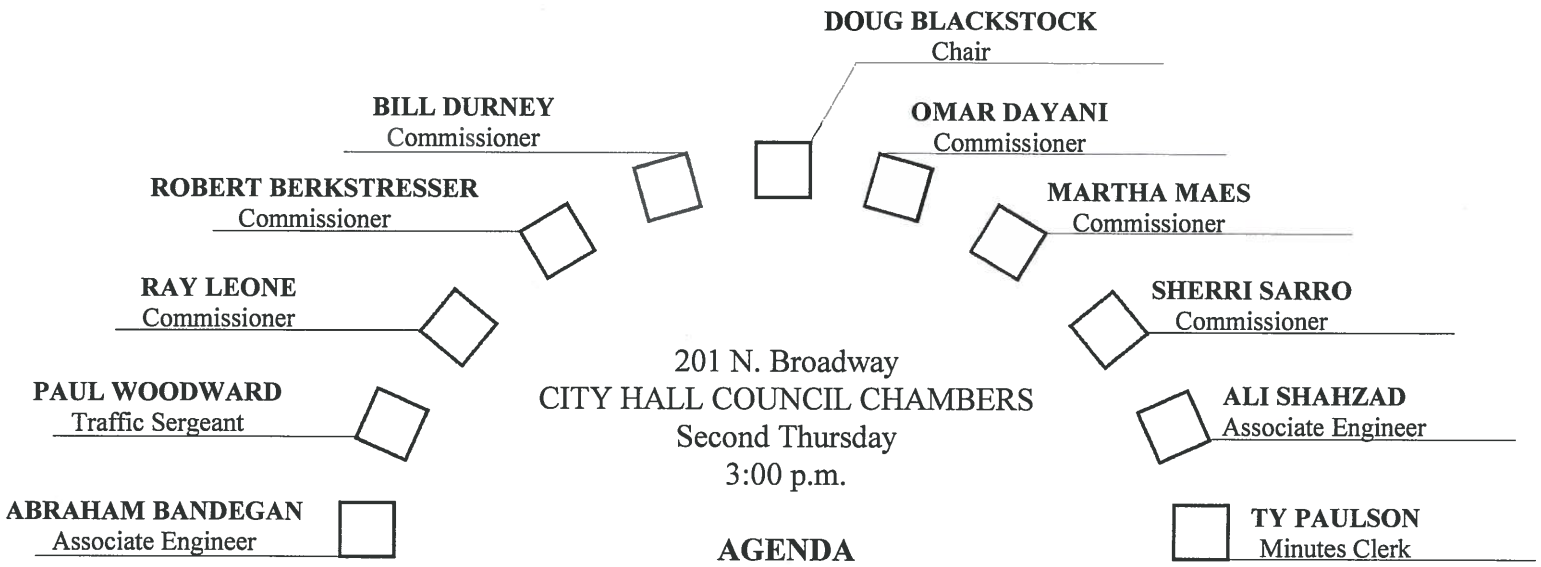
CITY OF ESCONDIDO

Transportation & Community Safety Commission



201 N. Broadway
CITY HALL COUNCIL CHAMBERS
Second Thursday
3:00 p.m.

AGENDA
April 10th, 2014

A. FLAG SALUTE

B. ROLL CALL AND DETERMINATION OF QUORUM

C. ORAL COMMUNICATIONS* (At this time, members of the public are encouraged to speak to the Commission concerning items not already on this agenda. A time limit of three [3] minutes per speaker and a total time allotment of fifteen [15] minutes will be observed.)

The Brown Act provides an opportunity for the members of the public to directly address the Commission on any item of interest to the public, before or during the Commission's consideration of the item. If you wish to speak regarding an agenda item, please fill out a speaker's slip and give it to the minute's clerk who will forward it to the Chairman.

If you wish to speak concerning an item not on the agenda, you may do so under "Oral Communications" which is listed on the agenda.

The City of Escondido recognizes its obligation to provide equal access to public meetings to those qualified individuals with disabilities. Please contact the Human Resources Department (839-4643) with any requests for reasonable accommodation, to include sign language interpreter, at least twenty-four (24) hours prior to the meeting.

D. APPROVAL OF MINUTES OF JANUARY 9, 2014 MEETING

E. CONSENT ITEMS

1. Hospital Signage on Citracado West, East Valley Parkway south of Citracado Pkwy, and Auto Pkwy.

   Source: Commissioner Durney & Staff

   Recommendation: Approval

   Previous action: None

F. NEW BUSINESS

1. Traffic Management Toolbox.

   Source: Staff

   Recommendation: Approval

   Previous action: None

2. Traffic Management Process and 2014 Traffic Management Projects List (TMPL) Prioritization.

   Source: Staff

   Recommendation: Approval

   Previous action: None

3. City of Escondido – General Plan Chapter III - Mobility and Infrastructure Information insert for Commissioners Binder – A Brief Overview Presentation on "Complete Streets".

   Source: Staff

   Recommendation: None

   Previous action: None

G. OLD BUSINESS

1. Project Status Update -- An overview of various projects involving the City.

   Source: Staff

Written or verbal reports may be presented on the following topics:

a. Active Transportation Program Grant - Caltrans is now administering a Call for Projects from March 21 through May 21, 2014. Applications must be received by COB on May 21, 2014.

   Recommendation: Receive and file reports.

H. SCHOOL AREA SAFETY

1. Pedestrian Safety – Reidy Creek School – Traffic Congestion.

   Source: Officer Navarro & School District

   Recommendation: Installed Sign for "No right turn on Red" on southbound approach, and proposed alternate striping concept to be designed.

I. ANY OTHER BUSINESS

1. Future Agenda Items -- A briefing of future agenda items proposed to be presented to the Transportation Commission.

   Source: Staff

   Recommendation: None (informational)

J. COUNCIL ACTION* (A briefing on recent Council actions on Commission or related items.) – Rural Road Standards approved by Council April 4th, 2014.

K. ORAL COMMUNICATIONS* (At this time, members of the public are encouraged to speak to the Commission.)

L. TRANSPORTATION COMMISSIONERS* (Commissioners may bring up questions or items for future discussion.)

M. ADJOURNMENT

*In order for the Transportation Commission to take action or conclude discussion, an item must appear on the agenda which is posted 72 hours in advance of the meeting. Therefore, all items brought up under the categories marked with an asterisk (*) can have no action. Such items can be referred to staff or scheduled for a future agenda.

AVAILABILITY OF SUPPLEMENTAL MATERIALS AFTER AGENDA POSTING: Any supplemental writings or documents provided to the Commission regarding any item on this agenda will be made available for public inspection in the Engineering Office located at 201 N. Broadway during normal business hours, or in the Council Chambers while the meeting is in session.

CITY OF ESCONDIDO

MINUTES OF THE REGULAR MEETING OF THE TRANSPORTATION AND COMMUNITY SAFETY COMMISSION

January 6, 2014

The regular meeting of the Escondido Transportation and Community Safety Commission was called to order at 3:05 p.m., Thursday, by Vice-chairman Durney, in the City Council Chambers, 201 North Broadway, Escondido, California.

Commissioners present: Commissioner Leone, Commissioner Berkstresser, Vice-chairman Durney, Commissioner Maes, and Commissioner Sarro.

Commissioners absent: Chair Blackstock and Commissioner Dayani.

Staff present: Ali Shahzad, Associate Engineer; Beth Kassebaum, Department Specialist; Julie Procopio, Assistant Public Works Director; Abraham Bandegan, Associate Engineer; Sergeant Woodward, Escondido Police Department; and Ty Paulson, Minutes Clerk.

ORAL COMMUNICATIONS:

Kimberly Mayerhofer, Escondido, expressed her concern with vehicles speeding between Avenida Del Diablo and Harmony Grove Road. She stated that she was aware of three accidents occurring during 2013, noting her concern for the students at the preschool. She asked that this item be agendized and that the City consider traffic calming measures such as installing a stop sign on Avenida Del Diablo, flashing slow down lights, or anything else the City felt would be appropriate to slow speeds in the subject area.

Presentation from Bike-Walk Escondido

Gary Onstad, Bike-Walk Escondido, noted that they were a fairly new organization that had been meeting for the last eight months. He stated that their mission was to ensure that bicycling and walking in Escondido was both pleasant and safe. He noted that their goals were supported by the Bicycle Master Plan and the Escondido Creek Commission. He indicated that their priorities included improving the Escondido Creek Trail, implementing traffic calming around schools, creating safe routes to schools, starting with Escondido High School, and help implement the Complete Streets Program. He also stated that they had received tremendous support from the youth of Escondido.

Valeria Hernandez, Escondido, noted that she attended Escondido High School. She stated that there was a need for bike and walk lanes for students to access Escondido High School. She also felt a mid-block crossing was needed along with wider sidewalks.

Carlos Hernandez, Escondido, noted he attended San Pasqual High School. He stated that that many of the students either walked or rode bikes to school, noting this was very dangerous due to not having wide enough sidewalks or mid-block crossings. He also felt educating the students to become more involved would help.

Mr. Onstad noted that the creek trail bike path had over 14 street crossing that were uncontrolled, noting his concern for the safety of the trail users. He stated that the Reveal Escondido Creek group was also working to improve the bike trail. He noted that the bike trail needed signage, parking restrictions at the trail entrances, and exits. He elaborated that they created a survey of the trail, which outlined the challenges. In conclusion, he noted that their goal was to partner with the City and other organizations to create the best solution.

Judy Frankel, Carlsbad, Bike/Walk North County, noted that she helped established bike/walk groups in San Diego. She felt Escondido was a destination for bicyclist both in town and in the outlying areas for mountain bikers. She suggested that a connection be provided from the transit center to the bike path and that the bike paths be widened. She encouraged that the Commission have a representative attend the February 13th Caltrans workshop.

MINUTES:

Moved by Commissioner Leone, seconded by Commissioner Berkstresser, to approve the minutes of the October 10, 2013, meeting. Motion carried unanimously.

CONSENT ITEMS:

1. New Striping Plan for Mission Avenue from North Broadway to Fig Street and for East Valley Parkway from Midway Drive to Citrus Avenue.

ACTION:

Moved by Commissioner Berkstresser, seconded by Commissioner Durney, to approve the consent item. Motion carried unanimously.

NEW BUSINESS:

Taken out of order.

2. Feasibility Study – mid-block pedestrian crossing on North Broadway north of Sheridan Avenue.

Abraham Bandegan, Associate Engineer, referenced the staff report and noted staff recommended including Alternatives 2 and 3 as outlined in the staff report (optimizing signal timing plan and constructing sidewalk improvements to allow for more pedestrian storage capacity) in the Traffic Management Plan List (TMPL) for prioritization at the April 2014 Transportation Commission meeting.

Commissioner Durney and staff discussed the timing for repaving North Broadway.

Commissioner Durney expressed his concern with the 47 MPH average speeds of vehicles traveling in front of the school. He then asked whether active controls could be used. Mr. Bandegan noted that the only active control device that might work would be HAWK Signals, which cost approximately $150,000. Commissioner Durney asked if grant funding was available. Mr. Bandegan noted that Safe Routes to School Fund might be an avenue for funding.

Greg Birch, Rancho Bernardo, noted his son lived in Escondido. He expressed his view that the speed limit around the schools needed to be 25 MPH during school hours. He also felt the City needed to create bike and walk lanes for all of the high schools in Escondido.

Valeria Hernandez, Escondido, noted that Escondido High School had more and more students riding bikes and walking to school. She felt a mid-block crossing was needed.

Carol Rea, Escondido, President of the Old Escondido Historic District, thanked the Commission for the stop signs at Juniper and 9th Avenue. She asked that the City take measures to create traffic calming for Escondido High School.

Patricia Borchmann, Escondido, asked that the City create traffic calming measures near Escondido High School. She noted that the vehicle speeds were too high near the schools.

Maya Rosas, Escondido, Bike/Walk San Diego, noted that the issues associated with bicycle traffic and student traffic was very serious. She asked why a passive stop sign was not warranted. She also noted that they could help with grant writing for the City.

Commissioner Berkstresser noted that the speed limit at all high school sites was 25 MPH during school hours. He also stated that the reason for not installing passive crosswalks was due to creating a false sense of security for pedestrians. He noted that the Police Department was very active in the Escondido High School area. He indicated that staff's recommendation would help keep the students from overflowing into the street. He suggested repositioning the bicycle parking at

Escondido High School in the vicinity of Bud Quade Way. He also stated educating and making the bicyclists and parents dropping off and picking students accountable was key for creating better safety.

Commissioner Maes noted that part of the issues was educating the students. She stated that she was opposed to mid-block crossings due to creating a false sense of security.

ACTION:

Moved by Commissioner Berkstresser, seconded by Commissioner Maes, to approve staff's recommendation. Motion carried unanimously.

1. Review and Approve a Policy for Prioritizing Traffic Management and Traffic Calming Policy.

Abraham Bandegan, Associate Engineer, referenced the staff report and noted staff recommended the Commission approve the policy on prioritizing and implementation of traffic management projects.

Commissioner Durney and Mr. Bandegan discussed the timing for reviewing the projects.

Discussion ensued regarding adding smaller projects after the April deadline.

ACTION:

Moved by Commissioner Berkstresser, seconded by Commissioner Durney, to approve staff's recommendation. Motion carried unanimously.

3. Approve new batch of speed surveys, including changes to posted limits

Beth Kassebaum, Department Specialist, referenced the staff report and noted staff recommended the Commission recommend approval to the City Council of updated Engineering and Traffic Surveys (E&TS) for posted speeds on various street segments Citywide as outlined in the staff report.

ACTION:

Moved by Commissioner Leone, seconded by Commissioner Berkstresser, to approve staff's recommendation. Motion carried unanimously.

