

RTIP ID# <i>(required)</i> RIV031215					
TCWG Consideration Date: October 4, 2018					
Project Description <i>(clearly describe project)</i> The City of Temecula (City), in cooperation with the California Department of Transportation (Caltrans), proposes to improve a portion of Interstate 15 (I-15) between the existing Winchester Road (State Route [SR] 79)/I-15 interchange and Murrieta Hot Springs Road near the I-15/Interstate 215 (I-215) junction, including related improvements to the portion of I-215 from the I-15/I-215 junction to just south of the Murrieta Hot Springs Road/I-215 interchange, within the cities of Temecula and Murrieta in Riverside County, California. The purpose of the proposed project is to relieve traffic congestion and improve safety and operational efficiency within the project limits. The overall project is to construct a new interchange, French Valley Parkway at I-15, between the Winchester Road (SR-79)/I-15 interchange and the I-15/I-215 junction, along with enhancements to facilitate improved operations on the existing mainline facility. French Valley Parkway would be constructed as a six-lane arterial highway from Jefferson Avenue to Ynez Road. Auxiliary lanes would be provided in the northbound (NB) and southbound (SB) directions, and a collector/distributor (C/D) system would be constructed parallel to I-15 between the I-15/I-215 confluence and Winchester Road in the NB and SB directions. The currently proposed project, Phase II, would construct a two-lane NB C/D system along I-15 from the Winchester Road interchange northerly on-ramps to just north of the I-15/I-215 junction providing connectors to I-15 and I-215, within the cities of Temecula and Murrieta in Riverside County, California. The new lanes would each be 12 feet wide. The proposed project limits along I-15 are from Post Mile (PM) 5.5 to PM 9.6 and along I-215 from R8.43 to R9.75 – generally from north of the I-15/I-215 confluence to just south of the Winchester Road interchange. Improvements would include pavement widening, bridge widenings, drainage extensions, retaining walls, and utility relocations.					
Type of Project <i>(use Table 1 on instruction sheet)</i> Reconfigure existing interchange					
County Riverside	Narrative Location/Route & Postmiles Interstate 15, PM 5.5/9.6, and Interstate 215, PM R8.43/R9.75 Caltrans Projects – EA# 08-43272				
Lead Agency: City of Temecula					
Contact Person Edison Jaffery	Phone# (909) 383-6903	Fax#	Email edison.jaffery@dot.ca.gov		
Hot Spot Pollutant of Concern <i>(check one or both)</i> PM2.5 X PM10 X					
Federal Action for which Project-Level PM Conformity is Needed <i>(check appropriate box)</i>					
Categorical Exclusion (NEPA)	X	EA or Draft EIS	FONSI or Final EIS	PS&E or Construction	Other
Scheduled Date of Federal Action:					
NEPA Assignment – Project Type <i>(check appropriate box)</i>					
Exempt	Section 326 –Categorical Exemption	X Section 327 – Non-Categorical Exemption			
Current Programming Dates <i>(as appropriate)</i>					
	PE/Environmental	ENG	ROW	CON	
Start	1/3/05	1/1/11	1/1/13	9/21/20	
End	1/29/10	9/4/20	9/6/24	6/5/26	

Project Purpose and Need (Summary): (attach additional sheets as necessary)

Need

Based on field observations (LSA Associates, 2004), there are two existing operational deficiencies in the project area. During the AM peak hour of traffic, the queue on the southbound I-15 off-ramp for Winchester Road extends well back onto the freeway mainline, sometimes as far as the I-15/I-215 junction. This first deficiency occurs because the intersection at the ramp terminus cannot accommodate the number of vehicles that the freeway on-ramp feeds to it.

The second operational deficiency, which occurs on the northbound I-15 during the PM peak hour of traffic, occurs at the Winchester Road direct on-ramp. Traffic in this area breaks down and causes queuing back to the intersection at the ramp terminus. The inadequate gaps for on-ramp traffic results in heavy proportions of mainline traffic in the right lanes and, in turn, the merge area becomes congested to the extent that it fails to operate efficiently.

