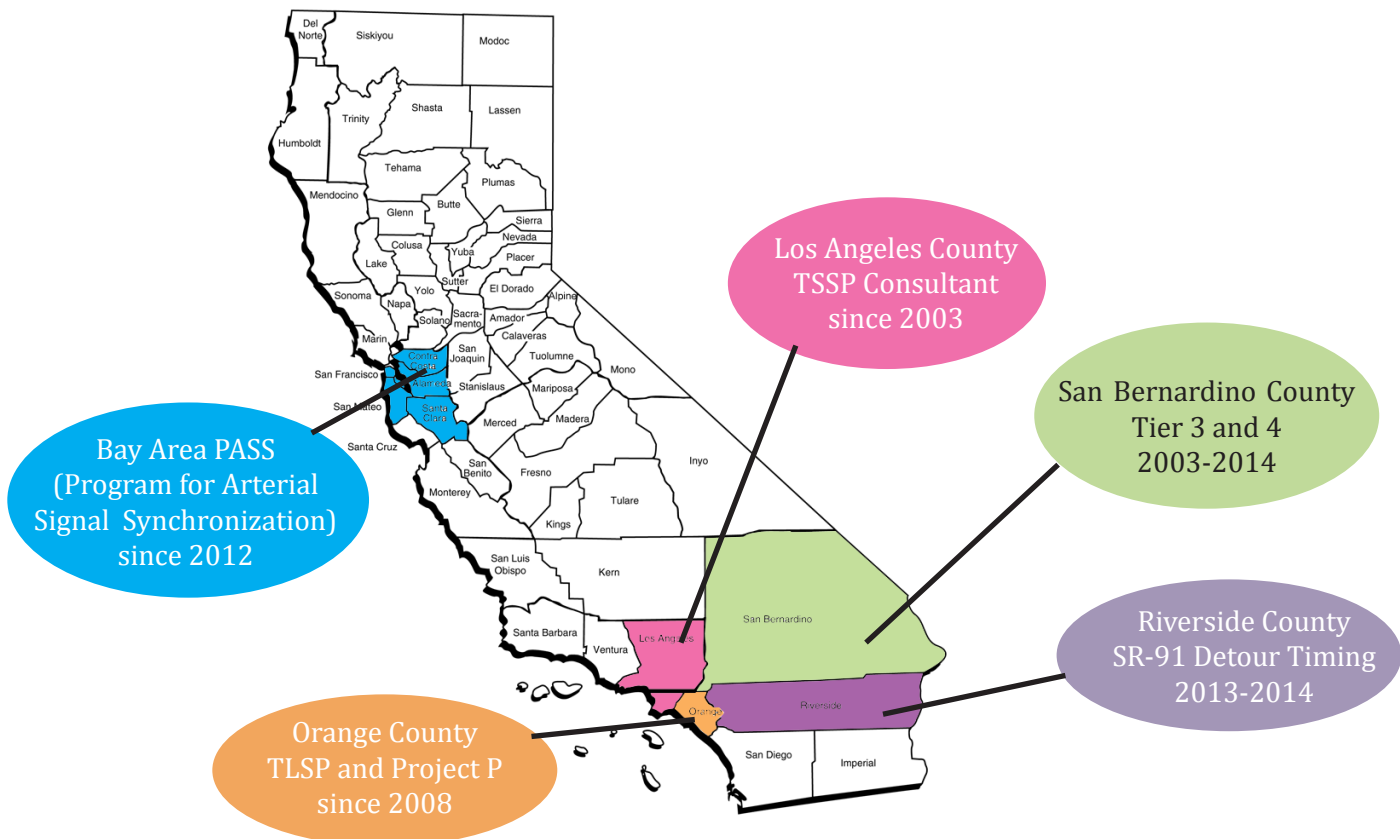


TRAFFIC ENGINEERING PLANNING EXPERIENCE

ADVANTEC has performed numerous projects involving regional traffic signal synchronization, and other related traffic engineering services, for over 110 cities in Southern California, covering all five counties: Orange, Los Angeles, Riverside, San Bernardino, and Riverside, as well as conducting work in northern California in the Bay Area. All of these projects include development of signal synchronization timing plans and equipment upgrades involving multiple jurisdictions. ADVANTEC is one of the first consulting firms to implement and fine-tune traffic signal timings in the field for cities and has been doing so since 1998.

