



# AGENDA REPORT

SAN CLEMENTE CITY COUNCIL MEETING

Meeting Date: May 21, 2019

Agenda Item 9E

Approvals: \_\_\_\_\_

City Manager [Signature]

Dept. Head [Signature]

Attorney \_\_\_\_\_

Finance [Signature]

**Department:** Public Works / Engineering Division  
**Prepared By:** Nestor Mangohig, Senior Civil Engineer - Traffic

**Subject:** *CAMINO VERA CRUZ/COSTA INTERSECTION CONTROL AND LANE RECONFIGURATION.*

**Fiscal Impact:** None. There is sufficient available budget to complete the design and prepare the project for public bidding.

**Summary:** The Planning Commission and staff recommend that the City Council: 1) authorize staff to move forward with the design of a traffic signal at the intersection of Camino Vera Cruz/Costa; and 2) approve conceptual striping plans for Camino Vera Cruz from Riachuelo to Arbolado.

**Discussion:** The intersection of Camino Vera Cruz/Costa serves as the access point to Forster Ranch Community Park and is located in close proximity to Truman Benedict Elementary School and Bernice Ayer Middle School (see Attachment 1). The intersection is one of the locations within the City that is provided crossing guard services during the school year based on student crossing activity that occurs at morning drop-off and afternoon pick-up times.

A capital improvement project was previously established at this location to study, design, and construct intersection control in order to improve safety and operations particularly during peak use times, as generated by weekday school activity as well as weekend sports and other park activities.

### Intersection Control

The California Manual on Uniform Traffic Control Devices (CA MUTCD) recommends that alternative intersection controls are considered and evaluated in addition to traffic signals to determine whether other types of control, such as a roundabout, may be a viable alternative. As part of the conceptual assessment, roundabout and traffic signal control was evaluated along with existing minor-stop control operations.

Three neighborhood meetings were conducted to inform the public of project progress as well as to solicit input as options were being evaluated. Neighborhood meetings occurred in April 2017, October 2018, and February 2019 as the project moved from service level evaluation to concept feasibility.

At the February 2019 meeting, attendees were informed that the staff recommendation going forward would be to design and construct a traffic signal at the Camino Vera Cruz/Costa intersection. Fifteen members of the public signed the

meeting sign-in sheet, and it was noted that several attendees did not sign the sheet. Feedback forms were provided to attendees and based on the eight forms completed and returned at the meeting, all supported the installation of a traffic signal. In the days following the neighborhood meeting, an additional nineteen completed feedback forms were returned. Similarly, all supported the installation of a traffic signal.

As of the October 2018 meeting, a roundabout concept was still under consideration. Despite staff support for a roundabout at that meeting, pending additional design/feasibility evaluation, public feedback indicated primary support for a traffic signal. Twenty feedback forms/emails were received in support of a traffic signal. Two other forms indicated support of a pedestrian-only signal, and three forms indicated support for a roundabout (pending evaluation). One resident indicated opposition to both a roundabout and traffic signal but acknowledged that a traffic signal may be 'the solution' at the intersection.

The roundabout alternative was ultimately removed based on constraints relative to existing street grades. The grade through the Camino Vera Cruz/Costa intersection exceeds 9% and the east approach/departure leg nears 11%. Although grades could be flattened to accommodate recommended design guidance, the cost would be prohibitive. A concept level cost of adjusting a roundabout to a compromise 8% grade was estimated at close to \$1.2-million dollars, not including potential utility issue costs. National Federal Highway Administration (FHWA) roundabout design guidance recommends a grade maximum of 4% although cites that roundabouts have been constructed on steeper grades. Flattening to 4% would further increase costs beyond \$1.2 million since retaining structures would likely be required for transition on both sides of the roundabout to meet existing grade.

All-way stop (AWS) control and pedestrian crossing-only alternatives (e.g. pedestrian hybrid beacon (HAWK) and standard pedestrian signal) were considered and not recommended by staff due to issues including: not meeting AWS warrants and not providing positive control for conflicting vehicles at the crosswalk. Typically, pedestrian only signals are recommended for installation at mid-block locations since the signal would only need to control through vehicle movements, and not the various turning movements associated with side street traffic activity.