Population projections for the region indicate continuing growth in the area served by the project. Southern California has been growing eastward and is expected to continue to grow toward fringe areas. Riverside County has been a primary recipient of this growth trend. The population in Riverside County is projected to increase from 2.4 million in 2017 to 3.2 million in 2045 (Caltrans, 2018), an approximately 33 percent increase. With this growth, there would be a continuing deterioration in the level of service (LOS) within the study limits.

In addition to existing and projected deficient LOS, Caltrans' Traffic Accident Surveillance and Analysis System has identified that the overall accident rate for SB I-15 in the study area is above the State average. The highest percent of accidents on the I-15 mainline was categorized as rear-end type collisions for the NB and SB directions. These collisions were not associated with any adverse weather factors because they took place during daylight in clear, dry conditions; therefore, these accidents seem to be congestion related.

Purpose

- To reduce current and projected traffic congestion on the ramps and freeway mainline in the project area
- To improve safety and operations between Winchester Road and the I-15/I-215 Junction
- To provide alternative vehicular access to I-15 that will also provide operational improvement to the I-15/Winchester Road interchange
- To provide improvements to accommodate projected growth and to facilitate local circulation consistent with the General Plans of the Cities of Temecula and Murrieta.

The proposed improvements would relieve traffic congestion and consequently reduce those accidents related to traffic congestion. The proposed project addresses (1) the inadequate weaving distance and interchange spacing between the two interchanges and (2) the spacing between French Valley Parkway and the I-15/I-215 junction with a C/D system. This will alleviate traffic congestion, improve mainline operation and safety, and reduce accident frequency

Surrounding Land Use/Traffic Generators (*especially effect on diesel traffic*)

The section of I-15 served by the French Valley Parkway Interchange provides local freeway access to the area's residential and through traffic, including long distance commuters in Riverside and San Bernardino Counties. However, the number of travelers/commuters has dramatically increased from previous years; thus, the proposed French Valley Parkway interchange has been strategically designed to serve both local and regional traffic growth for years to come.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

In the opening year (2022), during the AM peak-hour, the project would improve the LOS on four highway segments, and there would be no change on four additional segments. In the evening peak hour, the LOS would improve on three highway segments, remain unchanged on four segments, and worsen on two segments; the Rancho California Road to Winchester Road segment would degrade from LOS C to LOS D, and the I-15 junction to I-15 lane drop segment would degrade from LOS B to LOS C. Overall, however, the proposed project would improve traffic flows within the project footprint in the opening year (the Rancho California Road to Winchester Road segment is south of the project

Table 4-5. Highway Levels of Service, Opening (2022) and Design Year (2045)

Road Segment	Level of Service							
	2022				2045			
	No Build		Build		No Build		Build	
	AM	PM	AM	PM	AM	PM	AM	PM
I-15								
Rancho California Road to Winchester Road off-ramp	C	C	C	D	D	E	D	F
Winchester Road on-ramp to I-15 lane addition	C	D	B	C	D	F	C	E
I-15 segment (5 lanes)	B	C	B	C	C	E	B	E
I-215 junction to I-15 lane drop	B	B	B	C	B	C	B	D
I-15 segment to Murrieta Hot Springs Road	B	C	A	B	C	E	B	C
North of Murrieta Hot Springs Road	C	E	C	E	D	F	D	F
I-215								
I-15 junction to Murrieta Hot Springs Road off-ramp	C	D	B	B	C	E	B	C
Murrieta Hot Springs Road off-ramp to lane addition	B	B	A	B	C	E	B	C
North of Murrieta Hot Springs Road on-ramp	B	D	B	D	C	E	C	E

Notes: AM – morning, PM – evening.

Source: Parsons, 2018.

