

# STATE ROUTE 91 IMPLEMENTATION PLAN

# 2024

## DRAFT

Prepared By:

 **MARK  
THOMAS**



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Every year since 2003, OCTA, RCTC, and stakeholders have worked collaboratively to review a program of projects along the SR-91 corridor.

## B E N E F I T S

- Provides seamless connectivity between Orange and Riverside Counties
- Increases travel options
- Optimizes vehicle throughput
- Reinvests net 91 Express Lanes revenues on the SR-91 corridor to improve regional mobility
- Investments to date: \$2.2 billion

### COMPLETED EFFORTS

REGION	PROJECT	COST (MILLIONS)	COMPLETION
Orange County	Eastbound Lane Addition (SR-241 to SR-71)	\$52.1	2010
	Fifth Lane Addition (SR-55 to SR-241)	\$85.2	2013
	Westbound Lane at Tustin Avenue	\$43.3	2016
	Anaheim Canyon Metrolink Station Improvements	\$34.2	2023
Riverside County	Green River Road Overcrossing	\$24.3	2009
	North Main Street Corona Metrolink Parking Structure	\$25	2009
	91 Corridor Improvement Project (Initial Phase)	\$1,407	2017
	La Sierra Metrolink Parking Improvements	\$6.3	2019
	15/91 Express Lanes Connector	\$270	2023
	Eastbound 91 Express Lane Extension	\$10	2023
Bi-County	Metrolink Service Improvements	\$249	2016
	Express Bus Service	\$6	2019
	SR-91 Corridor Operations Project	\$38	2022

# State Route 91 Implementation Plan 2024



ANTICIPATED PROJECTS	REGION	PROJECT	COST (MILLIONS)	CURRENT PHASE
	Orange County	SR-91 Improvements (SR-57 to SR-55)	\$460	Final Design
		Placentia Metrolink Rail Station	\$34.8	Final Design
		Metrolink Improvements	TBD	Planning
	Riverside County	Santa Ana River Trail	\$36.5+	Planning
		SR-71/SR-91 Interchange Improvements	\$137	Construction
		Improvements East of I-15	TBD	Preliminary Engineering
	Bi-County	SR-241/SR-91 Tolloed Express Connector	\$423	Final Design
		91 Eastbound Corridor Operations Project (SR-241 to SR-71)	TBD	Environmental Revalidation
91 Westbound Improvements (SR-241 to SR-71)		TBD	Preliminary Engineering	

CONCEPTS	LOCATION	COST (MILLIONS)
	Green River Road Bike Lane Gap Closure	TBD
	North Main Transit Connector	\$125
	Elevated 4-Lane Facility (MIS Corridor A) from SR-241 to I-15	\$2,720
	WB SR-91 to SB SR-55 Connector Improvements	\$75-\$150
	EB SR-91 Fifth Lane Addition at SR-241	\$31
	Fairmont Boulevard Improvements	\$76.8





## Introduction

Previous law authorized the California Department of Transportation (Caltrans) to enter into franchise agreements with private companies to construct and operate four demonstration toll road projects in California. This resulted in the development of the 91 Express Lanes facility in Orange County. The four-lane, 10-mile toll road runs along the median of State Route 91 (SR-91) in northeast Orange County between the Orange/Riverside County line and State Route 55 (SR-55). Since the 91 Express Lanes carried its first vehicle on December 27, 1995, the facility has saved users tens of millions of hours of commuting time.

While the 91 Express Lanes facility has improved travel time along the SR-91 corridor, provisions in the franchise agreement between Caltrans and the private franchisee, the California Private Transportation Company (CPTC), prohibited Caltrans and county transportation agencies from adding transportation capacity or operational improvements to the SR-91 corridor through the year 2030 from Interstate 15 (I-15) in Riverside County to the Orange/Los Angeles Counties border. Consequently, the public agencies were barred from adding new lanes, improving interchanges, and adding other improvements to decrease congestion on the SR-91 freeway.

Recognizing the need to eliminate the non-compete provision of the franchise agreement, Governor Gray Davis signed Assembly Bill 1010

(Lou Correa) (AB 1010) into law in September 2002, paving the way for much-needed congestion relief for thousands of drivers who use SR-91 to travel between Riverside and Orange Counties each day. The bill allowed the Orange County Transportation Authority (OCTA) to purchase the 91 Express Lanes franchise and eliminate the non-compete clause that prohibited capacity-enhancing improvements from being implemented on SR-91. The purchase agreement for the 91 Express Lanes was completed on January 3, 2003, placing the road in public hands at a cost of \$207.5 million. With the elimination of the non-compete provision through AB 1010 and the subsequent 91 Express Lanes purchase by OCTA, Orange County and Riverside County public officials and Caltrans Districts 8 and 12 have been coordinating improvement plans for SR-91.



## Introduction (continued)

Senate Bill 1316 (Lou Correa) (SB 1316) was signed into law in September 2008 as an update to the provisions of AB 1010. SB 1316 authorizes OCTA to transfer its rights and interests in the Riverside County portion of SR-91 toll lanes by assigning them to the Riverside County Transportation Commission (RCTC) and authorizes RCTC to operate tolls for 50 years. In 2017, RCTC opened the extension of the 91 Express Lanes to traffic into Riverside County with completion of the initial phase of the SR-91 Corridor Improvement Project (see Appendix B). SB 1316 requires OCTA and RCTC, in consultation with Caltrans, to issue an annual SR-91 Implementation Plan (Plan) for SR-91 improvements between State Route 57 (SR-57) and I-15. The Plans prior to adoption of SB 1316 included a westerly project limit of SR-55. The Plan establishes a program of potential improvements to relieve congestion and improve operations in the SR-91 corridor.

The 2024 Plan fulfills the requirement to provide the State Legislature with an annual Implementation Plan for SR-91 improvements and builds on the 2023 Plan. The projects included in the Plan have been infused with various sources of local, state, and federal funding. The Plan includes overviews, status summaries, and proposed costs and schedules for projects to improve mobility on SR-91. Also included are conceptual lane diagrams (as appropriate), and discussions of key considerations that need to be addressed in the planning and development of each project. This Plan provides OCTA, RCTC, and Caltrans with a framework to implement SR-91 and other related improvements. Future annual Plan updates will continue to refine the scope, cost, and schedule of each project included in this version of the Plan.

## 91 EXPRESS LANES TOLL POLICY GOALS

With the completion of the State Route 91 Corridor Improvement Project's initial phase in spring 2017, there are approximately 18 miles of Express Lanes between Orange and Riverside counties. OCTA and RCTC have adopted goals for the 91 Express Lanes to continue to maintain a safe, reliable, and predictable travel time for express lane users traversing seamlessly between the two counties. The goals listed here take into consideration the 91 Express Lanes as well as the SR-91 corridor at large.

### These guiding principles include:

- Optimizing vehicle throughput at free flow speeds;
- Increasing average vehicle occupancy;
- Balancing capacity and demand to serve customers who pay tolls as well as carpoolers (3+) who are offered discounted tolls;
- Paying debt service and maintaining debt service coverage;
- Generating sufficient revenue to sustain the financial viability of the 91 express lanes; and
- When appropriate, reinvesting net revenues on the SR-91 corridor to improve regional mobility.

## Project Accomplishments



Much progress has been made since the initial 2003 SR-91 Implementation Plan was approved. The 2024 Plan includes select completed project exhibits as a historical reference, which can be found in Appendix B.

## Completed Construction/ Improvement Projects

- Repaved and sealed pavement surfaces, restriped, and replaced raised channelizers on the 91 Express Lanes.
- On EB SR-91 the roadway was restriped, and the median barrier was reconstructed. This project removed the CHP enforcement area and extended the EB auxiliary lane from SR-71 to the Serfas Club Drive off-ramp.
- The WB auxiliary lane was extended between the County line and SR-241. This project eliminated the lane drop at the 91 Express Lanes and extended the existing auxiliary lane from the County line to SR-241 in the westbound direction. This improvement minimized the traffic delays at the lane drop area, resulting in improved vehicle progression.
- On WB SR-91 the roadway was restriped to extend the auxiliary lane between SR-71 and the County line. This resulted in a new continuous lane between SR-71 and SR-241.
- Safety Improvements were constructed at the Truck Scales. Existing shoulders were improved, lanes were re-striped, illumination improved, and signage was modified into and out of the EB facilities.
- Green River Road Overcrossing Replacement
- Metrolink Parking Structure at the North Main Street Corona Metrolink Station
- EB SR-91 lane addition from SR-241 to SR-71
- Additional SR-91 WB and EB travel lane between SR-55 and SR-241
- SR-91 WB bypass lane to Tustin Avenue at SR-55
- Metrolink Service Improvements
- Initial SR-91 Corridor Improvement Project (CIP)
- La Sierra Metrolink Parking Improvements
- Express Bus Service
- 91 Corridor Operations Project
- Anaheim Canyon Metrolink Station Improvements
- 15/91 Express Lanes Connector
- Eastbound 91 Express Lane Extension



These projects provide enhanced freeway capacity and/or improved mobility for one of the most congested segments of SR-91.

The completed EB SR-91 lane addition project from SR-241 to SR-71 (see Appendix B) has improved highway operations. This project reduced travel time by approximately 20 minutes during its opening year.

The Initial CIP project has provided significant benefits to drivers on SR-91. This \$1.4 billion investment project included widening SR-91 by one GP lane in each direction east of SR-71, adding collector-distributor (CD) roads and direct south connectors at I-15/SR-91, extending the 91 Express Lanes to I-15, and providing system/local interchange improvements. The new lanes and other improvements provide time savings, offer choice and reliability, boost safety, enhance access and job creation, promote ridesharing, reduce pollution, and aid the movement of goods along the region's roadways.

The WB SR-91 Widening Project completed construction in 2016 from State College Blvd to Interstate 5 (I-5). This project added one WB general purpose lane and removed the dedicated exit lane to State College Blvd from the SB SR-57 to WB SR-91 Connector that contributed to operational issues due to the short weaving distance. While this project falls just to the west of the limits for the Plan study area, it will have an influence on operations within the Plan area.

