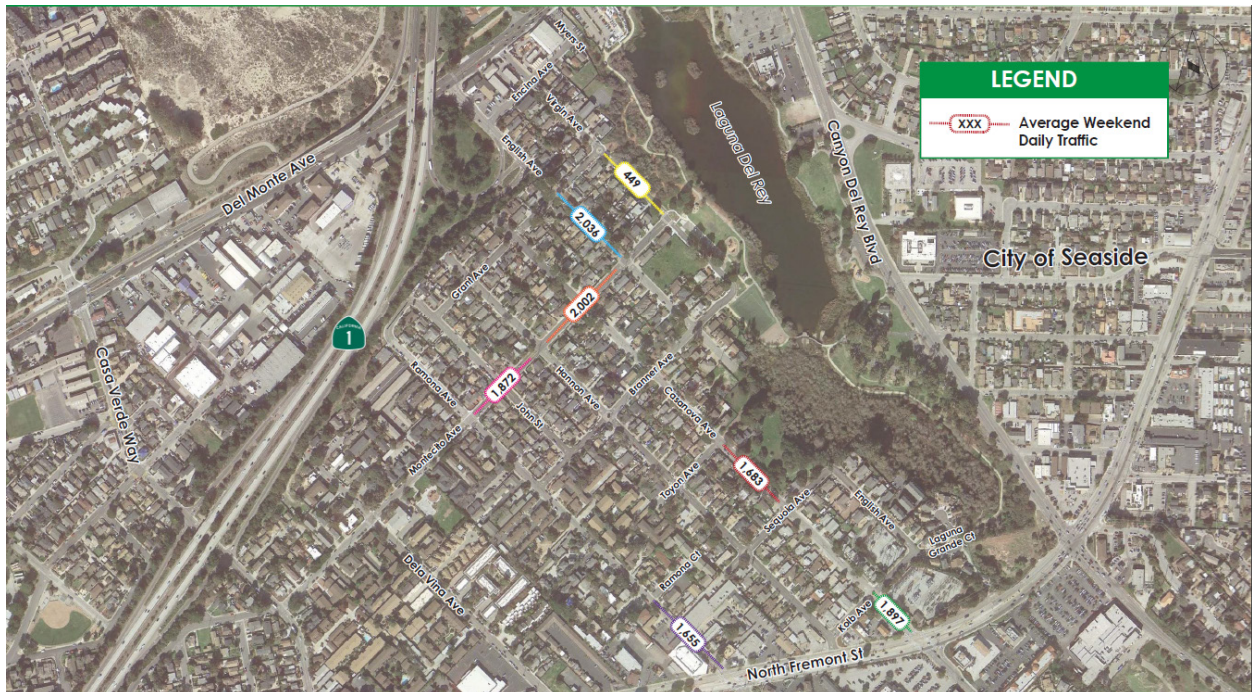


Figure 6 - Weekend Daily Traffic

Source: Kimley-Horn, 2019

Traffic Speed

The traffic speed profile through the Del Monte Grove – Laguna Grande neighborhood is shown in **Figure 7**. The speed limit is 25 mph on the study segments. The average speed and 85th percentile speed of the study segments is shown on **Figure 8**.

The 85th percentile is included in the analysis because, California state law requires that speed limits be set using the 85th Percentile Speed, meaning the speed that 85 percent of the drivers are measured driving at or below. Per the California Manual for Setting Speed Limits, a minimum of 100 vehicles speeds must be collected for vehicles in a “free-flow” condition. Vehicles that are free-flowing would not be influenced by traffic control devices, weather, or other slower vehicles like trucks or buses.

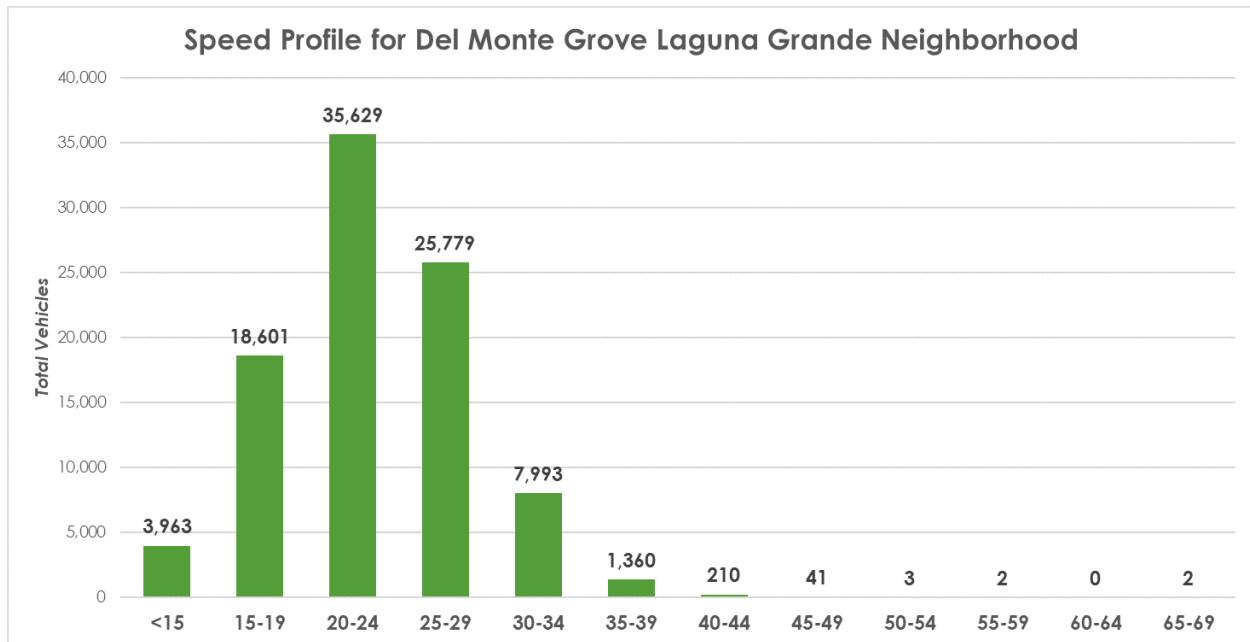


Figure 7 - Speeds for Del Monte Grove – Laguna Grande
 Source: Kimley-Horn, 2019

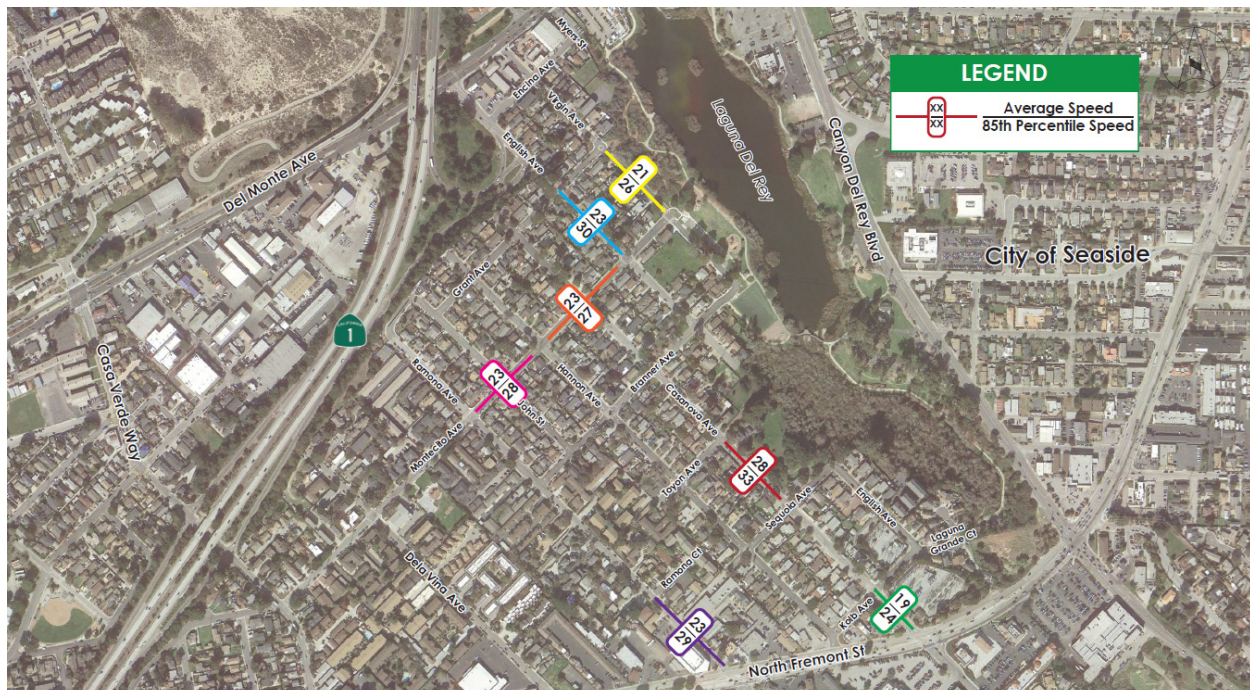
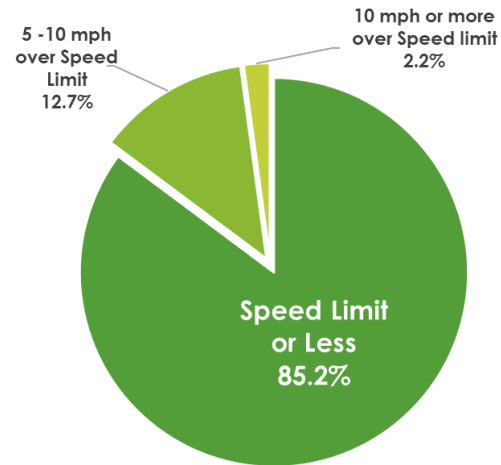


Figure 8 - Neighborhood Speeds
 Source: Kimley-Horn, 2019

The average speed on English Avenue is 25 mph for the segment between Grant Avenue and Montecito Avenue, and the 85th percentile speed is 30 mph, shown in **Figure 8**. **Figure 9** illustrates the portion of vehicles that drive at or below the speed limit, 5 -10 mph above the speed limit, and more than 10 mph above the speed limit. This segment is located at the northern entrance of the neighborhood and south of the Highway 1 Ramps. Most vehicles drive within five mph of the speed limit. Over the course of the week 348 vehicles were recorded going over 10 mph over the speed limit, which approximates to 50 vehicles per day.

English Ave Speed Profile,

From Grant Avenue to Montecito Avenue



*May Not add to 100% due to roundoff error

Figure 9 - Speed profiles for English Avenue

Source: Kimley-Horn, 2019

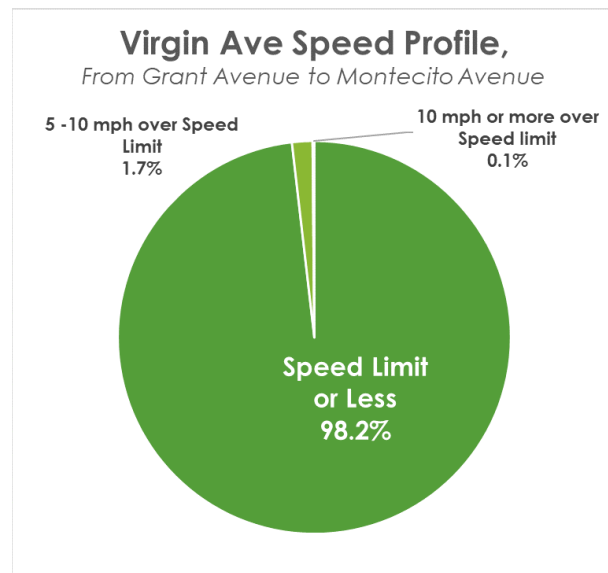


Figure 10 - Speed profiles for Virgin Avenue

Source: Kimley-Horn, 2019

The average speed on Virgin Avenue is 21 mph for the segment between Grant Avenue and Montecito Avenue and the 85th percentile speed is 26 mph, shown in **Figure 8**. **Figure 10** illustrate the portion of vehicles that drive at or below the speed limit, 5-10 mph above the speed limit, and more than 10 mph above the speed limit. This segment is located at the northern entrance of the neighborhood and borders the Laguna Grande Regional Park. Most vehicles drive within five mph of the speed limit. Over the course of the week, 5 vehicles were recorded going over 10 mph over the speed limit, which is less than one vehicle per day.