Table 4-6. No-Build and Build Highway Segment Annual Average Daily Traffic, Opening (2022) and Design Year (2045)

Highway Segment		Vehicle Volumes (Annual Average Daily Traffic)							
		2022				2045			
		No-Build		Build		No-Build		Build	
		Total	Truck	Total	Truck	Total	Truck	Total	Truck
I-15 NB	Rancho California Road Slip On-ramp to Winchester Road Off-ramp	92,930	8,085	97,790	8,508	133,960	11,655	138,350	12,036
	Winchester Road Off-ramp to Winchester Road Loop On-ramp	77,280	6,723	82,740	7,198	115,310	10,032	121,080	10,534
	Winchester Road Loop On-ramp to Winchester Road Slip On-ramp	86,160	7,496	82,740	7,198	124,490	10,831	121,080	10,534
	Winchester Road Slip On-ramp to I-215 NB Off-ramp	102,620	8,928	82,740	7,198	142,020	12,356	121,080	10,534
	I-215 NB Off-ramp (I-15/I-215 split)	46,410	3,202	35,490	2,449	62,080	4,284	50,340	3,473
	I-215 NB Off-ramp to Murrieta Hot Springs Road Off-ramp	56,210	3,878			79,940	5,516		
	From I-215 to C/D Merge			47,250	3,260			70,740	4,881
	From C/D Merge to Murrieta Hot Springs Road Off-ramp			54,470	3,758			78,810	5,438
	Murrieta Hot Springs Road Off-ramp to Murrieta Springs Loop On-ramp	51,200	3,533	49,420	3,410	74,800	5,161	73,850	5,096
	Murrieta Springs Loop On-ramp to Murrieta Hot Springs Road Direct On-ramp	55,520	3,831	54,510	3,761	82,510	5,693	81,940	5,654
North of Murrieta Hot Springs Road	74,820	5,163	74,380	5,132	102,330	7,061	101,920	7,032	
I-215 NB	From I-15 NB	46,410	2,506			62,080	3,352		
	From I-15 to C/D Merge			35,490	1,916			50,340	2,718
	From C/D Merge to Murrieta Hot Springs Road Off-ramp			45,520	2,458			63,470	3,427
	Murrieta Hot Springs Road Off-ramp to Murrieta Hot Springs Road Loop On-ramp	40,710	2,198	40,530	2,189	56,280	3,039	56,920	3,074
	Murrieta Hot Springs Road Loop On-ramp to Murrieta Hot Springs Road Slip On-ramp	45,850	2,476	45,690	2,467	62,790	3,391	63,250	3,416
	North of Murrieta Hot Springs Road	59,070	3,190	59,010	3,187	77,970	4,210	78,460	4,237

Source: Parsons, 2018.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

In the design year (2045), during the AM peak-hour, the project would improve the LOS on five highway segments, and there would be no change on four additional segments. In the PM peak hour, the LOS would improve on four highway segments, remain unchanged on three segments, and worsen on two segments; the Rancho California Road to Winchester Road segment would degrade from LOS E to LOS F, and the I-15 junction to I-15 lane drop segment would degrade from LOS C to LOS D. Overall, however, the proposed project would improve traffic flows within the project footprint in the design year (the Rancho California Road to Winchester Road segment is south of the project).

Table 4-5. Highway Levels of Service, Opening (2022) and Design Year (2045)

Road Segment	Level of Service							
	2022				2045			
	No Build		Build		No Build		Build	
	AM	PM	AM	PM	AM	PM	AM	PM
I-15								
Rancho California Road to Winchester Road off-ramp	C	C	C	D	D	E	D	F
Winchester Road on-ramp to I-15 lane addition	C	D	B	C	D	F	C	E
I-15 segment (5 lanes)	B	C	B	C	C	E	B	E
I-215 junction to I-15 lane drop	B	B	B	C	B	C	B	D
I-15 segment to Murrieta Hot Springs Road	B	C	A	B	C	E	B	C
North of Murrieta Hot Springs Road	C	E	C	E	D	F	D	F
I-215								
I-15 junction to Murrieta Hot Springs Road off-ramp	C	D	B	B	C	E	B	C
Murrieta Hot Springs Road off-ramp to lane addition	B	B	A	B	C	E	B	C
North of Murrieta Hot Springs Road on-ramp	B	D	B	D	C	E	C	E

Notes: AM – morning, PM – evening.