A \$2.8 billion U.S. Army Corps of Engineers (USACE) project called the Santa Ana River Mainstem project is ongoing and will provide flood protection from the recently improved Prado Dam (near SR-71) to the Pacific Ocean. The project includes many features that have already been completed, including improvements to Seven Oaks Dam, 30 miles of levees, and modifications to original project features including raising the Prado Dam embankment and installation of new, larger capacity outlet works. In 2021, the Corps and Orange County Flood Control District amended a cooperative agreement which would allow the Corps to use federal funds under the Bipartisan Budget Act to complete select features of the project.

Due to the adjacency of SR-91 to the Santa Ana River, project teams have coordinated with the USACE, Orange County Flood Control District, Caltrans, and other federal, regional, and local agencies to coordinate and accommodate planned SR-91 improvements.

## Completed Designs and Reports

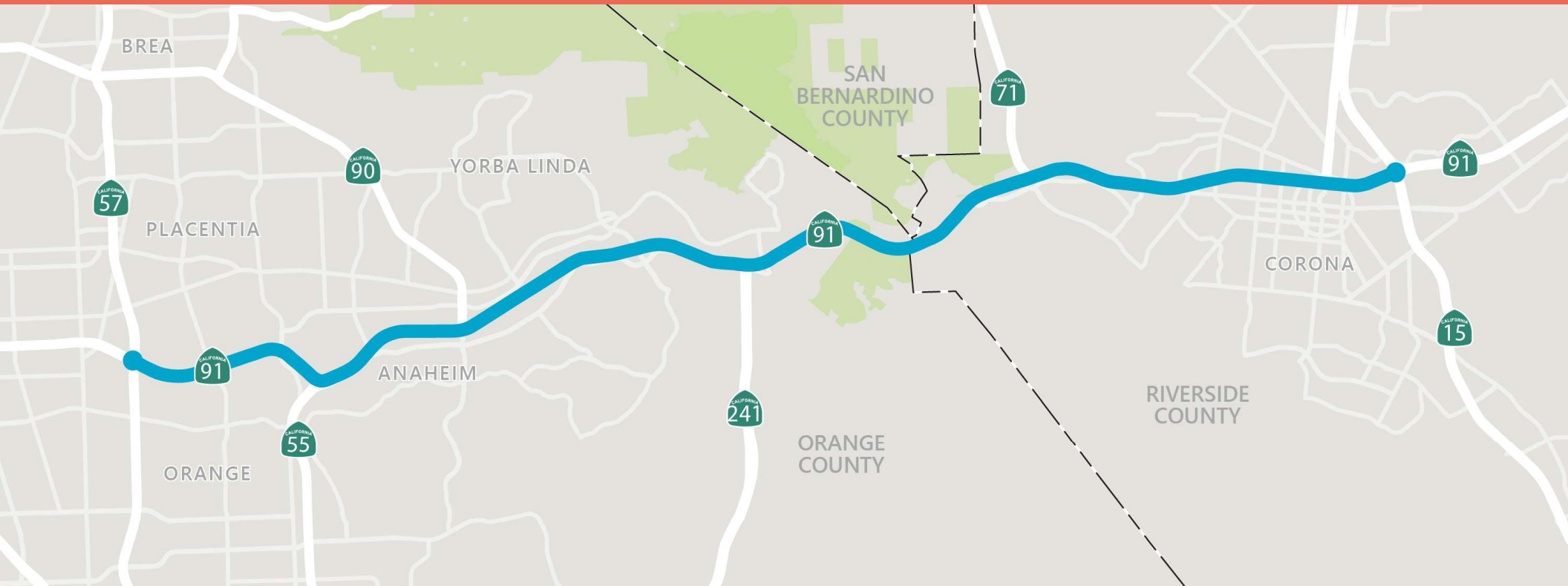


There are various project development phase documents (Feasibility Reports, Studies, PSR, PA/ED, or PS&E) that are completed, or are in draft form and anticipated to be approved that identify mobility improvements. These documents include:

- MIS – Final Project Report: Locally Preferred Strategy Report (January 2006)
- Renewed Measure M Transportation Investment Plan (November 2006)
- RCTC 10-Year Western County Highway Delivery Plan (December 2006)
- SR-91/Fairmont Boulevard Feasibility Study (December 2009)
- Corridor System Management Plan (CSMP) Orange County SR-91 Corridor Final Report (August 2010)
- Renewed Measure M Capital Action Plan (April 2011)
- Project Report & Environmental Document for 91 Corridor Improvement Project (October 2012)
- SR-71/SR-91 Interchange Environmental Phase (2011) and Final Design (2015)
- Project Report & Environmental Document for SR-241/SR-91 Tolled Express Connector (April 2020)
- Project Report & Environmental Document for SR-91 Improvements Between SR-57 and SR-55 (July 2020)
- Environmental Documents for Santa Ana River Trail Phase 4 and Phase 6 (2021)
- Final Alternative Analysis Report for SR-91 Eastbound Corridor Operations Project from SR-241 to SR-71 (April 2022)
- 2023 Next 10 Delivery Plan (October 2023)



## Project Limits



The project study limits encompass the segment of SR-91 from west of the junction of SR-57 and SR-91 in the City of Anaheim in Orange County, to east of the junction of SR-91 and I-15 in the City of Corona in Riverside County. The freeway segment is approximately 20.3 miles long and includes 12.7 miles within Orange County and 7.6 miles within Riverside County.

## Existing Traffic Conditions Summary

For the 2024 Plan, existing traffic patterns along the SR-91 study corridor were evaluated to understand the changes between 2022 and 2023 due to factors that influence the users. These factors may include remote work policies implemented by employers, variations of school schedules, increase in non-work-related trips, and construction activities along SR-91 from the 15/91 Express Lanes Connector and SR-71/SR-91 Interchange Improvements projects.

Weekday traffic volumes on both general-purpose lanes and express lanes were obtained from the Caltrans Performance Measurement System (PeMS) database, collected traffic counts at on- and off-ramps, and weekday travel speed data collected from Inrix. All above data was obtained during the month of October 2023 for comparison purposes.

Analysis of the 2023 traffic data showed slight variations in travel patterns compared to the 2022 data. The similar traffic demand translated to the similarity in traffic congestion patterns for the SR-91 corridor between 2022 and 2023, showing the same bottleneck locations with a slightly different congestion period as a result of construction activities.

Considering that traffic patterns on the SR-91 corridor are generally consistent between 2022 and 2023 along with some temporary variation of traffic patterns due to the on-going construction activities, the existing conditions for the 2024 Plan will utilize the 2022 existing traffic analysis from the 2023 Plan. Traffic conditions will continue to

be monitored to assess when to update the existing traffic analysis for upcoming Implementation Plans.

The existing traffic analysis from the 2023 Plan was developed using traffic data collected in 2022. Morning (6 a.m. to 10 a.m.) and afternoon (3 p.m. to 7 p.m.) peak period traffic volumes were collected from multiple data sources. The SR-91 mainline and High Occupancy Vehicle (HOV) volumes were obtained from the Caltrans Performance Measurement System (PeMS). The SR-91 Express Lane volumes were provided by OCTA and RCTC. The SR-91 on- and off-ramp volumes were collected from the field. In addition, the travel time and speed data were collected from the field and supplemented with INRIX speed data. All existing traffic data represent typical weekday traffic patterns along the SR-91 corridor in the month of October 2022.



## Existing Traffic Conditions Summary

During the weekdays, westbound SR-91 experiences heavier traffic conditions during the morning commute for travelers leaving Riverside County to employment areas in Orange and Los Angeles Counties. The corridor is generally most congested between the peak period of 6 a.m. to 9 a.m. in the westbound direction and the peak period of 3 p.m. to 7 p.m. in the eastbound direction. Due to the high demand, congestion in the corridor occurs before and after the peak periods. The eastbound afternoon conditions tend to be exacerbated by the lack of receiving capacity in the Riverside County portion of the SR-91 corridor. Accordingly, RCTC is working closely with Caltrans District 8 to sponsor improvements that will provide congestion relief for the eastbound afternoon condition. Some of these improvements include the recently completed 15/91 Express Lanes Connector, the SR-71/SR-91 Interchange, and Improvements East of I-15.

The following is a summary of the deficiencies identified along the SR-91 corridor:

- Heavy traffic volumes to/from I-15 converge with the SR-91 and increase delay during the morning and evening peak hours.
- SR-71 traffic demand as well as physical and operational constraints for the EB SR-91 to NB SR-71 connector contribute to mainline and EB SR-91 corridor delays.
- Completion of the westbound 91 Corridor Operations Project improves the traffic operations in the westbound direction. However, traffic entering the WB SR-91 from the Green River Road and SR-71 on-ramps still contributes to mainline congestion during the morning peak period.
- High traffic volumes entering the freeway from Gypsum Canyon Road, Santa Ana Canyon Road, Green River Road, Weir Canyon Road, Imperial Highway and Lakeview Avenue contribute to congestion on the SR-91 mainline.
- One of the two lanes from the Eastern Transportation Corridor (State Route 241) connector is dropped at the merge to EB SR-91 causing additional congestion on the EB SR-91 general purpose lanes.
- At the NB SR-55 interchange with EB SR-91, a lane on SR-91 is dropped (as a dedicated exit) at Lakeview Avenue and a second lane is dropped (as a dedicated exit) at Imperial Highway creating a weave condition.
- WB SR-91 drops two GP lanes and a 91 Express Lane to SB SR-55, contributing to mainline congestion. This drop also occurs on the left-hand side of SR-91, creating a weaving condition.
- WB traffic entering SR-91 at Lakeview Avenue traveling to SB SR-55 contributes to mainline congestion by weaving across three lanes on SR-91.
- A lane drop on EB SR-91 at SB SR-241 creates a chokepoint.

## Logical Project Sequencing

As noted, the SR-91 Corridor in Riverside County, in the EB direction, lacks the receiving capacity during the afternoon peak period which creates a bottleneck condition. Due to the high levels of congestion experienced on this segment of the corridor, there is sensitivity to any changes that may affect traffic operations. Without first addressing the congestion in Riverside County, any performance or capacity enhancing projects upstream would further exacerbate congested conditions causing additional delays and queueing. Therefore, projects that have the potential to impact demand and/or provide additional capacity in the EB direction should be considered in a logical sequence to ensure that there is sufficient receiving capacity in Riverside County.

