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Welcome

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PUBLIC INFORMATION MEETING

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Welcome

State Route 246 Passing Lanes and Purisima Road Safety Improvement Project

Open Forum

PUBLIC INFORMATION MEETING

5:30 p.m. to 8:00 p.m.
Wednesday, July 16, 2008
Lompoc City Hall-City Council Chambers

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State Route 246 Passing Lanes and Purisima Road Safety Improvement Project

Why Are We Here Tonight?

- **To show the public several proposals studied by Caltrans for this segment of Route 246.**

  We have displays showing preliminary mapping for The SB 246 Passing Lanes Project and the Purisima Road Safety Improvement Project.

  There will be a brief presentation at 6:30 p.m. to further inform you on the potential projects.

- **To collect written feedback from the community on proposed improvements along the corridor.**

  There are comment cards designed to obtain your suggestions or opinions on the project.

- **To allow residents and property owners the opportunity to determine whether there may be any temporary or long-term impacts to their properties if proposed projects are undertaken.**

  There is a map indicating right of way lines and assessor parcel numbers. A representative from Caltrans Right of Way is available to assist you with determining where your property is located on the map.

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Purisima Road Safety Improvement Project

Purpose and Need

PURPOSE

The purpose of the proposed project is to improve safety at the intersection of Route 246 and Purisima Road by reducing the potential for broadside collisions and decreasing the severity of accidents.

NEED

The intersection of Route 246 and Purisima Road is experiencing a pattern of broadside accidents. There have been twenty-five traffic collisions at the intersection in the five-year period between April 1, 2001 and March 31, 2006. (This is approximately four times the statewide average collision rate for similar intersections in California.) Of these collisions, twenty-one were broadside accidents involving vehicles turning left from Purisima Road onto Route 246. Of the twenty-one broadside collisions, eleven resulted in injuries.

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State Route 246 Passing Lanes

Purpose and Need

PURPOSE

The purpose of the project is to improve the mobility along this segment of Route 246 by reducing the length of traffic queues, or platoons, caused by the lack of passing opportunities. The project will increase site distance and reduce the length of the approaching uphill grade at the intersection of Tularosa Road. In addition, the project will reduce conflicts and improve the flow of traffic at several intersections. One side benefit of these changes will be improved safety.

NEED

This nine-mile segment of Route 246 is a two-lane conventional highway with numerous intersections and private access points. The terrain is essentially flat except for the area near Tularosa Road, which is near the top of a ridge. Short uphill grades on Route 246 approach the intersection from both directions. The primary land use along this highway segment is agriculture. Many farm implements, (tractors, plows, etc.), use the highway to access isolated fields.

Traffic studies for this highway segment show that vehicles spend 65% of the time behind slower moving traffic during peak hour. Although there are several locations along this highway segment where passing is permitted when safe, during periods of peak use, safe passing is limited by oncoming traffic. This causes queuing or platooning. This situation is exacerbated at Tularosa Road when heavy trucks and farm vehicles are slowed by the steep approach grades. Through traffic is further delayed when left-turning vehicles slow or stop in the through lane to wait for oncoming traffic to clear before they can safely complete their turn.

The passing lanes will reduce the possibility of unsafe passing by impatient motorists. The improved sight distance at Tularosa Road will allow motorists to more safely enter the stream of traffic on the highway. The left-turn channelizations will segregate left-turning vehicles, which currently slow and stop in the through lanes, thus reducing the possibility of rear-end type accidents.

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State Route 246 Passing Lanes

Project Description

Two sets of passing lanes in each direction, varying between 1.4 and 2.2 miles in length, will be constructed at 1.7 to 3.2 mile intervals to provide passing opportunities during peak periods. Lowering the highway profile through the intersection will reduce the length of the uphill grades approaching Tularosa Road. This will reduce the speed loss of heavy trucks and farm equipment at this location. The profile correction will also improve sight distance for vehicles entering the highway from Tularosa Road. Left-turn channelizations at Hapgood Road, Campbell Road, Big Ranch Road and Drum Canyon/Mail Road intersections will also improve the flow of traffic by removing turning vehicles from the through lanes, thus reducing delay. A two-way left-turn lane will be constructed between Hapgood Road and Big Ranch Road.