Source: Parsons, 2018.

Table 4-6. No-Build and Build Highway Segment Annual Average Daily Traffic, Opening (2022) and Design Year (2045)

Highway Segment		Vehicle Volumes (Annual Average Daily Traffic)							
		2022				2045			
		No-Build		Build		No-Build		Build	
		Total	Truck	Total	Truck	Total	Truck	Total	Truck
I-15 NB	Rancho California Road Slip On-ramp to Winchester Road Off-ramp	92,930	8,085	97,790	8,508	133,960	11,655	138,350	12,036
	Winchester Road Off-ramp to Winchester Road Loop On-ramp	77,280	6,723	82,740	7,198	115,310	10,032	121,080	10,534
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	I-215 NB Off-ramp (I-15/I-215 split)	46,410	3,202	35,490	2,449	62,080	4,284	50,340	3,473
	I-215 NB Off-ramp to Murrieta Hot Springs Road Off-ramp	56,210	3,878			79,940	5,516		
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	Murrieta Springs Loop On-ramp to Murrieta Hot Springs Road Direct On-ramp	55,520	3,831	54,510	3,761	82,510	5,693	81,940	5,654
North of Murrieta Hot Springs Road	74,820	5,163	74,380	5,132	102,330	7,061	101,920	7,032	
I-215 NB	From I-15 NB	46,410	2,506			62,080	3,352		
	From I-15 to C/D Merge			35,490	1,916			50,340	2,718
	From C/D Merge to Murrieta Hot Springs Road Off-ramp			45,520	2,458			63,470	3,427
	Murrieta Hot Springs Road Off-ramp to Murrieta Hot Springs Road Loop On-ramp	40,710	2,198	40,530	2,189	56,280	3,039	56,920	3,074
	Murrieta Hot Springs Road Loop On-ramp to Murrieta Hot Springs Road Slip On-ramp	45,850	2,476	45,690	2,467	62,790	3,391	63,250	3,416
	North of Murrieta Hot Springs Road	59,070	3,190	59,010	3,187	77,970	4,210	78,460	4,237

Source: Parsons, 2018.

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

See Table 4-5 and Table 4-6 above.

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

See Table 4-5 and Table 4-6 above.

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

The changes in traffic distribution and traffic operations with the project would have minor effects on emissions of criteria air pollutants along the project alignment (Table 4-7, See Attachments). The overall effects of the project on emissions of criteria air pollutants and their precursors are very minor. Future emissions of reactive organic gases (ROG), nitrogen oxides (NO_x), and CO would be lower than at present, with or without implementation of the project due to improved fuel economy and pollution control technologies.

The CT-EMFAC model does not account for re-entrained road dust, so PM₁₀ and PM_{2.5} from re-entrained road dust must be separately calculated. The ARB has published an emissions factor for Riverside County (California Air Resources Board 2018) of 116.3 pounds of PM₁₀ per million vehicle-miles traveled, with PM_{2.5} being estimated at 25 percent of PM₁₀ emissions.

Comments/Explanation/Details *(attach additional sheets as necessary)*

The proposed project would expand an existing highway. Based on Caltrans truck counts for 2016 (Caltrans, 2017), heavy trucks on I-15 are 8.7 percent of Average Annual Daily Traffic (AADT) south of the junction with I-215 and 6.9 percent of the AADT north of the junction with I-215. On I-215 at its junction with I-15, heavy trucks are 5.4 percent of AADT. Heavy trucks are assumed to be primarily diesel trucks. Heavy truck volumes are generally at or greater than 10,000 AADT on I-15 south of its junction with I-215, and less than 10,000 AADT on I-15 and I-215 north of their junction.

The proposed project would not generate new vehicle trips; thus, it would not significantly increase the number of diesel vehicles on local segments of I-15 or I-215, or associated ramps or intersections (see Sections 4.2.1 and 4.2.2). The proposed project would primarily serve to improve traffic flows on I-15 and I-215 in the Temecula/Murrieta area. Improved traffic operations could induce some motorists and truck drivers to alter their routes, but this would be a very minor effect. Diesel trucks produce fewer PM_{2.5} emissions at higher speeds, so the project would be expected to reduce emissions from diesel trucks traveling on I-15 and I-215 relative to no-build conditions, and these reductions would offset any local increases from rerouting of trucks.