In October 2019, a consensus was reached between OCTA, RCTC, Caltrans, and the TCA that would set the stage for a series of projects to be implemented in sequential order to improve the SR-91 corridor. OCTA, RCTC, TCA, and Caltrans, Districts 8 and 12, as well as Caltrans Headquarters directors, worked through five major issues. This framework will enable the streamlining of the implementation of the SR-241/SR-91 Tolloed Express Connector project while minimizing impacts to the 91 corridor. The subject matter of the multi-agency consensus is outlined to the right:

1. Setting priorities for SR-91 corridor projects to reduce construction-related impacts;
2. Allowing completion of the environmental approval process and updating related programming documents;
3. Clarifying lead agencies for final design, construction, and maintenance;
4. Identifying the principal funding agency for final design, construction, and maintenance; and
5. Designating lead agencies for retaining toll revenue and toll setting/operational control.

**Based on the above framework, the agencies reached consensus on a 91 Corridor program of projects and sequencing as outlined below:**

- 15/91 Express Lanes Connector (completed)
- SR-91 Corridor Operations Project (completed)
- SR-71/SR-91 Interchange Improvements
- SR-241/SR-91 Tolloed Express Connector\*

\*Note: SR-241/SR-91 Tolloed Express Connector is not dependent upon completion of SR-71/SR-91 Interchange Improvements

## Project Summary

The projects in this Plan are presented in the following groups: Orange County Projects, Riverside County Projects and Bi-County Projects. The stage of development for each project, such as planning, final design, construction, or procurement and implementation, varies as noted in the project summaries. Table 1 summarizes the various planned projects, concept projects, and completed projects. For details on each project refer to Section 2 for planned projects, Appendix A for concepts, and Appendix B for selected completed projects.

- The Orange County projects have a total cost of approximately \$495 million. The projects include the SR-91 improvements between SR-57 and SR-55, Placentia Metrolink rail station, and Metrolink Improvements.
- The Riverside County projects have a total cost of over \$173 million. The improvements include: the Santa Ana River Trail, SR-71/SR-91 Interchange Improvements, and SR-91 improvements east of I-15.
- The Bi-County projects benefit both Orange and Riverside Counties. The total cost for the Bi-County projects exceeds \$573 million. The improvements include: the SR-241/SR-91 Tolled Express Connector, 91 Eastbound Corridor Operations Project (SR-241 to SR-71), and 91 Westbound Improvements (SR-241 to SR-71).

**Table 1 – SR-91 Implementation Plan Projects**

Project	Cost (Millions)
<b>Orange County Projects</b>	
SR-91 Improvements between SR-57 and SR-55	\$460
Placentia Metrolink Rail Station	\$34.8
Metrolink Improvements	TBD
<b>SUBTOTAL</b>	<b>\$495+</b>
<b>Riverside County Projects</b>	
Santa Ana River Trail	\$36.5+
SR-71/SR-91 Interchange Improvements	\$137
Improvements East of I-15	TBD
<b>SUBTOTAL</b>	<b>\$173.5+</b>
<b>Bi-County Projects</b>	
SR-241/SR-91 Tolled Express Connector	\$423
91 Eastbound Corridor Operations Project (SR-241 to SR-71)	\$150
91 Westbound Improvements (SR-241 to SR-71)	TBD
<b>SUBTOTAL</b>	<b>\$573+</b>

## Project Summary

Table 1 – SR-91 Implementation Plan Projects (continued)	
<b>Concept Projects</b>	<b>Cost (Millions)</b>
Green River Road Bike Lane Gap Closure	TBD
North Main Transit Connector	\$175
Elevated 4-Lane Facility (MIS Corridor A) from SR-241 to I-15	\$2,720
Westbound SR-91 to Southbound SR-55 Improvements	\$75 – 150
Eastbound SR-91 Fifth Lane Addition at SR-241	\$31
Fairmont Boulevard Improvements	\$76.8
<b>SUBTOTAL</b>	<b>\$3,077.8 - \$3,152.8</b>
<b>Completed Project Summary Since 2006 (Completion Year)</b>	<b>Cost (Millions)</b>
Green River Road Overcrossing Replacement (2009)	\$24.3
North Main Street Corona Metrolink Station Parking Structure (2009)	\$25
Eastbound Lane Addition from SR-241 to SR-71 (2010)	\$51.2
Widen SR-91 between SR-55 and SR-241 by Adding a 5th GP Lane in Each Direction (2013)	\$85.2
SR-91 WB Lane at Tustin Avenue (2016)	\$43.2
Metrolink Service Improvements (2016)	\$249
Initial Phase CIP: Widen SR-91 by One GP Lane in Each Direction East of Green River Rd, CD Roads and I-15/SR-91 Direct South Connector, Extension of Express Lanes to I-15 and System/Local Interchange Improvements (2017)	\$1,407
Express Bus Service (2019)	\$6
La Sierra Metrolink Parking Improvements (2019)	\$6.3
SR-91 Corridor Operations Project (2022)	\$38
Anaheim Canyon Metrolink Station Improvements (2023)	\$34.2
15/91 Express Lanes Connector (2023)	\$270
Eastbound 91 Express Lane Extension (2023)	\$10
<b>SUBTOTAL</b>	<b>\$2,249.4</b>



## Traffic Analysis

For the 2024 Plan, the traffic analysis for major SR-91 projects used the TransModeler model calibrated and validated to reflect existing traffic patterns of 2022 as described in the prior section. This traffic simulation model provides a better depiction of actual travel delays experienced by motorists compared to traditional travel demand models. The model can be used to analyze freeway bottlenecks sometimes neglected in traditional travel demand models.

This approach is especially important given high SR-91 traffic volumes and the potential for relatively few vehicles to significantly slow down traffic. For example, a minor freeway merging area can cause many vehicles to slow, cascading delay through the traffic stream, and rapidly decreasing both speed and volume for major segments of the freeway. The metrics reported in the Plan include travel time from the beginning to the end of the study corridor and vehicle hours of delay experienced on the study corridor, which both focus on operations for vehicles on SR-91.

A third metric includes vehicles served by the system in the study corridor and takes into consideration vehicles on ramps and freeways that feed into or are fed by SR-91 in the study area. In addition to the existing year 2022 analysis, two future years of 2030 and 2045 were analyzed and include the SR-91 projects that are scheduled to be completed by the respective year. The operations analysis quantified travel time savings for WB morning and EB afternoon conditions for the following major improvements projects:

### Year 2030

- SR-91 Improvements between SR-57 and SR-55
- 15/91 Express Lanes Connector
- SR-71/SR-91 Interchange Improvements
- SR-241/SR-91 Tolled Express Connector
- SR-91 Eastbound Corridor Operations Project

### Year 2045

- Projects completed in 2030
- SR-91 Improvements East of I-15
- SR-91 Westbound Corridor Operations Project (remaining)
- Fairmont Boulevard Improvements

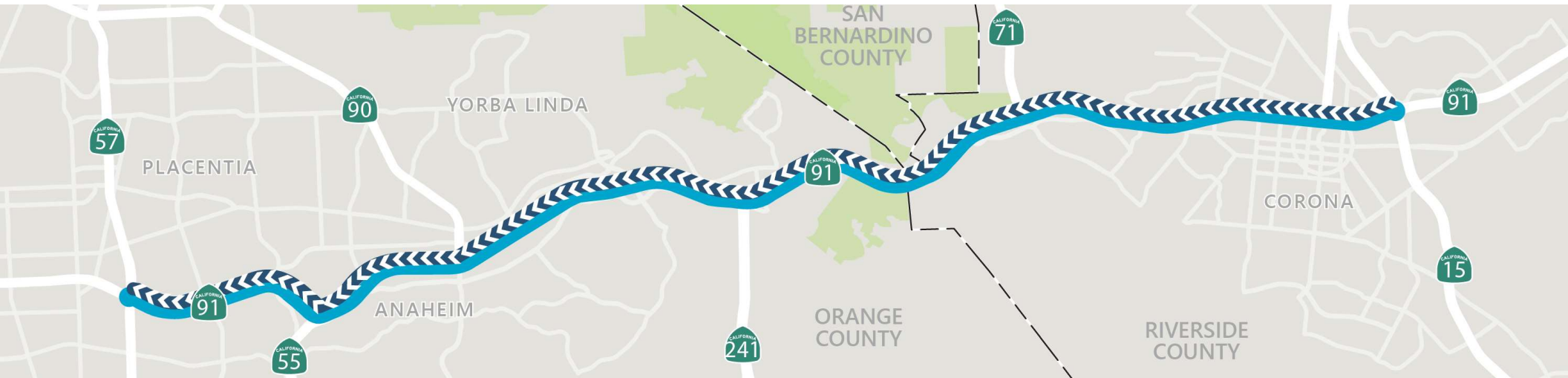
## Westbound Analysis

The WB morning traffic analysis results indicate that for the year 2030 forecasts, peak hour travel times are anticipated to exacerbate in Riverside County (by about 6 minutes) and maintain the same in Orange County. In addition to increasing travel time, overall vehicle hours of delay in the corridor will increase (by about 29 percent), while the entire system is able to serve more vehicles (by about 4 percent). Bottlenecks are anticipated at the Orange-Riverside County line and at the SR-241 interchange/Gypsum Canyon interchange area, which will continue a long queue on WB SR-91 extending to the I-15/SR-91 interchange. The bottleneck at the SR-55 interchange will be relieved.

For the year 2045 forecasts, travel times are anticipated to decrease (by about 21 minutes) in Riverside County as implementation of the SR-91 Westbound Corridor Operations Project would improve operations. With more vehicles able to travel downstream, travel times in Orange County would increase (by about 16 minutes) when compared to 2030. Overall vehicle hours of delay will decrease (by about 10 percent) in the corridor,

and the number of vehicles the system is serving will also increase (by about 12 percent). There is a bottleneck at SR-71 due to a large increase of vehicles going to and from SR-71. Also, with more vehicles able to travel downstream, another bottleneck occurs at the Tustin Avenue and SR-55 area. Travel time in Orange County shows an increase in 2045 due to the growth in traffic, projects relieving congestion upstream allowing more vehicles to travel downstream, and no additional capacity enhancing projects in Orange County. OCTA and RCTC are exploring multi-modal opportunities on, or adjacent to, the SR-91 corridor that could provide additional congestion relief.