The Average Speed on Montecito Avenue is 23 mph for the segment between Casanova Avenue and Hannon Avenue and the 85th Percentile Speed is 27 mph. For the segment between Hannon Avenue and John Street the average speed is 23 mph and the 85th Percentile is 28 mph as shown on **Figure 8**. **Figures 11** and **12** illustrate the portion of vehicles that drive at or below the speed limit, 5-10 mph above the speed limit, and more than 10 mph above the speed limit. Most vehicles drive within five mph of the speed limit. Over the course of the week, 156 vehicles were recorded going over 10 mph over the speed limit, which approximates to 22 vehicles per day.

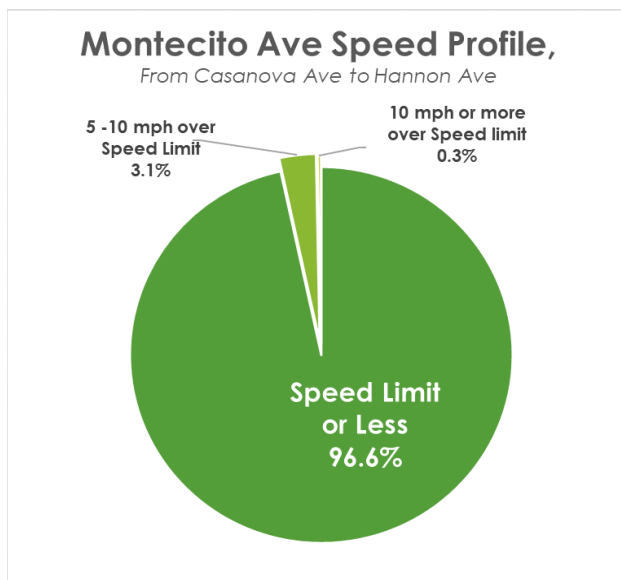


Figure 11 - Montecito Avenue speed profile

Source: Kimley-Horn, 2019

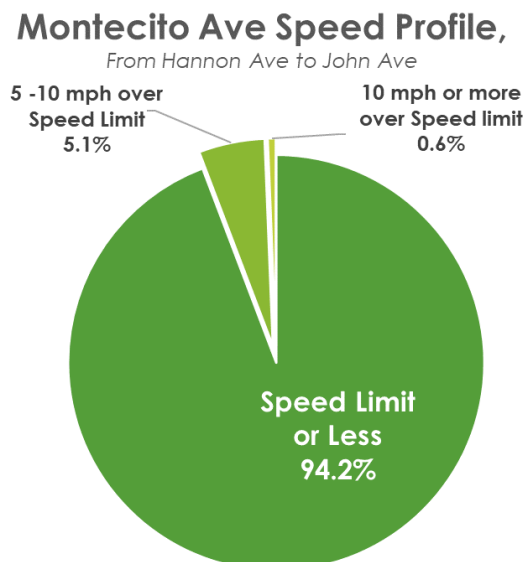


Figure 12 - Montecito Avenue speed profile

Source: Kimley-Horn, 2019

The average speed on Ramona Avenue is 23 mph for the segment west of North Fremont Street and the 85th percentile Speed is 29 mph, shown on **Figure 8**.

Figure 13 illustrates the portion of vehicles that drive at or below the speed limit, 5-10 mph above the speed limit and the portion of vehicles that drive more than 10 mph above the speed limit. Most vehicles drive within five mph of the speed limit, over the course of the week 171 vehicles were recorded going over 10 mph over the speed limit, which approximates to 25 vehicles per day.

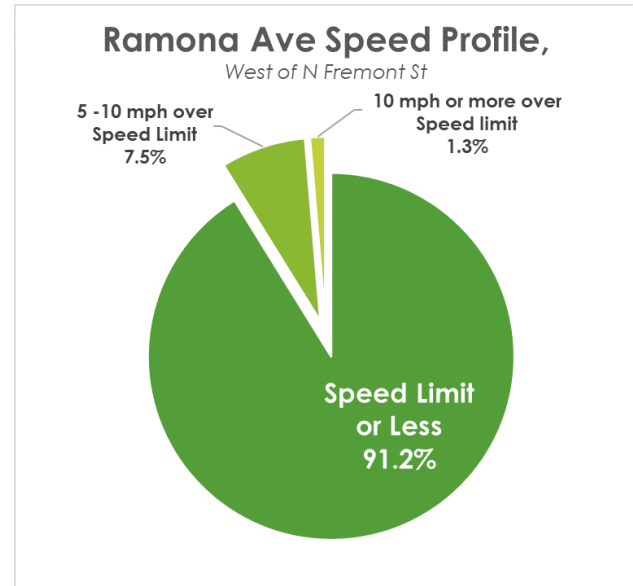


Figure 13 - Ramona Avenue speed profile

Source: Kimley-Horn, 2019

The average speed on Casanova Avenue is 28 mph for the segment between Toyon Avenue and Sequoia Avenue, and the 85th percentile speed is 33 mph, as shown in **Figure 8**. For the segment between North Fremont Street and Kolb Avenue, the average speed is 19 mph, and the 85th percentile speed is 24 mph. **Figures 14** and **15** illustrate the portion of vehicles that drive at or below the speed limit, 5-10 mph above the speed limit, and more than 10 mph above the speed limit. Although most vehicles drive within five mph of the speed limit, Casanova Avenue experiences the highest proportion of drivers driving more than 10 mph over the speed limit. Over the course of the week, 220 vehicles were recorded going over 10 mph over the speed limit, which approximates to 32 vehicles per day.

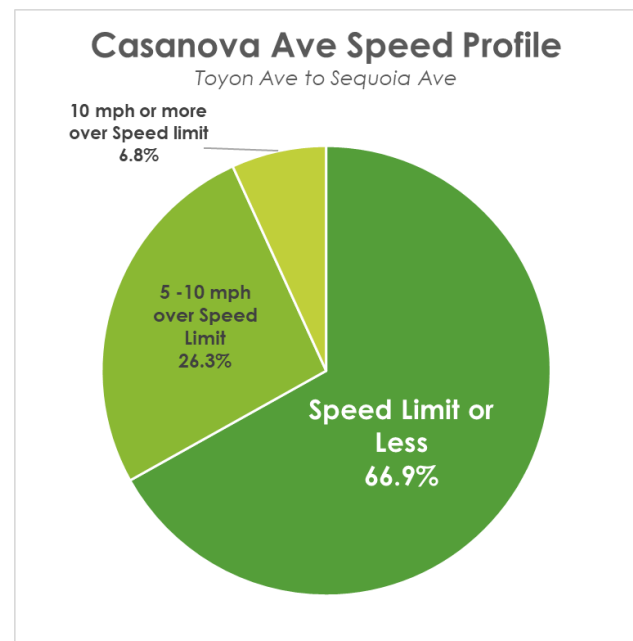
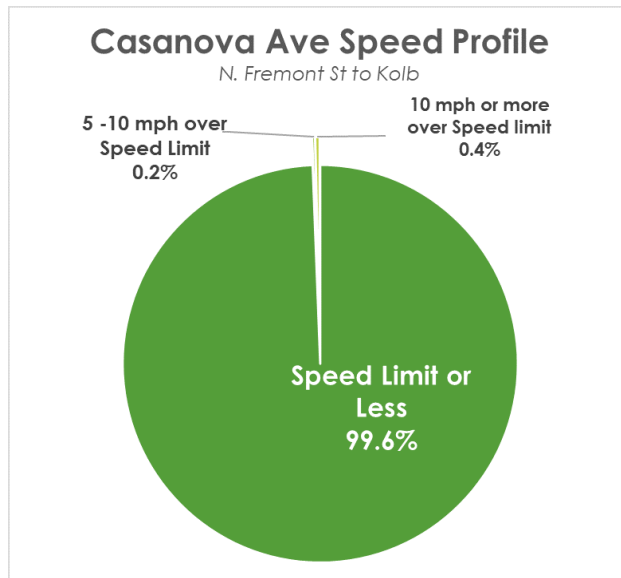


Figure 14 - Casanova Avenue speed profile

Source: Kimley-Horn, 2019



Often the drivers that residents remember are those that drive much faster than the posted speed limit. **Figure 16** shows the percentage of drivers by study segment that drive more than 10 mph over the speed limit over the course of the week. The study segment with the greatest proportion of drivers speeding more than 10 mph over the speed occurred on Casanova Avenue between Toyon Avenue and Sequoia Avenue with seven percent.

Figure 15 - Casanova Avenue speed profile

Source: Kimley-Horn, 2019

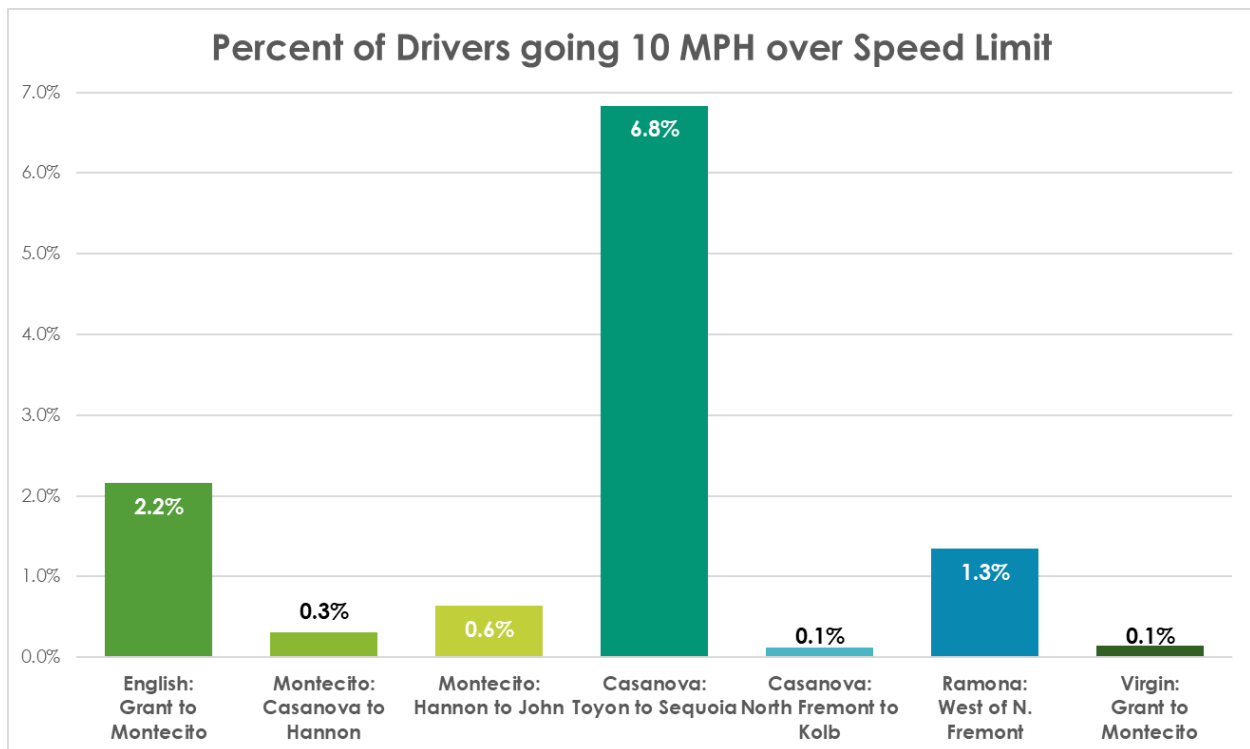


Figure 16 - Percent over 10 mph speed limit

Source: Kimley-Horn, 2019

Monterey Police Department Speed Trailer

Upon request by the community, the Monterey Police Department placed the temporary speed trailer. The speed trailer, in addition to notifying drivers of their speed, records speed data. Monterey Police Department and Traffic Engineering Department provided a summary speed profile as well as the average speed, 85th percentile speed, and daily volumes. The speed trailer was positioned on the 400 block of Casanova Avenue, between Montecito Avenue and Branner Avenue. No data was originally collected along this segment previously, as part of this study.

