

DETAILED PROJECT DESCRIPTION

The purpose of the **SR116/SR121 Intersection Improvement Project** is to improve operations for all modes of transportation at a high volume, four-way stop where SR116 and SR121 intersect, consequently reducing congestion and the occurrence of accidents for all modes of transportation, while maintaining and enhancing where possible, access to adjacent properties and parking for public transit and carpool users.

Two project Build Alternatives, a Roundabout and a Signalized Intersection, were developed to meet the purpose and need for the project.

Roundabout: This alternative would construct a two-lane roundabout with a bypass lane in the southeastern quadrant of the intersection for motorists traveling northbound on SR121. A partial right-turn bypass lane would be constructed in the northeastern quadrant for motorists traveling from eastbound SR121 and connecting to northbound SR116. On the fourth leg, Bonneau Road would be widened and realigned to accommodate a standard single entry and single exit lane. The existing free right-turn from northbound SR121 to would be removed.

Landscaping, drainage systems, and access control would be modified. New sidewalks for pedestrians and bicyclists, with planting strips separating the sidewalks from the roundabout, would connect all four legs. Within the project footprint, bicyclists have the option of riding on the roadway shoulder before entering the roundabout.

The center of the roundabout would be located northeast of the existing intersection, and Bonneau Road would be shifted to the north. This realignment would require that a right-of-way be acquired from the vineyard located in the northwestern quadrant. The roundabout was offset slightly northeast of the existing intersection to balance right-of-way considerations with design standards. Rights-of-way also would need to be acquired from the vineyard. A portion of the motel parcel in the southeastern quadrant would need to be acquired.

Design Option 1: Interim Roundabout: The Interim Roundabout design option would also include construction of a hybrid multilane-lane roundabout, which would be a phased version of the Roundabout Alternative and may be implemented initially, prior to implementation of the full Roundabout Alternative. Under the Interim Roundabout design option, 90 degrees of the circulatory roadway would have two lanes (instead of 180 degrees). Two partial right turn bypass lanes would be provided, one in the southeast (instead of a full right turn bypass) and one in the northeast quadrants. The project limits, right-of-way acquisition, and the area of impact would be the same as those described above for the Roundabout Build Alternative.. The only difference between the Interim Roundabout and the Roundabout Alternative would be the number of lanes; the Interim Roundabout would be striped with one lane, while the Roundabout Alternative would be striped with two lanes; and the northbound full right turn bypass is replaced by a partial right turn by pass (yield at exit leg) with the interim roundabout.

Signalized Intersection: This alternative would install a four-way traffic signal at the SR116/SR121 intersection, and would widen the intersection for an additional left-turn lane on eastbound SR116 and an additional right-turn lane on northbound SR121. Bonneau Road would be widened to accommodate standard lanes and shoulders. The existing free right-turn would be eliminated. Landscaping, drainage systems, and access control would be modified. A pedestrian facility with sidewalks would connect all four legs. On SR116 and SR121, bikeways would be Class II compliant. Bicyclists would use the shoulder and, at the intersection, a dedicated lane. A sliver of right-of-way would be acquired, slightly affecting adjacent vineyards and businesses.

Not a Project of Air Quality Concern (40 CFR 93.123(b)(1))

(i) New or expanded highway projects with significant number/increase in diesel vehicles?

- Not a new or expanded highway project
- Intersection improvements to relieve congestion (reducing delay and air pollutant emissions)
- No change in traffic volume or truck percentages on SR-116 or SR-121

(ii) Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?

- Diesel vehicles represent an estimated 4.2% of intersection traffic volume
- Intersections at LOS D, E, or F improve, and delays decrease (202, 2040)
- No project-related changes in land use that would affect diesel traffic percentage

(iii) New bus and rail terminals and transfer points?—Not Applicable

(iv) Expanded bus and rail terminals and transfer points?—Not Applicable

(v) Affects areas identified in PM₁₀ or PM_{2.5} implementation plan as site of violation?