Express Lanes in the westbound direction operate satisfactorily in 2030 and will experience a slowdown in 2045 in Riverside County where the 3-lane section merges back to two lanes. RCTC is planning to implement dynamic pricing for the SR-91 corridor in the near future, which will help to maintain satisfactory operation of the Express Lanes



## Westbound Analysis

Figures 1-1 and 1-2 below summarize the westbound corridor vehicle hours of delay and systemwide served vehicles, respectively.

Figure 1-1 – Westbound SR-91 from I-15 to SR-57 A.M. Peak Period Corridor Vehicle Hours of Delay

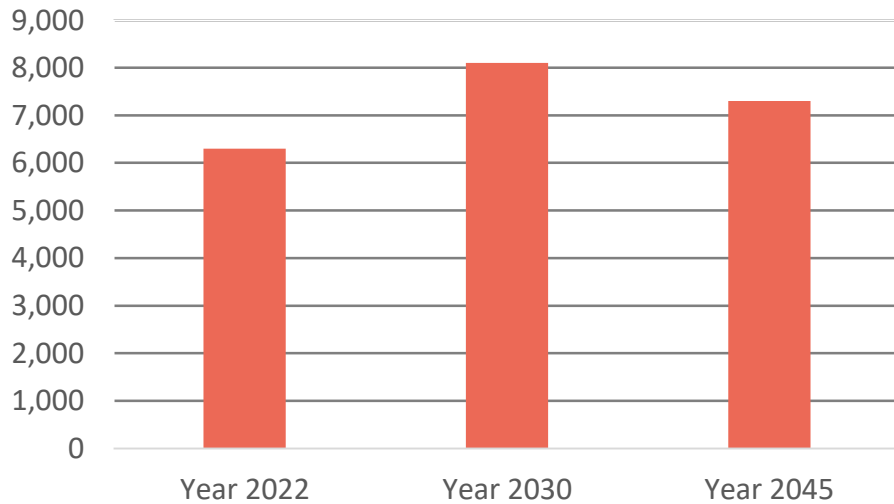
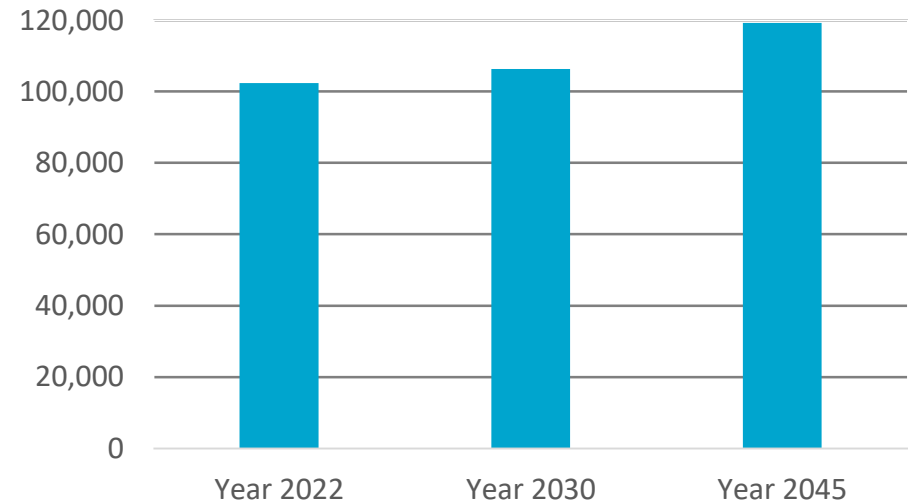


Figure 1-2 – Westbound SR-91 from I-15 to SR-57 A.M. Peak Period Systemwide Served Vehicles

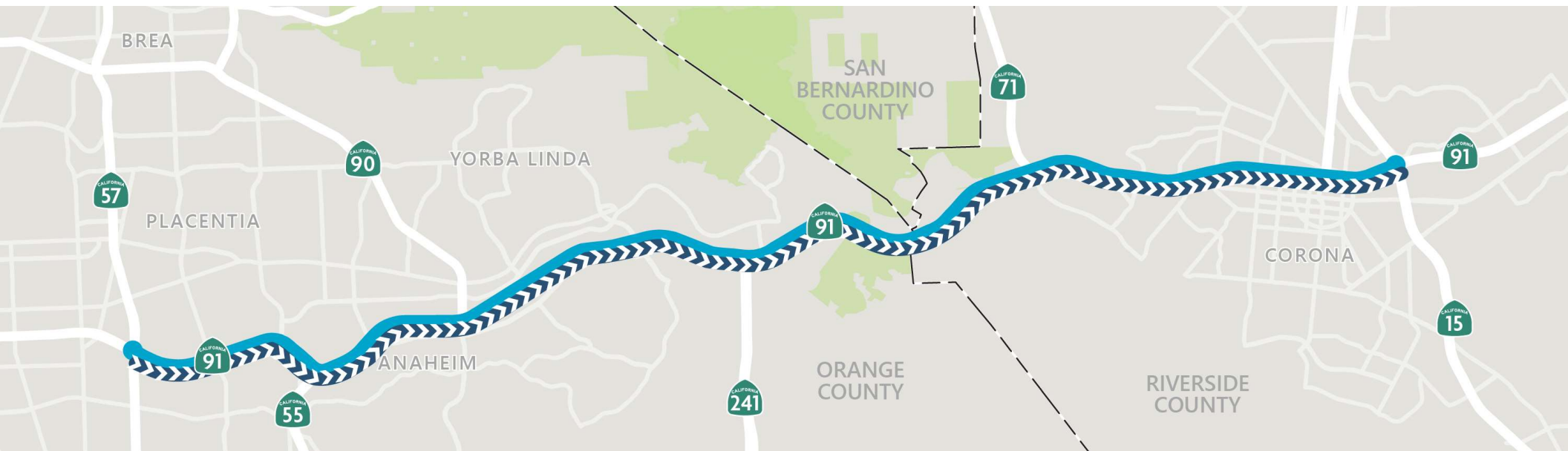


## Eastbound Analysis

The EB afternoon traffic analysis indicates that for the year 2030 forecasts, peak hour travel times are anticipated to increase (by about 4 minutes) in Riverside County and decrease (by about 33 minutes) in Orange County. With the decrease of total travel time (by about 29 minutes) required to travel through the corridor, the vehicle hours of delay will also decrease (by about 38 percent) and the number of vehicles served by the system will increase (by about 3 percent). With the inclusion of the EB Corridor Operations Project, the congestion at the county line will be reduced. The improved conditions at the county line increases the amount of vehicles able to travel downstream and increases the bottleneck near the Main Street and I-15 area in Riverside County. Improvement projects near I-15 in the future should help to alleviate congestion in those areas.

For the year 2045 forecasts, travel times are anticipated to decrease (by about 14 minutes) in Riverside County and increase in Orange County (by about 28 minutes) when compared to 2030. Overall vehicle hours of delay will increase (by about 54 percent) and the number of vehicles the system is serving will be greater (by about 3 percent). The main bottleneck will occur at the county line as existing conditions.

Express Lanes in the eastbound direction operate satisfactorily in all the analysis years.





## Eastbound Analysis

Figures 1-3 and 1-4 below summarize the eastbound corridor vehicle hours of delay and systemwide served vehicles, respectively.

Figure 1-3 – Eastbound SR-91 from SR-57 to I-15 P.M. Peak Period Corridor Vehicle Hours of Delay

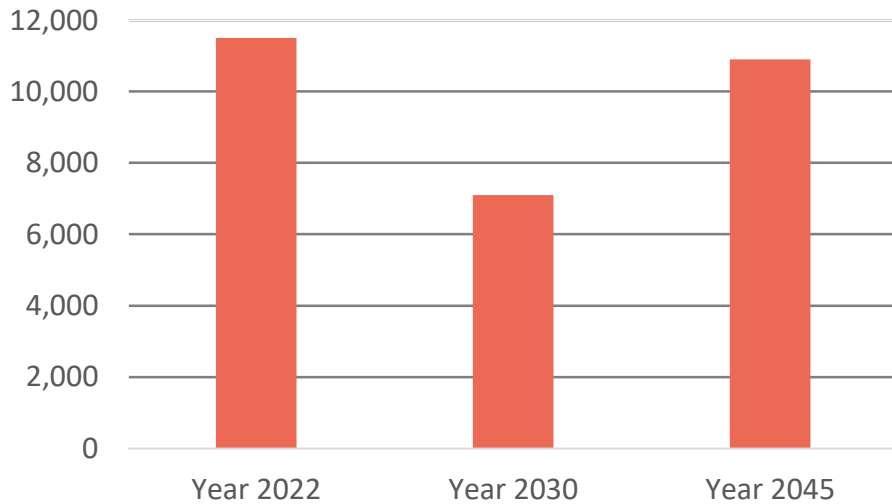
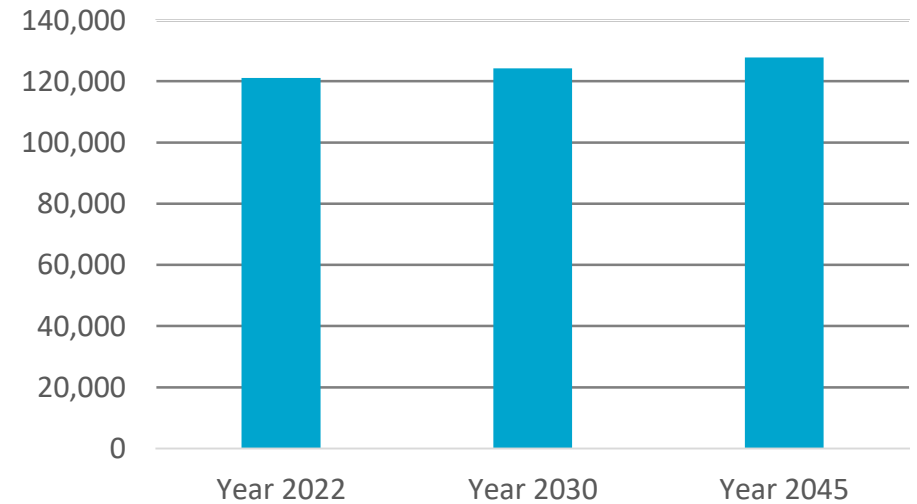