4. Rural Residential Roadway Standards – Alternative Roadway Standards to be recommended for Approval to the City Council

Ali Shahzad, Associate Engineer, referenced the staff report and noted staff

recommended approval to City Council of the Rural Residential Roadway Standards.

Commissioner Durney and Mr. Shahzad discussed the difference between the current residential standards and the proposed standards.

Trudy Pachoin, Escondido, asked what the accommodation would be for the bicyclists. Mr. Shahzad noted that residential streets did not require bicycle lanes due to residential streets already having traffic calming. He also noted that the ADTs were very low for the proposed areas.

ACTION:

Moved by Commissioner Leone, seconded by Commissioner Berkstresser, to approve staff's recommendation. Motion carried unanimously.

OLD BUSINESS:

1. Project Status Update – An overview of various projects involving the City

a. Truck Route signage – installation complete
b. Highway Safety Improvement Program (HSIP) Funding Awarded for two (2) Top Priority Traffic Signals

Ali Shahzad, Associate Engineer, provided the updates to the Commission and requested input.

SCHOOL AREA SAFETY

1. Pedestrian Safety – Reidy Creek School – Traffic Congestion - Received

ANY OTHER BUSINESS:

1. Future Agenda Items – A briefing of future agenda items proposed to be presented to the Transportation Commission.

Mr. Shahzad noted that Commissioner applications were due.

Commissioner Durney asked for an agenda item to discuss installing directional hospital signage in the area where Citracado dead ended, noting he had witnessed individuals not being able to find the hospital on Citracado on a regular basis.

Commissioner Durney asked for an agenda item to discuss how the Commission could be more involved with the bike/walk program.

Mr. Bandegan noted that the Commission would be hearing the Traffic Management Project List at the next meeting.

COUNCIL ACTION: None.

ORAL COMMUNICATIONS: None.

TRANSPORTATION COMMISSIONERS: No discussion.

ADJOURNMENT:

Vice-chairman Durney adjourned the meeting at 4:43 p.m. The next meeting of the Commission would be held on April 10, 2014, at 3:00 p.m. in City Council Chambers, 201 North Broadway, Escondido.

Ali Shahzad, Associate Engineer

Ty Paulson, Minutes Clerk

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CITY OF ESCONDIDO

TRANSPORTATION and
COMMUNITY SAFETY COMMISSION

Commission Report of: April 10th, 2014 **Item No.: E1**

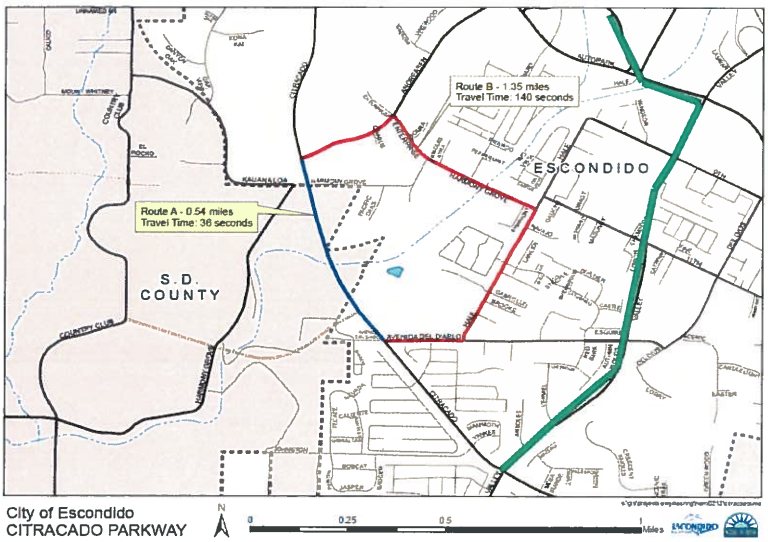
Location: Hospital Signage on East Valley Parkway south of South Citracado Pkwy

Initiated By: Commissioner Bill Durney and City Staff

Subject: Approve Sign Installs for Palomar Hospital – Way finding Signage along Valley Parkway, Citracado and Auto Parkway to guide them to North Citracado Parkway.

Background:
During the January 9th , 2014 Transportation and Community Safety Commission meeting, Commissioner Bill Durney indicated that he had witnessed ambulance drivers at the terminus of south-east Citracado Parkway looking for Palomar Hospital. Commissioner Durney stated that he has provided directions to the Hospital too many times and the new signs on East Valley Parkway were still not effective enough.

Data:
Citracado Parkway terminates at Avenida del Diablo. The missing section of Citracado Parkway, between Avenida del Diablo and Andreasen, is under design and will be constructed when funding is secured (see Blue Link on map next page). There are short cuts that could be taken to the northwest portion Citracado Parkway at Avenida Del Diablo and we propose to install a guide sign there too; however, the most direct route along the major streets on East Valley Parkway and then Auto Parkway (green line) to Citracado Pkwy that have existing Hospital Guide Signage would be the most appropriate route to add additional Hospital way finding signage. Additionally, Auto Pkwy from I-15 may need another sign as well.



Discussion & Purpose:

General Service Signs for Conventional Roads

Per the California Manual on Uniform Traffic Control Devices (CA-MUTCD) conventional roads, commercial services such as gas, food and lodging generally are within sight and are available to the road user at reasonably frequent intervals along the route. Consequently, on this class of road there usually is no need for special signs calling attention to these services. Moreover, General Service signing is usually not required in urban areas **except for hospitals**, law enforcement assistance, tourist information centers, and camping.

The MUTCD presents the following standards and guidance for Hospital Signs:

Hospital Sign (D9-2 and D9-13)
Option:
49 Hospitals, as defined in California Code of Regulations, Title 22, Division 5, Chapter 1, Article 1, Section 70005 and licensed by the Department of Health Services, which provide 24 hour inpatient care, in urban and rural areas which are located in close proximity to a highway and provide specified medical services, may qualify for the Hospital (D9-2) symbol sign.
50 The D9-2 signs may be provided for hospitals in urban areas within 1 mile of a highway, accept emergency cases and have a medical doctor in attendance 24 hours a day.
51 The D9-2 signs may be provided for hospitals in rural areas within 3 mile of a highway, accept emergency cases and have a doctor on call 24 hours a day.
52 Exceptions to the distance requirement may be made in areas where hospitals are a great distance apart.

Picture "A" (size of sign is Not to Scale)

Recommendation:

Install directions on blue background on white lettering above existing Hospital Sign on West Valley Parkway just south of Cirtracado Pkwy. At location shown in Picture "A" attached to complement the existing Hospital signage:

1. Install Directions above on Hospital and Arrow Signs just south of Citracado Pkwy. for northbound traffic on West Valley Parkway to go straight and make a left at Auto Parkway.
2. Additional Hospital H with Arrow at locations on Map as shown with symbol.

D9-2 Sign

M6-3

Necessary Council Action: None.

Respectfully submitted,

Prepared by:

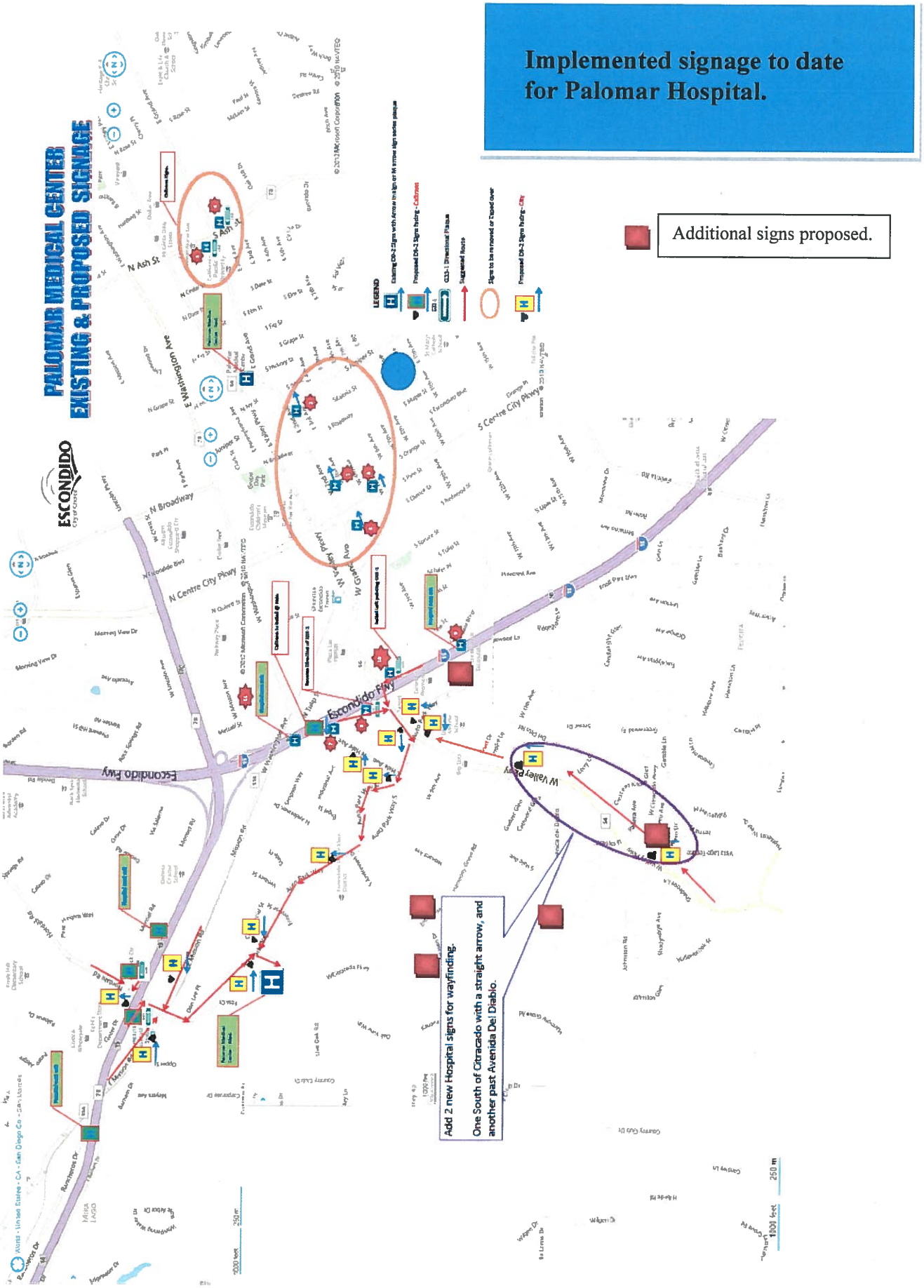
Ali Shahzad, PE (Traffic)
Associate Engineer/Traffic

Reviewed by:

Homi Namdari, PE (Civil)
Assistant City Engineer

Approved by:

Edward N. Domingue, PE (Civil)
Director of Public Works/City Engineer


Implemented signage to date for Palomar Hospital.
Additional signs proposed.
PALOMAR MEDICAL CENTER
EXISTING & PROPOSED SIGNAGE
ESCONDIDO
LEGEND
N Ash St
E Washington Ave
N Broadway
N Centre City Pkwy
S Centre City Pkwy
Escondido Fwy
W Valley Pkwy
Add 2 new Hospital signs for wayfinding.
One South of Citracado with a straight arrow, and another past Avenida Del Diablo.

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CITY OF ESCONDIDO

TRANSPORTATION and
COMMUNITY SAFETY COMMISSION

Commission Report of: April 10th, 2014 **Item No.: F1**

Location: City of Escondido Traffic Management Toolbox

Initiated By: Transportation Commission and City Staff

Request: Review and approve City of Escondido Traffic Management Toolbox

Background:

City Council, Transportation and Community Safety Commission and City Staff receive reports from the public related to speeding, cut-through traffic and unwanted maneuvers noted with streets around the city. Also on many occasions, the need for traffic management in certain locations is initiated by City Staff (Engineering Escondido Police Department) based on observations. In order to implement proper traffic calming measures, City Staff prepared a Traffic Management Toolbox that includes a variety of traffic calming measures that may be selected.

Discussion and Purpose:

"City of Escondido Traffic Management Toolbox" is an inventory of applicable traffic management and traffic calming measures that can be implemented in different areas to address speeding, cut-through traffic or other safety issues. The purpose of this Toolbox is to provide information on how to initiate traffic management and provide guidance on selection and application of the traffic calming measures.

Official signage and striping placed in the public right-of-way and recognized by the public are known as Traffic Control Devices. These devices and their specifications have been officially approved by the State of California Department of Transportation (Caltrans) in CA-MUTCD2012. Traffic management measures in this "Toolbox", however, also include features from the below mentioned state and national manuals, guidelines and standards.

- National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide
- American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets
- Caltrans Effective Application of Traffic Calming Techniques
- National Cooperative Highway Research Program (NCHRP) Report 500 Volume 18: A Guide for Reducing Collisions Involving Bicycles (2008)

As mentioned, this Toolbox will provide alternative means that target speeding and/or cut-through problems. Each tool listed is unique and has a specific purpose for addressing and resolving these problems. More than just a structural feature on a street, traffic calming tools also encompass education, enforcement and engineering. Tools are classified in three different groups.

- Class I tools
  These tools are mainly non-physical measures related to Education and Enforcement and also include minor signage. Where feasible, city will fund the class I measures using its traffic infrastructure budget.

- Class II tools
  These tools mainly consist of signing and striping projects leading to traffic management and some physical speed management measures. Projects that can be addressed with class II measures will be prioritized for selection by TCSC as a part of Traffic Management Projects List (TMPL).

- Class III tools
  These tools may also be selected to be used for projects included in the TMPL for prioritization by TCSC, however, due to their cost these projects will likely require grant funding for their completion.

