



Atascadero City Council

Staff Report – Public Works Department

El Camino Real Downtown Traffic Calming and Corridor Plan Project Update

RECOMMENDATION:

Council review alternative layouts for El Camino Real Downtown Traffic Calming and Corridor Plan and direct staff to develop detailed layouts and cross sections of preferred alternative for draft final report.

REPORT IN BRIEF:

The El Camino Real Traffic Calming and Corridor Plan has progressed to a point where the developed alternatives and analysis require City Council feedback. It is anticipated, the City's consultant, KTUA, along with their traffic engineer sub-consultant, Central Coast Transportation Consulting (CCTC), will present the various alternatives for the corridor layout at the City Council meeting. The layouts provide for pedestrian and bicycle safety with enhanced facilities and traffic calming measures. The layouts significantly increase the number of on-street public parking for visitors patronizing businesses and attending special events.

DISCUSSION:

Background:

The El Camino Real Downtown Traffic Calming and Corridor Plan (Project) is envisioned to be a planning level document that outlines recommendations for future road improvements incorporating enhanced pedestrian and bicycle access along with increased parking opportunities and safer crosswalks. The goal is to enhance economic development in the downtown by creating a zone that slows traffic speeds and enhances appearance and safety. The Project limits include the El Camino Corridor from the intersection of Highway 41 to the intersection of Rosario Avenue.

Over the last several decades, the City has implemented improvements in the downtown, which were identified as part of the Downtown Revitalization Plan, Downtown Design Guidelines, and the City's Wayfinding Program. Improvements were generally limited to sidewalk widening at corners (bulb-outs), sidewalk enhancements, signage, raised planted medians and crosswalks. Other key facility improvements have

developments and others will result in an increase in downtown activity, including vehicle trips, pedestrians, cyclists, and other multi-modal methods of transportation.

Secondly, the Atascadero High School (AHS) and the Atascadero Junior High School (AJHS) are located within ¼ mile of the El Camino Real Downtown Corridor. School-related traffic is a significant consideration throughout the corridor, particularly during peak hours occurring from drop-off and pick-up times. With additional vehicular, pedestrian, and bicycle traffic in the Downtown area, concerns regarding the safety and function of El Camino Real have arisen from residents and business owners, particularly at intersections and existing mid-block crossings. These concerns are likely to increase in the future as complete streets improvements to State Route 41 in 2020, and potential improvements to the Atascadero Avenue and Mall corridor, will likely encourage pedestrian and bicycle traffic to be funneled through the US 101 tunnel and elsewhere.

Third, merchants, residents, developers, and City leaders have expressed the need for more parking and pedestrian access within the downtown district due to an increase in economic activity and special events. Limited parking is available on El Camino Real and includes non-metered, parallel on-street parking. A mix of diagonal and parallel parking exists on other Downtown streets adjacent to El Camino Real. Increasing parking opportunities on El Camino Real will be advantageous in furthering the economic goals of the Downtown. Currently, the width and speed of traffic on El Camino Real discourages visitors from using the corridor for parking or walking across El Camino Real to go to a business on the other side of the street.

The Council also discussed Downtown redevelopment during their strategic planning in February 2017. Safety, parking, development/redevelopment, and traffic were identified as issues and opportunities in the Downtown district. The Council identified safety as the first priority and commerce as the second priority. The proposed project is catered toward addressing many of these items.

Summary:

The overall objective of the project is to develop a holistic traffic calming and corridor plan along the Downtown El Camino Real Corridor that considers the needs and goals of all multimodal users, residents, businesses, and City leaders. The final corridor plan is intended to serve as a blueprint or master plan for future improvements within the El Camino Real right-of-way, which should further the economic goals of the City while enhancing the Downtown Corridor's safety and aesthetic appearance for all users.