Figure 1-4 – Eastbound SR-91 from SR-57 to I-15 P.M. Peak Period Systemwide Served Vehicles



## OVERVIEW

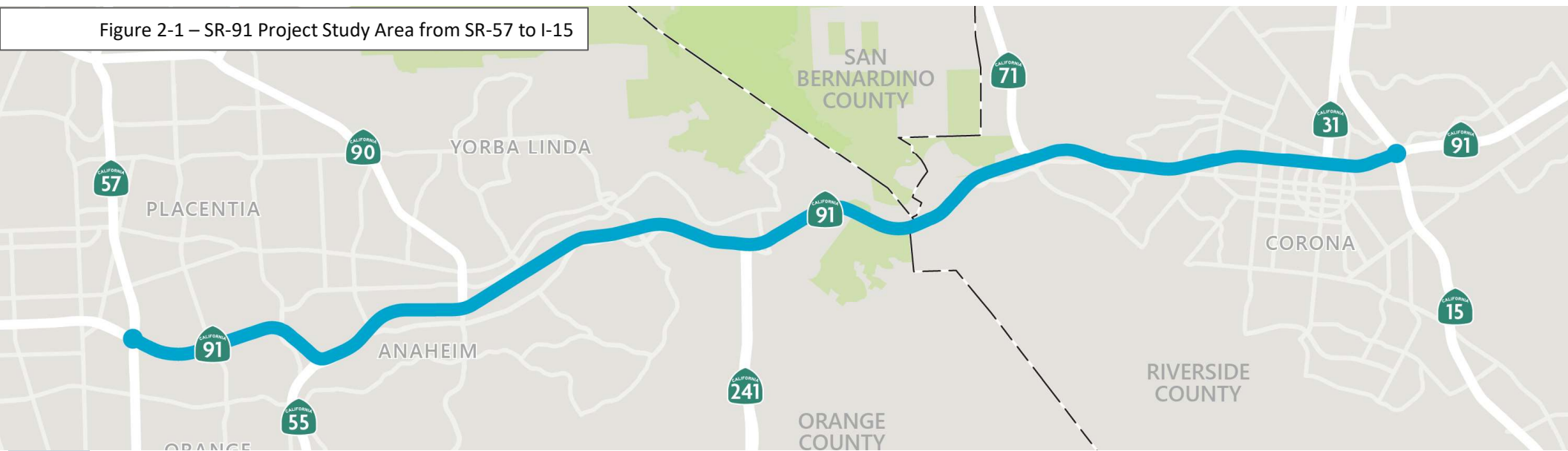
The 2024 Plan describes projects, key considerations, benefits, current status, schedule, and costs (in 2024 dollars, or as noted) for major projects and concepts. The projects are grouped as follows: Orange County Projects, Riverside County Projects, and Bi-County Projects.

The intent of the Implementation Plan is to present a list of projects and studies along the SR-91 corridor and highlight coordination between OCTA, RCTC, and Caltrans to improve the corridor.

As part of the project development process, detailed operational analysis will need to be conducted to evaluate operational issues associated with each project. The project development phases are discussed in the status updates and are defined as follows:

- Conceptual Engineering = Pre-Project Study Report (Pre-PSR) – Conceptual planning and engineering for project scoping and feasibility prior to initiating the PSR phase.
- Preliminary Engineering = Project Study Report (PSR) – Conceptual planning and engineering phase that allows for programming of funds.
- Environmental = Project Approval/Environmental Document (PA/ED) – The detailed concept design that provides environmental clearance for the project and programs for final design and right of way acquisition. The duration for this phase is typically 2 to 3 years.
- Design = Plans, Specifications, and Estimates (PS&E) – Provide detailed design to contractors for construction bidding and implementation.
- Construction = The project has completed construction and will provide congestion relief to motorists.

Figure 2-1 – SR-91 Project Study Area from SR-57 to I-15





## Orange County Projects

The Orange County set of projects includes three improvements at a total cost of approximately \$495 million (in 2024 dollars, or as noted). The projects include: SR-91 improvements between SR-57 and SR-55, Placentia Metrolink rail station, and Metrolink Improvements.

Orange County Project Summary	Cost (Millions)
SR-91 Improvements between SR-57 and SR-55	\$460
Placentia Metrolink Rail Station	\$34.8
Metrolink Improvements	TBD
<b>SUBTOTAL</b>	<b>\$494.8+</b>



## Project Description



The project proposes to add EB capacity between SR-55 and SR-57, improve the SR-91/SR-57 and SR-91/SR-55 interchanges and local interchanges. In the SR-91/SR-57 interchange area, improvements identified in Project Approval/Environmental Document (PA/ED) phase include extending an additional lane on WB SR-91 from the NB SR-57 to WB SR-91 connector through State College Boulevard and terminating at the auxiliary lane to Raymond Avenue-East Street. At the SR-91/SR-55 interchange area, a drop on-ramp from Lakeview Avenue would be constructed between realigned WB SR-91 lanes for direct access to SB SR-55, allowing for the exit to SB SR-55 to be moved further east, separating WB SR-91 and SB SR-55 traffic west of the Lakeview Avenue bridge. The 91 Express Lanes will not be impacted by the project. In order to accommodate the improvements, the Lakeview, Tustin, Kraemer/Glassell, and La Palma bridges are proposed to be replaced. The improvements have been developed in cooperation with local jurisdictions and affected communities.

## Key Considerations



The proposed project improvements on WB and EB SR-91 may require partial right-of-way acquisition and Temporary Construction Easements (TCEs). In some areas, a non-standard geometric cross-section is proposed to reduce the right-of-way impacts.

## Benefits



The proposed project improvements on WB and EB SR-91 between SR-57 and SR-55 include, among other features, adding one EB general purpose lane to achieve lane balancing and interchange improvements. Project improvements will reduce congestion and delay and reduce weaving.

## Schedule and Cost

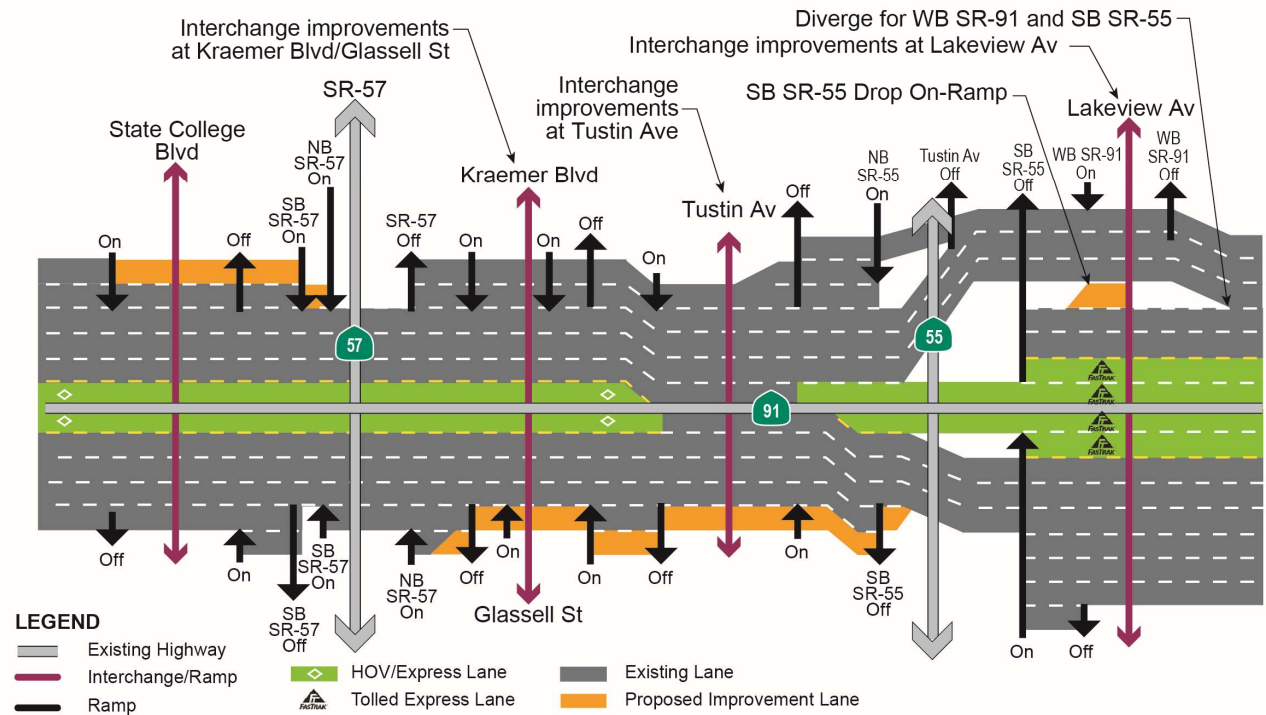


Construction is anticipated to be completed in 2029 and the total project cost is estimated to be approximately \$460,000,000.

## Current Status



The project improvements were originally studied in the SR-91 Feasibility Study, which was completed in June 2009. The Project Study Report was completed in 2014 and the Project Approval/Environmental Document (PA/ED) was completed in 2020. This project was then split into three separate segments and the Plans Specifications and Estimate (PS&E) phase began in 2020 for all three segments. The proposed improvements are included in the Measure M program.



## Project Description



The new Placentia Metrolink Station will serve the Metrolink 91/Perris Valley Line, providing commuter rail service between Perris and Los Angeles, via Riverside and Orange counties. The project includes construction of a parking structure, OCTA bus access, an area for passenger pick-up and drop-off, and two station platforms.

## Benefits



The station will meet the current transit demand and foster train ridership growth in the region, contributing to congestion relief on SR-91.