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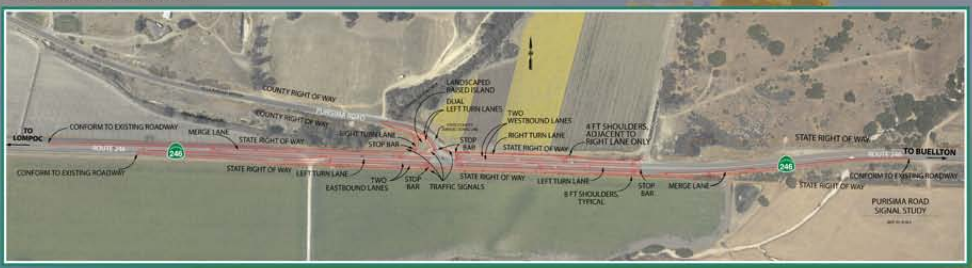
Purisima Road Safety Improvement Project

Project Description

There are two types of improvements being considered for this intersection, a roundabout and a traffic signal. Each leg of the roundabout would consist of a single lane entering and exiting the circular lane. There will be a dedicated right-turn lane from Purisima Road to westbound Route 246. The traffic signal would consist of dual through lanes for eastbound and westbound Route 246 as well as a single right-turn lane and dual left-turn lanes for Purisima Road. The traffic signal would also retain the left-turn lane from eastbound Route 246 to Purisima Road.



JUSTIFICATION OF ROUNDABOUT

Numerous reports from data collected across the nation have identified roundabouts as viable alternatives to reduce the number and severity of broadside collisions. The modern roundabout is now recognized nationally as an intersection type and traffic control treatment capable of providing unique and significant operational and safety benefits over a wide range of traffic volumes and conditions. A roundabout at the project's intersection will have fewer conflict points and eliminate broadside conflicts. The severity of the collisions will decrease due to low speeds, 15 to 20 mph, within the circular roadway. High-speed broadside conflicts will be replaced with low speed merging conflicts, resulting in potentially fewer and less severe collisions.

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Purisima Road Safety Improvement Project

	Criteria	Signal	Roundabout	Comments
Safety Category	Crash Frequency	Higher than a roundabout	Lower than a signal	
	Crash Severity	Higher due to higher speeds and higher speed differential	Lower due to lower speeds and lower speed differential, elimination of high speed broadside crashes	
	# of Conflict Points Between Vehicles	13	4	Existing intersection has 6 conflict points
	# of Driver Decisions	Higher than a roundabout because there more conflict points	Lower than a signal because there are fewer conflict points	
	Pedestrian Accessibility/Safety	More conventional crossing but more exposure to higher speed traffic than a roundabout	More confusing than a signal but less exposure to traffic	
	Bicycle Accessibility/Safety	Cyclists will have a dedicated shoulder but will have a conflict point for right turns onto Purisima and higher speed traffic	Most cyclist will choose to share the roundabout lane with traffic. Traffic is moving at a slower pace	
	Maintenance worker exposure	Higher for signal maintenance	Higher for landscape maintenance	
Traffic Operations	Capacity	Sensitive to signal timing and/or vehicle detection. Actuated signal can distribute capacity (green time) where needed.	Affected by circulating flow that conflicts with entry flow and the geometric elements.	
	Operational Benefits (Levels of Service, Delays etc.)	Reduce delay on Purisima Rd. Prioritized vehicle movement according to demand to minimize queuing for each approach. May reduce delay at nearby downstream at-grade intersections due to platooning.	Reduce delay on Purisima Rd. Minimal stopage with continuous vehicle movement. Not affected by power outage. Not affected by equipment failures. Less delay during offpeak hours.	
	Traffic Speed	0-65 mph	0-27 mph	
	User Familiarity	Drivers are very familiar with signalized intersections	Drivers are uncertain about rules of a Roundabout	
	Special Vehicles (Ag Equipment) are accommodated	Easier to maneuver special large vehicles	More difficult to maneuver special large vehicles	
	Capability with 246 Passing Lane Project	Very compatible	Very compatible	
Cost	Project Capital Outlay Costs	Roadway $3,764,200 Right of Way $310,000 **Total $4,074,200**	Roadway $2,825,862 Right of Way $170,000 **Total $2,995,862**	
	Maintenance Cost			
	Additional maintenance inventory			
	Operational Cost			
Environmental Impacts	AG Land Impacts	Commulatively impacts are greater, but are linear along the RW	Concentrated but a smaller area	
	Community Input			
	Project Footprint	**Larger than a roundabout** (4.52 acres total construction footprint, 1.62 acres of additional permanent footprint)	**Smaller than a signal** (1.74 acres total construction footprint, 0.66 acres of additional permanent footprint)	
	Cultural (archeological & historical Impacts)	Minimal Impact	Minimal Impact	
	Biological	Minimal to none for vegetation, impacts to creek and animals to be determined	Minimal to none for vegetation, impacts to creek and animals to be determined	
	Visual	Tends to be more urban	Tends to be more rural	Both will increase lighting and signage. Roundabout may offer more opportunity for planting.
	Flood Plain Impacts	Minimal Impact	Minimal Impact	
	Storm Water Impacts	Greater Impact based on larger footprint	Near negligible because the center of a roundabout can be planted	
Right of Way and Utility Impacts	Right of Way Acquisitions	(0.80 Acre)	(0.35 Acre)	
	Utility Impacts	more aerial utility involvement (electrical, phone and cable)	water, electrical, phone and cable	
Construction	Staging	Less difficult	More difficult	
	Complexity of Construction	Less complex	More complex	
	Flexibility of Expansion	More challenging to expand	Roundabout would be designed for future expansion	
	Reconfiguration of Existing Intersection	More widening (larger footprint) but simple construction	Slightly more complex construction but will have a smaller footprint	