Specifically, the City identified the following project objectives:

- Provide public safety for all roadway users by incorporating complete streets and "road diet" concepts and principals
- Enhance economic development by supporting existing and future merchants with additional parking
- Support downtown business synergy through a partnership in crafting a Downtown Traffic Calming Plan
- Enhance the streetscape of El Camino Real by creating a sense of place and arrival into the Downtown

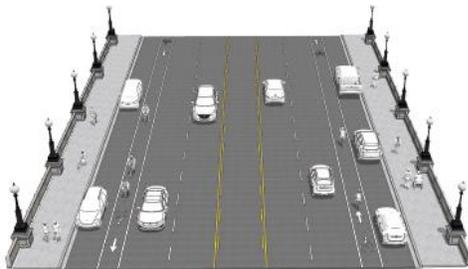
- Create safe pedestrian connections and crossings while enhancing the walkability of Downtown
- Slow vehicular speeds to increase safety and visibility, including an analysis of impacts to level of service (LOS)
- Enhance the ability to host more special events in the Downtown area
- Accommodate multi-modal transportation, where feasible

KTUA of San Diego was hired in November 2017 to assist the City in the analysis and development of a corridor plan. CCTC of Morro Bay is working as a subconsultant to KTUA to provide traffic engineering and operations analysis. Council awarded the Downtown Traffic Calming project to KTUA in November 2017, and City staff has been working closely with KTUA and CCTC to develop alternatives that meet the objectives listed above, while at the same time balancing impacts to varied roadway users. That process has resulted in the two main alternatives discussed below.

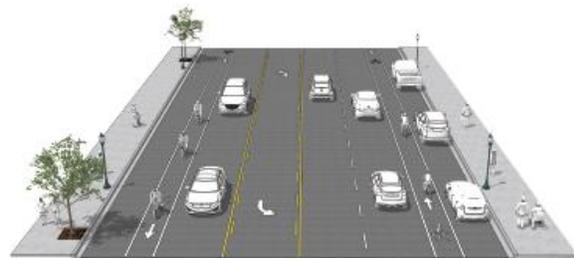
Analysis:

Existing Conditions:

Currently, the El Camino Real corridor between Highway 41 and Rosario Avenue varies in pavement width and lane configuration. Lane configuration generally consists of two through lanes in each direction and a center lane, parallel parking along both curb lines, and intermittent bike lanes from Highway 41 to Traffic Way. Roadway width (curb to curb) is 80' from Traffic Way through the Atascadero Creek Bridge, and 76' from the Atascadero Creek Bridge to Traffic Way. North of Traffic Way the roadway width narrows further to 72', but there is only a single southbound lane to accommodate bike lanes on both sides of the street. The posted speed limit is 25 mph throughout the project area as allowed in designated Downtown Districts. However, the majority of vehicles exceed this limit.



ECR between Colony Square and East Mall
Existing Conditions



Traffic Way to Rosario Avenue
Existing Conditions

Existing Cross-Section (Highway 41 to Rosario Avenue)

From	To	Pavement Width	Existing Cross-Section						
			Southbound			Center	Northbound		
			Parking	Bike	Lanes	TWLTL	Lanes	Bike	Parking
Highway 41	Colony Square Entrance	80'	10'	-	12'/12'	12'	11'/11'	4'	8'
Colony Square Entrance	Atascadero Creek Bridge	80'	8'	4'	11'/11'	12'	11'/11'	4'	8'
Atascadero Creek Bridge	Entrada Ave	76'	8'	4'	11'/11'	12'	11'/11'	-	8'
Entrada Ave	Traffic Way	76'	8'	-	10'/10'	20'	10'/10'	-	8'
Traffic Way	Rosario Ave	72'	8'	5'	12'	11'	11'/11'	5'	8'

Existing and Future Traffic Volume Analysis:

CCTC analyzed existing and future developed (cumulative) traffic volumes and determined that having only one lane in each direction may be accommodated on El Camino Real within the downtown zone without creating significant traffic impacts. However, this determination came with several suggestions to lessen vehicle traffic impacts.

Traffic impacts are typically measured in terms of Levels of Service (LOS) having letter scores from A to F. LOS is related to the amount of time (delay) it takes for a vehicle to pass through a given segment of the road or intersection. If LOS is increased for vehicles, vehicle speeds commonly increase and may reduce safety for pedestrians, bicyclists, and other forms of transportation. LOS summary tables lists the worst traffic delays in busiest morning hour (“AM”) and afternoon hour (“PM”) – which generally correspond to school drop-off and pick-up hours. The following conditions are analyzed as part of the traffic model:

1. “Existing” corresponds to a current or no-build (no project) scenario.
2. “Project” corresponds to having any of the one-lane alternatives throughout the corridor. This condition also assumes a mid-block crosswalk across El Camino Real centered between Sunken Gardens and the proposed public plaza with La Plaza Development.
3. “Project Modified” corresponds to the following recommended modifications to the “Project” conditions (in order of greatest impact to increase LOS):
 - a. Relocate the mid-block crossing proposed between West Mall and East Mall to the East Mall intersection at the location of the existing crosswalk. Install a pedestrian hybrid beacon coordinated with the West Mall traffic signal. This will provide a more orderly crossing point for large groups of students, provide greater queue storage, and decrease the chances of vehicles blocking the intersections.
 - b. Maintain the existing lane configuration on the northbound approach to the El Camino Real/Traffic Way intersection to avoid queues spilling back to West Mall.
 - c. Widen the eastbound approach to the El Camino Real/Traffic Way intersection to include a left turn lane, a through lane, and a right turn pocket to lessen queue spillback to US 101 ramps.

4. "Cumulative" corresponds to future fully-developed conditions based upon current zoning of land uses.

The following tables summarize the corridor travel times (Highway 41 to Rosario Avenue) during the peak 15 minutes of the PM peak hour for the above conditions.

Table 1: Existing and Existing Plus Project Corridor Travel Times			
Direction	Travel Time ¹ (sec)		
	Existing	Existing + Project	Existing + Project Modified
Southbound	88.1	95.0	97.2
Northbound	115.1	135.8	113.7

1. Results from Synchro Arterial Level of Service Report.

Table 5: Cumulative and Cumulative Plus Project Corridor Travel Times			
Direction	Travel Time ¹ (sec)		
	Cumulative	Cumulative + Project	Cumulative + Project Modified
Southbound	94.3	99.9	104.9
Northbound	119.1	170.5	116.6

1. Results from Synchro Arterial Level of Service Report.

Existing travel times along the roughly ¼ mile corridor are approximately 1.5 minutes for the southbound direction and 2 minutes for the northbound direction during the peak 15 minutes of the day. Under cumulative no build conditions, travel times are expected to increase by less than 10 seconds in each direction. Implementing the project conditions (mid-block crosswalk, one northbound lane through Traffic Way, etc.) would add 50 seconds to northbound travel time under cumulative (fully developed) conditions with a nominal change to southbound travel time. Implementing the modified project as detailed above would result in northbound travel times slightly lower than the existing (no build) condition.

The following table summarizes the intersection delays and level of service for the various conditions.

Atascadero ECR LOS Summary													
Intersection	Peak Hour	Existing		Existing + Project		Existing + Project Modified		Cumulative		Cumulative + Project		Cumulative + Project Modified	
		Delay ¹ (sec/veh)	LOS	Delay ¹ (sec/veh)	LOS	Delay ¹ (sec/veh)	LOS	Delay ¹ (sec/veh)	LOS	Delay ¹ (sec/veh)	LOS	Delay ¹ (sec/veh)	LOS
1. Traffic Way/El Camino Real	AM	24.3	C	27.4	C	22.0	C	26.7	C	32.2	C	24.2	C
	PM	27.7	C	38.6	D	24.3	C	32.5	C	56.5	E	27.9	C
2. Entrada Avenue/El Camino Real	AM	0.8 (18.8)	-(C)	0.8 (22.2)	-(C)	0.8 (22.2)	-(C)	1.2 (16.3)	-(C)	1.2 (20.2)	-(C)	1.2 (20.2)	-(C)
	PM	0.8 (11.8)	-(B)	0.8 (14.7)	-(B)	0.8 (14.7)	-(B)	1.1 (20.3)	-(C)	1.3 (30.4)	-(D)	1.3 (30.4)	-(D)
3. West Mall/El Camino Real	AM	8.2	A	12.3	B	12.3	B	9.3	A	14.8	B	14.8	B
	PM	8.0	A	19.1	B	19.4	B	17.7	B	22.9	C	23.6	C
4. East Mall/El Camino Real	AM	0.7	A	0.1	A	3.8	A	0.7	A	0.1	A	4.2	A
	PM	2.9	A	0.1	A	11.6	B	3.1	A	0.2	A	13.3	B

1. HCM 6th average control delay in seconds per vehicle (HCM 2000 used for Intersection 4). For side-street-stop controlled intersections the worst approach's delay is reported in parentheses next to the overall intersection delay.
 Note: Unacceptable operations shown in bold text.