## Schedule and Cost



Plans are 100 percent complete, however, the construction contract cannot be advertised until a Construction and Maintenance Agreement is in place with BNSF Railway, the right-of-way owner. The project will be advertised for bids once an agreement is in place. The total project cost is estimated to be \$34.8 million.

## Current Status



The City of Placentia is the lead on right-of-way and environmental clearance, and OCTA is the lead agency for design and construction of the project. Funding for the project is programmed to use 91 Toll Revenues, M2 (OC Go) and the City of Placentia funds for the construction phase. State Transportation Improvement Program (STIP), Public Transportation Modernization, Improvement, and Service Enhancement Account (PTMISEA), OC Go and City funds are programmed for the design and right-of-way costs. Project is currently on hold.



Image source: [www.placentia.org/Placentia-Metrolink-Site-Plan](http://www.placentia.org/Placentia-Metrolink-Site-Plan) (Wildan Engineering)



## Project Description



There are 14 daily trains that run on the Inland Empire-Orange County (IEOC) Line and 12 trains running on the 91/Perris Valley (91/PV) line for a total of 26 daily trains. The Perris Valley portion of the 91/PV Line extends Metrolink service southeast by 25 miles, from Riverside to Perris via Moreno Valley. Metrolink is conducting a plan that would look at optimizing service and realize cost efficiencies throughout the region.

## Key Considerations



Construction of the new Placentia Metrolink station will improve passenger access along the 91/PV Line by creating a station between Fullerton and Corona.

## Benefits

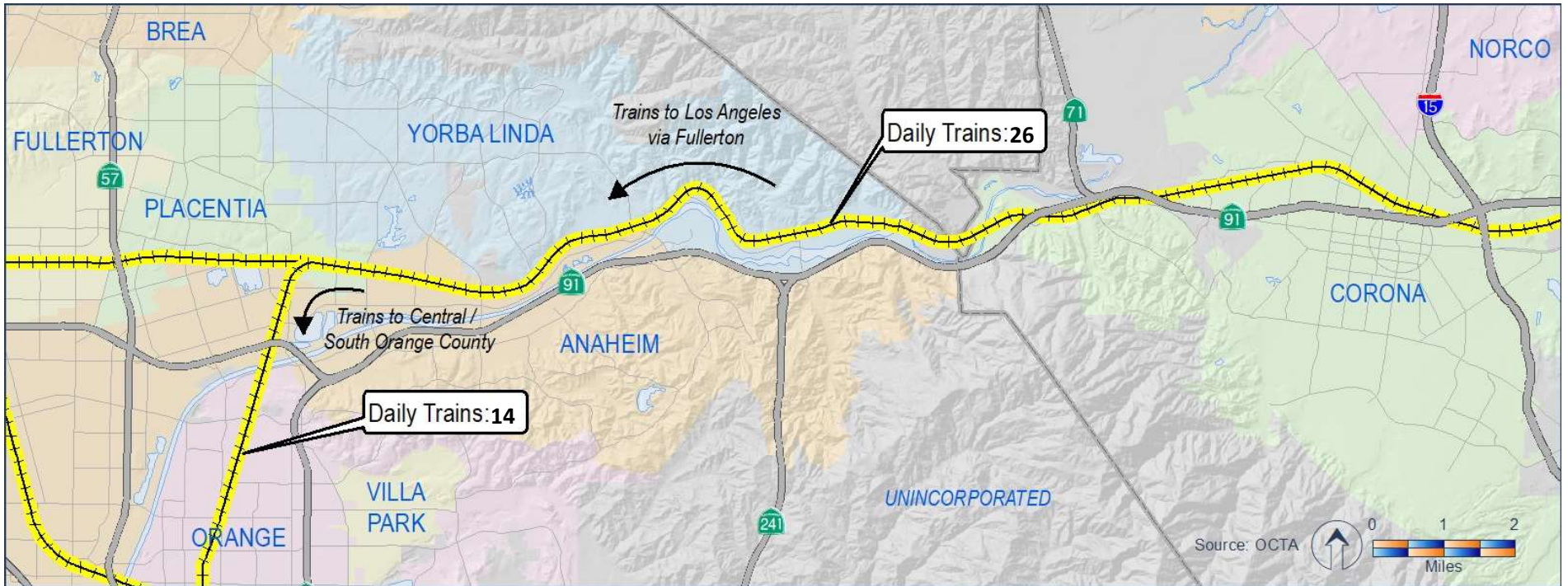


Enables development of Metrolink service, improved efficiency, and fosters train ridership growth in the region, contributing to congestion relief on the SR-91.

## Current Status



Metrolink's is developing a service optimization plan which will help realize cost efficiencies related to crew and scheduling. Implementation timing of the plan is scheduled for October 2024, with daily trips increasing on the IEOC and 91/PV lines.



4/26/2023

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## Riverside County Projects

The Riverside County set of projects includes three improvements: the Santa Ana River Trail, the SR-71/SR-91 Interchange Improvements, and SR-91 Improvements east of I-15. Projects for implementation in Riverside County are anticipated to cost more than \$173 million (in 2024 dollars, or as noted).

Riverside County Project Summary	Cost (Millions)
Santa Ana River Trail	\$36.5+
SR-71/SR-91 Interchange Improvements	\$137
SR-91 Improvements East of I-15	TBD
<b>SUBTOTAL</b>	<b>\$173.5+</b>

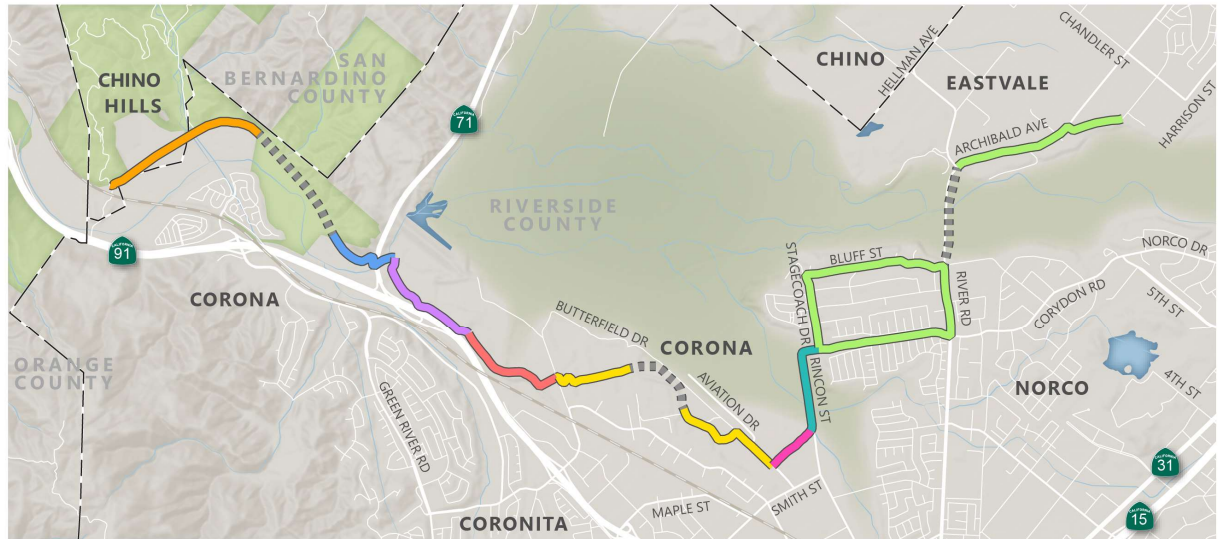
## Project Description



The Santa Ana River Trail is a multi-use trail complex that runs alongside the Santa Ana River. When completed, it will be the longest multi-use trail in Southern California, spanning over 100 miles between San Bernardino and Orange counties. As envisioned, the trail connecting San Bernardino, Riverside, and Orange counties would be a dual-track trail consisting of 1) paved Class I and Class II Bikeways for bicyclists and pedestrians and 2) decomposed granite (DG) surfaced riding and hiking trail for equestrians, mountain bicyclists, and hikers. The Santa Ana River Trail is currently 60 percent complete. When finished it will extend from the San Bernardino County National Forest to the Pacific Ocean at Huntington Beach where the trail ends. There are currently two gaps in the trail: from Green River in Orange County to Hidden Valley Wildlife area in Riverside County; and from Waterman Avenue in San Bernardino to the National Forest boundary line near unincorporated Mentone.

This project addresses the gap from Green River to the Hidden Valley Wildlife area and involves installing multi-use trails along local streets and in the Santa Ana River Trail (SART) located within the Prado Dam Flood Control Basin area of the Santa Ana River for the easterly portion of the trail and the Green River Golf Club for the westerly portion of the trail.

Phase	Schedule	Cost	Status
1	TBD	unknown	On hold pending funding
2,2A,3A	Env and Design complete end 2024	\$9 million – Phases 2/2A/3A	No construction funding
3B	Env and Design complete end 2024, construction by 2028	\$1 million	Funded and incorporated into USACE spillway project
3	TBD	unknown	On hold pending funding
4	Complete	\$1.5 million	Complete
6	Complete by 2026	\$25 million	Funded



- PHASE 1
- PHASE 3A
- EXISTING BIKE CONNECTION
- PHASE 2
- PHASE 3B
- PHASE 3
- PHASE 4
- PHASE 2A
- PHASE 6





## Project Description



The current project includes a new two-lane direct connector from eastbound (EB) SR-91 to northbound (NB) SR-71 and realignment of the existing Green River Road SR-91 EB on-ramp to provide connection to NB SR-71 and EB SR-91.

## Key Considerations



Project improvements must be coordinated with the following projects: the SR-91 Eastbound Corridor Operations Project and the SR-241/SR-91 Tolled Express Connector. Close coordination with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife will also be required as the connector crosses the Santa Ana River west of the Prado Dam.

## Benefits



The project will provide a new direct connector improvement from EB SR-91 to NB SR-71, replacing the geometric choke point created by the existing loop connector. The project will also improve traffic operations and operational efficiency by eliminating or minimizing weaving conflicts through the use of auxiliary lanes.