#### Camino Vera Cruz Lane Reconfiguration

Camino Vera Cruz is a four-lane divided roadway from Camino De Los Mares to Avenida Pico. The daily traffic level on Camino Vera Cruz in the project vicinity, prior to the extensions of Avenida La Pata (August 2016) and Camino Del Rio (January 2017), was approximately 13,600 vehicles per day (vpd). Traffic counts collected post-extension shows that the daily traffic levels have decreased and now range from approximately 8,600 to 9,300 vpd. The Citywide traffic model forecasts long-term volumes to be in the 9,000 to 10,000 vpd range.

The Orange County Transportation Authority (OCTA) Master Plan of Arterial Highway (MPAH) roadway capacity values indicate that a 4-lane divided arterial (similar to Camino Vera Cruz) can accommodate 30,000 vehicles per day while still maintaining

favorable performance conditions. A 2-lane divided arterial can accommodate 15,000 vehicles per day while still maintaining favorable performance conditions. A reconfigured lane section can support existing and forecast traffic volumes in the project vicinity.

Citizen concerns previously received related to school drop-off, pick-up, park activity, and roadway design include the following:

- Parked and/or idling vehicles within the bike lane on the Camino Vera Cruz school frontage force bicycles to veer into the adjacent vehicle lane along with motor vehicles travelling on the downhill grade.
- Vehicle disregard in the vicinity of the school crosswalk. Too many close calls.
- Speeding vehicles, particularly travelling on the downhill grade.
- Parking demand related to sports and other park activities will occasionally send vehicles into the adjacent neighborhoods to search for parking.
- Sight distance limited for vehicles entering Camino Vera Cruz from Riachuelo, Bello Panorama, and Arbolado due to roadway curvature and geometrics.

Based on existing and forecast traffic volumes as well as issues in the project vicinity previously identified (listed above), staff recommends implementing a lane reconfiguration on Camino Vera Cruz, from approximately Riachuelo to Arbolado (Limits shown in Attachment 1, conceptual striping plans shown in Attachment 2). A lane reconfiguration would offer the following:

- Median separation and left turn lanes on Camino Vera Cruz would be maintained.
- On-street parking in the vicinity of the lane reconfiguration limits would provide additional parking and/or pick-up/drop-off space for school activity and would accommodate overflow parking related to sports and other park activities.
- Pedestrians crossing Camino Vera Cruz would only cross two through vehicle lanes instead of four. It should be noted that crossing guard services will remain at this location.
- Platoon effect would provide for a level of speed management on a reduced lane section since a single leading vehicle would attenuate speeds of the vehicles behind it.
- Wider bike lane.
- Bike lane buffer would provide further separation between the bicycle and vehicle travel lanes.
- Increase side street visibility at Riachuelo, Bello Panorama, and Arbolado since vehicles would be able to pull further forward to see oncoming traffic on Camino Vera Cruz.

The proposed lane reconfiguration is able to accommodate peak hour volumes as well as daily volumes. A similar situation occurs adjacent to King Middle School in the City of Oceanside. The school side street (Mesa Drive) also serves as the access point to a City park as well as an informal secondary pick-up/drop-off area. The daily traffic level on Mesa Drive is higher than Camino Vera Cruz (11,200 vpd vs. 8,600-9,300 vpd). More notable, however, is that the peak hour traffic on Mesa Drive for the one-

lane westbound direction only is 771 vehicles per hour (vph) occurring during the morning commute/school peak. The combined westbound and eastbound peak hour volume on Camino Vera Cruz totals 753 vph, also in the morning commute/school peak.

The City of Oceanside initially implemented their lane reconfiguration further from the middle school, adjacent to an elementary school and park, as a pilot to test its effectiveness. Based on the success of the one-lane directional section, the concept was expanded to extend in front of the middle school and park access as well. The pilot was implemented in 2009 and expanded in scope in 2013. The lane reconfiguration remains in place today.

Similar lane reconfiguration information was presented at the February 2019 neighborhood meeting. Of the attendees that heard the presentation and returned feedback forms at the end of meeting, seven of eight indicated support for a lane reconfiguration and one did not support. As mentioned previously, nineteen additional feedback forms were returned after the meeting. Of the nineteen, ten indicated support for a lane reconfiguration, eight did not support, and one did not indicate support or non-support.