The study intersections all currently operate acceptably at LOS C or better and will continue to do so for all scenerio in the AM peak hour. The ECR/Traffic Way intersection drops to LOS D at PM peak hour for the existing plus project conditions but improves to LOS C for the existing plus project modified conditions. For cumulative plus project, this intersection drops to LOS E at PM peak hour but increases to LOS C for the cumulative plus project modified condition. The ECR/Entrada intersection drops to LOS D for cumulative plus project and project modified conditions, but delay only increases 10.1 seconds per vehicle.

It should be noted that the proposed alternatives described in the following sections should perform closely to the “Project Modified” conditions. These alternatives have been developed to incorporate the “Project Modified” recommendations to eliminate the mid-block crosswalk at Sunken Gardens and will maintain the existing configuration of two northbound approach lanes at the ECR/Traffic Way intersection. The third recommendation of widening the eastbound approach to the ECR/Traffic Way intersection to include separate left turn, through, and right turn lanes has less impact on the intersection’s LOS and would require additional Right-of-way.

Proposed Alternatives:

Several alternatives were developed for the study area and are generally associated with two segments of El Camino Real: Highway 41 to Traffic Way, and Traffic Way to Rosario Avenue. For Highway 41 to Traffic Way, two alternatives were developed. For Traffic Way to Rosario Avenue, three alternatives were developed. Conceptual plans and cross-sections for these sections and alternatives are attached to this report for reference. A discussion of each segment follows.

Highway 41 to Atascadero Creek Bridge (Alt. 1 & 2):

Both Alternative 1 and 2 are identical for the segments from Highway 41 to Atascadero Creek and from Entrada Ave to Rosario Ave. Lane configuration would be retained north of Highway 41, with one northbound lane being dropped at the Colony Square entrance. North of the Colony Square entrance, lane configuration would consist of single northbound and southbound lanes, center lane, bicycle lanes, and diagonal parking along both roadway edges. The following table summarizes the cross section.

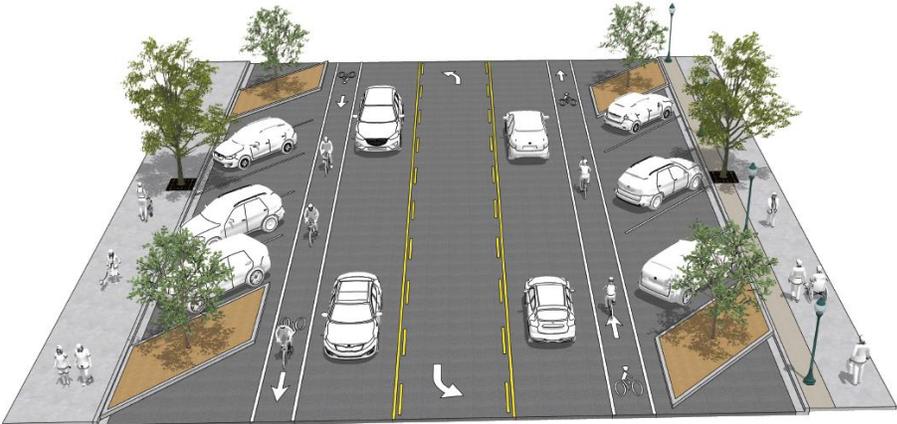
From	To	Pavement Width	Proposed Cross-Section						
			Southbound			Center	Northbound		
			Parking	Bike	Lanes	TWLTTL	Lanes	Bike	Parking
Highway 41	Colony Square Entrance	80'	10'	-	12'/12'	12'	11'/11'	4'	8'
Colony Square Entrance	Atascadero Creek Bridge	80'	19'	5'	10'	12'	10'	5'	19'

Atascadero Creek Bridge to Entrada Avenue (Alt. 1):

Alternative 1 proposes to match the southbound portion described above, with single northbound and southbound lanes, a center two way left turn lane (TWLTTL), bike lanes in both directions, and angled parking against both curbs. The following table summarizes the cross section.