Figure 17 shows the speed profile from data collected over the course of a week from September 16 – 22, 2019. This data shows that the majority of vehicles (66 percent) drive at or below the speed limit. Less than one percent of drivers drive more than ten mph over the speed limit.

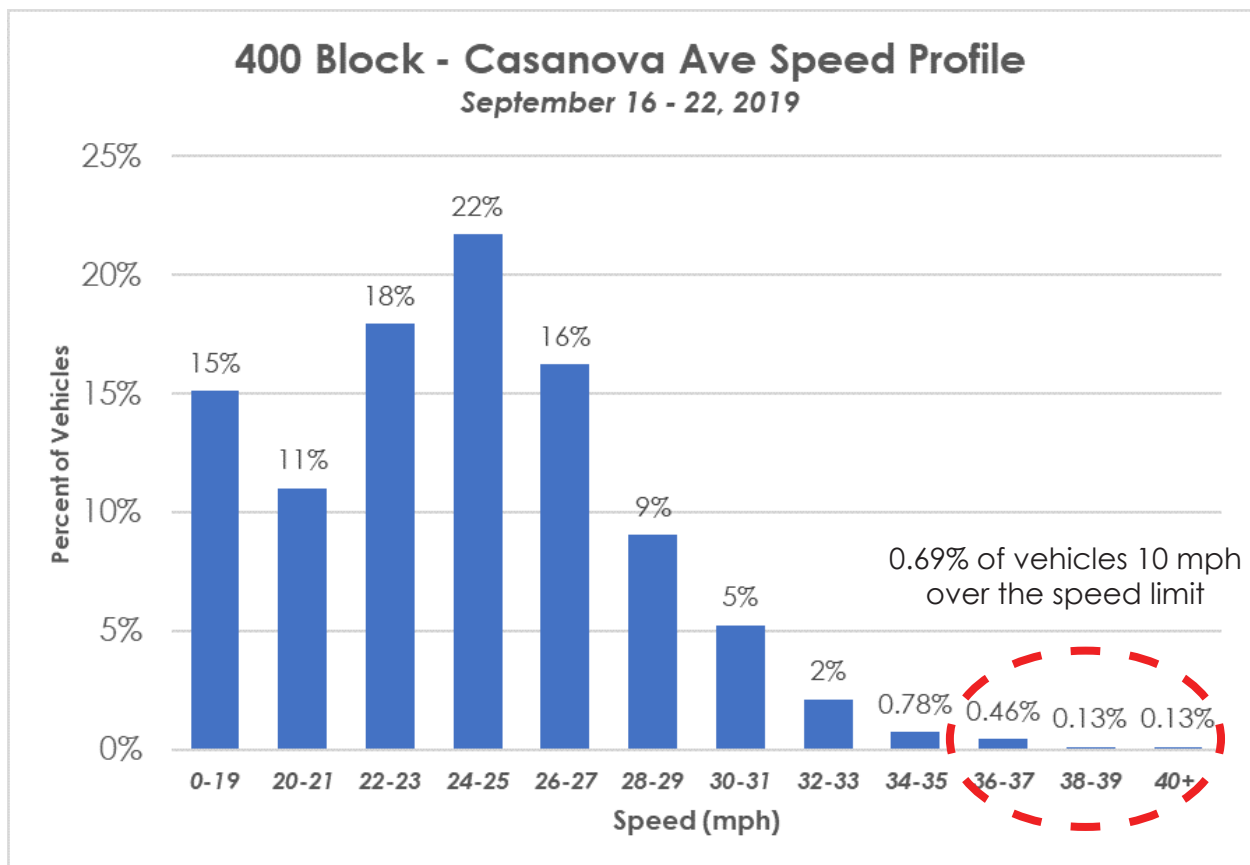


Figure 17 - 400 Block Casanova Speed Profile

Source: Kimley-Horn, 2019

Table 2 - Casanova Speed Trailer Data

| | 400 Casanova |
|---------------------------------------|------------------------|
| Average Speed: | 24 mph |
| 85th Percentile Speed: | 28 mph |
| Average Daily Weekday Traffic: | 2,342 vehicles per day |
| Average Daily Weekend Traffic: | 1,822 vehicles per day |

Source: City of Monterey, 2019

Vehicle Classification

The vehicle classification is broken into four categories. (1) Motorcycles/Passenger Cars [Federal Highway Administration, FHWA, Class 1-2], (2) Pick Ups, Sport Utility Vehicles, SUVs, and Heavy pick-up trucks [FHWA Class 3, 5], (3) Buses [FHWA Class 4], and (4) Heavy Vehicles, such as semi-trucks or delivery trucks [FHWA Class 6-13]. In the Del Monte Grove – Laguna Grande Neighborhood, the predominant vehicle traffic is by the motorcycle/passenger vehicle category. **Figure 18** illustrates the vehicle classification categories for the neighborhood. **Appendix B** provides examples of vehicles in the 13 FHWA classification categories. Passenger cars or Motorcycles are the primary vehicle using the Del Monte Grove – Laguna Grande neighborhood.

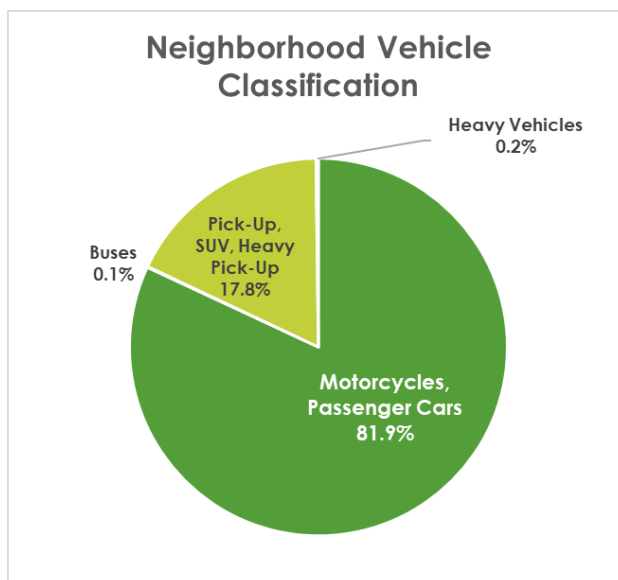


Figure 18 - Neighborhood Vehicle Classification

Source: Kimley-Horn, 2019

Peak and Off-Peak Variation

Traffic counts were collected during off peak season, December 2-8, 2018. Concerns were expressed about not collecting traffic counts during the peak season or considering special events. It was discussed that roads are not typically designed for the worst-case scenario, which happens for a very short time period over the course of a year. Designing for the worst day of the year can be costly and mean that our traffic infrastructure is underutilized and over-designed for most of the year. Intersections must consider both peak hour and off-peak traffic of a typical day, so all travelers have an intersection that provides minimal delays and proper lane requirements, regardless of what time of day they use it.

When comparing the peak and off peak seasons with each other, the average increase in traffic during the peak season is five percent for the Del Monte Avenue between Camino El Estero and Camino Aguajito and three percent for North Fremont Street between Casanova Avenue and Canyon Del Rey per the TAMC Traffic Count Collection program. The variation between peak and off-peak season is illustrated in **Figure 19**.

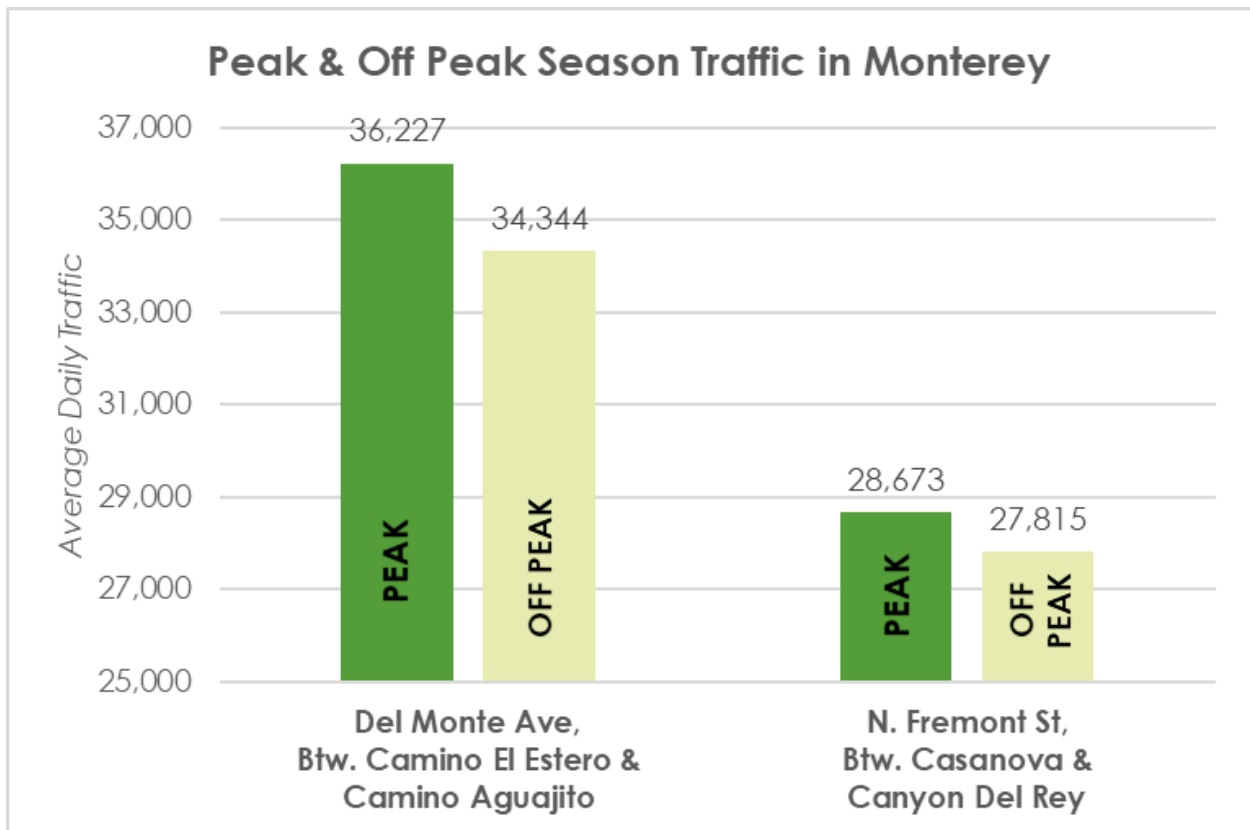


Figure 19 - Peak and Off-Peak Season Variation

Source: Kimley-Horn, 2019

Traffic Collisions

Traffic collision data was reviewed for a four-year period from January 2014 – December 2018. The traffic collision data was collected from a combination of City of Monterey Police Department reports and the Statewide Integrated Traffic Records System (SWITRS).

Collision Volumes

The total number of collisions over this four-year period from January 2014 – December 2018 was 45. The number of collisions per year is shown in **Figure 20**.