The following pages identify tools that have been endorsed and are available for use in the City of Escondido. This set of measures constitutes Escondido's "Traffic Management Toolbox". These measures were chosen based on:

- Acceptability of the measures to the Escondido Residents
- Acceptability of the measures to stakeholders including the Fire and Police and Public Works Departments
- Acceptability of the measures to the City Appearance Committee
- Feasibility and appropriateness to address and resolve traffic concerns in the City
- Compatibility of the measures to national standards and guidelines
- Availability of financial resources

In this Toolbox, all approved traffic management and traffic calming measures are briefly described, application for their usage is listed and possible advantages and disadvantages of the tools are also clarified. Photographic examples of different measures are presented in the following figures.

Escondido PD Presence and Enforcement – Class I

Description:

Escondido Police presence will help to make a visual showing in residential neighborhoods and discourage speeding. Enforcement entails the presence of police to monitor speeds and other illegal traffic behavior and issue citations if necessary. It is an initial attempt to reduce speed on streets with speeding problems.

Application:

Streets with documented speeding problem. It can also be used during the learning period when new devices or restrictions are first implemented.

Advantages:

- Very effective while officer is actually present at the location
- Can be targeted to specific time periods that are deemed to be most problematic
- Can be implemented on short notice
- Targets only violators without affecting normal traffic

Disadvantages:

- It is a temporary measure, usually only effective when the officer is present
- Enforcement may be limited by police availability and other policing duties
- Long term financial commitment of police personnel
- Short "memory effect" on motorists when enforcement officer no longer present

Safety Education – Class I

Description:

Safety education programs include efforts to make the public more aware of their own driving behavior and the impact it has on others. Pedestrian and bicycle safety programs alert and educate pedestrians and bicyclists on road safety. Driver safety information and education on existing laws can help improve driver behavior.

Application:

Neighborhood and School Safety programs and and field training workshops can be arranged. Bike-Walk Escondido Committee can also help in educating schools and neighborhood residents.

Advantages:

- Has a long term effect
- Affects and helps both sides (local drivers and also bikes and pedestrians)
- Relatively cheap

Disadvantages:

- Very time consuming
- Needs help of EPD, volunteers and also arrangement and scheduling
- Many people might not be interested or may not participate
- Usually should be accompanied by some other measures to be effective

Speed Limit Signs – Class I

Description:

Signs that define the legal driving speed under normal conditions. The speed limit is based on undertaken surveys or based on established rules and regulations.

Application:

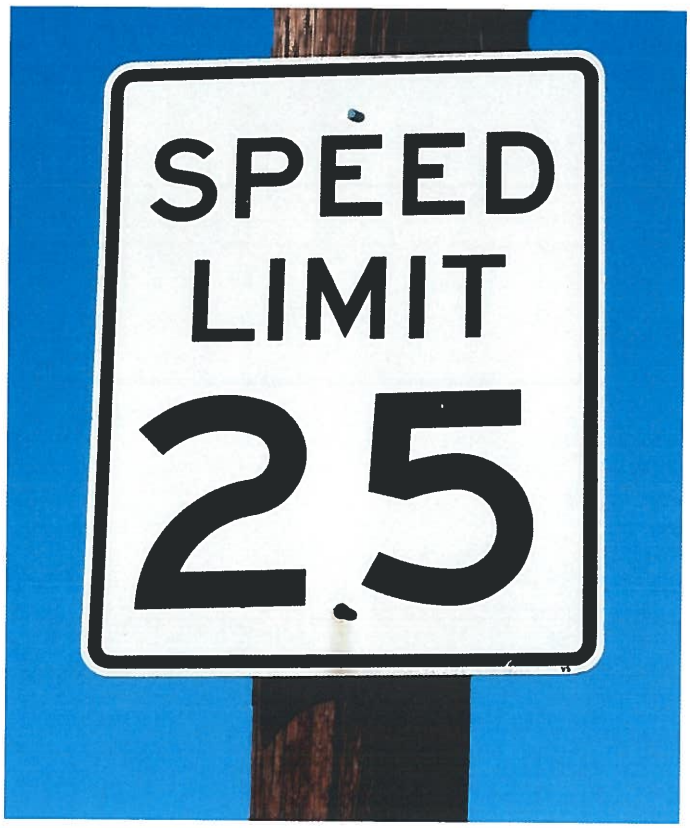
At Streets where speeding is a problem and ongoing enforcement is realistic.

Advantages:

- Provides clear definition of legal speed limit
- Provides context for enforcement efforts
- Provides goal for traffic calming efforts

Disadvantages:

- Typically not effective in and of itself
- Not self-enforcing
- Requires on-going police enforcement
- Unrealistically low speed limits are difficult to enforce and tend to be disregarded
- More visual pollution from signs in the neighborhood



Speed Monitoring Trailers – Class I

Description:

Mobile trailer mounted radar display that informs drivers of their speed. As drivers approach the sign, they are detected by radar and their speed displayed in flashing or static lights.

Application:

Any street where speeding is a problem

Advantages:

- Educational tool
- Good public relations
- Effective for temporary speed reduction needs

Disadvantages:

- Some motorists may speed up to try to register a high speed
- Duration of effectiveness may be limited
- Not self-enforcing

Restricted Movement Signs – Class I

Description:

Sign that prohibits certain movements at an intersection on certain days of the weeks and in a certain period of time based on the existing problem

Application:

Streets where reducing cut-through traffic is desired

Advantages:

- Redirects traffic to main streets
- Reduces cut-through traffic
- Addresses time-of-day problems

Disadvantages:

- Not self-enforcing (low voluntary compliance)
- May increase trip length for some drivers
- Increases number of downstream turning movements
- More visual pollution from signs in the neighborhood
- May lead to confusion at busy intersections

Stop Signs – Class I

Description:

Stop signs are basically not meant to be traffic calming devices and should not be used for the sole purpose of speed reduction; but when used properly in conjunction with other traffic management measures they are very effective in right-of-way management and also calming the traffic.

Application:

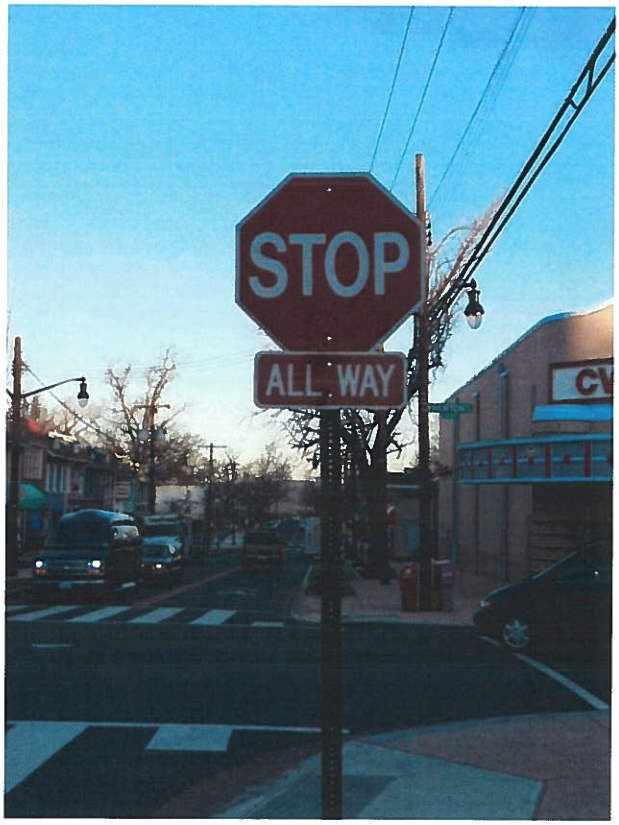
Streets where roads with different classifications intersect and there is a speeding problem on one or both corridors

Advantages:

- Self-enforcing
- Provides context for enforcement efforts
- Relatively cheap

Disadvantages:

- More visual pollution from signs in the neighborhood
- May lead to sharper speed profiles between intersections
- Drivers try to make up the lost time by speeding even more



Radar Speed Display Signs – Class II

Description:

As drivers approach the sign, they are detected by radar and their speed displayed in flashing or static lights on the sign panel. These signs are intended for residential streets with moderate traffic volumes.

Application:

Residential streets where speeding is a problem

Advantages:

- Increases driver awareness of speed and the posted speed limit
- Can be turned off at a higher speed threshold in order to discourage deliberate speeding
- Drivers driving at the speed limit or less don't trigger the sign
- Educational tool
- Can be solar powered
- Can collects speed data

Disadvantages:

- Added cost to install and maintain
- Long-term effectiveness may be limited for everyday drivers
- Duration of effectiveness may be limited
- Not self-enforcing

High Visibility Crosswalks – Class II

Description:

High visibility crosswalks established by painting stripes between the crosswalk's outer boundary stripes.

Application:

Residential, local collector and collector roads where pedestrian crossing demand is considerable and visibility of pedestrians may be compromised

Advantages:

- Relatively cheap
- More visible to the driver than traditional crosswalks.

Disadvantages:

- Not an active intersection control measure
- May give false sense of security to pedestrians
- Higher maintenance costs

Lane Narrowing – Class II

Description:

Lane narrowing physically restricts the final width of a lane between ten to twelve feet, while expanding sidewalks and landscaped areas.

Application:

Residential, local collector and collector roads where speeding is a problem

Advantages:

- Good for pedestrians and bicyclists due to shorter crossing distance
- Slows traffic without significant impact on first responders
- Most effective on streets where excessive speed is primarily due to street width

Disadvantages:

- May increase accidents, if opposing traffic is brought closer
- Narrowing by center cross-hatch needs extensive maintenance
- Results in less relaxed driving
- Higher maintenance costs

Bike Lanes – Class II

Description:

Marked lanes located within a road right-of-way, designated for use by cyclists and from which vehicular traffic is generally excluded.

Application:

Street segments with potential bicyclists and/or where lane narrowing is intended

Advantages:

- Good for bicyclists due to separation of vehicular traffic and bicycles
- Helps Traffic Calming goals since it usually leads to some sort of lane narrowing
- Can be implemented with Street Maintenance Program
- Can be consistent with City's Bicycle Master Plan

Disadvantages:

- Necessary width is not always available
- Right-of-way issues at intersections
- Turning movement problems at intersections (mainly left-turns)
- Higher maintenance costs

Bike Buffers – Class II

Description:

A safe no-man's-land usually cross-hatched area marked between bike-lanes and the adjacent travel lane to completely separate vehicular traffic from bicyclists.

Application:

Street segments with potential bicyclists and higher 85% speed and/or where lane narrowing is intended

Advantages:

- Good for bicyclists due to separation of vehicular traffic and bicycles
- Helps Traffic Calming goals since it usually leads to some sort of lane narrowing
- Can be implemented with Street Maintenance Program
- Can be consistent with City's Bicycle Master Plan

Disadvantages:

- Maintenance costs
- Necessary width is not always available
- Right-of-way issues at intersections

Edge Lines – Class II

Description:

Marking the edge of the outside travel lane and clarification of the travel way width

Application:

Rural, Residential, local collector and collector roads where speeding is a problem due to width of the road and/or roads with large number of pedestrians using sidewalks

Advantages:

- Good for pedestrians and bicyclists using sidewalks since it usually creates a safe area between them and the vehicular traffic
- Most effective on streets where excessive speed is primarily due to street width

Disadvantages:

- Not a very effective Traffic Calming measure when implemented without other measures
- Pedestrians use the remaining width of the AC out of the edge line to walk in areas with no sidewalk

Speed Tables – Class II

Description:

Speed table is a short, raised street section that extends across the roadway. Speed tables are gradual changes in the roadway surface and have little or no effect on a vehicle driving the posted speed limit or slower, but can produce discomfort when the speed limit is exceeded

Application:

Rural, Residential, local collector roads where speeding is a problem

Advantages:

- Increases pedestrian safety
- Self-enforcing
- Relatively inexpensive
- Parking allowed on table
- Does not affect drainage

Disadvantages:

- May increase response time for emergency vehicles
- May generate minor noise at table when traversed by large trucks or buses
- Some discomfort for short wheel-based vehicles

Raised Crosswalks – Class II

Description:

Raised crosswalks are flat-topped speed tables, built as a pedestrian crosswalk, with vehicle ramps on the approaches.

Application:

Local collector and local roads where speed control and pedestrian crossing designation are desired

Advantages:

- Increases pedestrian visibility in the crosswalks
- Requires minimal maintenance
- Affects cut-through traffic

Disadvantages:

- May increase traffic noise in vicinity of crosswalk
- May create drainage issues where raised crossing extends from curb to curb
- May require extensive warning signs to be effective

HAWK Beacons – Class III

Description:

A HAWK beacon (High-Intensity Activated crossWalK beacon) is a traffic signal used to stop road traffic and allow pedestrians to cross safely. It is also known as "pedestrian hybrid beacon" or "HAWK signal". The purpose of a HAWK beacon is to allow protected pedestrian crossings, stopping road traffic only as needed.

Application:

Mid-block pedestrian crossing in areas with higher ADT and/or average speed of vehicles and high number of crossing pedestrians

Advantages:

- Active Intersection Control Device
- High Visibility
- Usually very effective (over 97%)

Disadvantages:

- Can provide false sense of security
- Drivers are unfamiliar with HAWK
- Not effective on the whole segment
- High cost to install and maintain

Turn Forcing Islands – Class III

Description:

Turn forcing islands are raised median islands that restrict through movement in one direction at an intersection.