At its regular May 8, 2019 meeting, the Planning Commission voted to recommend approval of the staff recommendation. Additionally, 22 emails were received by the Planning Commission in support of the staff recommendation. No subsequent comments or concerns have been received in response to the meeting noticing.

The Planning Commission recommended that the traffic signal be installed prior to a lane reconfiguration and subsequent to the start of the new school year, so that any effects of potential modified school patterns onto the public right of way can be considered when refining the lane reconfiguration design concept.

If a traffic signal is approved and installed at this location, it will be tied in to the City's communication system. A separate project, in coordination with the Orange County Transportation Authority (OCTA), is underway to upgrade communications and signal equipment along Camino Vera Cruz.

#### Implementation Timeline

A design consultant for this project is already under contract to prepare design plans, specifications, and cost estimate (PS&E). Work will begin once Council direction is received. It is estimated that traffic signal installation could occur in Winter/Spring 2020 should Council support the staff recommendation. This target timeframe is based on feedback from material suppliers who have indicated that steel tariffs have significantly increased order lead time for traffic signal poles and mast arms. As for the proposed lane reconfiguration, the timing would be coordinated through the City's annual pavement/street maintenance program, and the City Council would again be informed of the proposed lane reconfiguration when a specific project is presented for contract award. As noted previously, the Planning Commission supported both a traffic

signal and lane reconfiguration, however recommended that the traffic signal implementation precede the lane reconfiguration.

**Recommended**

**Action:** STAFF RECOMMENDS THAT the City Council:

1. Approve a traffic signal at the intersection of Camino Vera Cruz/Costa and direct staff to proceed with design and bid of a traffic signal project; and
2. Approve conceptual striping plans for Camino Vera Cruz from Riachuelo to Arbolado.