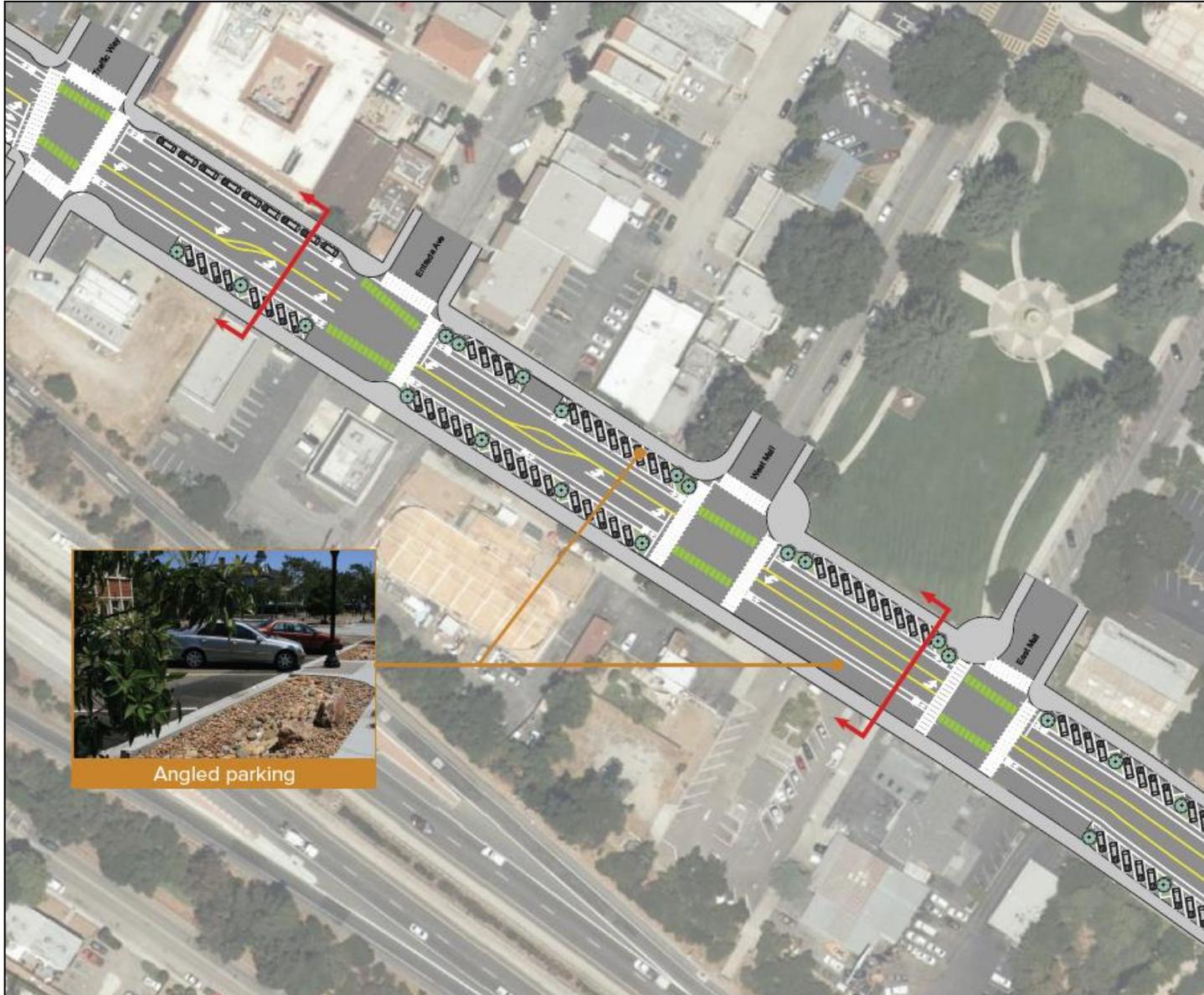
From	To	Pavement Width	Proposed Cross-Section						
			Southbound			Center	Northbound		
			Parking	Bike	Lanes	TWLT	Lanes	Bike	Parking
Atascadero Creek Bridge	Entrada Ave	76'	17'	5'	10'	12'	10'	5'	17'

As discussed above, the primary benefits of this alternative include additional parking of approximately 50%, decreased vehicle speeds, and improved facilities for bicyclists and pedestrians. Diagonal parking can be configured with either front-in or back-in parking.



West Mall to East Mall- Alternative 1
 Looking northbound

Alternative 1: Traffic Way to East Mall



Atascadero Creek Bridge to Entrada Avenue (Alt. 2):

Alternative 2 proposes single vehicle lanes and bike lanes in both northbound and southbound directions, and existing curbside parallel parking would remain. The remaining roadway width would be utilized for a median “flex” space. This concept allows for a 30’ wide at-grade median area, which could be utilized for parking, landscaping, special events, etc. The following table summarizes the cross section.