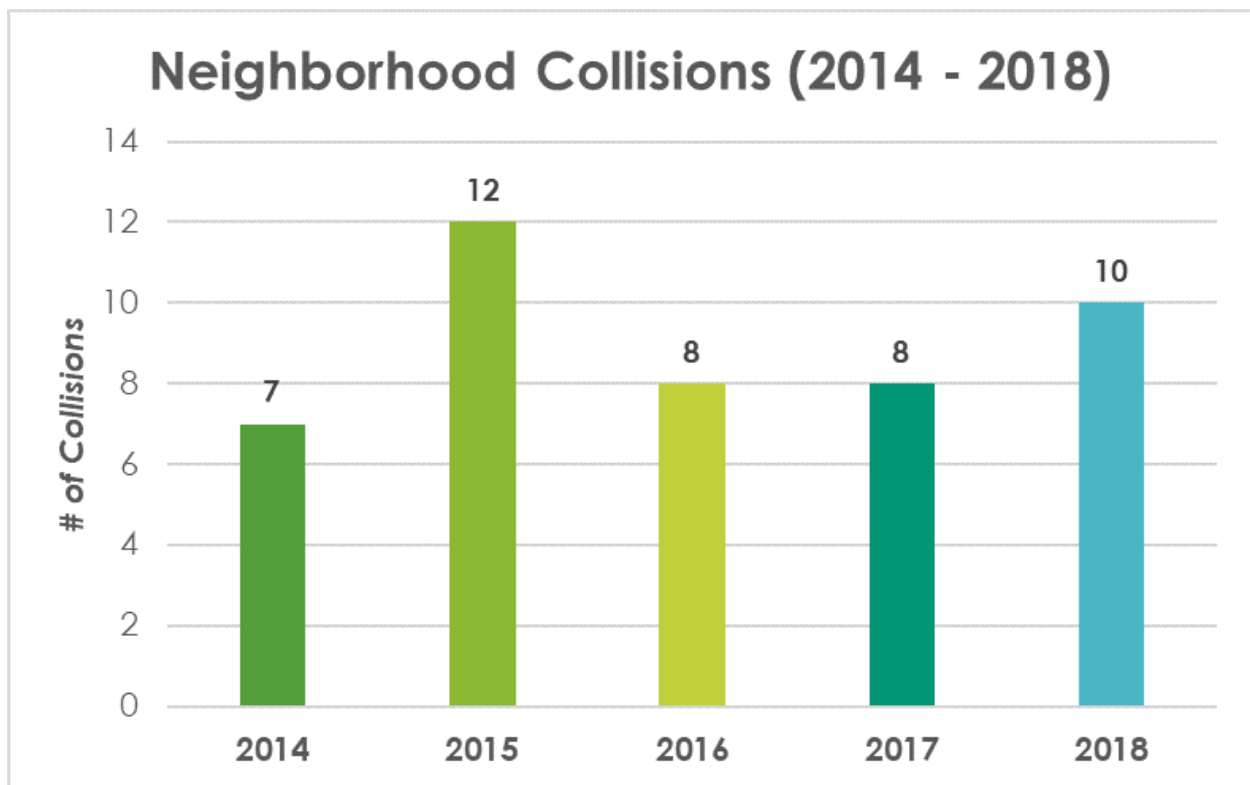


Figure 20 - Collisions in Del Monte Grove – Laguna Grande Neighborhood, 2014 - 2018

Source: City of Monterey and SWITRS, 2018

Collision Type

There are eight types of vehicle collision classifications listed in the Collision Investigation Manual. These are bicycle, broadside, head-on, hit object, improper turning, rear-end, sideswipe, and unknown. Figure 21 shows the proportion of collisions by type from 2014 to 2018. Of these collision types, the majority of collisions were sideswipe collision. In this period, there was 20 sideswipe collisions .

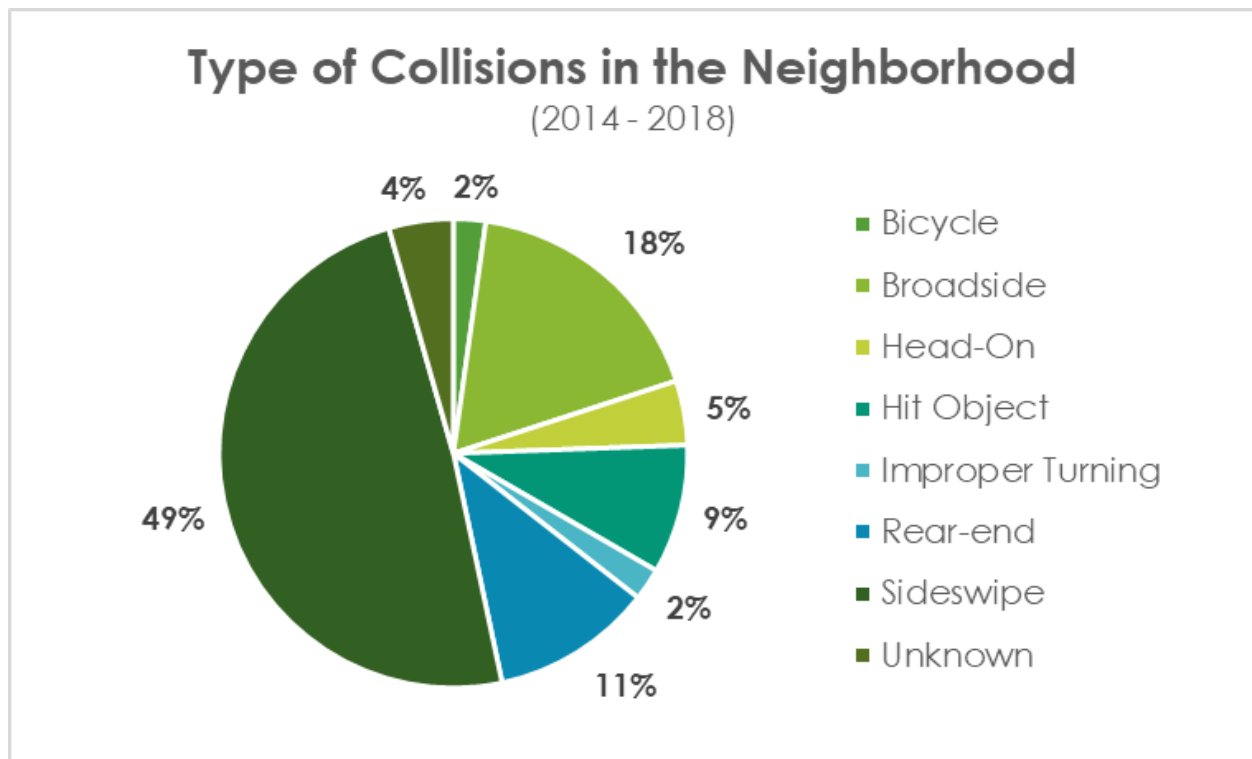


Figure 21 - Types of Collisions in the Del Monte Grove – Laguna Grande Neighborhood, 2014 - 2018

Source: Kimley-Horn, 2019

Collision Severity

Collision severity is broken down into five main categories. Property Damage Only is the lowest severity of collision, where the highest severity is a fatal collision. **Figure 22** shows the proportion of collisions by severity from 2014 to 2018. In this neighborhood from 2014 to 2018, there were no fatal collisions. Most collisions, 81%, were determined to be Property Damage Only, a non-injury type.

Eight collisions from the 2014 to 2018 period were injury collisions, five collisions had complaint of pain injuries, two collisions had visible injury collisions and one was a severe injury collision. The severe injury collision occurred in 2016 and involved a bicycle. Collisions with bicycles and pedestrians often result in higher severity injuries.

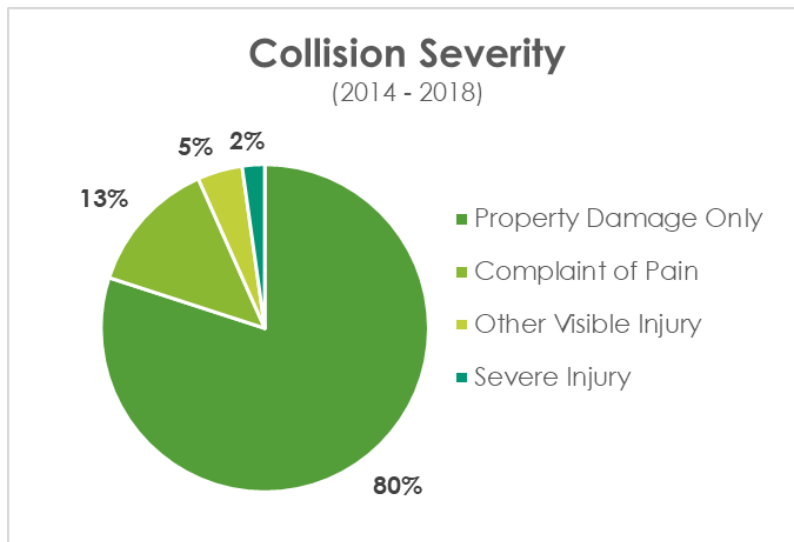


Figure 22 - Severity of Collisions in the Del Monte Grove – Laguna Grande Neighborhood, 2014 - 2018

Source: Kimley-Horn, 2019

Collision Involvement

In the Del Monte Grove – Laguna Grande Neighborhood, the a majority of the collisions involve parked vehicles. Other Motor Vehicles involvement, i.e. two or more of the collision parties are motor vehicles, is the next largest portion of collision type. **Figure 23** shows the types of parties involved in collisions in the neighborhood.

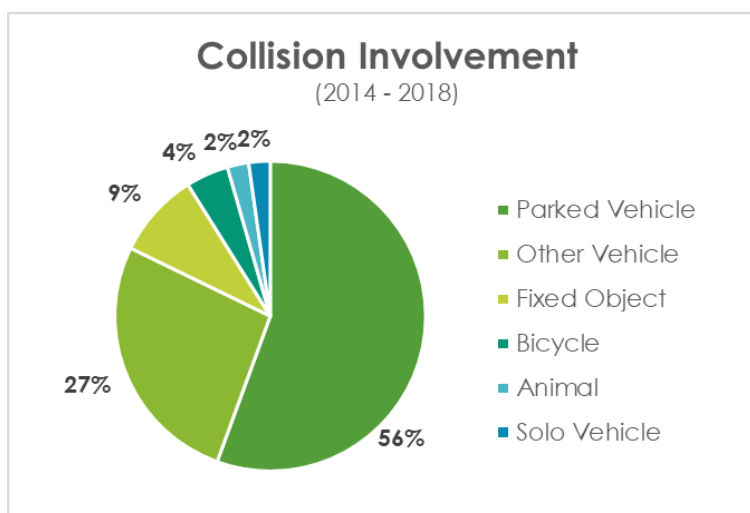


Figure 23 - Parties involved in Collisions in the Del Monte Grove – Laguna Grande Neighborhood, 2014 - 2018

Source: Kimley-Horn, 2019

TRAFFIC CALMING TOOLBOX

To achieve traffic calming there is a toolbox developed by the City of Monterey of different measures that can be used to visually and physically alter the roadway. The devices considered in the toolbox are described in **Table 3**, a copy of the handout provided to meeting attendees is shown in **Figure 24**.