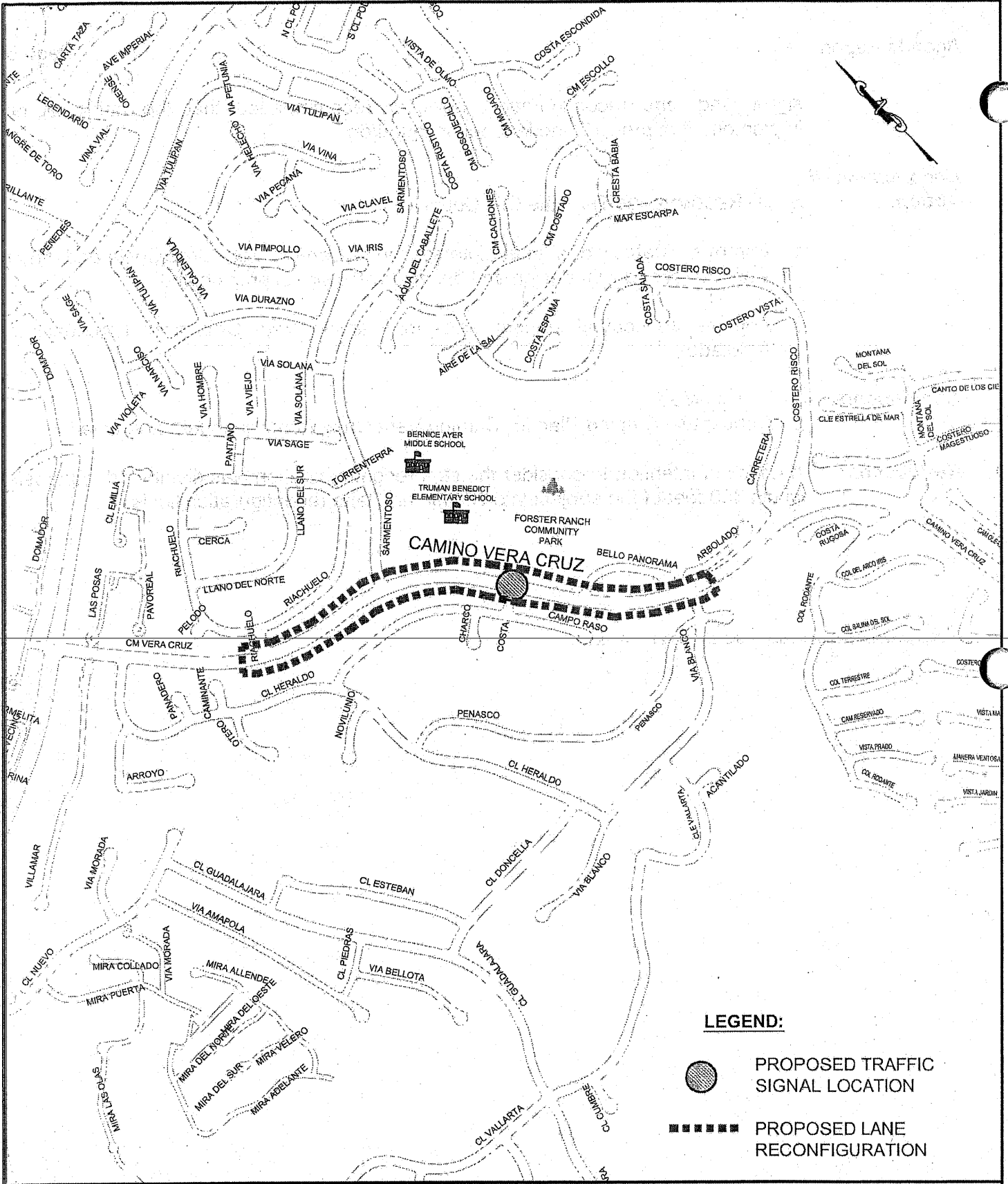
**Attachments:**

1. Vicinity Map
2. Conceptual Striping Plan for Camino Vera Cruz, from Riachuelo to Arbolado

**Notification:**

A notice of intention to consider the staff recommendation was distributed to parcels within 300 feet of the