Application:

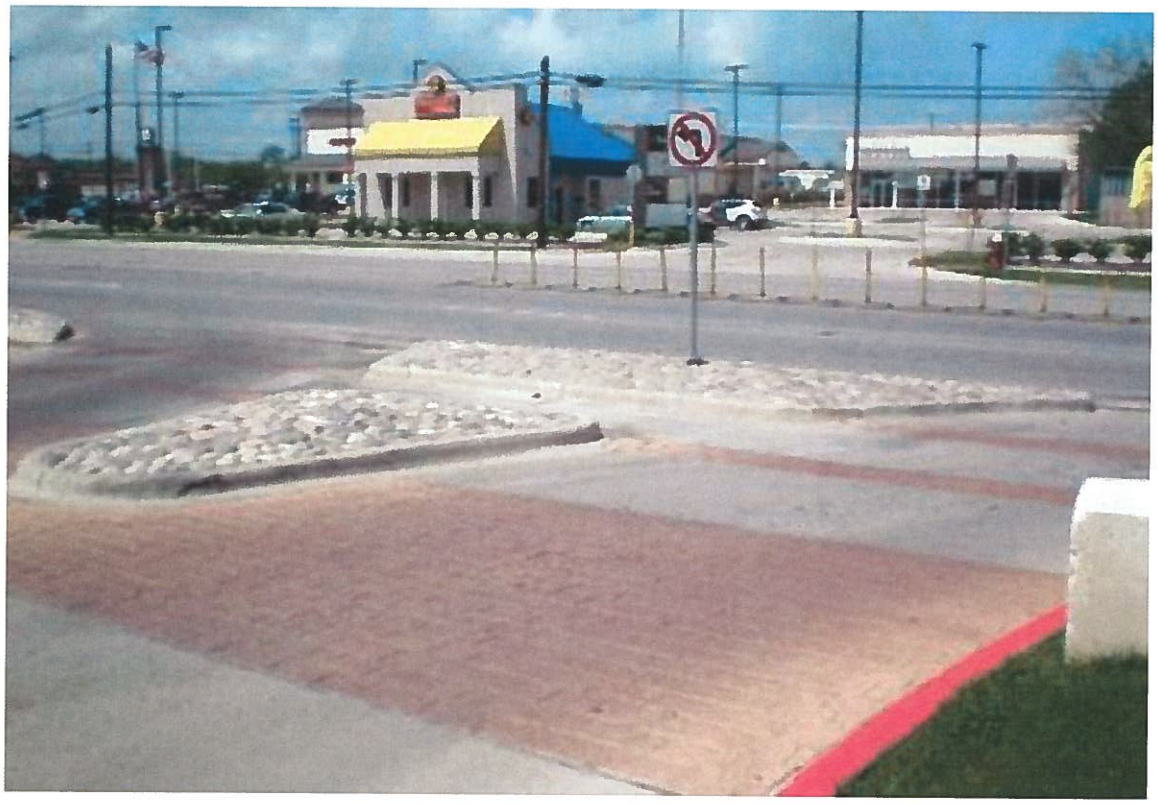
Turn forcing islands are most applicable to local streets where cut-through traffic in one direction is a major problem.

Advantages:

- Reduces cut-through traffic
- More self-enforcing than signs
- Shorter pedestrian crossing distances

Disadvantages:

- Will re-direct traffic to other local streets
- Causes increased travel time for local residents
- Is a permanent measure, even though problem may be limited to certain periods
- Needs significant warning and guiding signs
- High installation cost



Intersection Neckdowns (Bulbouts) – Class III

Description:

Curb extensions at intersections that reduce roadway width curb-to-curb

Application:

Typically used at intersections where two or more adjacent legs have parking lanes and the width can be used to narrow roadway and shorten pedestrian crossings at the intersection

Advantages:

- Increase in pedestrian visibility and crossing distance reduction
- Can "reclaim" pavement for pedestrian and streetscape amenities
- Breaks up drivers' line-of-sight (mainly turning vehicles)
- May provide opportunity for decorative crosswalk treatment

Disadvantages:

- Effect on vehicle speeds is limited by the absence of pronounced vertical or horizontal deflection
- Creates drainage issues where curb and gutter exist
- May create an obstruction for bicyclists
- High installation cost

Mid-Block Chokers – Class III

Description:

Chokers are raised islands in the parking zone that can be detached from the curb line to allow for drainage.

Application:

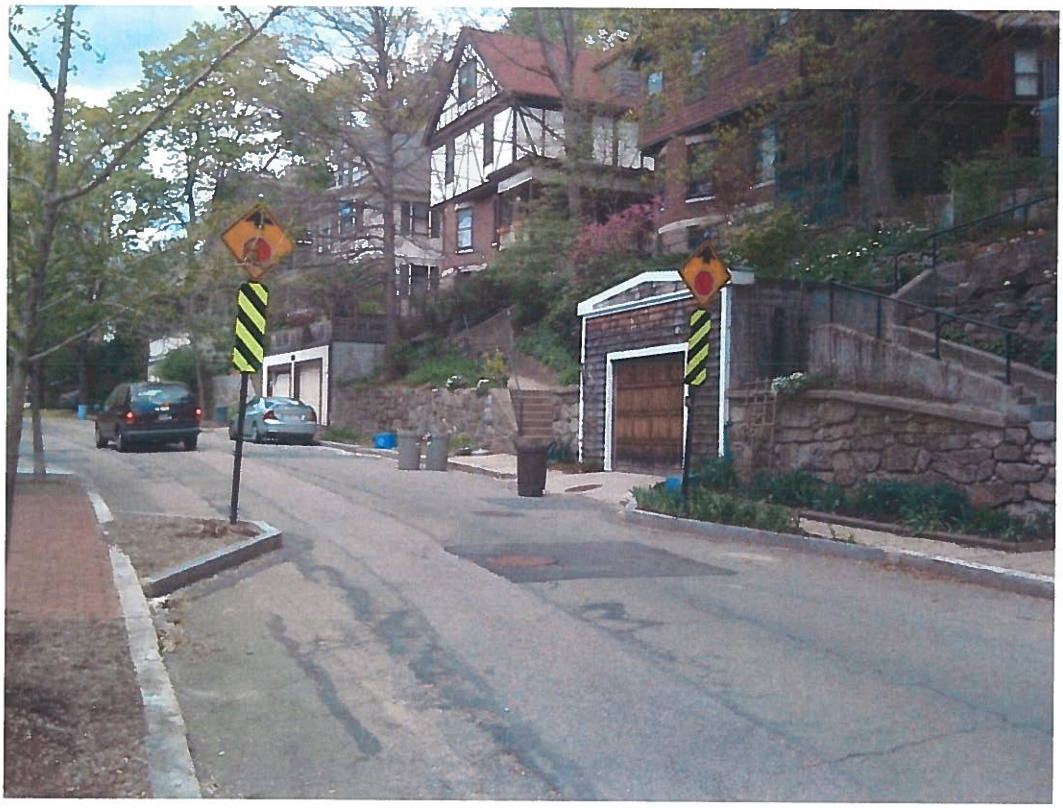
Mid-Block chokers narrow the roadway and are most applicable on wide streets with speeding and cut-through problems.

Advantages:

- Speed reduction
- Breaks up driver's sight-line
- Reduces pedestrian crossing
- Increases pedestrian and motorist visibility

Disadvantages:

- May require partial or total removal of on-street parking
- Increases maintenance for areas where street sweeping equipment cannot reach between the choker and the curb line
- Can lead to liability on certain accidents



Diverters – Class III

Description:

Diverters are raised areas placed diagonally across a four-way intersection that restrict all through movements and force a turn in some directions.

Application:

Diverters are most applicable to local streets where cut-through traffic is a major problem.

Advantages:

- Reduces cut-through traffic
- Channels traffic flow, thus eliminating conflicts at an intersection
- Can be designed to accommodate emergency vehicles
- Can accommodate bicycle traffic through intersection

Disadvantages:

- Will re-direct traffic to other local streets
- Causes increased travel time for local residents
- Is a permanent measure, even though problem may be limited to certain periods
- May require partial or total removal of parking near intersection
- Needs significant warning and guiding signs

Chicanes – Class III

Description:

This Curved street alignment can be designed into new developments or retrofitted in existing right-of-ways. The curvilinear alignment requires additional maneuvering and shortens drivers' sight-lines, resulting in lower average speed

Application:

Can be applied to any street where speed control is desired, provided the street is wide enough to accommodate the curvilinear design

Advantages:

- Changes the look of the street, making it more pleasing
- Has minimal impact on emergency response
- Usually very effective

Disadvantages:

- Involves extensive design and expensive implementation
- May require partial or total removal of on-street parking
- Additional maintenance for service vehicles to maneuver a curvilinear street
- May require modification of drainage features and other utilities

Medians and Center Islands – Class III

Description:

Raised island in the center of the roadway with one-way traffic on each side

Application:

Used on wide streets to narrow each direction of travel and to interrupt sight distances down the center of the roadway

Advantages:

- Narrowed travel lanes provide "friction" and can slow vehicle speeds
- Significant opportunity for landscaping and visual enhancement of the neighborhood
- Can utilize space which otherwise would be "unused" pavement
- Can be used to control traffic access to adjacent properties if desired

Disadvantages:

- Medians are very expensive
- Long medians may impact emergency access and operations due to left-turn limitation
- May interrupt driveway access and result in downstream U-turns
- May require removal of parking

Median Barriers – Class III

Description:

Median barriers are raised islands in the center of the roadway that separate traffic directions. Extended medians reach beyond cross street(s), thus eliminating left turns and through traffic.

Application:

Medians Barriers are used on wide streets to narrow the travel lanes, discourage cut-through traffic on the other direction and interrupt sight distances

Advantages:

- Helps pedestrian crossing
- Narrowed travel lanes can slow vehicle speeds
- Opportunity for landscaping and visual enhancements to the neighborhood
- Reduces cut-through traffic

Disadvantages:

- Relatively significant impact on emergency access and operations
- May interrupt driveway access and result in U-turns
- May require removal of parking
- Relatively expensive

Traffic Circles – Class III

Description:

Traffic circles are raised circular medians in an intersection with counterclockwise traffic flow. Vehicles must change their travel path to maneuver around the circle and are typically controlled by "Yield on Entry" on all approaches.

Application:

Intersections and streets where speed control and improved side-street access is desired

Advantages:

- Provides increased access to street from side street
- Slows traffic as it drives around circle
- Breaks up sight-lines on straight streets
- Opportunity for landscaping in the intersection

Disadvantages:

- Unclear definition of right-of-way for some users
- May impede emergency response when smaller diameters are used and causes problems for left turns maneuvers by large vehicles
- On streets with bicycle facilities, bikes must merge with traffic around circle

Mini-Roundabouts – Class III

Description:

The raised circular median (inner circle) directs traffic flow in a counterclockwise direction through an intersection. Vehicles must change their travel path to maneuver through the roundabout, which will be controlled by "Yield on Entry" on all approaches.

Application:

Mini-Roundabouts are designed for all levels of local collector and below classifications usually in neighborhoods with acceptable traffic conditions and lower volumes.

Advantages:

- Provides increased access to major street from side street
- Slows traffic as drivers maneuver around the circle
- Breaks up sight-lines on straight streets
- Opportunity for landscaping and visual enhancements to the neighborhood
- Possible Congestion Relief

Disadvantages:

- Unclear definition of right-of-way for some users
- Usually expensive
- May impact flow of pedestrians and bicyclists

Roundabouts – Class III

Description:

The raised circular median (inner circle) directs traffic flow in a counterclockwise direction through an intersection. Vehicles must change their travel path to maneuver through the roundabout, which will be controlled by "Yield on Entry" on all approaches.

Application:

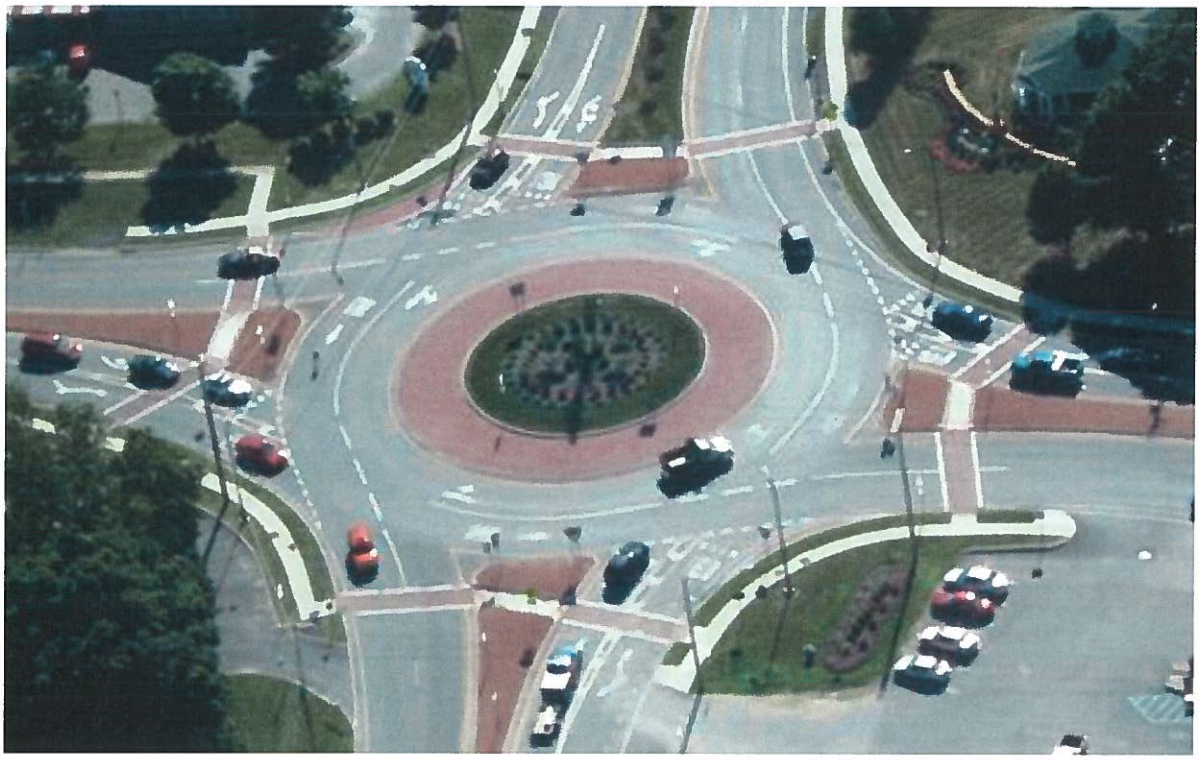
Roundabouts are high capacity, minimum delay safety features, designed for all levels of arterial and collector traffic conditions.