Table 3 - Traffic Calming Devices

| Traffic Calming Device & Description | Examples |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Curvilinear Street</p> <p>A curved street alignment, sometimes called as Chicane, can be used to narrow the street and cause the driver to do additional maneuvering and reduce drivers' line of sight distances.</p> |  <p>Source: City of Monterey</p> |
| <p>Diagonal Diverter</p> <p>Diagonal diverters use raised areas placed diagonally across a four-way intersection to restrict through movements in all directions, they are used where cut through traffic is a concern.</p> |  <p>Source: National Association of City Transportation City Officials</p> |
| <p>Entrance Barrier</p> <p>A physical barrier that restricts turns into a street. Creates a one-way segment at the intersection while maintaining two-way traffic for the rest of the block, used where cut-through traffic is a concern and where vehicles from nearby facilities circulate looking for parking.</p> |  <p>Source: City of Monterey</p> |



| Traffic Calming Device & Description | Examples |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <p>Entry Island with Neighborhood Identification Sign</p> <p>Neighborhood signs placed in a center island median can be used to define entry to a residential area, in addition to narrowing the street, and interrupting line of sight distances.</p> |  <p>Source: Google Earth, 2019</p> |
| <p>Median</p> <p>A raised median island in the center of the roadway with one-way traffic on each side, used to narrow wide streets and to interrupt sight distance down center of roadway.</p> |  <p>Source: City of Monterey</p> |
| <p>Neckdown/Curb Extensions</p> <p>Neckdowns or curb extensions are segments where curbs are extended toward the center of the roadway, this can be used to narrow a roadway and/or shorten pedestrian crossing.</p> |  <p>Source: City of Monterey</p> |
| <p>Neighborhood Sign Program</p> <p>A neighborhood sign program would be the implementation of signs unique to a neighborhood which assist drivers in recognizing they have entered a residential neighborhood and encourage them to observe the posted speed limits.</p> |  <p>Source: Google Earth, 2019</p> |





| Traffic Calming Device & Description | Examples |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Pavement Treatment</p> <p>Varied pavement texture or color to create visual and tactile focus point, used where pedestrian crossings are a concern and speeding is a problem. Treatments may include colored pavement, pavers, or textured concrete.</p> |  <p>Source: Ennis-Flint</p> |
| <p>Police Enforcement</p> <p>Additional Police enforcement presence to monitor speed and issue citations can be requested for brief time periods, this is often used where streets have documented speed or restriction violations.</p> |  <p>Source: City of Monterey Police Department, 2019</p> |
| <p>Radar Speed Display Signs</p> <p>Radar Speed Display signs are a permanent version of the Speed Monitoring Trailer. Speeds are displayed in flashing or static lights on the sign panel. These signs are intended for residential streets with moderate traffic volumes and where speeding is a problem.</p> |  <p>Source: City of Monterey</p> |
| <p>Realigned Intersection</p> <p>Intersections can be realigned to make the "through movement" a turning movement, used where it is desired to redirect traffic to a higher classification roadway or where slowing traffic as it enters the neighborhood is desired.</p> |  <p>Source: Federal Highway Administration</p> |



| Traffic Calming Device & Description | Examples |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <p>Restricted Movement Barrier</p> <p>A barrier island that prevents certain movements at an intersection, used where reducing cut through traffic is desired.</p> |  <p>Source: City of Monterey</p> |
| <p>Restricted Movement Signing</p> <p>Signing can be used to restrict movements which will may help with reducing neighborhood cut-through traffic.</p> |  <p>Source: City of Monterey</p> |
| <p>Speed Limit Sign</p> <p>Speed Limit signs are signs that define the legal driving speed under normal conditions, used where speeding is a problem and ongoing enforcement is realistic.</p> |  <p>Source: Google Earth, 2019</p> |
| <p>Speed Monitoring Trailer</p> <p>A speed monitoring trailer is a mobile trailer with a mounted radar display that informs drivers of their speed, used on any street where speeding is a problem. Trailers can be made available upon request to Monterey Police Department for brief time periods, provided it is not in otherwise use.</p> |  <p>Source: City of Monterey</p> |



| Traffic Calming Device & Description | Examples |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Street Closure</p> <p>The full closure of a street, used where cut through traffic is the major concern. Typically, considerations need to be made to ensure emergency vehicle access as well as bicycle and pedestrian access.</p> |  <p>Source: National Association of City Transportation Officials</p> |
| <p>Traffic Circle</p> <p>A raised circular median in an intersection with counterclockwise traffic flow, typically controlled by a "Yield on Entry" on all approaches, used where speed control is desired, improved side street access is desired, and with relatively low proportion of left turn movements.</p> |  <p>Source: City of Monterey</p> |

What is in the Toolkit!



Restricted Movement Signing



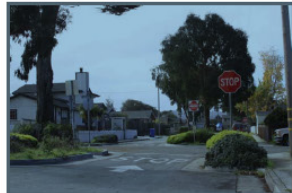
Medians



Street Closure



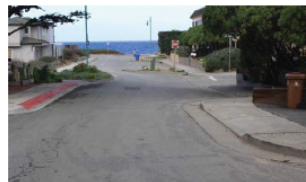
Diagonal Diverter



Entrance Barrier



Traffic Circles



Curvilinear Street



Curb Extensions



Radar Speed Signs

⊘ What is NOT in the toolkit ⊘



Traffic Signals



Children At Play Signs



Stop Signs



Speed Bumps

For More Information please see: The City's Neighborhood Traffic Calming Program (<https://tinyurl.com/TC-policy>)



DEL MONTE GROVE LAGUNA GRANDE TRAFFIC CALMING TOOLBOX



Kimley»Horn

Figure 24 - Del Monte Grove – Laguna Grande Traffic Calming Toolbox

Source: Kimley-Horn, 2019

Existing Neighborhood Traffic Calming Measures

As part of the 2001 Del Monte Grove Neighborhood traffic calming plan, several potential traffic calming measures were identified. After the adoption of the plan, some of these measures were implemented by the City. The following is a list of traffic calming measure that were implemented based on the recommendation of the prior Traffic Calming Plan:

- Radar Speed Sign on English Avenue at Grant Avenue
- Traffic Circle on Virgin Avenue at Grant Avenue
- Entrance Barrier on Grant Avenue at Casanova Avenue
- Pavement Treatment on Montecito Avenue at English Avenue
- Median Island on Montecito Avenue at Hannon Avenue
- Pavement Treatment at Montecito Avenue at Ramona Avenue
- Traffic Circle on Hannon Avenue at Branner Avenue
- Traffic Circle on Hannon Avenue at Sequoia Avenue
- Traffic Circle on Casanova Avenue at Kolb Avenue

Of the nine traffic calming measures implemented account, seven were recommended in the previous traffic calming plan. **Figure 25** illustrates concepts recommended by the prior plan.

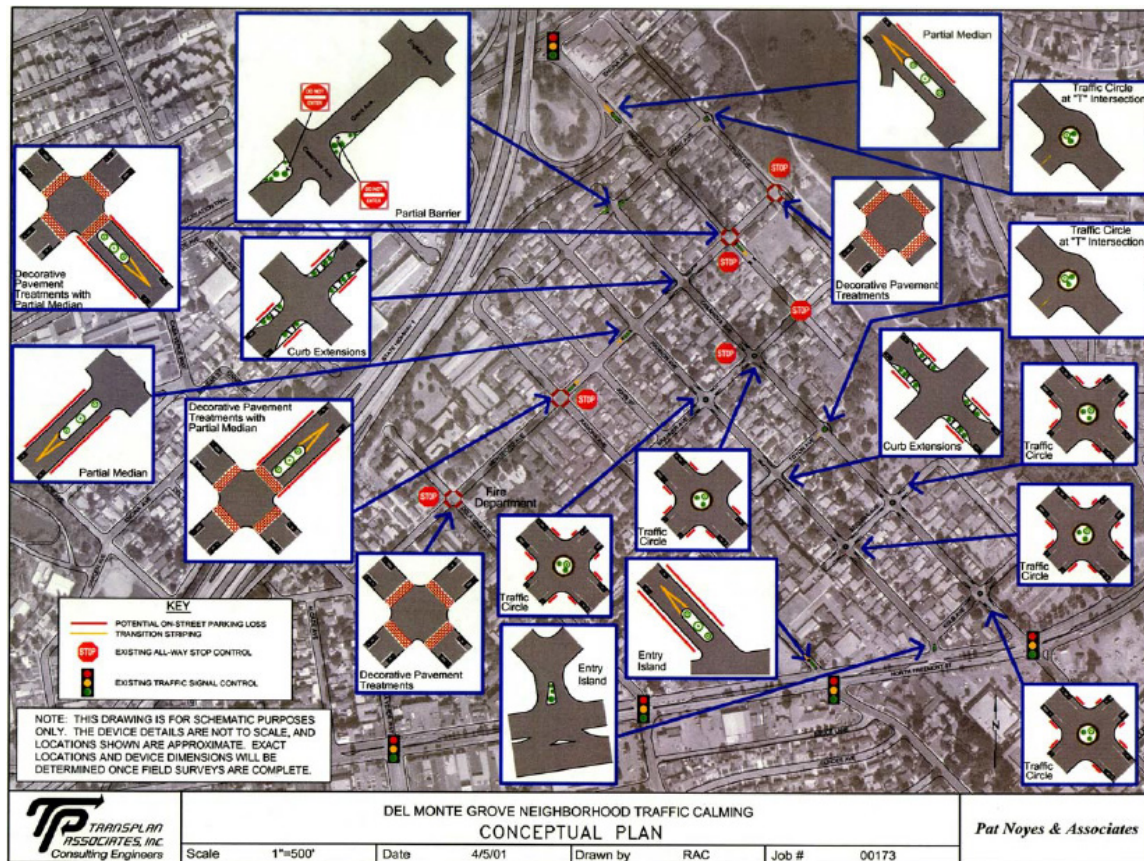


Figure 25 - Traffic Calming Plan Recommendations for 2001 Plan

Source: City of Monterey

Treatments Not Approved Traffic Calming Tools

The following items are not approved treatments for use as traffic calming tools by the City of Monterey for public roadways within its jurisdiction:

Stop Signs

Stop signs are traffic control devices meaning that they are intended to control the right-of-way at intersections. They are not effective in the reduction of speed and can have unintended negative consequences such as noise, increased speeding, or decreased stop compliance. The installation of a stop sign requires an engineering study which demonstrates that the installation of a stop sign is warranted per state and federal standards.

Children at Play Signs

These signs are not standard traffic control devices or warning signs, per state and federal standards. These signs have not shown to increase safety. The sign is a direct and open suggestion that it is acceptable for children to play in the street which should not be encouraged.

Traffic Signals

Traffic Signals, like stop signs, are intended to control the right-of-way at intersections. They are designed to improve safety on higher volume roads and are installed where significant traffic conflicts require them. The installation of a traffic signal requires an engineering study which demonstrates that the installation of a traffic signal is warranted per state and federal standards.

Speed Humps, Bumps, or Dips

Many residents throughout the City, have requested speed humps, bumps, dips or raised crosswalks. Speed humps are vertical changes to the roadway that require drivers to maintain the posted speed to traverse them comfortably. It is against City Policy to implement these devices since they have a negative effect on emergency vehicle response time, increasing emergency response times, up to 10 seconds for each hump that a fire truck needs to travel over. To be effective speed humps must be placed in a series resulting in much greater impact to vehicle response time. Speed humps can also damage fire apparatus. Much like stop signs, speed bumps can have unintended negative consequences such as increased speed in between humps by drivers “making up” for lost time due to humps or stops.

Flashing Lights

Flashing beacons or flashing signs are only used in very specific applications in the City such as an approach to a change in condition such as roads ends or a pedestrian flashing beacon. If too many signs or flashing lights or signs are installed (e.g., they are installed at locations with no heavy pedestrian use or change in road condition), then the unintended consequence is that the flashing lights or signs that are truly necessary will start to be ignored. When this happens, the effectiveness of all flashing lights and signs are reduced, and crashes can result.

On-Street Parking

On-street parking is not a traffic calming treatment; however, studies have shown that on-street parking can have an effect on vehicle speeds. On-street parking can visually narrow the roadway and give drivers the impression that the road is narrowing, encouraging them to slow down.

COMMUNITY INPUT

Community input and engagement is important at every stage in the planning, development, and implementation of the Traffic Calming Plan. Meetings are required to approve a traffic calming plan to ensure that the community was consulted. This section discusses the findings from the three neighborhood meetings held.