subject intersection and lane reconfiguration limits.

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**LEGEND:**



PROPOSED TRAFFIC SIGNAL LOCATION



PROPOSED LANE RECONFIGURATION

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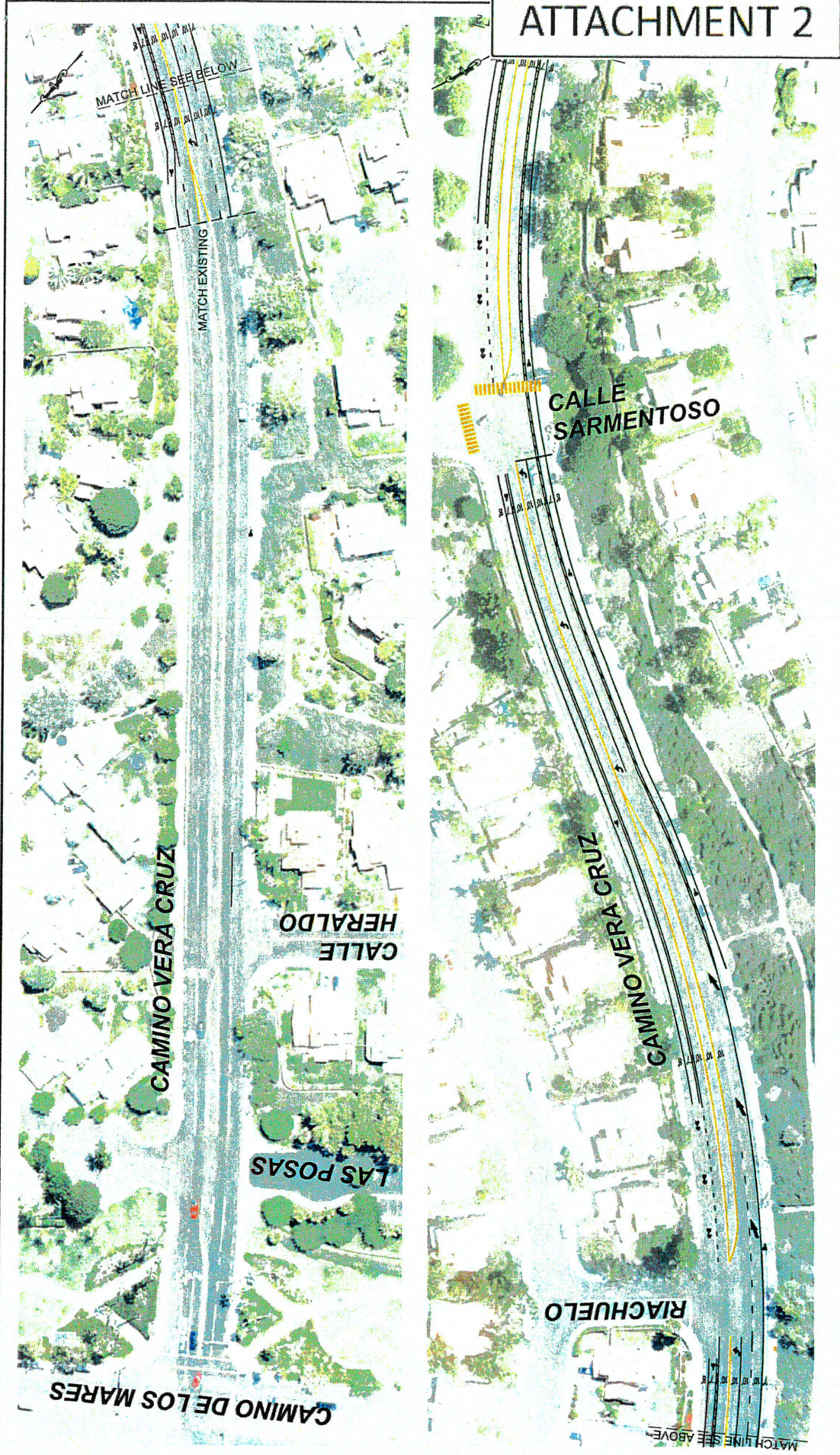