The LOS at intersections near the project alignment (Tables 4-2 and 4-4, See Attachments) would not be adversely affected by the proposed project. Two intersections (Winchester Road/ Ynez Road and Winchester Road/Jefferson Avenue) would degrade from LOS D to LOS E during the peak hour with implementation of the proposed project. This decline in the quality of traffic operations at these intersections, however, would not be due to a significant number of diesel vehicles.

Diesel truck volumes at local intersections would not change substantially due to the proposed project. Total truck percentages at local intersections range from less than 2 percent to almost 6 percent, with an average of approximately 3 percent (Parsons, 2018). These truck percentages would not increase with implementation of the project.

The proposed project has no bus or rail terminal component, and it would not alter patterns to or from any existing bus or rail terminal.

The proposed project would not expand any bus terminal, rail terminal, or related transfer point that would increase the number of diesel vehicles congregating at a single location.

The project is not in or affecting an area or location identified in any PM₁₀ or PM_{2.5} implementation plan. The immediate project area is not considered to be a site of violation or possible violation.

Therefore, the proposed project is not considered a POAQC.

Attachments

Table 4-7. Operational Emissions of Criteria Air Pollutants and Precursors on Interstate Segments Affected by the Project

SCENARIO	POLLUTANT EMISSIONS (lb/day)								
	ROG	NO _x	CO	Exhaust		Road Dust		Total PM	
				PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
2017 (Baseline)	60	428	772	47	22	38	10	85	32
2022 No Build	39	242	480	46	19	44	11	90	30
2022 Build	40	248	490	47	20	43	11	90	31
Project Increment	1	6	10	1	1	-1	0	0	1
2045 No Build	25	60	302	61	25	60	15	121	40
2045 Build	26	62	314	63	25	62	16	125	41
Project Increment	1	2	12	2	0	2	1	4	1

Notes: See Appendix D - CT-EMFAC Output File. Project emissions would not exceed any applicable significance thresholds or regulatory limits. Road dust estimated based on ARB factor of 116.3 pounds per million vehicle-miles traveled.

Table 4-2. No-Build and Build Intersection Peak-Hour Levels of Service (2022)

Intersection	2022 No Build				2022 Build			
	AM		PM		AM		PM	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Date Street & Ynez Road	58.3	E	69.4	E	56.9	E	57.1	E
Cherry Street/French Valley Parkway & Jefferson Avenue	58.5	E	46.2	D	59.2	E	53.4	D
Winchester Road & Ynez Road	41.0	D	45.7	D	62.8	E	44.6	D
Winchester Road & I-15 NB	15.2	B	16.2	B	14.3	B	16.2	B
Winchester Road & I-15 SB	46.2	D	21.4	C	25.3	C	17.4	B
Winchester Road & Jefferson Avenue	37.0	D	53.3	D	33.6	C	60.8	E

Notes: AM – morning, PM – evening, LOS – Level of Service, NB – northbound, SB – southbound.

Source: Parsons, 2018.

Table 4-4. No-Build and Build Intersection Peak-Hour Levels of Service (2045)

Intersection	2045 No Build				2045 Build			
	AM		PM		AM		PM	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Date Street & Ynez Road	66.2	E	84.9	F	64.6	E	72.5	E
Cherry Street/French Valley Parkway & Jefferson Avenue	178.7	F	190.8	F	177.6	F	183.6	F
Winchester Road & Ynez Road	72.4	E	87.0	F	71.6	E	70.3	E
Winchester Road & I-15 NB	19.0	B	15.8	B	18.7	B	8.9	A
Winchester Road & I-15 SB	65.3	E	18.4	B	57.1	E	19.1	B
Winchester Road & Jefferson Avenue	53.2	D	108.0	F	37.2	D	99.6	F

Notes: AM – morning, PM – evening, LOS – Level of Service, NB – northbound, SB – southbound.