Our Regional Traffic Signal Synchronization experience is detailed in the table below.

County	Agency	Regional Traffic Signal Synchronization Projects
Los Angeles	County of L.A.	Alondra TSSP; Garfield/Eastern/Cherry TSSP; Florence TSSP; Valley East TSSP; Firestone TSSP
Orange	OCTA	Beach Blvd TSSP, Yorba Linda Blvd TSSP; Magnolia TSSP, Jeffrey Road TSSP, San Clemente TSSP, Edinger TSSP, Seal Beach Blvd TSSP
San Bernardino	SANBAG	Regional Signal Synchronization Tier 3 and 4
Riverside	Caltrans	Signal synchronization of ramps and intersections adjacent to SR-91 construction detour
Bay Area	MTC	El Camino Real TSSP; So San Francisco TSSP; Oakland TSSP



TRAFFIC ENGINEERING PLANNING EXPERIENCE

ADVANTEC's Recent Signal Synchronization Projects in California

Project	County	No. of Ints.	No. of Agencies	TMC	Center to center communications	Ethernet IP Protocol	Wireless Communications	Fiber Optic Communications	Ecopolite Controls System	McCallin Collozet System	GPS Clocks	Cellular modems
SANBAG Tier 3 and 4 Traffic Signal System and Synchronization	San Bernardino	691	16	✓	✓	✓	✓	✓	✓	✓	✓	✓
MTC - Oakland Traffic Signal Synchronization	Alameda, Bay Area	41	2								✓	
MTC - South San Francisco Traffic Signal Synchronization	San Mateo, Bay Area	78	2									
MTC - El Camino Real Traffic Signal Synchronization	Santa Clara, Bay Area	59	6								✓	
Seal Beach Blvd ITS and TMC improvements	Orange	15	1	✓		✓		✓		✓		
OCTA - Jamboree Rd Traffic Signal Synchronization	Orange	16	2	✓		✓		✓	✓			
San Clemente Traffic Signal Synchronization	Orange	88	2	✓		✓	✓	✓				
OCTA - Edinger Avenue Traffic Signal Synchronization	Orange	78	5			✓	✓	✓		✓		
Jeffrey Road Traffic Signal Synchronization	Orange	73	1	✓		✓		✓	✓			
Fairview Road Traffic Signal Synchronization	Orange	91	3	✓		✓	✓	✓				
OCTA - Magnolia Ave Traffic Signal Synchronization	Orange	54	8			✓	✓	✓		✓		
OCTA - Yorba Linda Traffic Signal Synchronization	Orange	46	5	✓		✓	✓	✓			✓	
Beach Blvd Traffic Light Synchronization and Monitoring Project	Orange	71	8			✓		✓			✓	
Inglewood IIS Phase II Design-Build	Los Angeles	45	2	✓	✓	✓		✓		✓	✓	
Downey Firestone IIS Design	Los Angeles	14	2	✓		✓		✓		✓		
Trunkey Florence ITS Design	Los Angeles	19	2	✓		✓		✓		✓		
Compton TS Phase I	Los Angeles	78	1	✓		✓	✓		✓			
Santa Ana I-55/I-5 Smart Corridor	Orange	31	2					✓				
Elko Avenue/Del Mar IIS	Los Angeles	6	1					✓				
SR-91 Construction Detour Signal Timing	Riverside	56	2	✓		✓						

Our signal synchronization projects have led to significant improvements and benefits, as shown on a few corridors below:

	Travel Speed (mph)	Delay (mins.)	No. of Stops	Benefit/Cost Ratio*
SANBAG Regional Signal Synchronization	19%	-36%	-35%	16:1
OCTA Beach Blvd	21%	-33%	-30%	21:1
OCTA Yorba Linda Blvd	10%	-25%	-21%	13:1
OCTA Magnolia Blvd	12%	-21%	-22%	20:1
OCTA Jeffrey Road	10%	-18%	-26%	24:1
MTC El Camino Real Blvd	16%	-23%	-34%	110:1

*BIC Ratio is based on individual agency parameters; MTC use 3- year B/C, the rest used 1-year