## Schedule and Cost

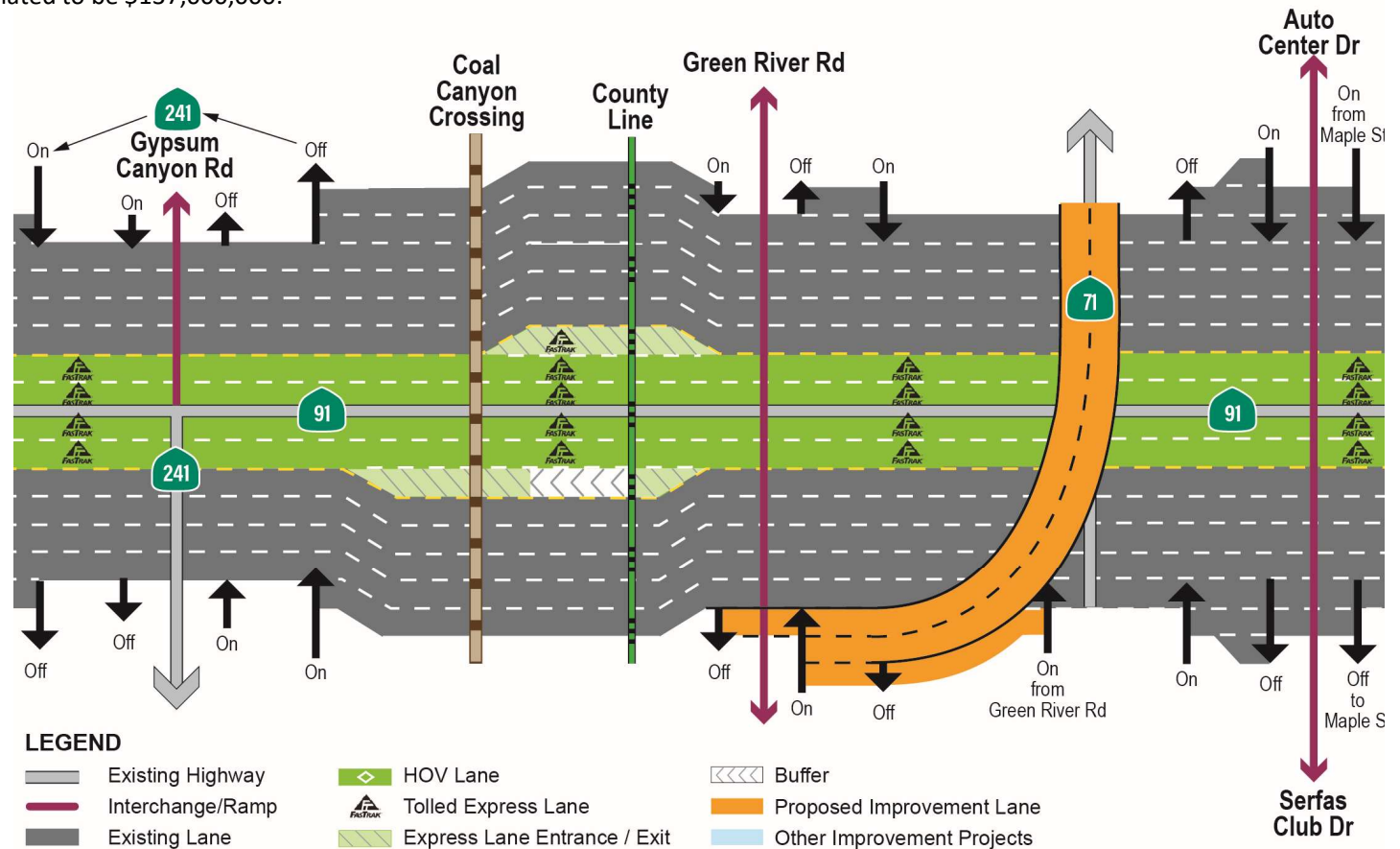


Construction is planned for completion in 2025. Construction cost is estimated to be \$137,000,000.

## Current Status



The environmental phase was completed in 2011 and final design in 2015. An environmental revalidation and update to the final design was completed in 2022. The project started construction in January 2023.





## Project Description



The Project Approval and Environmental Document (PA/ED) for the SR-91 Corridor Improvement Project (CIP), from SR-241 to Pierce Street, included the addition of a 5th lane in each direction, the addition of auxiliary lanes at various locations, the addition of collector-distributor lanes at the I-15/SR-91 interchange, the extension of the 91 Express Lanes from the Orange County line to I-15, the construction of a SR-91 Express Lanes median direct connector to and from I-15 South, a SR-91 Express Lanes median direct connector to and from I-15 North, the construction of one Express Lane in each direction from the I-15/SR-91 interchange southerly to I-15/Cajalco Road (completed as part of RCTC I-15 Express Lanes Project), and improvements east of I-15. Due to funding constraints, a Project Phasing Plan was developed to allow an Initial Phase, with reduced improvements, to move forward as scheduled, with the remaining ultimate improvements to be completed later. The SR-91 improvements east of I-15, which includes extending an Express Lane east of McKinley Street and adding a general-purpose lane from I-15 to Pierce Street in each direction (the subject project), is a component of the SR-91 CIP that was not constructed with the Initial Phase.

## Key Considerations



Coordination among many of the SR-91 freeway projects that overlap the project limits is critical to successfully delivering these projects on schedule and within budget. Designing to accommodate future projects is a recurring theme for each of these projects. Minimizing conflicts in scope between projects requires direct coordination between each project team. Additionally, future projects frequently have multiple alternatives under study, each with differing scope and construction footprints. Specifically, the project improvements need to continue to be coordinated with the SR-71/SR-91 interchange, and the SR-241/SR-91 Tolled Express Connector.

## Benefits



The SR-91 Improvements east of I-15 will reduce congestion and delays by providing additional operational improvements on SR-91 from I-15 to Pierce Street.

## Schedule and Cost

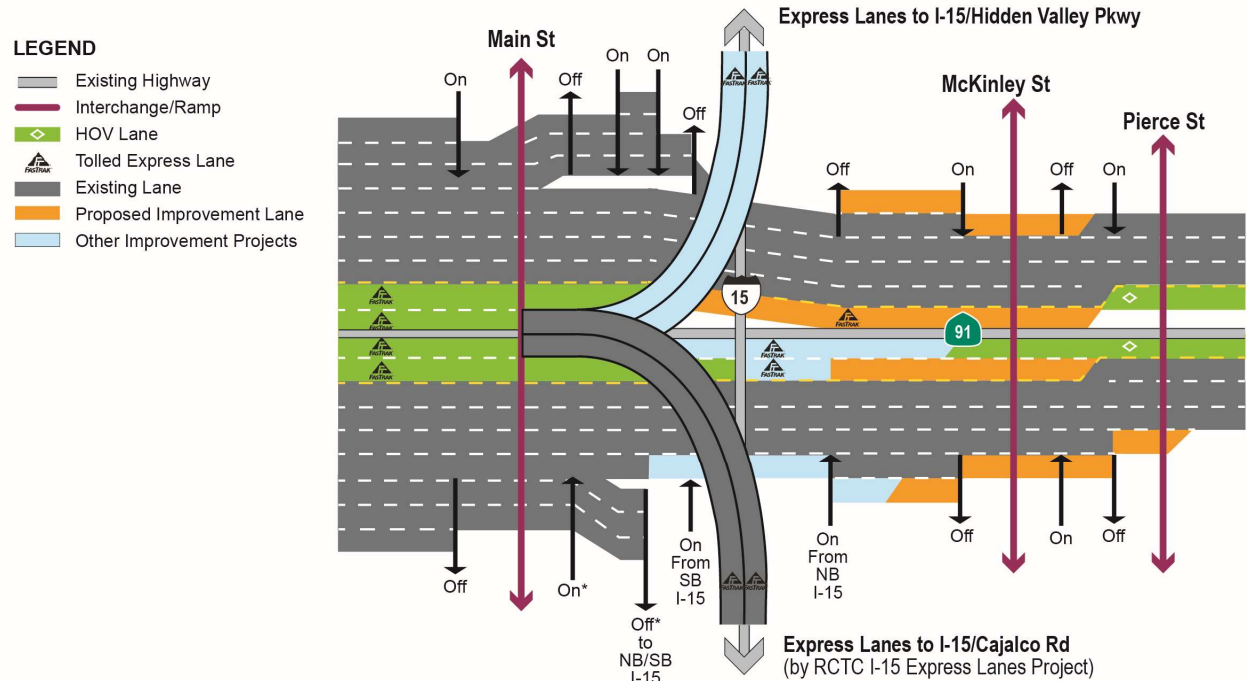




Anticipated project completion and cost are to be determined.

## Current Status



Preliminary engineering is complete but may need to be revisited at a future date. The SR-91 Improvements east of I-15 is currently included in the SR-91 CIP environmental document for the SR-91 that was completed in 2012.



## Bi-County Projects

There are three Bi-County improvement projects that will benefit both Orange and Riverside Counties. These projects include: the SR-241/SR-91 Tolled Express Connector, Eastbound Corridor Operations Project (SR-241 to SR-71), and 91 Westbound Improvements (SR-241 to SR-71). The total cost for the projects is expected to be more than \$573 million (in 2024 dollars, or as noted).

Bi-County Project Summary	Cost (Millions)
SR-241/SR-91 Tolled Express Connector	\$423
Eastbound Corridor Operations Project (SR-241 to SR-71)	\$150
91 Westbound Improvements (SR-241 to SR-71)	TBD
<b>SUBTOTAL</b>	<b>\$573+</b>

## Project Description

The SR-241/SR-91 Tolled Express Connector will consist of a direct connector between the 241 Toll Road and 91 Express Lanes, carrying northbound 241 Toll Road traffic to the eastbound 91 Express Lanes and westbound 91 Express Lanes traffic to the southbound 241 Toll Road.