Advantages:

- Provides increased access to major street from side street
- Slows traffic as drivers maneuver around the circle
- Breaks up sight-lines on straight streets
- Opportunity for landscaping and visual enhancements to the neighborhood
- Possible Congestion Relief

Disadvantages:

- Unclear definition of right-of-way for some users
- Usually very expensive
- Impacts flow of pedestrians and bicyclists



Recommendation:

Approve City of Escondido Traffic Management Toolbox

Necessary Council Action: None

Respectfully submitted,

Prepared by:

Abraham Bandegan, TE, PTP
Associate Engineer/Traffic Division

Reviewed by:

FOR: Julie B. Procopio, PE
Assistant Director of Public Works Dept.

Approved by:

Edward N. Domingue, PE
Director of Public Works Dept./City Engineer

ESCONDIDO
City of Choice

CITY OF ESCONDIDO

TRANSPORTATION and
COMMUNITY SAFETY COMMISSION

Commission Report of: April 10th, 2014 **Item No.: F2**

Location: Citywide

Initiated By: Staff

Request: Review and approve City of Escondido Traffic Management Process and 2014 Traffic Management Projects List (TMPL) Prioritization

Background:

Considering the large number of traffic management requests being received and the limited resources available, at its January 9, 2014 meeting, the TCSC adopted a policy to evaluate and prioritize proposed projects using a Traffic Management Projects List (TMPL). This item provides the proposed scoring criteria for the projects and also presents the first list of projects for Transportation Commission evaluation.

As stated in the policy adopted on January 9th, the list of projects will be evaluated by staff with review by the Transportation Commission in April of each year. The TCSC will provide direction to staff as to which projects should be selected for further evaluation and design. Staff will report back in June with detailed design and cost information for TCSC consideration.

Discussion & Purpose:

City of Escondido wishes to promote safe and efficient public streets that contribute to a positive quality of life for neighborhood residents and other users such as students, pedestrians, bicyclists and other users. City is also committed to maintaining and improving its neighborhoods by mitigating impacts that may detract or adversely affect quality of life. Positive street design and good traffic management within our streets are important elements of this goal.

TMPL Scoring Criteria:

City Staff recommends the following criteria be used to evaluate and prioritize projects on the TMPL:

- Road Condition (max. 6 points)
  - Geometric Design (max. 3 points)

    Not Standard= 3, Substandard= 2, Partially Substandard= 1
  - Roadside Improvement (max. 3 points)

    Unimproved= 3, Partially Unimproved= 2, Mostly Improved with Gaps in Improvement= 1

- Road Usage (max. 6 points)
  - Bike and Pedestrian Volume (max. 3 points)

    High= 3, Medium= 2, Low= 1
  - Average Daily Traffic (ADT) (max. 3 points)

    ADT>7400veh/day= 3, 7400≥ADT>5400veh/day= 2, 5400≥ADT>3400veh/day= 1

- Anticipated Effectiveness (max. 6 points)
  - Feasibility of the Solution (max. 3 points)

    High=3, Medium=2, Low=1
  - Effectiveness of the Solution (max. 3 points)

    High=3, Medium=2, Low=1

- Problem Severity×2 (max. 12 points)
  - Frequency of Accidents (max. 6 points)

    Accident Rate≥1.5= 6, 1.5>Accident Rate≥0.5= 4, 0.5>Accident Rate= 2
  - Speeding Problem (max. 6 points)

    (85% - Design Speed) ≥10mph= 3, 10mph>(85% - Design Speed) ≥5mph=2, (85% - Design Speed)< 5mph= 1

Each year, every project on TMPL will be evaluated and may get a maximum of 30 points based on their different characteristics and the projects nature and location. The projects with the higher total accumulated points will have a higher priority on TMPL.

2014 TMPL:

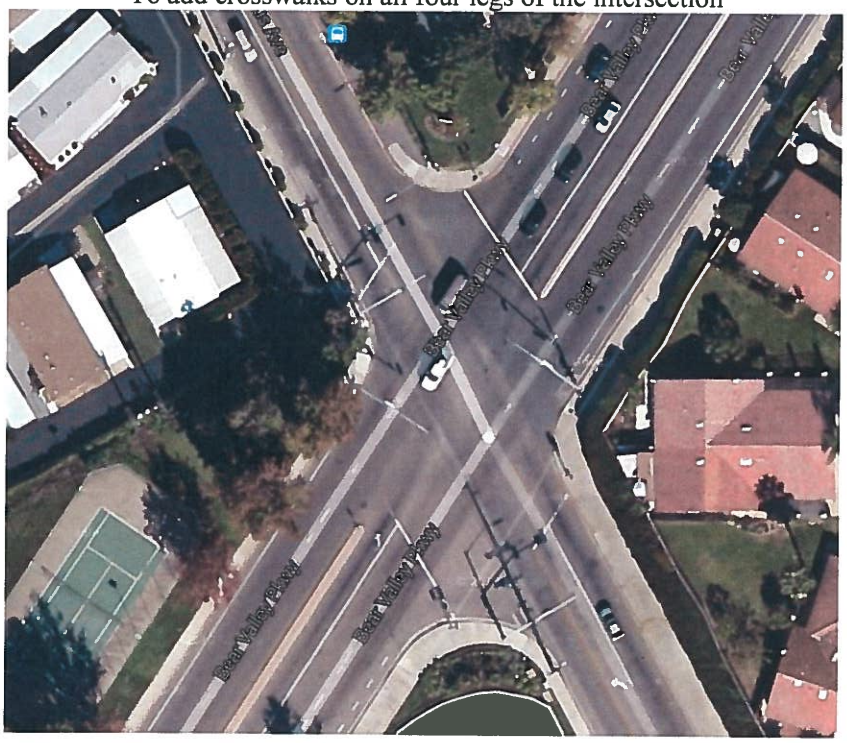
2014 Traffic Management Projects List (TMPL) includes 8 different projects citywide. The list of projects with a brief description of the traffic issue together with the potential solution is mentioned below. Final top-ranked selected projects will be evaluated and a more detailed engineering design will be provided for Transportation Commissions review and approval at its July meeting.

1. School Zone Crosswalk Improvement (est. $6000)

Based on a preliminary assessment of seven elementary and middle school zones during walk audits undertaken by Escondido Union School District, valuable data related to pedestrian and bicyclists circulation in the study areas was provided by EUSD for staff review. After evaluating each location, City Staff selected four intersections for implementing transverse crosswalks on all or some legs of the intersections for safer pedestrian crossing. Below are the selected intersections.

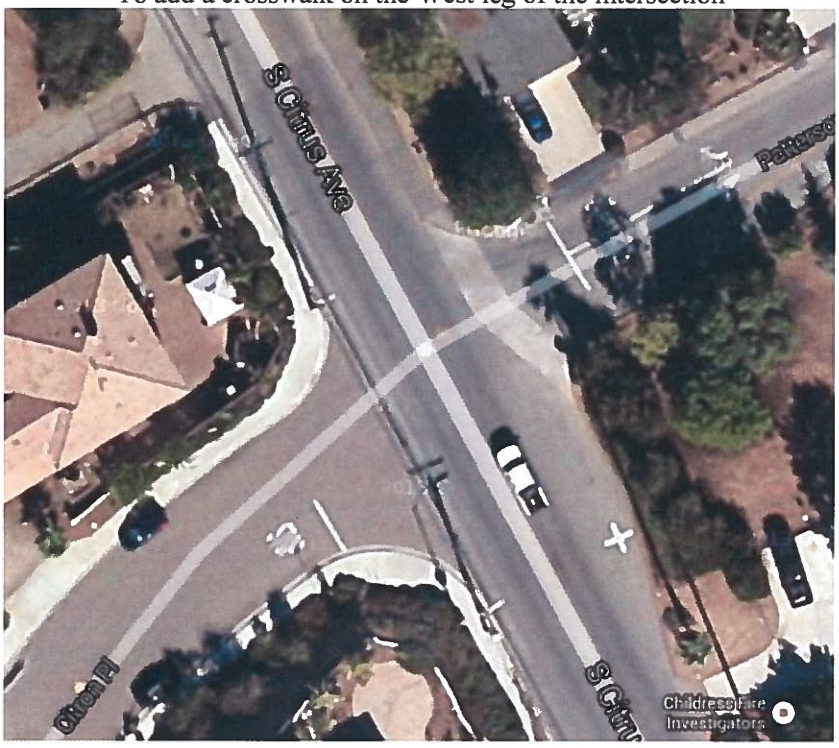
✓ Washington Ave and Rose St
To add crosswalks on all four legs of the intersection

✓ Citrus Ave and Bear Valley Pkwy
To add crosswalks on all four legs of the intersection



✓ Lincoln Ave and Fig St
To add crosswalks on all four legs of the intersection

✓ Citrus Ave and Patterson Rd
To add a crosswalk on the West leg of the intersection



2. Traffic Management on Chestnut St (est. $30000)

   Chestnut Street is classified as a collector street in the city General Plan but it is not built to a Collector specification and the road remains unimproved in several areas. As shown in the next figures, there are no sidewalks in most of the segment and the cross section is not meeting city standards. The speed limit on Chestnut St is 40 mph which makes it uncomfortable for pedestrians and bicyclists travelling on this street.

   Considering the large number of driveways, frequent pedestrian and bicyclist activities and also speeding complaints received from the residents, implementing traffic management measures selected from the "Traffic Management Toolbox" would likely reduce speeds and improve safety.

   As mentioned above, if selected, the project will be designed per current engineering standards and will be presented to the Transportation Commission at its July meeting prior to implementation for review and approval.

S/B Chestnut St at 5th Ave

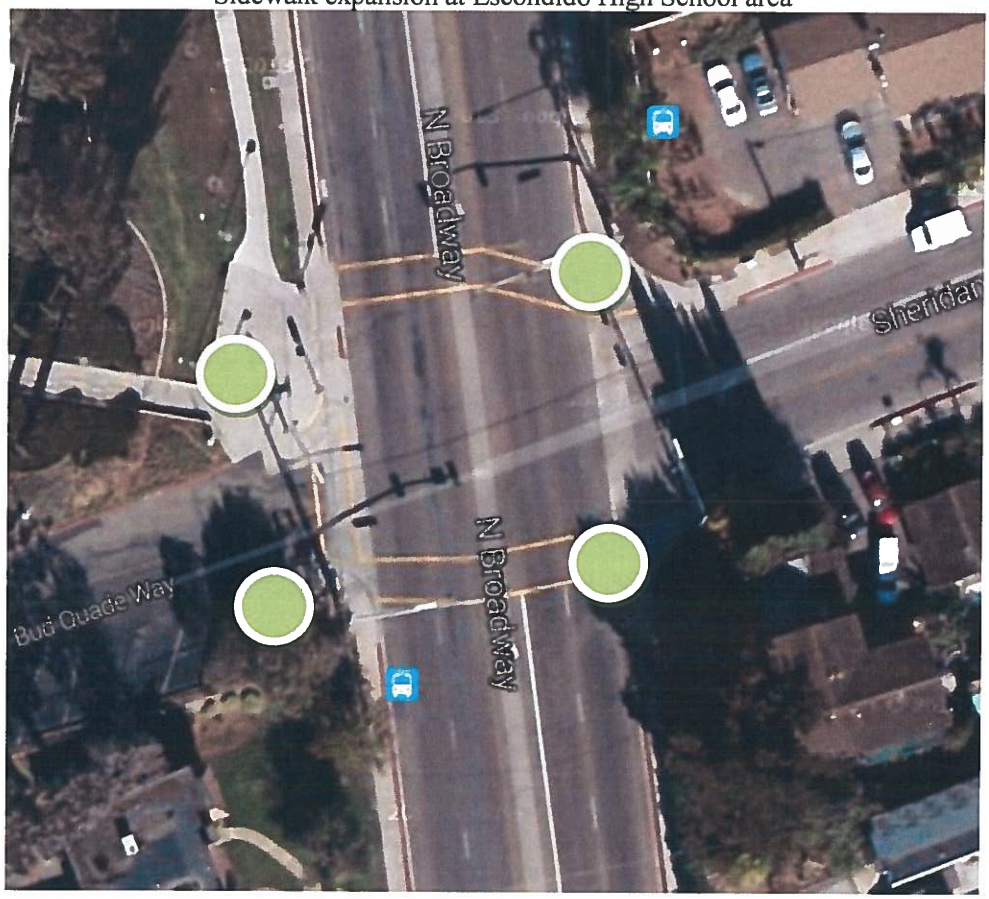
S/B Chestnut St at 9th Ave

3. Escondido High School Sidewalk Expansion (est. $14000)

Escondido High School, with student population of 2,520 is located at 1535 N. Broadway, across from Sheridan Avenue. Students usually walk; bike or drive to school, and a limited number are dropped-off and picked-up. Most of the pedestrian, bicycle and vehicular traffic arrive from north and south, on the east side of N. Broadway, with a concentration of pedestrians at the intersection of Sheridan Avenue. During school traffic peak periods of morning and afternoon, the crosswalk at the intersection of N. Broadway and Sheridan Avenue is impacted by heavy student pedestrian traffic.