From	To	Pavement Width	Proposed Cross-Section						
			Southbound			Center	Northbound		
			Parking	Bike	Lanes	TWLTL	Lanes	Bike	Parking
Atascadero Creek Bridge	Entrada Ave	76'	8'	-	10'	40'	10'	-	8'

In addition to the Alternative 1 benefits of increased parking of approximately 50%, Alternative 2 essentially divides the corridor into two one-way roads to further promote

decreased vehicle speeds and improved pedestrian crossings. Pedestrian crossings are inherently safer when crossing a single lane, although this may also encourage crossing at midblock locations as opposed to marked intersections. Vehicles paralleled parked against the sidewalk have better visibility when backing out as compared to head-in angled parking, which reduces conflicts with traveling bicyclists and vehicles. Bike lanes are dropped with this alternative and require bikes to share the travel lane with vehicles. This is needed to accommodate flex space angled parking requirements and left turn lanes at the intersections. Travel lane and flex space widths may need to be adjusted with final concepts.



West Mall to East Mall- Alternative 2

Looking northbound

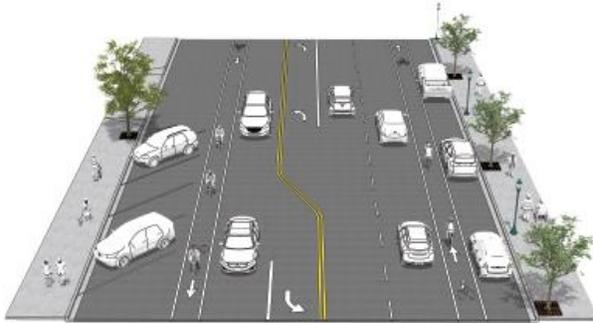
Alternative 2: Traffic Way to East Mall



Entrada Avenue to Traffic Way (Alt. 1 & 2):

The single lane of travel northbound for both alternatives transitions into two lanes north of Entrada Avenue. This for both alternatives is very similar to its current configuration except only one southbound travel lane is proposed. This will also allow the addition of bike lanes in each direction. Parallel parking would be provided on the east side (Carlton Hotel). Parking on the west side is the only difference between the two alternatives. Alternative 1 provides angled parking while Alternative 2 has parallel parking that shifts southbound traffic to accommodate the flex space in the median. The extra width from parallel parking in Alternative 2 allows buffered bike lanes in each direction. The following table summarizes the cross sections.

Alt. No.	From	To	Pavement Width	Proposed Cross-Section						
				Southbound			Center	Northbound		
				Parking	Bike	Lanes	TWLTL	Lanes	Bike	Parking
1	Entrada Ave	Traffic Way	76'	17'	5'	8'	11'	10'/10'	5'	8'
2	Entrada Ave	Traffic Way	76'	8'	5'+(3')	8'	11'	11'/11'	(3')+5'	8'



Traffic Way to Entrada Avenue
Alternative 1



Traffic Way to Entrada Avenue
Alternative 2

Traffic Way to Rosario Avenue (Alt. 1, 2, & 3):

The traffic-engineering consultant, CCTC, recommends maintaining two northbound lanes of travel from Entrada Avenue through Rosario Avenue. One of these lanes may end with a right turn lane at Traffic Way in front of the Carlton. With the existing roadway only 72' wide in this area and retaining two northbound lanes, there is not sufficient width to allow for diagonal parking on both sides of the street from Traffic Way to Rosario Avenue.

Alternative 1 and 3 provide angled parking on the west side which results in additional parking along the segment, although the number of existing driveways limits the potential gains in parking spaces to an approximately 10% increase. For reference, along a segment with few driveways, parking increases are typically in the range of 50-60% with a change from parallel to diagonal parking.

The recommendation to maintain two northbound lanes north of Entrada Avenue is based upon traffic queuing. The signal at Traffic Way and El Camino Real sees significant traffic from all four directions, which necessitates long signal phase lengths. Subsequently, with a single northbound lane, traffic modeling indicates that existing and future traffic volumes may back up through Entrada Avenue and West Mall during peak periods.