Meeting #1

The first meeting for the Traffic Calming Plan Update was held on December 12, 2018 at Casanova Oak Knoll Park Center, 735 Ramona Avenue. Community comments and concerns were raised by the residents and noted. The meeting had over twenty attendees. When asked what the residents would describe as the vision of their neighborhood, they stated that they would like Casanova Avenue to not be a thoroughfare (but a neighborhood street), removal of truck traffic, and implementation of traffic calming measures without compromising on street parking.

Community concerns and comments can be grouped into the following seven categories:

Geometry

There are some concerns with the design of the traffic circle at Kolb Avenue, it is not as effective as it could be. Other residents would like to see more traffic circles along Casanova Avenue. There were some concerns about sight distance at Encina Avenue and English, Toyon Avenue and Casanova Avenue, and at Casanova Avenue and Montecito Avenue. Additionally, several residents noted that the bulbouts are not visible and that the bulbouts have several tire marks from cars driving too close to them.

Parking

Parking was a top concern of residents, and they did not want to see any traffic calming measure which would potentially end in on-street parking loss. Other concerns discussed by residents were: commercial vehicles take up parking spaces in residential areas (Montecito Avenue, English Avenue and Casanova Avenue), too many vehicles parked on the street and not in the driveway or garage, people parking in areas where streets are not wide enough or blocking sight distance and fire hydrants

Speed

Meetings listed Casanova Avenue, between Montecito Avenue and Kolb Avenue as the location with the most drivers speeding. It was, however, noted by a resident that sometimes it seems that traffic does go too fast, but the traffic is, in fact, driving at the speed limit, and it is because the resident is standing still that it seems as if the cars are going faster than we think. It was also noted that neighbors speed as well (not only cut-through traffic).

Traffic

A major concern brought up was the effect of a potential residential development in one of the vacant lots on Casanova Avenue. As a result of the project, which has not yet been approved, neighborhood traffic could increase. Residents also were concerned with cut through traffic, although they did note, if we move traffic are we just making it our neighbors' problem. A suggestion from the community is the addition of wayfinding signs to prevent cut-through traffic and direct traffic to main roads. Residents were also concerned with the high numbers of truck traffic though neighborhood including City work trucks. Parking intrusion from businesses in the neighborhood.

Pedestrian

Residents noted the high volume of pedestrians in the neighborhood and requested more crosswalks or raised crosswalks. Residents were supportive of pedestrian features and facilities, however they wanted to ensure that any improvements would be balanced with impact

Bicycles

Although, residents were supportive of bicycle features and facilities, the did want to ensure that it was balanced with impact to vehicle traffic. Additionally, residents felt that bicyclists do not comply with stop signs.

Enforcement

Some of the topics discussed by the community were related to the enforcement. A resident noted that when there is not much traffic in the early morning, vehicles do not always adhere to stop signs. In regard to parking, people commented that sometimes vehicles are parked in front of fire hydrants.

Meeting notes and materials from the first meeting can be found in **Appendix C**.

Meeting #2

The second neighborhood meeting for the Del Monte Grove – Laguna Grande Neighborhood Traffic Calming Plan Update was held on April 3, 2019 at Casanova Oak Knoll Park Center, 735 Ramona Avenue. The meeting had 12 attendees.

In this meeting, the neighborhood was shown traffic data that was collected along English Avenue, Virgin Avenue, Casanova Avenue, Ramona Avenue and Montecito Avenue. Additionally, residents were shown preliminary traffic calming concepts for the intersections of Casanova Avenue at Sequoia Avenue, Toyon Avenue, and Branner Avenue, the intersection of Hannon Avenue and Kolb Avenue, as well as segments of Ramona Avenue and English Avenue.

Regarding these concepts, residents noted concerns with sight distance at Toyon Avenue and Casanova Avenue, the maintenance in traffic circles, reflectors or reflective paint on bulb outs so they are more visible. Residents requested to have data from the studies posted to the City's website.

The concern about parking intrusion from businesses into the neighborhood as well as the proposed housing development were re-visited. Current NCIP proposals, which overlapped with traffic calming efforts, were discussed.

Meeting notes and materials from the first meeting can be found in **Appendix D**.

Meeting #3

The third neighborhood meeting for the Del Monte Grove – Laguna Grande Neighborhood Traffic Calming Plan Update was held on October 2, 2019 at Casanova Oak Knoll Park Center, 735 Ramona Avenue. The meeting had seven attendees.

As part of the third meeting, new speed data was presented from the Police department speed trailer that was placed on the 400 block of Casanova Avenue. This is between the intersections of Branner Avenue and Montecito Avenue.

The concepts proposed in the prior meeting were re-visited, and it was decided that alternatives need to be developed for the intersections which a traffic circle was recommended. Between the second and third meeting, a site visit to the intersection of Toyon Avenue and Casanova Avenue was held to evaluate the sight distance and ensure that proposed concepts would have adequate sight distance.

Meeting notes and materials from the first meeting can be found in **Appendix E**.

[illegible]

Source: Kimley-Horn, 2019

A neighborhood entry sign at the northern entrance of the neighborhood is recommended to signify the entrance into a residential neighborhood. The sign is recommended to be placed south of the Highway 1 Ramps (see **Figure 26**). **Figure 27** shows an example the neighborhood that could be placed on English Avenue and **Figure 28** shows an example of what the sign could look like if placed at the recommended location.



Figure 27 - Casanova Ave Neighborhood Entry Sign

Source: Google Maps, 2019



Figure 28 - Recommended English Avenue Neighborhood Entry Sign

Source: Kimley-Horn, 2019

Hannon Avenue Entry Median

A median was recommended at Hannon Avenue to slow vehicles as they enter the neighborhood. An option would be to include a Neighborhood Entry Sign to further signify the entrance to a residential neighborhood. The proposed location of the median is shown in **Figure 26** and the proposed conceptual design is shown below in **Figure 29**.

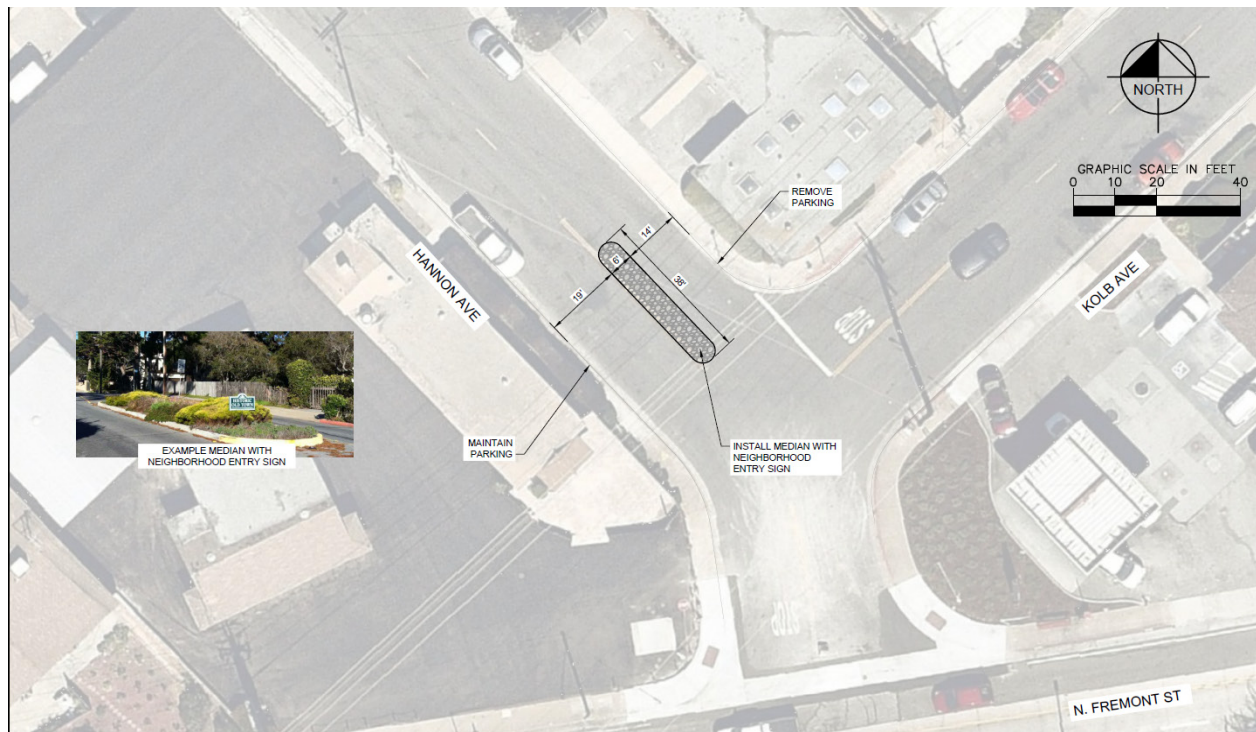


Figure 29 - Hannon Avenue Entry Median

Source: Kimley-Horn, 2019

Casanova Avenue Corridor Treatments

Three concepts have been proposed along the Casanova Avenue corridor at the intersections with Branner Avenue, Toyon Avenue and Sequoia Avenue. The location of the proposed concepts is shown in **Figure 26**.

Casanova Avenue and Branner Avenue Curb Extension/ Bulbouts

Curb Extensions have been proposed at two intersection corners. Crosswalk striping is recommended on the southern leg and eastern leg of the intersection. Striping of crosswalks and centerlines is recommended on Branner Avenue and Casanova Avenue. An ADA curb ramp improvement is also recommended to provide a landing for the proposed crosswalk across Branner Avenue. The proposed conceptual design is shown below in **Figure 30**.

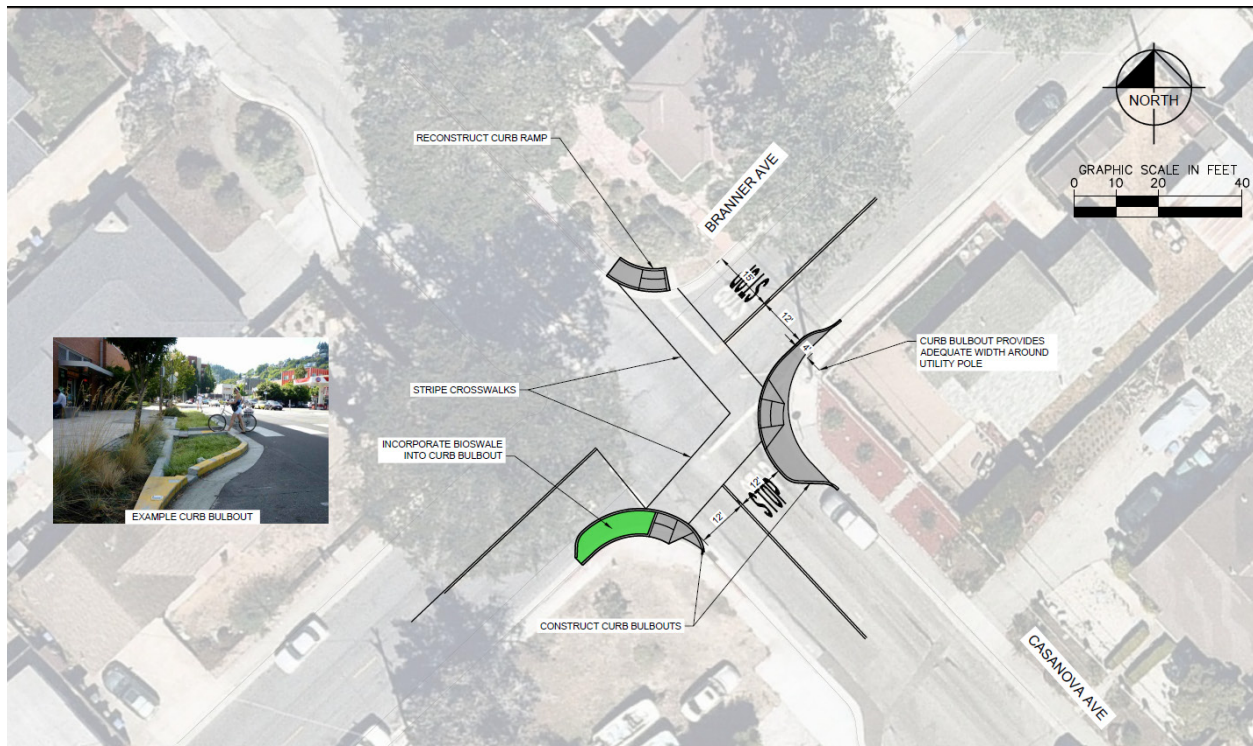


Figure 30 - Casanova Avenue and Branner Avenue Curb Extension/ Bulbouts

Source: Kimley-Horn, 2019

Casanova Avenue and Toyon Avenue Traffic Calming Alternatives

Two alternatives were developed for the intersection of Casanova Avenue and Toyon Avenue: The first alternative, Alternative A, is Curb Extensions/ Bulbouts shown in **Figure 31**. The second alternative, Alternative B, is a Traffic Circle shown in **Figure 32**.