Traffic Engineering staff have evaluated various alternatives to assist with pedestrian and bicycle traffic concerns during the morning and afternoon peak periods. The effective measures are first to modify the signal timing plan to allocate more time for pedestrian and bicyclists to cross N Broadway and second to expand the storage area of the sidewalks at the corners of the intersection. By implementing curb expansions, pedestrians and bicyclists would have more storage area to gather and wait for their green to cross the intersection. This solution would provide a high capacity waiting area for pedestrians together with additional time allowed for the pedestrians to cross N. Broadway.

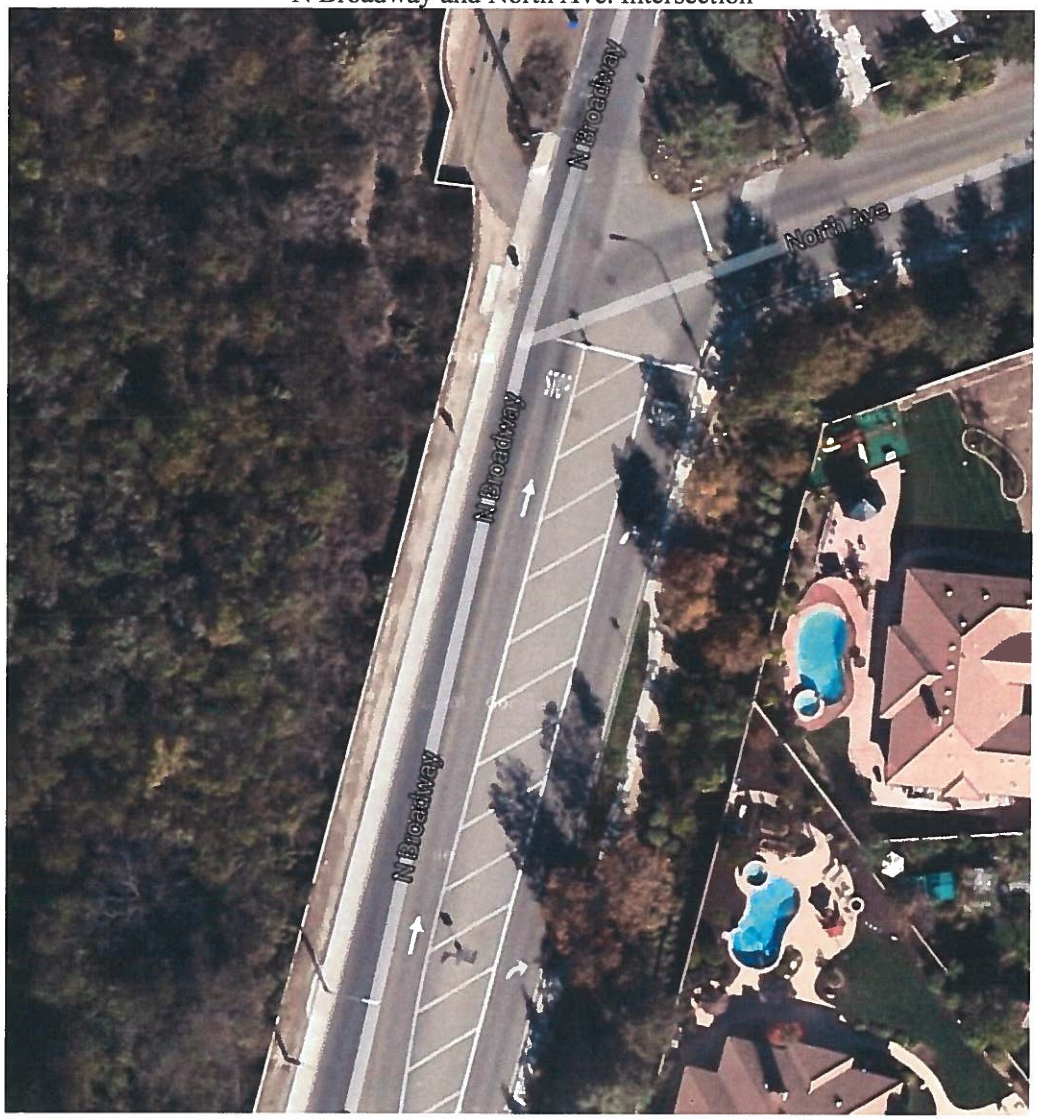
Sidewalk expansion at Escondido High School area



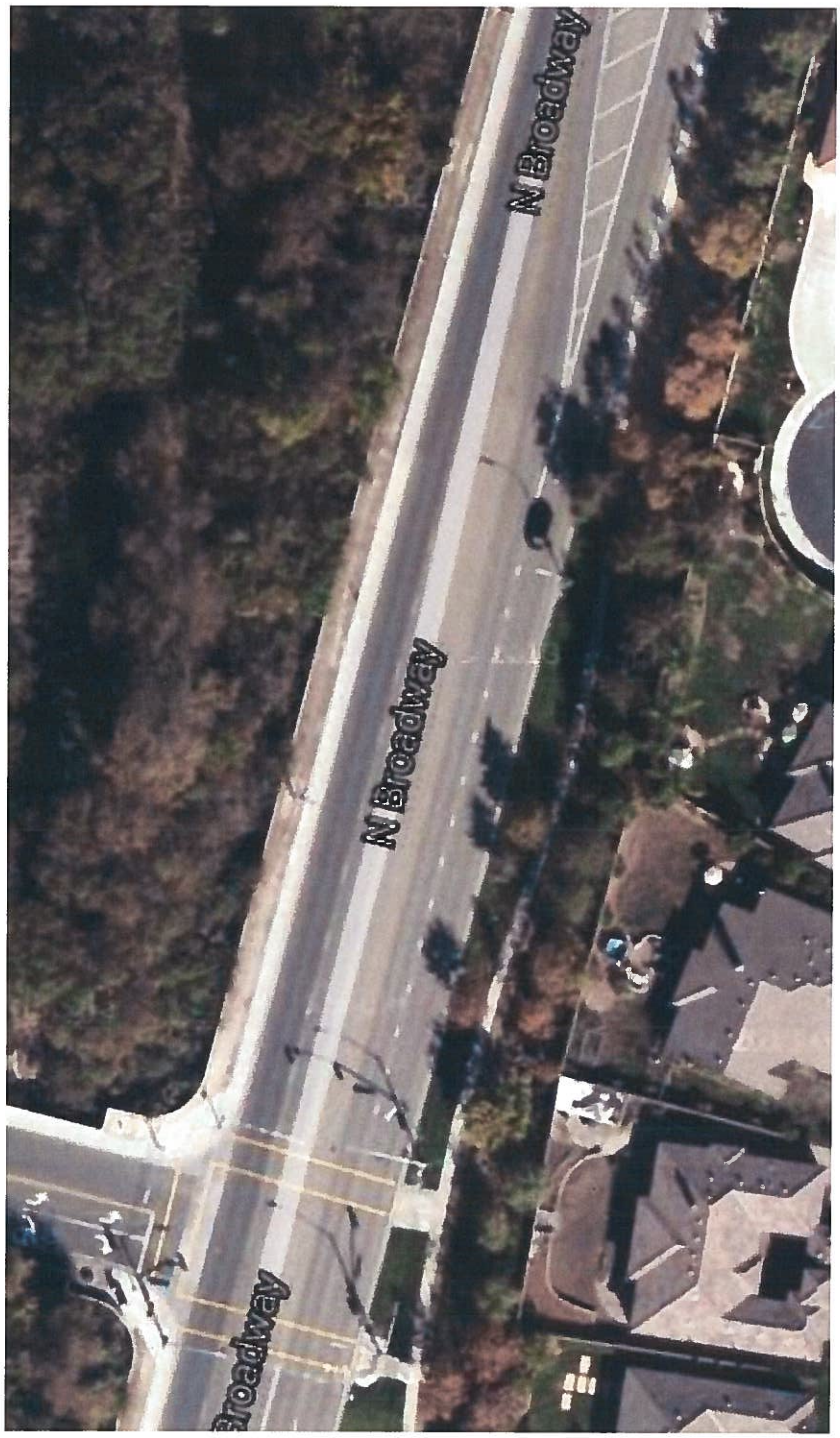
4. N Broadway between Reidy Creek and North Ave (est. $8000)

City Staff has received complaints from Escondido Police Department and also parents regarding the unsatisfactory level of service on the segment of N Broadway between Reidy Creek and North Ave at school pick-up and drop-off periods. Since the parking area provided by the school is inadequate, many parents use the #2 lane on S/B N Broadway to wait. The queuing causes a problem for N Broadway and North Ave Intersection because of the roadway alignment at the intersection and the existing striping. Also parents sometimes park their vehicles on North Ave and walk to the school to pick-up their children and then walk back to their cars. The crosswalk on N Broadway, together with the limited sight distance and also rare illegal U-turn maneuvers at the intersection, causes extra delay and unsatisfactory level of service. City Staff is considering restriping the segment to provide a parking lane for the parents, a right-turn-only lane on S/B N Broadway at Reidy Creek and also a crosswalk at the intersection of North Ave. Figures below show the existing striping on the segment of N Broadway in the Reidy Creek Elementary School Area.

N Broadway and North Ave. Intersection



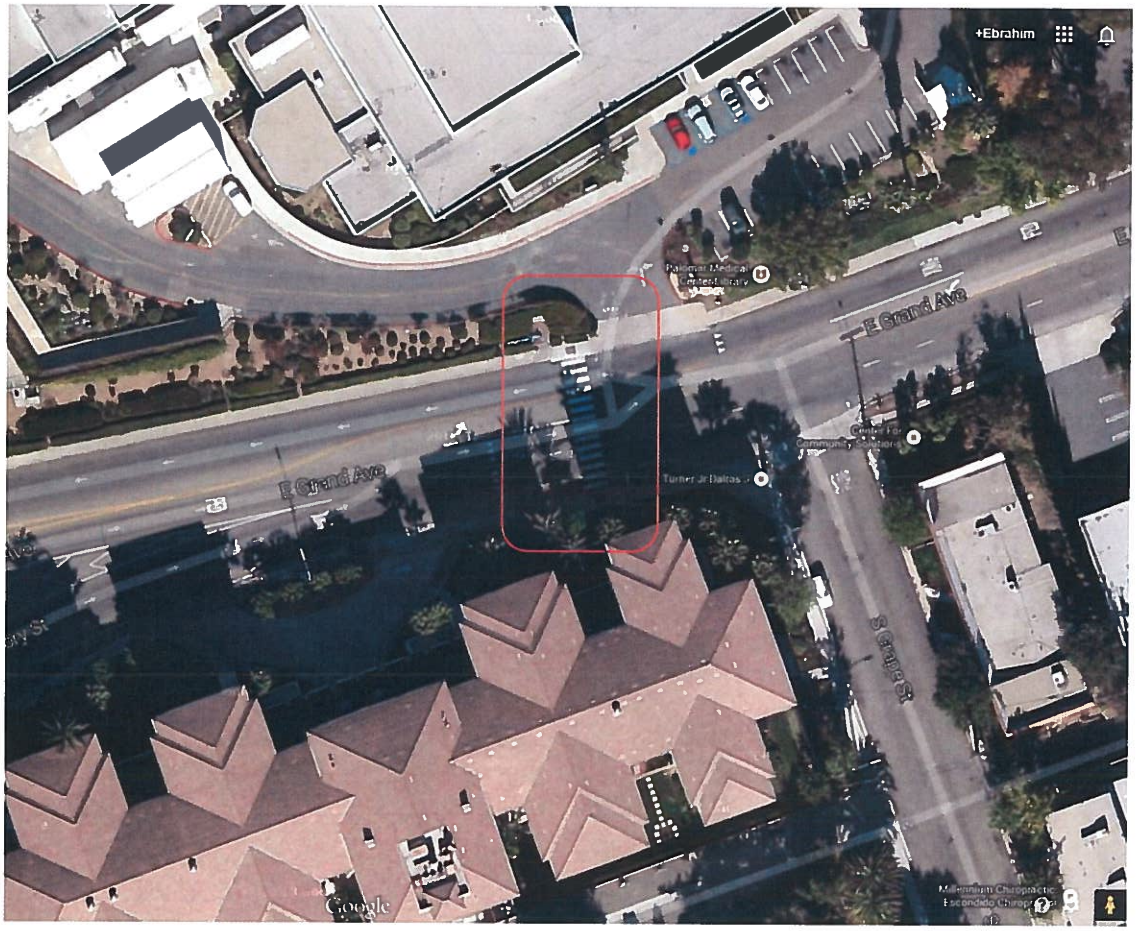
N Broadway north of Reidy Creek Elementary School access road



5. Grand Avenue HAWK mid-block Crossing (est. $150000)

   This pedestrian crossing on Grand Ave just west of S Grape St intersection in front of Palomar Hospital has CA-MUTCD2012 compliant signage and striping. Considering the geometric design of the segment at that location on a hill, City Staff implemented a high visibility crosswalk to improve visibility two years ago. Other measures including the Rapid Flashing Beacons have been considered by the TCSC, but were not approved due to concerns about providing the pedestrians a false sense of security. TCSC has expressed a desire to provide active controls wherever possible. The best solution is to install a High-intensity Activated CrossWalk (HAWK) beacon at that location. The high cost of HAWK beacon will likely require grant funding. Figures below show the location of the crossing.