- Not identified in a PM₁₀ or PM_{2.5} implementation plan as an area of potential violation
- Nearest PM₁₀ or PM_{2.5} violations in 2013 in Santa Rosa, 8 miles to the north

RTP ID# (required) 22190				
TIP ID# (required) SON150009				
Air Quality Conformity Task Force Consideration Date : November 2015				
Project Description (clearly describe project)				
<p>The project is located at the junction of SR-116 and SR 121 in Sonoma County (see Figures 1 and 2 attached). The project would replace a stop-controlled intersection at SR116/SR121 with either a roundabout or a 4-way signalized intersection. Bonneau Road would be widened and realigned.</p> <p>Landscaping, drainage systems, and access control would be modified. New sidewalks would be installed for pedestrians and bicyclists, with planting strips separating the sidewalks from the roadway. Within the project footprint, bicyclists would ride on the roadway shoulder, which could serve as a Class II bike lane.</p>				
Type of Project: Intersection Improvement Project				
County Sonoma	<i>Narrative Location/Route & Postmiles</i> SR 116 Post Miles 46.5 to 47.1 and SR 121 Post Miles 6.5 to 7.0 Caltrans Projects – EA# 3G900			
Lead Agency: Sonoma County Transportation Authority				
<i>Contact Person</i> Seana Gause	<i>Phone#</i> (707) 565-5372	<i>Fax#</i> NA	<i>Email</i> SGAUSE@sctainfo.org	
Federal Action for which Project-Level PM Conformity is Needed (check appropriate box)				
<i>Categorical Exclusion (NEPA)</i>	<input checked="" type="checkbox"/> EA or Draft EIS	<input type="checkbox"/> FONSI or Final EIS	<input type="checkbox"/> PS&E or Construction	<input type="checkbox"/> <i>Other</i>
Scheduled Date of Federal Action: December 3, 2015				
NEPA Delegation – Project Type (check appropriate box)				
<input type="checkbox"/> <i>Exempt</i>	<input type="checkbox"/> Section 6004 – Categorical Exemption	<input checked="" type="checkbox"/> Section 6005 – Non-Categorical Exemption		
Current Programming Dates (as appropriate)				
	PE/Environmental	ENG	ROW	CON
Start	August 2014	October 2016	October 2016	October 2018
End	October 2016	April 2018	April 2018	December 2019

Project Purpose and Need (Summary): *(please be brief)*

The purpose of the project is to improve operations at the high volume, 4-way stop at the SR116/SR121 intersect, reducing congestion and accidents for all modes of transportation, while maintaining and enhancing access to adjacent properties and parking. The improvements are needed due to high traffic volumes, heavy turning movements, and long peak-hour delays. Recent accident data show a higher-than-average total accident rate on SR121 at the project location. In addition, facilities for bicyclists and pedestrians at the intersection are limited.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic):* The area around the project site is primarily agricultural lands, rural residences, and, next to the highway, a gas station, motel, and other service retail uses. The closest residence is located along SR121 east of the SR116/SR121 intersection, and about 300 feet from its center.

Brief summary of assumptions and methodology used for conducting analysis

As an intersections improvement project, assumed that the project would not generate traffic or change the percentage of heavy trucks passing through the intersection.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Year / Road Segment	No Build			Round-About			Signalized Intersection		
	AADT	Trucks		AADT	Trucks		AADT	Trucks	
		%	#		%	#		%	#
Opening Year (2020)									
Southbound SR-116	18,063	4.2	759	18,063	4.2	759	18,063	4.2	759
Northbound SR-121	21,650	4.2	909	21,650	4.2	909	21,650	4.2	909
Westbound SR-121	25,013	4.2	1,051	25,013	4.2	1,051	25,013	4.2	1,051
Eastbound Bonneau Road	1,680	4.2	71	1,680	4.2	71	1,680	4.2	71

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Year / Road Segment	No Build			Round-About			Signalized Intersection		
	AADT	Trucks		AADT	Trucks		AADT	Trucks	
		%	#		%	#		%	#
Design Year (2040)									
Southbound SR-116	24,538	4.2	1,031	24,538	4.2	1,031	24,538	4.2	1,031
Northbound SR-121	31,178	4.2	1,309	31,178	4.2	1,309	31,178	4.2	1,309
Westbound SR-121	38,870	4.2	1,633	38,870	4.2	1,633	38,870	4.2	1,633
Eastbound Bonneau Road	2,600	4.2	116	2,600	4.2	116	2,600	4.2	116

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

Improvements at this rural highway intersection are not expected to be re-distributed as a result of the project.

Comments/Explanation/Details (please be brief)

See attached Project Description and Traffic Data attachments

Figure 1: Project Vicinity



Figure 2: Project Location