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Environmental Studies

Studies should be available as part of the draft environmental document in early summer of 2009.

Community Impact Assessment

Visual Impact Assessment

Floodplain Impacts

Cultural Resources Evaluation

Biological Studies

Hazardous Waste Investigation

Air and Water Quality Study

Noise Studies

Farmland Analysis

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Biological Concerns

General biological surveys were completed during the spring and summer of 2007 to identify and delineate natural resources occurring within the proposed project limits. Additional surveys specific for the threatened and endangered species with potential to occur in the project area were initiated this year and will continue into next year. To date the following special-status species have been observed within the project study area:

California tiger salamander (*Ambystoma californiense*) - Federally Threatened

California red-legged frog (*Rana aurora draytonii*) - Federally Threatened

Southwestern pond turtle (*Actinemys marmorata pallida*) - California Special Concern Species

Western spadefoot (*Spea hammondii*) - California Special Concern Species

Coast horned lizard (*Phrynosoma coronatum*) - California Special Concern Species

Black-flowered figwort (*Scrophularia atrata*) - California Native Plant Society 1B.2

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Tiger Salamander

Populations in Santa Barbara and Sonoma counties of the California tiger salamander (*Ambystoma californiense*) are federally listed as endangered and recognized as a Species of Special Concern by the California Department of Fish and Game.

California tiger salamander is a stocky salamander that averages 6-8 inches in length. The top and sides are black with yellow spots and bars; belly is yellow.

Adults feed on invertebrates, hatchlings feed on zooplankton and older larvae feed mainly on tadpoles

California tiger salamander lifespan is approximately 10 years and reaches sexual maturity in approximately 3-5 years.

California tiger salamander is reliant on both aquatic and terrestrial habitats. Aquatic habitat essential for CA tiger salamander reproduction.

- Males arrive first to breeding ponds and stay longer (6-8 weeks)
- Females arrive later and stay 1- 2 weeks
- Single female may lay 400 - 1300 eggs
- Salamanders return to uplands for the rest of the year and may not return to breed again for many years
- Aquatic breeding habitat can be natural ephemeral pools and ponds, enhanced natural pools and ponds or man made pools such as agricultural and stock ponds

California tiger salamanders spend most of every year in uplands

- First 3-5 years juveniles never go to ponds
- Adults only at ponds for few weeks
- Use the burrows of small mammals in the uplands surrounding breeding ponds
- Juveniles disperse from ponds in all directions
- Move up to 2,200 feet from breeding ponds to find suitable refugia

The decline of the California tiger salamander is attributed to the loss, degradation, and fragmentation of habitat. The competition and predation from introduced species likely has a negative effect on the species as well.

Tiger Salamander images courtesy of Peter Gaede

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Public Comment

There are several ways you can provide input to our process:

Written comments may be placed in the comment box, or may be directly mailed to:

CALTRANS DISTRICT 5
Attention: Cathy Stettler
50 Higuera Street
San Luis Obispo, CA 93401

or

E-mail: cathy_stettler@dot.ca.gov
Contact Cathy Stettler at (805) 549-3797

Please submit your comments by August 15, 2008

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What's Next

- **We will proceed with required environmental studies.**

  The environmental study process allows Caltrans to identify potential impacts and to determine ways to avoid or reduce them.

- **We will refine the proposed build alternatives based on your comments and the study results.**

- **What is there for the public to review?**

  Public input is important to our study process. Additional opportunity will be made available for comment when the draft environmental document has been approved for public circulation.

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