Alternative 1 maintains the two northbound lanes of travel with parallel parking on the east side and angled parking on the west side. Two bike lanes are accommodated but the two-way center turn lane is replaced by a wide double-line. Vehicles wishing to make left turns into driveways will be required to do so from the travel lane.

Alternative 2 maintains the existing configuration but provides transitions in the southbound lane at Traffic Way to accommodate a single lane south of Traffic Way.

Alternative 3 maintains two northbound lanes of travel through the Traffic Way intersection and transitions to one northbound lane. This alternative provides for a two-way center turn lane, bike lanes, parallel parking on the east side, and angled parking on the west side. This alternative had not been evaluated for traffic modeling at this the time of this report.

The following table summarizes the cross sections.

Alt. No.	From	To	Pavement Width	Proposed Cross-Section						
				Southbound			Center	Northbound		
				Parking	Bike	Lanes	TWLTL	Lanes	Bike	Parking
1	Traffic Way	Rosario Ave	72'	17'	5'	11'	-(4')	11'/11'	5'	8'
2	Traffic Way	Rosario Ave	72'	8'	5'	10'	10'	10'/10'	5'	8'
3	Traffic Way	Rosario Ave	72'	17'	5'	10'	20'	11'	5'	8'



Traffic Way to Rosario Avenue
Alternative 1



Traffic Way to Rosario Avenue
Existing Conditions (Alt. 2)



Traffic Way to Rosario Avenue
Alternative 3

It should be noted that while the traffic model shows impacts resulting from dropping a northbound lane, actual traffic patterns are often more complex. In reality, drivers are adaptable and will avoid situations with known delays. Subsequently, modeled delays may not be realized, or it may be decided that delays through the corridor are acceptable in order to provide additional parking, additional public spaces, and width for bicycles and pedestrians.

Conclusion:

Staff is seeking direction from Council on the various alternatives and options in order to move forward with the Traffic Calming Plan. Staff is looking for Council input on the following four items:

1. *Should we reduce two travel lanes to one lane each direction from Highway 41 to Entrada.*
 - a. Pros: Slower vehicular traffic, increased pedestrian safety, contiguous bike lanes, increased parking stalls (approx.. 50% more), more sense of place.
 - b. Cons: Slight decrease in LOS from A to B/C at West/East Mall and from B/C to C/D at Entrada.

2. *Angled parking or Flex space/parking from Atascadero Creek Bridge to Entrada.*
 - a. Angled Parking. Pros: Maximizes available parking, better driveway access (TWLTL), easy/less costly to construct, consistent with layout north and south, no changes to the Colony Days parade. Cons: Vehicle speeds may not decrease at times when parking is not utilized, contiguous pavement (“sea of asphalt”), less sense of place.

- b. Flex space/parking. Pros: Decreases vehicle speeds most effectively, shortest pedestrian crossing of lanes, increases available parking, provides sense of place, breaks up asphalt, landscaping/shade potentials, opportunities for events. Cons: May encourage mid-block crossings, potential delays for emergency vehicles, and would require changes to the Colony Days parade.
3. *Keep two northbound travel lanes or drop to one from Traffic Way to Rosario.*
- a. Two travel lanes. Pros: No significant change in LOS, will accommodate angled parking on west side (increase in parking), consistent layout. Cons: Decreased driveway access (no TWLTL), encourages higher vehicle speeds.
 - b. One travel lane. Pros: Increased parking (angled), encourages lower vehicle speeds, accommodates full bike lanes, maintains good driveway access (TWLTL), promotes sense of place. Cons: More vehicle congestion, possible vehicle conflicts in merge lanes north of Traffic Way.

FISCAL IMPACT:

The Downtown Traffic Calming Study has no direct costs beyond previously approved consultant and staff costs. The scope of the report does not include detailed design to a level that would allow for construction estimates. Additionally, both Alternative 1 and Alternative 2 could be implemented using methods with a wide range of cost. Both alternatives could retain the majority of existing improvements and replace existing striping at a relatively low cost. Alternatively, full buildout with associated hardscape improvements would incur significant capital costs, but would provide the increased aesthetic value. A final approved corridor plan would likely be eligible for an Active Transportation Grant.

ALTERNATIVES:

Council could elect to not select either of the alternatives and direct staff to reconsider options.

ATTACHMENTS:

1. Conceptual Plans
2. Conceptual Cross Sections