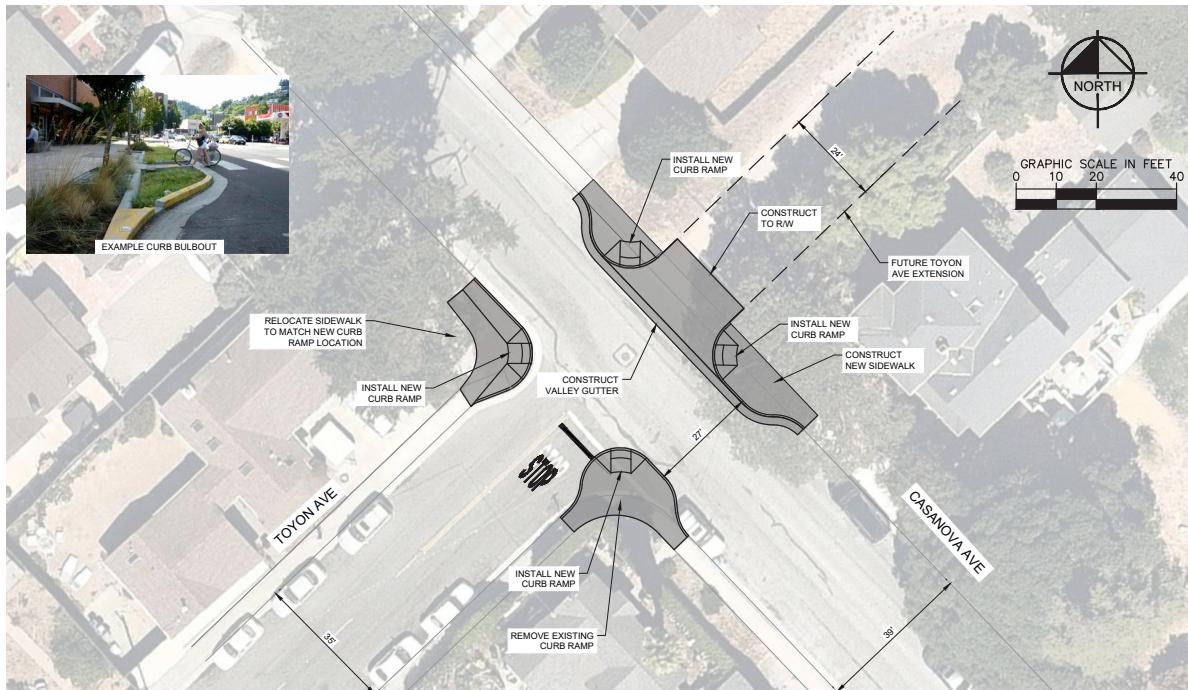


Figure 31 - Casanova Avenue and Toyon Avenue Curb Extension/ Bulbouts

Source: Kimley-Horn, 2019

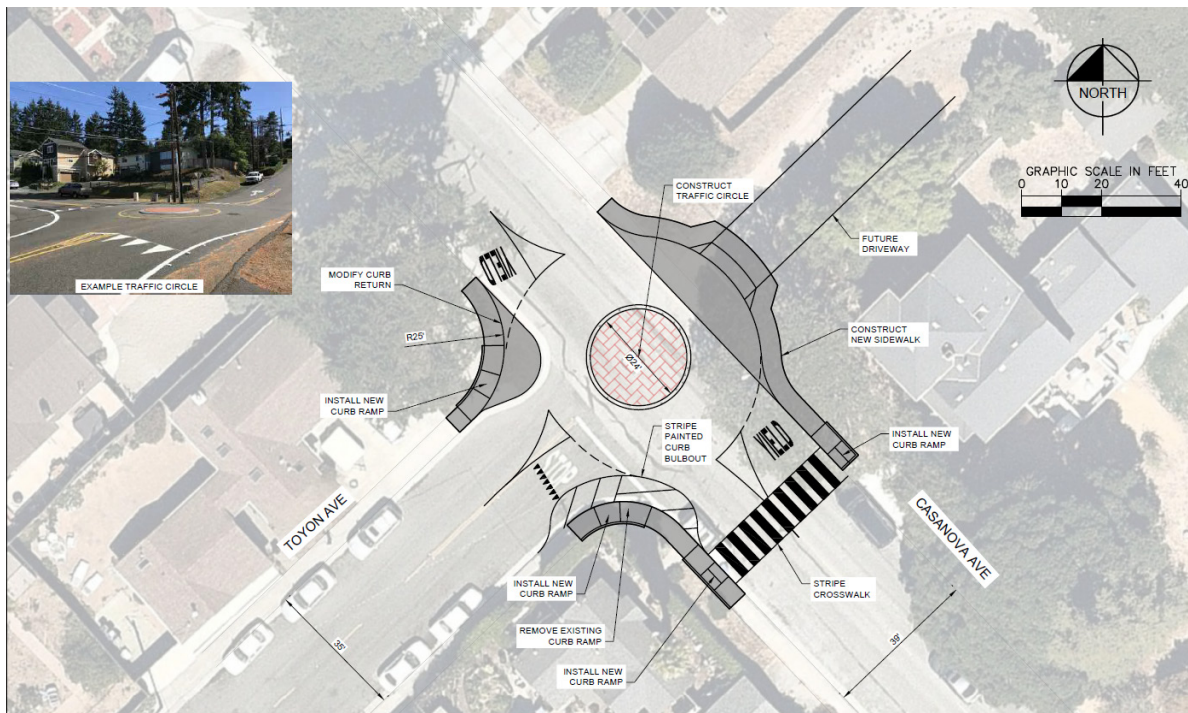


Figure 32 - Casanova Avenue and Toyon Avenue Traffic Circle

Source: Kimley-Horn, 2019

Casanova Avenue and Sequoia Avenue Traffic Calming Alternatives

Two alternatives were developed for the intersection of Casanova Avenue and Toyon Avenue: The first alternative, Alternative A, is Curb Extensions/ Bulbouts shown in **Figure 33**. The second alternative, Alternative B, is a Traffic Circle shown in **Figure 34**.

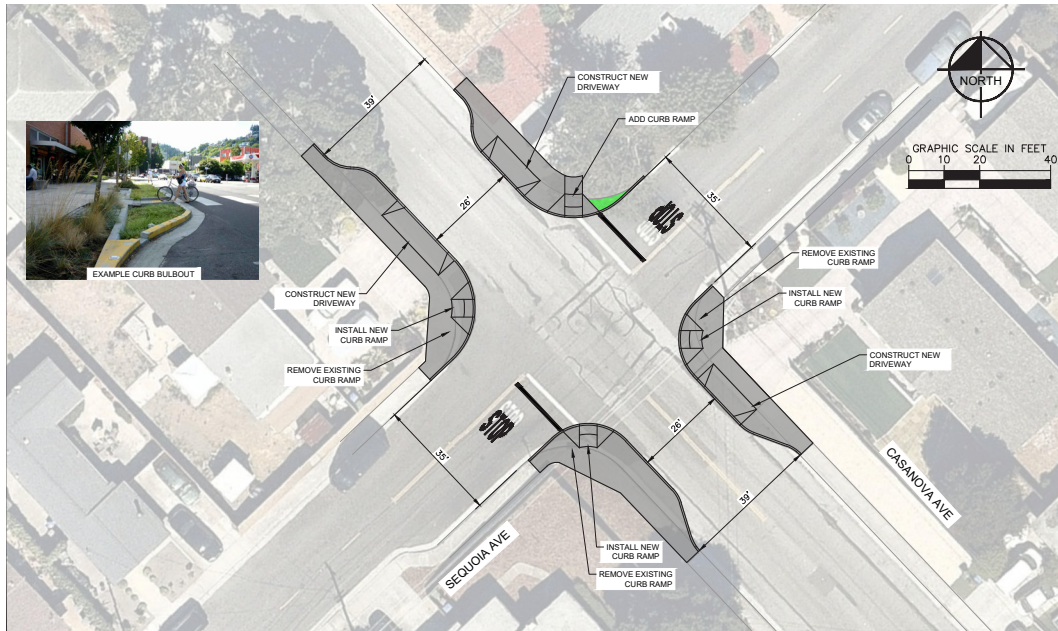


Figure 33 - Casanova Avenue and Sequoia Avenue Curb Extension/ Bulbout

Source: Kimley-Horn, 2019

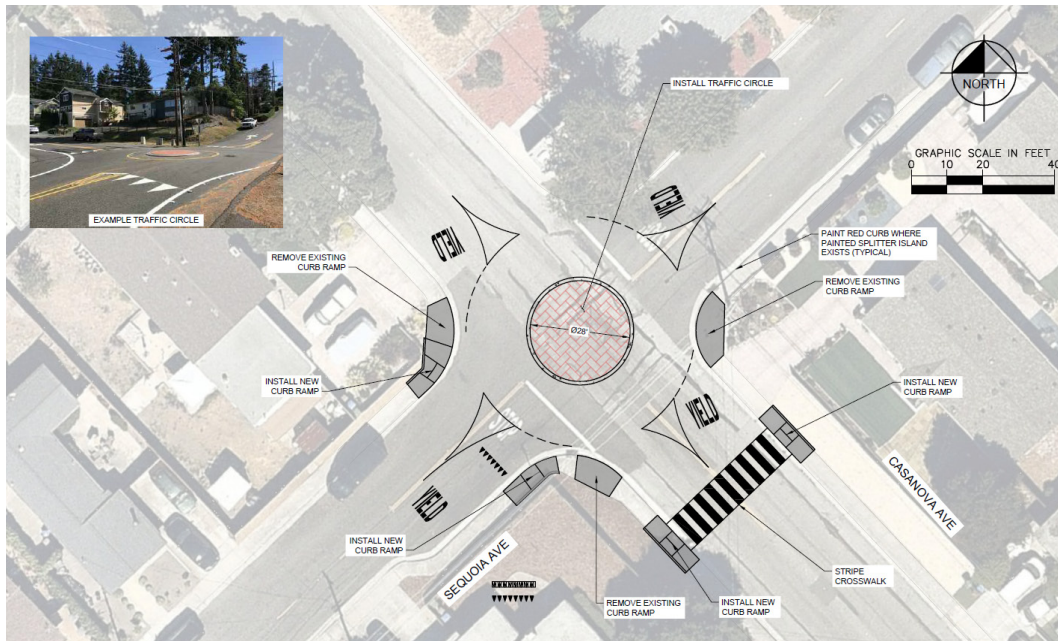


Figure 34 - Casanova Avenue and Sequoia Avenue Traffic Circle

Source: Kimley-Horn, 2019

Ramona Avenue Corridor Treatments

Two concepts have been proposed along the Ramona Avenue corridor: a series of curb extensions between North Fremont Street and Branner Avenue, and Radar Speed Signs at Branner Avenue. The location of the proposed concepts is shown in **Figure 26**.