High Visibility Pedestrian Crossing in front of Palomar hospital



Limited sight distance on N/B Grand Ave

Limited sight distance on N/B Grand Ave

6. Creek Bike Trail Improvements (est. $8000)

Escondido Creek Trail meets with multiple city streets. Bicyclists and pedestrians are required to cross the intersecting street, if they want to continue on the trail. While providing controlled HAWK crossing at each location would be costly, there are some improvements that could be made to improve sight distance and visibility of the trail. City Staff have visited the trail with Bike-Walk Escondido Committee members to further evaluate the situation on those intersections. Recommended improvements are as follows.

HARMONY GROVE ROAD

Install D11-1 and M6-1 signs in each direction at locations circled in red.

D11-1

M6-1

TULIP STREET

Install W11-1 and W11-15P signs in each direction at locations circled in red.

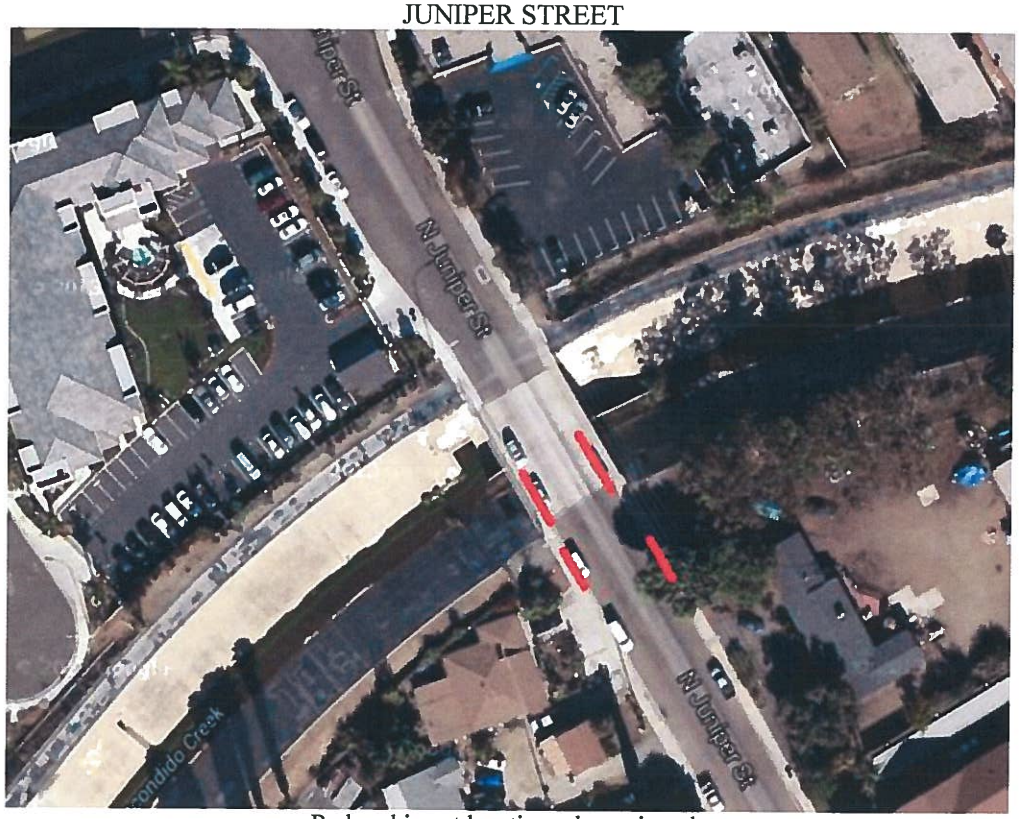
W11-1

W11-15P (optional)

N BROADWAY

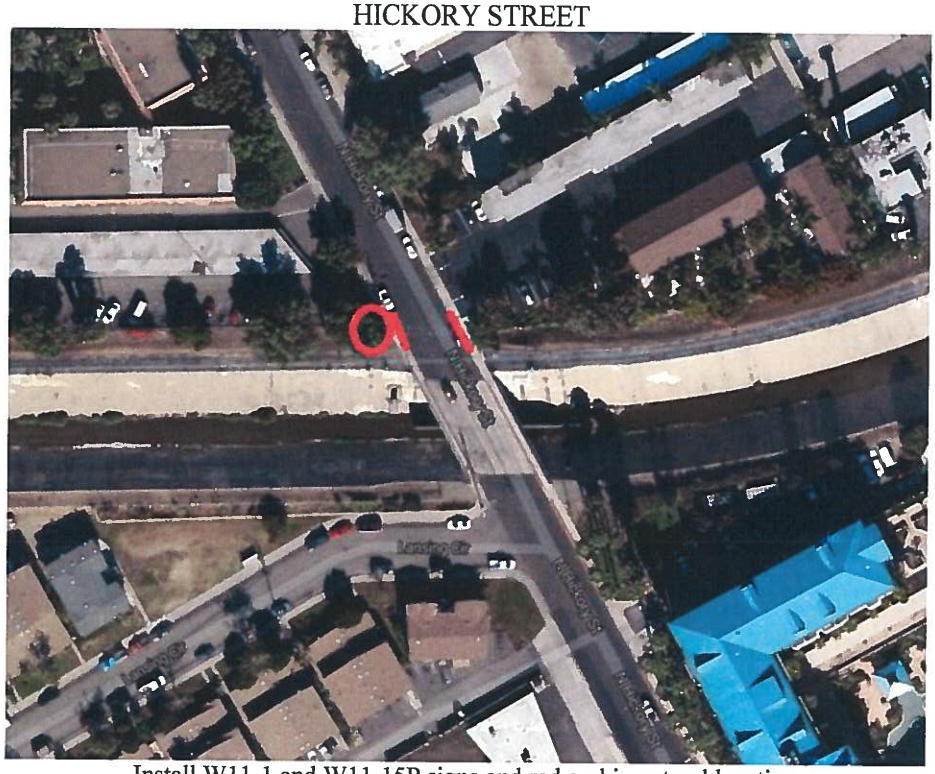
Install W11-1 and W11-15P signs in each direction at locations circled in red.

JUNIPER STREET



Red curbing at locations shown in red.

HICKORY STREET

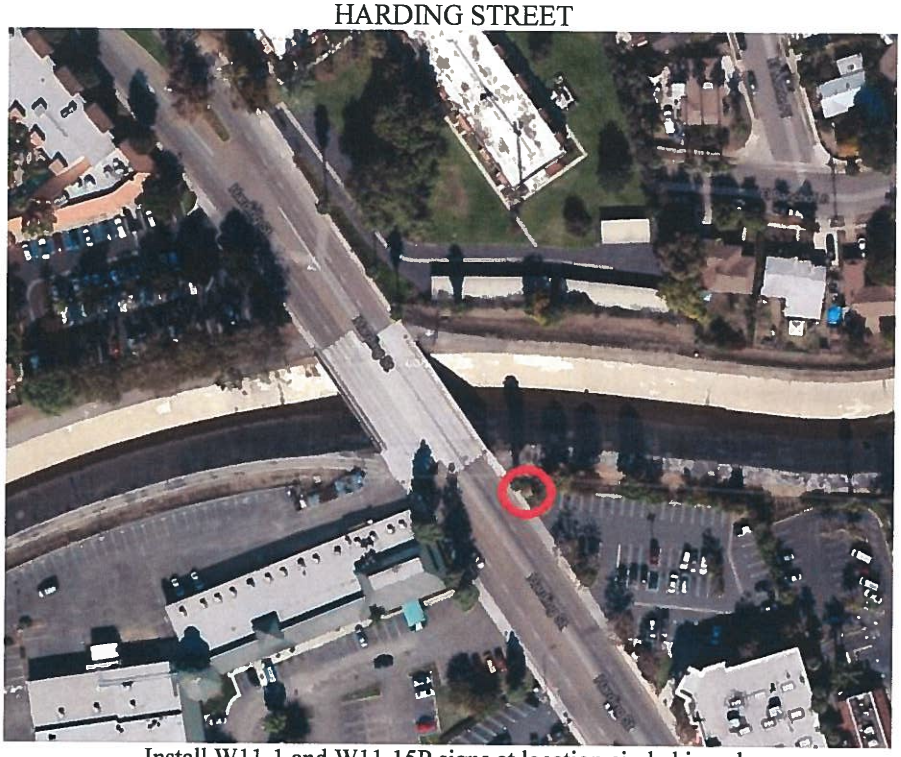


Install W11-1 and W11-15P signs and red curbing at red location

FIG STREET

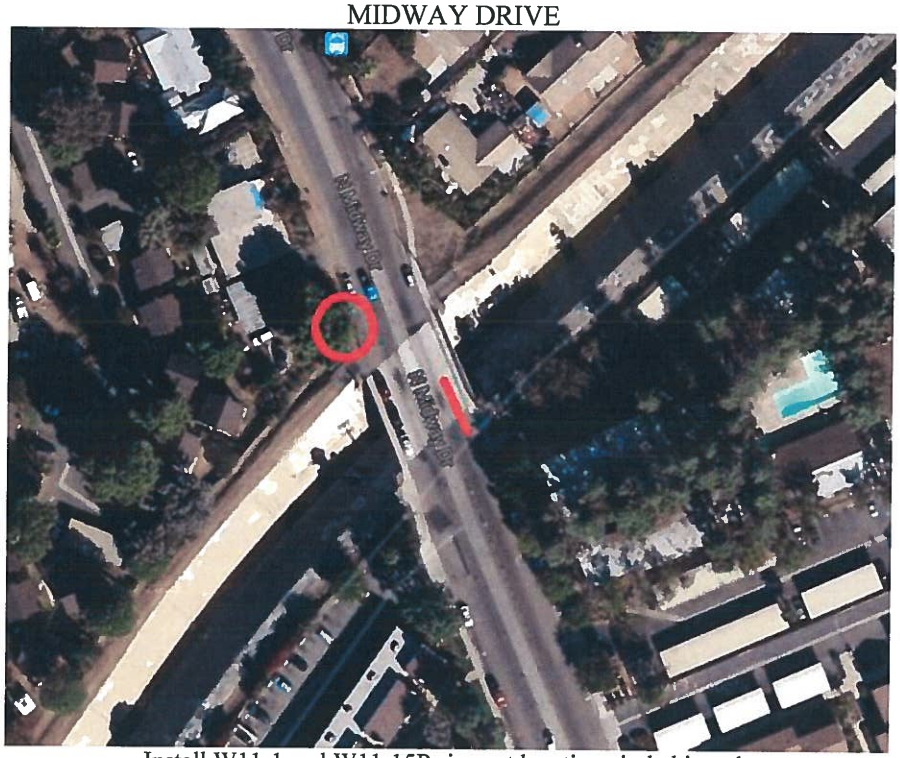
Install W11-1 and W11-15P signs at location circled in red.

HARDING STREET



Install W11-1 and W11-15P signs at location circled in red.

MIDWAY DRIVE



Install W11-1 and W11-15P signs at location circled in red.
Red curbing at location shown with red line.

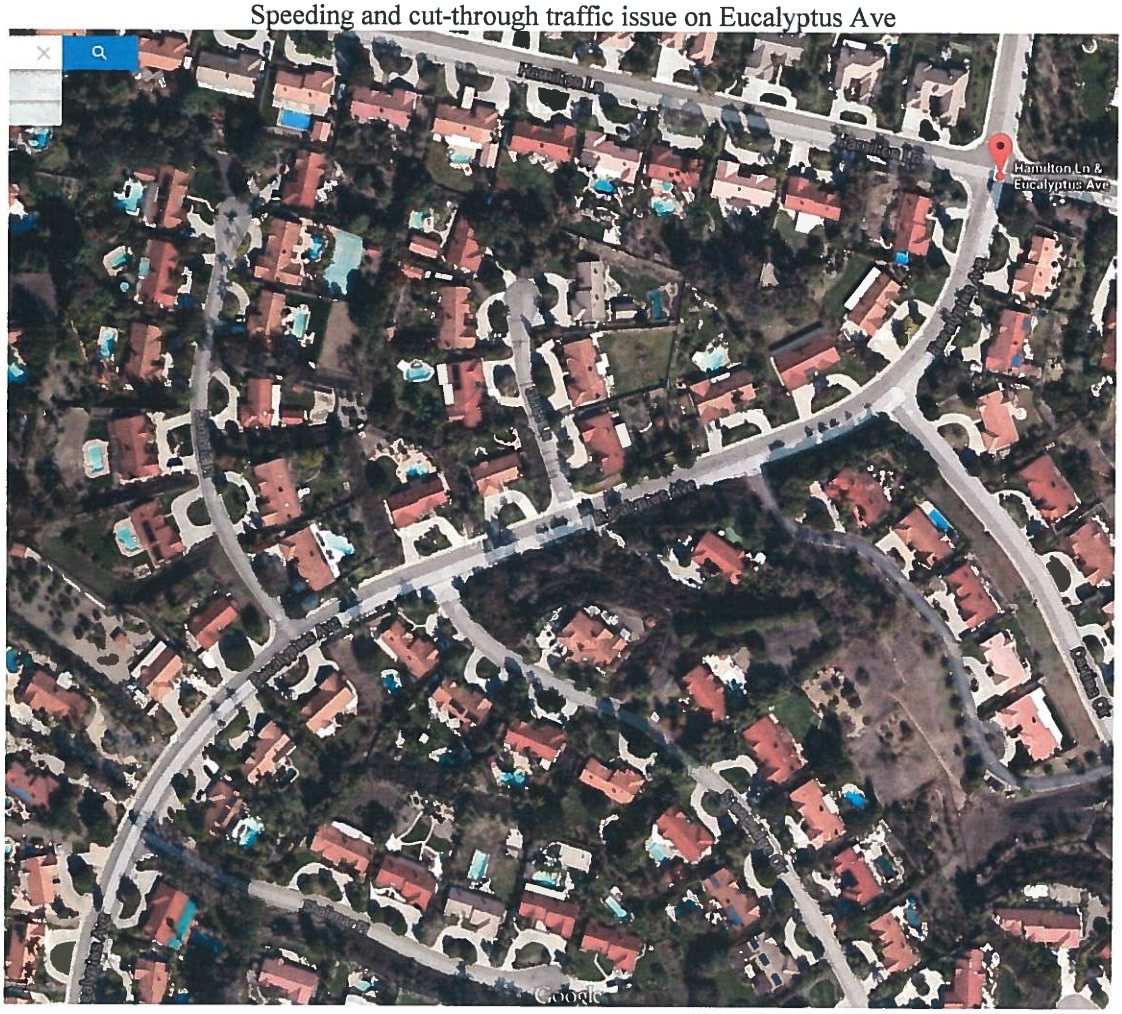
7. Creek Bike Trail Roadway HAWK Crossings (est. $300000)

As mentioned in the description of Project 6, the Escondido Creek Trail meets city streets at several locations without a controlled crossing for pedestrians and bicyclists. Based on conducted site visits, two High-intensity Activated CrossWalks (HAWK) beacons are desired by Bike-Walk Escondido Committee to be implemented at high priority intersections to improve safe crossing over streets intersecting Escondido Creek Trail.