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**VICINITY MAP**

CAMINO VERA CRUZ/COSTA  
 INTERSECTION IMPROVEMENTS  
 5-21-19/9E-6

# ATTACHMENT 2

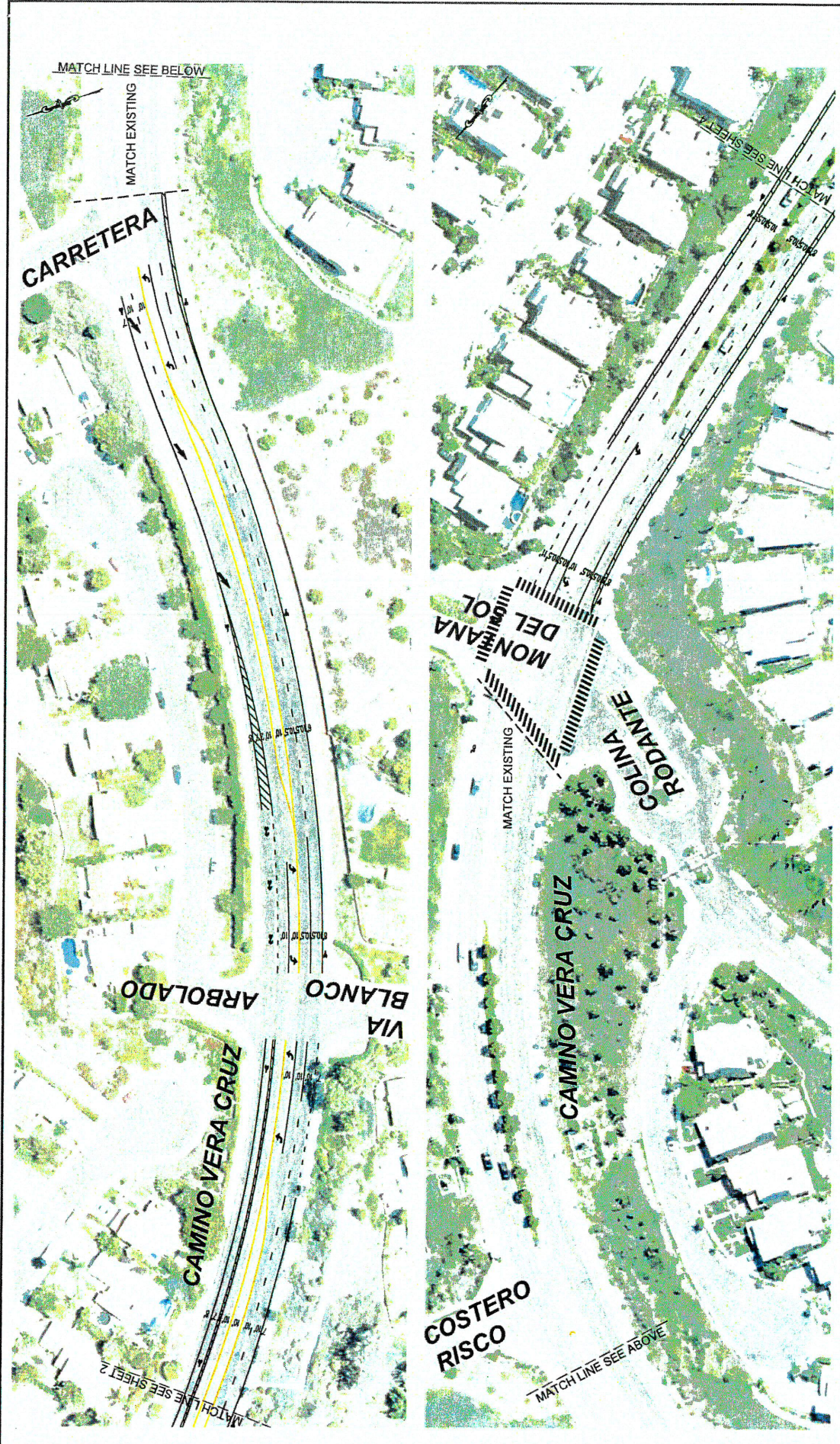


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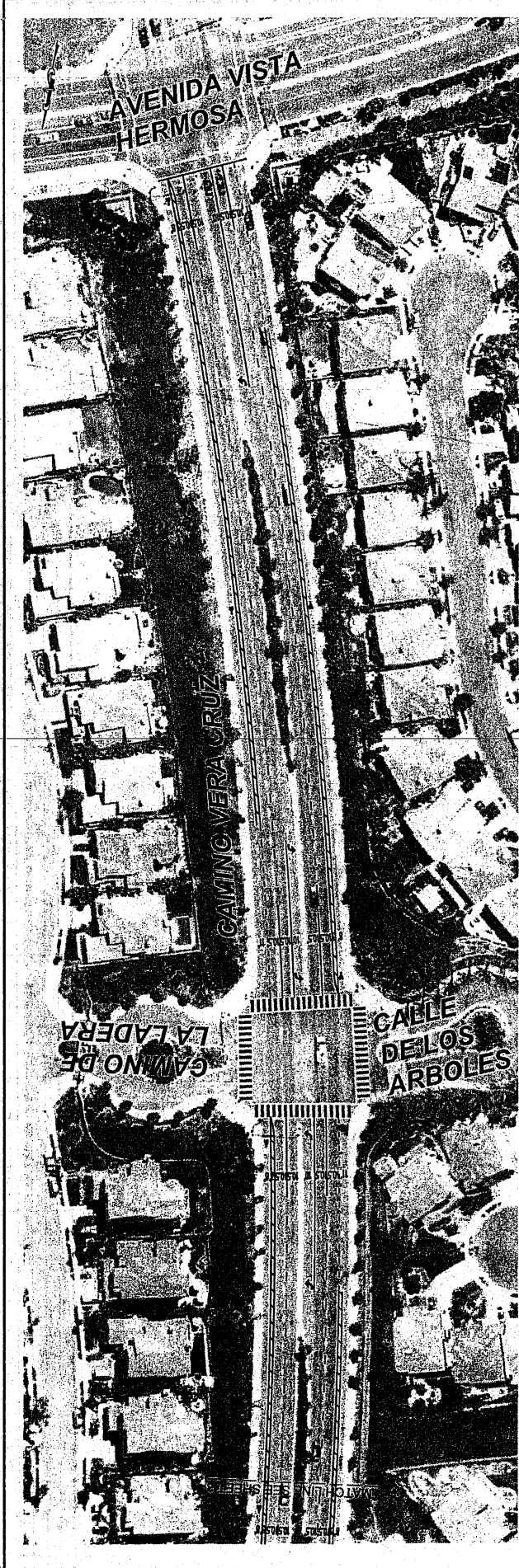
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		TERRAS A. BARRILET, P.E. ASST.			
		DEPUTY PUBLIC WORKS DIRECTOR			
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