Ramona Avenue Curb Extensions/ Bulb Outs

A series of four curb extensions/bulb outs is proposed on Ramona Avenue, the locations were proposed where there is no parking allowed in existing conditions; this ensures that no parking is lost as a result of the proposed concept. **Figure 35** shows the proposed concept layout for the Ramona Avenue curb extensions/bulbouts.



Figure 35 - Ramona Avenue Curb Extension/ Bulbouts between North Fremont Street and Branner Avenue

Source: Kimley-Horn, 2019

Ramona Avenue Radar Speed Signs

Radar speed signs are recommended along Ramona Avenue, on the east and west side of the intersection with Branner Avenue as shown in **Figure 36**. A general area has been identified for the radar speed signs. The final location of the signs is contingent on the sun exposure, to power the signs, and adjacent property owner approval.

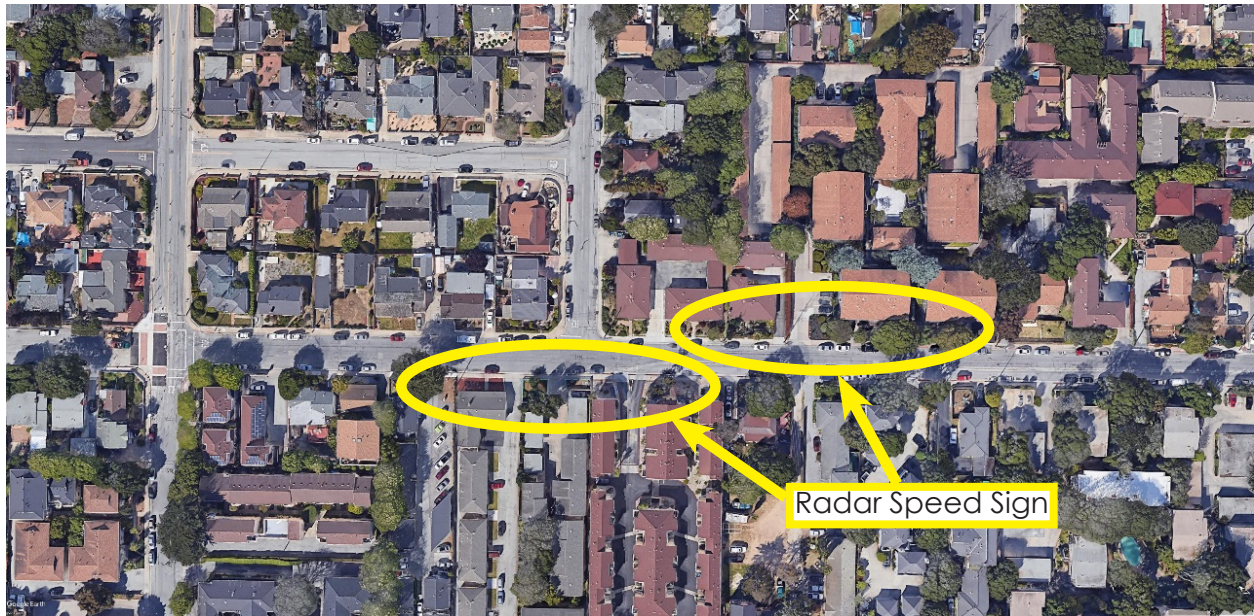


Figure 36 - Ramona Avenue Radar Speed Signs at Branner Avenue

Source: Kimley-Horn, 2019

Detailed drawings can be found in **Appendix F**.

APPENDIX

A. EXISTING CONDITIONS TRAFFIC COUNTS

B. VEHICLE CLASSIFICATION

C. MEETING #1 MATERIALS – *Presentations, Posters, and Feedback*

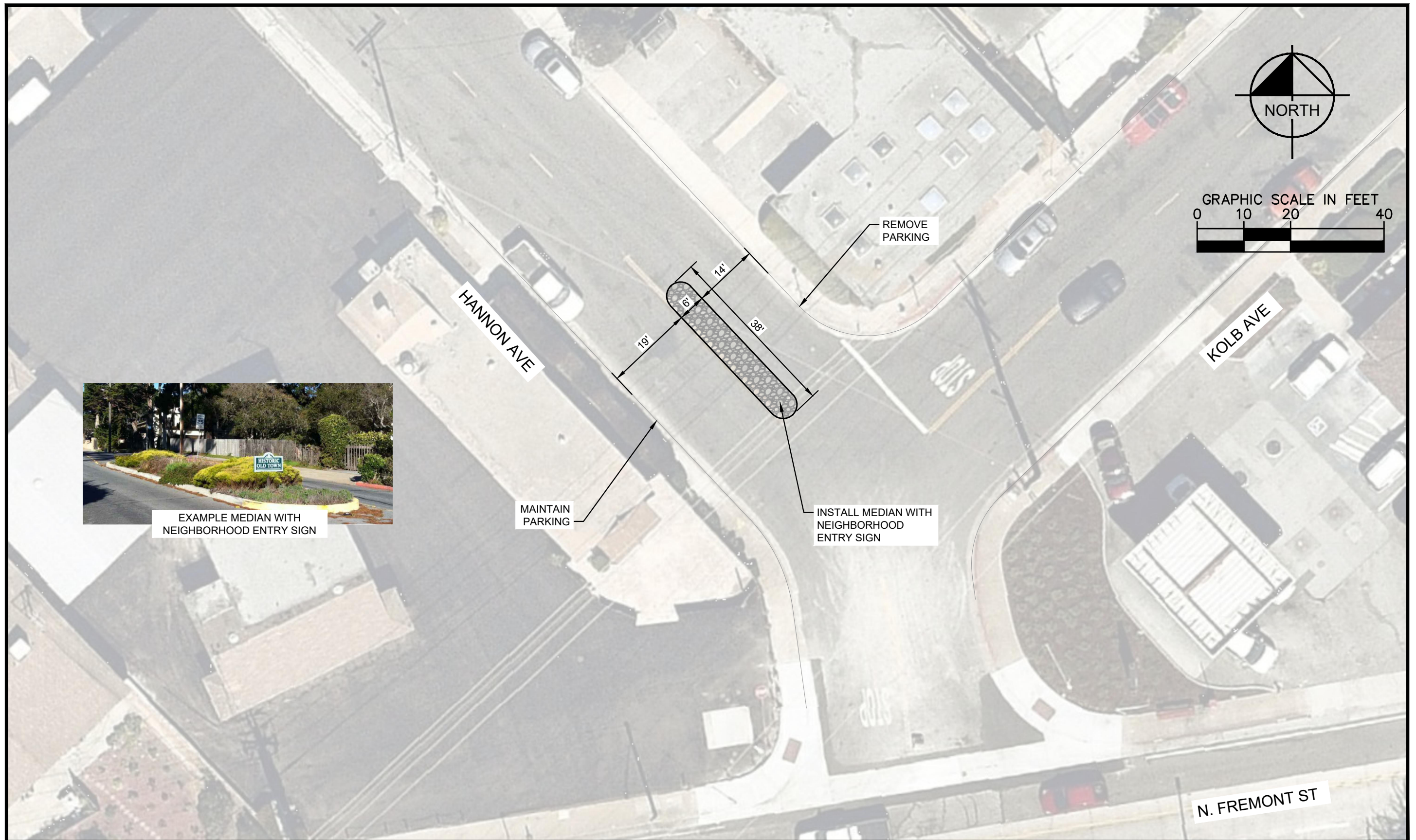
D. MEETING #2 MATERIALS – *Presentations, Posters, and Feedback*

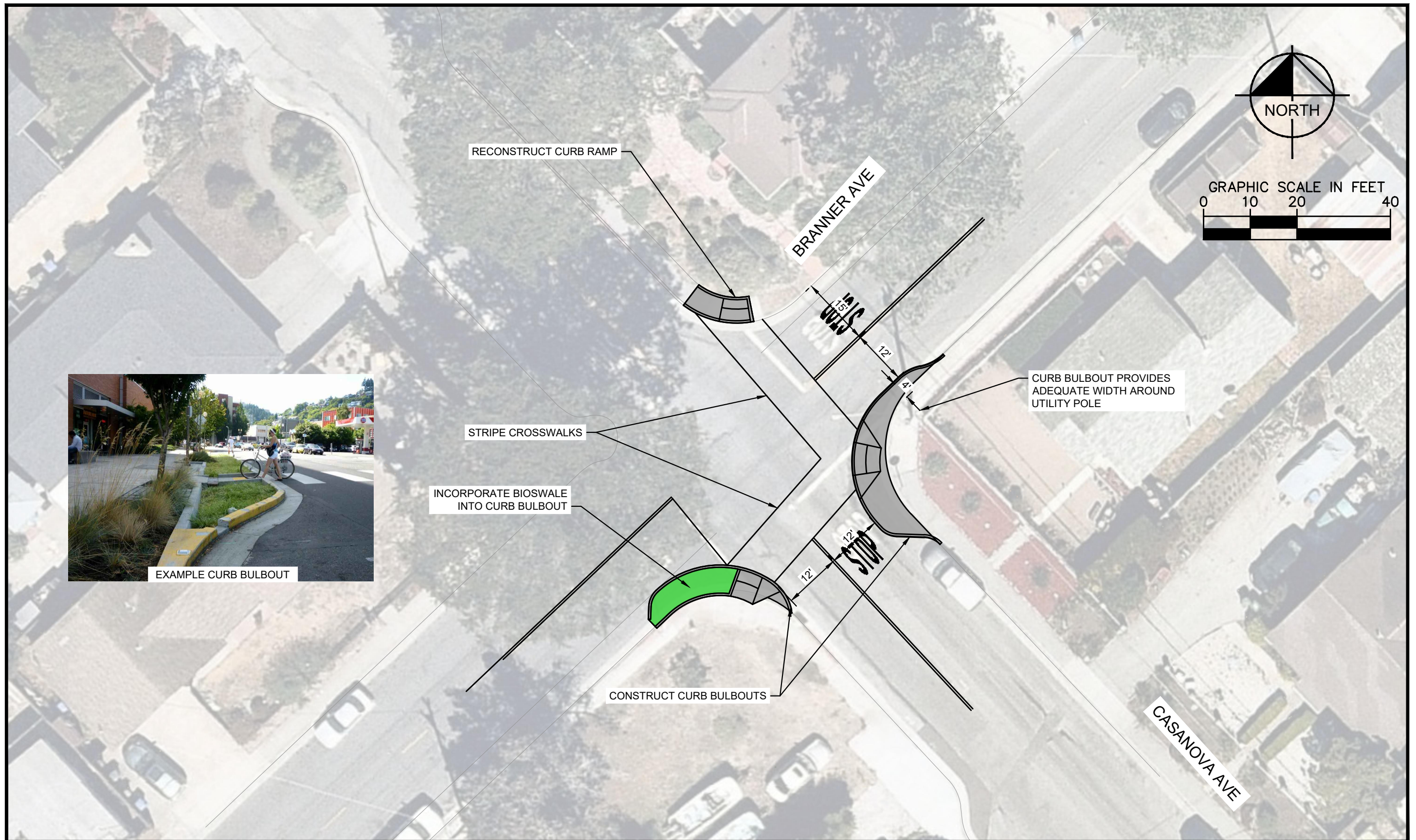
E. MEETING #3 MATERIALS – *Presentations, Posters, and Feedback*

F. RECOMMENDED TRAFFIC CALMING CONCEPTS

F. RECOMMENDED TRAFFIC CALMING CONCEPTS









EXAMPLE CURB BULBOUT