Source: Parsons, 2018.



Figure 1-1. Project Location Map

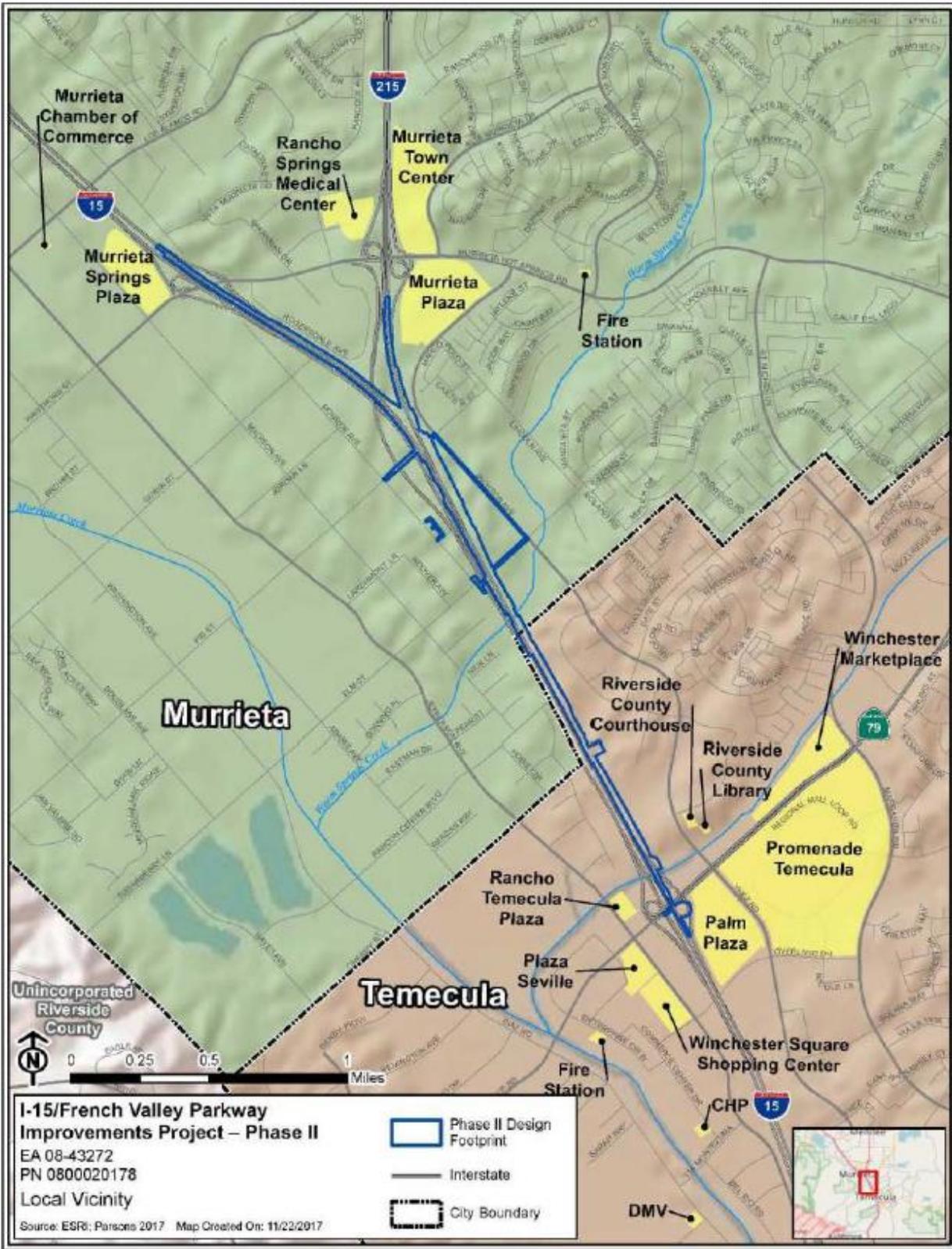


Figure 1-2. Local Vicinity Map