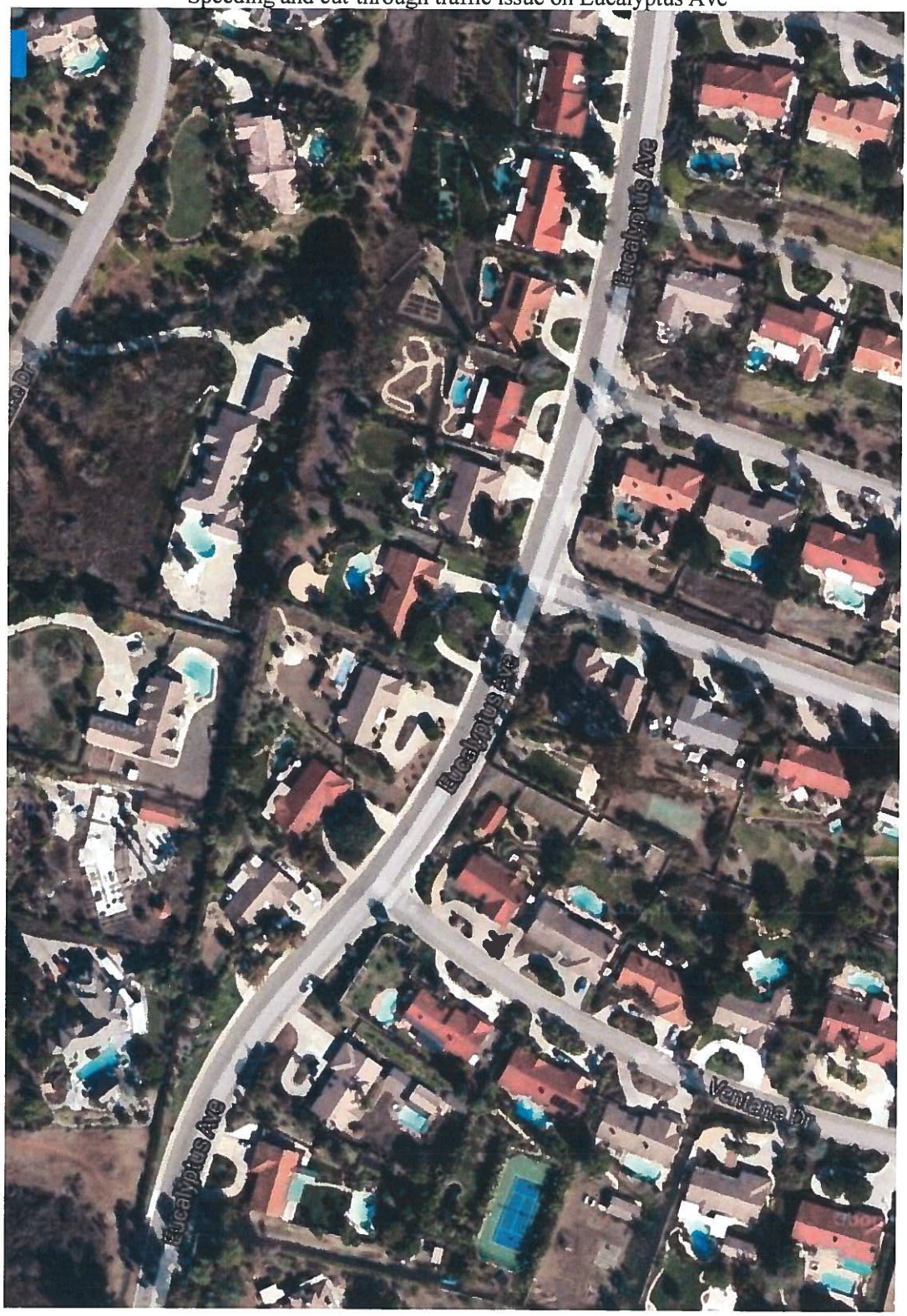
8. Eucalyptus Ave Speeding (est. $30000)

Eucalyptus Ave is classified as Local Collector in City of Escondido General Plan and City Staff have received reports of speeding and relatively high volume of cut-through traffic on this street. Considering the residential nature of the neighborhood Escondido Police Department has helped by enforcing the speed limit. City Staff has also implemented two speed radar feedback signs at this segment of Eucalyptus Ave on Feb 2014. Because the complaints persists City Staff has evaluated implementing extra measures of traffic calming in the area to resolve the speeding and cut-through traffic issue. Next figures show the segment of Eucalyptus Ave.

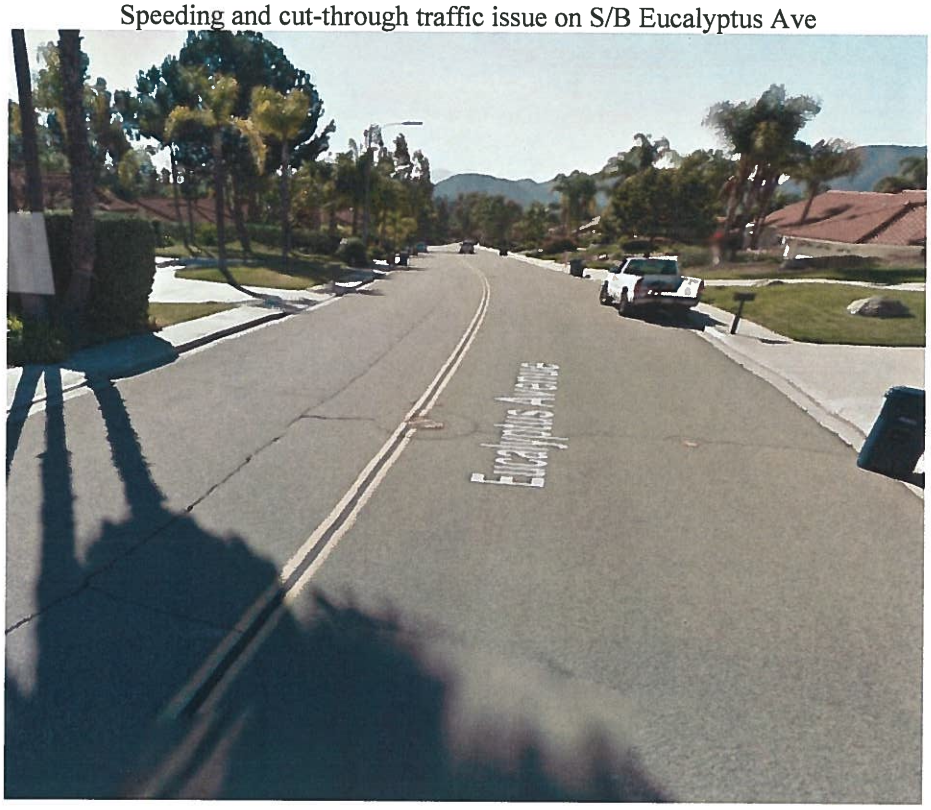
Speeding and cut-through traffic issue on Eucalyptus Ave



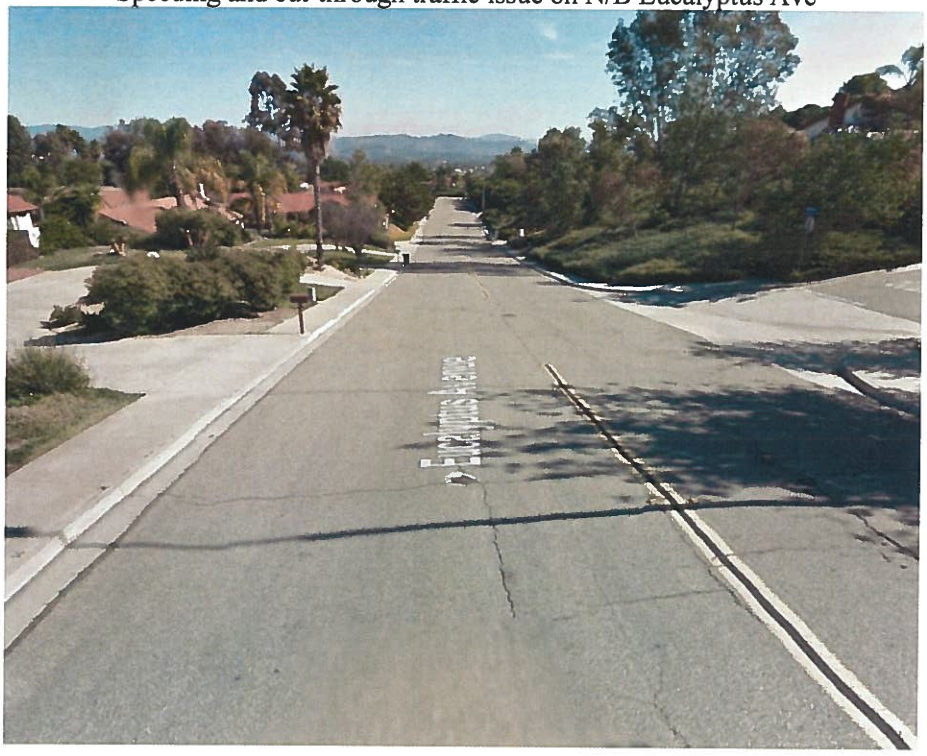
Speeding and cut-through traffic issue on Eucalyptus Ave



Speeding and cut-through traffic issue on S/B Eucalyptus Ave



Speeding and cut-through traffic issue on N/B Eucalyptus Ave



TMPL Prioritization:

Using the points-based scoring criteria in this report, all eight projects were evaluated and scored and the top three priority projects are recommended to be selected for further assessment and detailed design considering an estimated $50,000 Transportation and Community Safety budget.

Traffic Management Projects List (TMPL) prioritization table on the next page shows the final scores of each of the eight projects. As mentioned the top three selected projects will be designed and the final project will be brought to the next TCSC meeting in July to receive final comments and approval prior to implementation. The top-ranked three projects are:

- School Zone Crosswalk Improvement (est. $6000)
- Traffic Management on Chestnut St (est. $30000)
- Escondido High School Sidewalk Expansion (est. $14000)

Traffic Management Projects List (TMPL) Prioritization Table

Project Name	Measures of Prioritization								Score (max. 30)
	Road Condition (max. 6)		Road Usage (max. 6)		Anticipated Effectiveness (max. 6)		Problem Severity x 2 (max. 12)		
	Geometric Design	Roadside Improvement	Bike and Pedestrian Volume	Average Daily Traffic (ADT)	Feasibility of the Solution	Effectiveness of the Solution	Frequency of Accidents	Speeding Problem	
School Zone Crosswalk Improvements	1	2	3	2	3	3	4	4	22
Chestnut Traffic Management	2	3	1	2	2	2	6	4	22
Escondido H.S. Sidewalk Expansion	0	2	3	3	3	2	6	2	21
N Broadway between Reidy Creek and North Ave	2	1	2	2	3	2	2	6	20
Grand Avenue HAWK mid-block Crossing	2	0	2	3	1	3	6	2	19
Creek Bike Trail Improvements	1	1	3	3	2	2	2	4	18
Creek Bike Trail Roadway HAWK Crossings	1	1	3	3	1	3	2	4	18
Eucalyptus/Hamilton Speed Complaints	2	2	1	1	3	2	2	4	17

Points Details:

Road Condition:

Geometric Design of Road: Not Standard = 3, Substandard = 2, Partially Substandard = 1

Roadside Improvement: Unimproved = 3, Partially Unimproved = 2, Mostly Improved with Gaps in Improvement = 1

Road Usage:

Bike and Pedestrian Volume: High = 3, Medium = 2, Low = 1

ADT: >7400veh/day = 3, >5400veh/day and <7400 veh/day = 2, >3400veh/day and <5400veh/day = 1

Anticipated Effectiveness:

Feasibility of the Solution: High=3, Medium=2, Low=1

Effectiveness of the Solution: High=3, Medium=2, Low=1

Problem Severity:

Frequency of Accidents: Accident Rate > 1.5 = 3, 1.5 > Accident Rate > 0.5 = 2, 0.5 > Accident Rate = 1

Speeding Problem: (85% - Design Speed) > 10mph = 3, 5mph < (85% - Design Speed) < 10mph=2, 0 < (85% - Design Speed) < 5mph=1

Recommendation:

Necessary Council Action: Approval of the three top-ranked projects for further evaluation and detailed design

Respectfully submitted,

Prepared by:

Abraham Bandegan, TE, PTP
Associate Engineer/Traffic Division

Reviewed by:

For: Julie B. Procopio, PE
Assistant Director of Public Works Dept.

Approved by:

Edward N. Domingue, PE
Director of Public Works Dept./City Engineer