## Key Considerations

The purpose of the project is to implement the build out of the Eastern Transportation Corridor as approved in 1994 in order to improve traffic operations on the northbound 241 Toll Road and the SR-91 general-purpose lanes while also maintaining reliable travel times and free flow speeds during peak periods on the 91 Express Lanes which were all key considerations in Caltrans' approval of the project. The project will require widening of SR-91 to accommodate the direct connector and associated Express Auxiliary Lanes in the median. The project's planned construction is aligned with the implementation of other planned improvements in the area including the SR-91 Eastbound Corridor Operations Project and SR-71/SR-91 Interchange Improvements. Coordination will be conducted with local agencies to ensure the project avoids impacts to planned bicycle and trail connections on Gypsum Canyon Road per the City of Anaheim General Plan and OCTA Commuter Bikeways Strategic Plan.

## Benefits

The project will provide connectivity between the 91 Express Lanes and the 241 Toll Road, which will enhance operations along the SR-91 general purpose lanes while also improving traffic operations on the northbound 241 Toll Road.

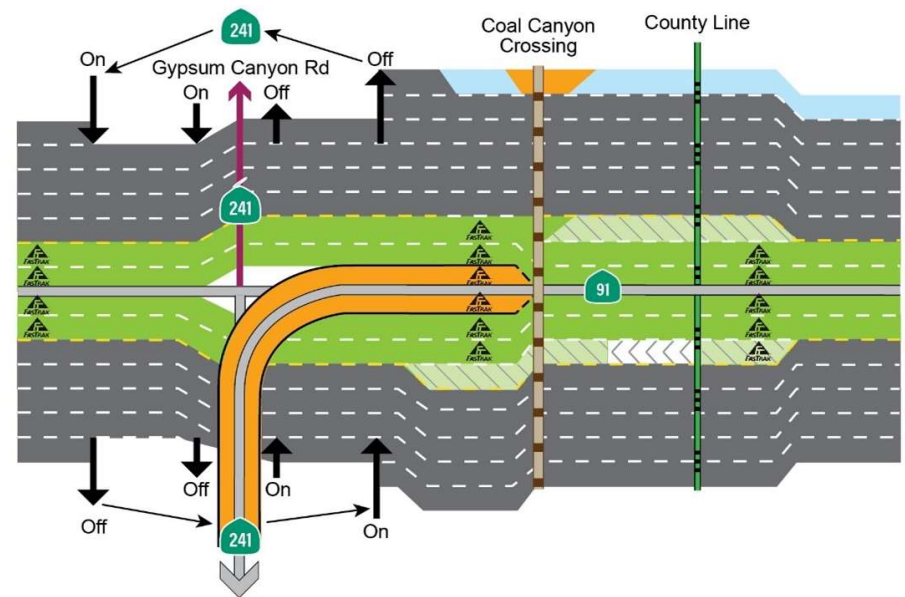
## Schedule and Cost

Final Design is expected to be completed in 2024. Construction is anticipated to last approximately 36 months beginning in 2025 with project opening in 2028. These milestones are contingent upon approval of interagency agreements between F/ETCA, Caltrans, RCTC, and OCTA on such matters as a Master Four Party Agreement, Operations Agreement, and F/ETCA receiving approval from the California Transportation Commission. The total cost of the project will be approximately \$423,000,000.

## Current Status

Preliminary engineering concepts for a SR-241/SR-91 Tolled Express Connector have been developed by the Foothill/Eastern Transportation Corridor Agency (F/ETCA) and Caltrans, which were utilized for the environmental analysis. A Project Study Report was initiated in January 2011 and was completed in January 2012. The Draft Environmental Document was circulated for public review from November 7, 2016, through January 9, 2017. Caltrans' approval of the project with the Record of Decision was completed in March 2020. Final design and development of interagency agreements are in progress.

- LEGEND**
-  Existing Highway
  -  Interchange/Ramp
  -  HOV Lane
  -  Express Lane Entrance / Exit
  -  Buffer
  -  Tolled Express Lane
  -  Existing Lane
  -  Proposed Improvement Lane
  -  Other Improvement Projects





## Project Description

The Project Approval and Environmental Document (PA/ED) for the SR-91 Corridor Improvement Project (CIP), from SR-241 to Pierce Street, included the addition of a 5th lane in each direction, the addition of auxiliary lanes at various locations, the addition of collector-distributor lanes at the I-15/SR-91 interchange, the extension of the 91 Express Lanes from the Orange County line to I-15, the construction of a SR-91 Express Lanes median direct connector to and from I-15 South, a SR-91 Express Lanes median direct connector to and from I-15 North, and the construction of one Express Lane in each direction from the I-15/SR-91 interchange southerly to I-15/Cajalco Road (completed as part of RCTC I-15 Express Lanes Project), and improvements east of I-15. Due to funding constraints, a Project Phasing Plan was developed to allow an Initial Phase, with reduced improvements, to move forward as scheduled, with the remaining ultimate improvements to be completed later. The SR-91 Eastbound Corridor Operations Project between SR-241 and SR-71 (the subject project) is a component of the SR-91 CIP that was not constructed with the Initial Phase.

## Key Considerations

Coordination among many of the SR-91 freeway projects that overlap the project limits is critical to successfully delivering these projects on schedule and within budget. Designing to accommodate future projects is a recurring theme for each of these projects. Minimizing conflicts in scope between projects requires direct coordination between each project team. Additionally, future projects frequently have multiple alternatives under study, each with differing scope and construction footprints. Specifically, the project improvements need to continue to be coordinated with the SR-71/SR-91 interchange and the SR-241/SR-91 Tolloed Express Connector.

## Benefits

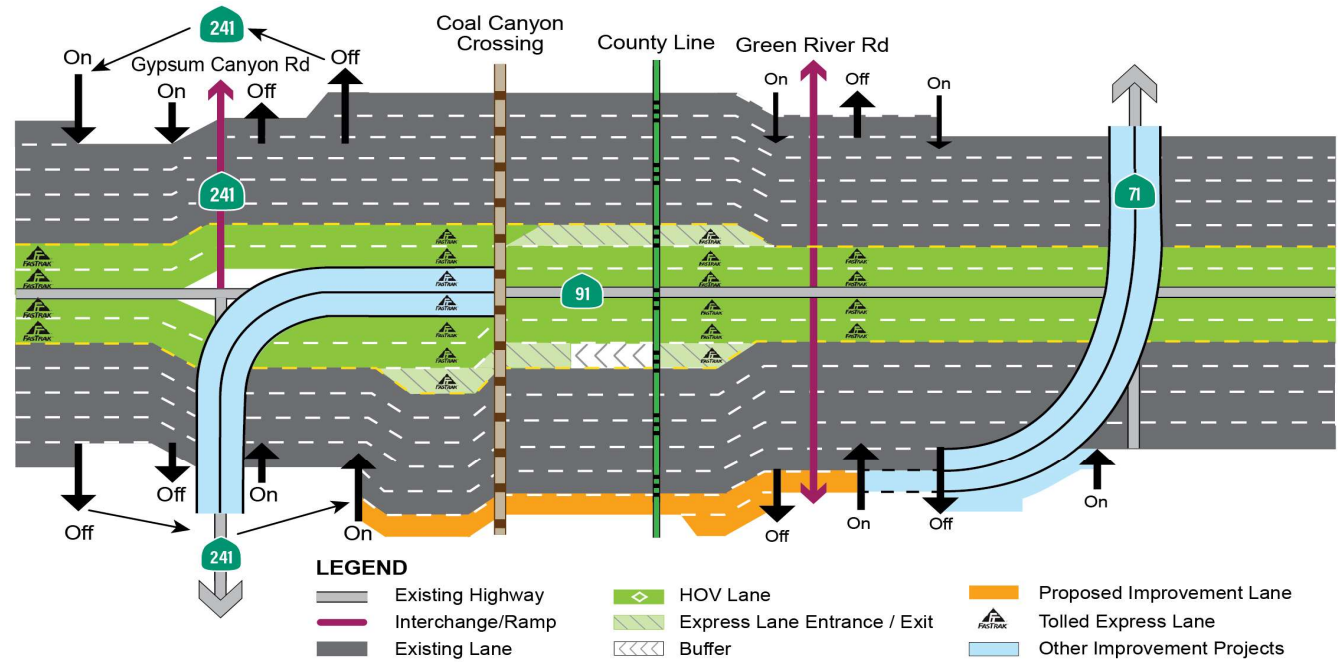
The 91 Eastbound Corridor Operations Project will reduce congestion and delays by providing additional operational improvements on SR-91 from SR-241 to SR-71.

## Schedule and Cost

With an estimated cost of \$150,000,000, the project is anticipated to be completed by 2030.

## Current Status

The 91 Eastbound Corridor Operations Project is included in the SR-91 CIP environmental document that was completed in 2012. An alternatives analysis to evaluate potential improvement options in the eastbound direction was initiated in 2020 and completed in 2022. Efforts to determine final scope and prepare an environmental revalidation began in 2023.



## Project Description

The Project Approval and Environmental Document (PA/ED) for the SR-91 Corridor Improvement Project (CIP), from SR-241 to Pierce Street, included the addition of a 5th lane in each direction, the addition of auxiliary lanes at various locations, the addition of collector-distributor lanes at the I-15/SR-91 interchange, the extension of the 91 Express Lanes from the Orange County line to I-15, the construction of a SR-91 Express Lanes median direct connector to and from I-15 South, a SR-91 Express Lanes median direct connector to and from I-15 North, and the construction of one Express Lane in each direction from the I-15/SR-91 interchange southerly to I-15/Cajalco Road (completed as part of RCTC I-15 Express Lanes Project), and– improvements east of I-15. Due to funding constraints, a Project Phasing Plan was developed to allow an Initial Phase, with reduced improvements, to move forward as scheduled, with the remaining ultimate improvements to be completed later. The 91 Westbound Improvements between SR-241 and SR-71 (the subject project) are a component of the SR-91 CIP that was not constructed with the Initial Phase.

## Key Considerations

Coordination among many of the SR-91 freeway projects that overlap the project limits is critical to successfully delivering these projects on schedule and within budget. Designing to accommodate future projects is a recurring theme for each of these projects. Minimizing conflicts in scope between projects requires direct coordination between each project team. Additionally, future projects frequently have multiple alternatives under study, each with differing scope and construction footprints. Specifically, the project improvements need to continue to be coordinated with the SR-71/SR-91 interchange and the SR-241/SR-91 Tolled Express Connector.

## Benefits

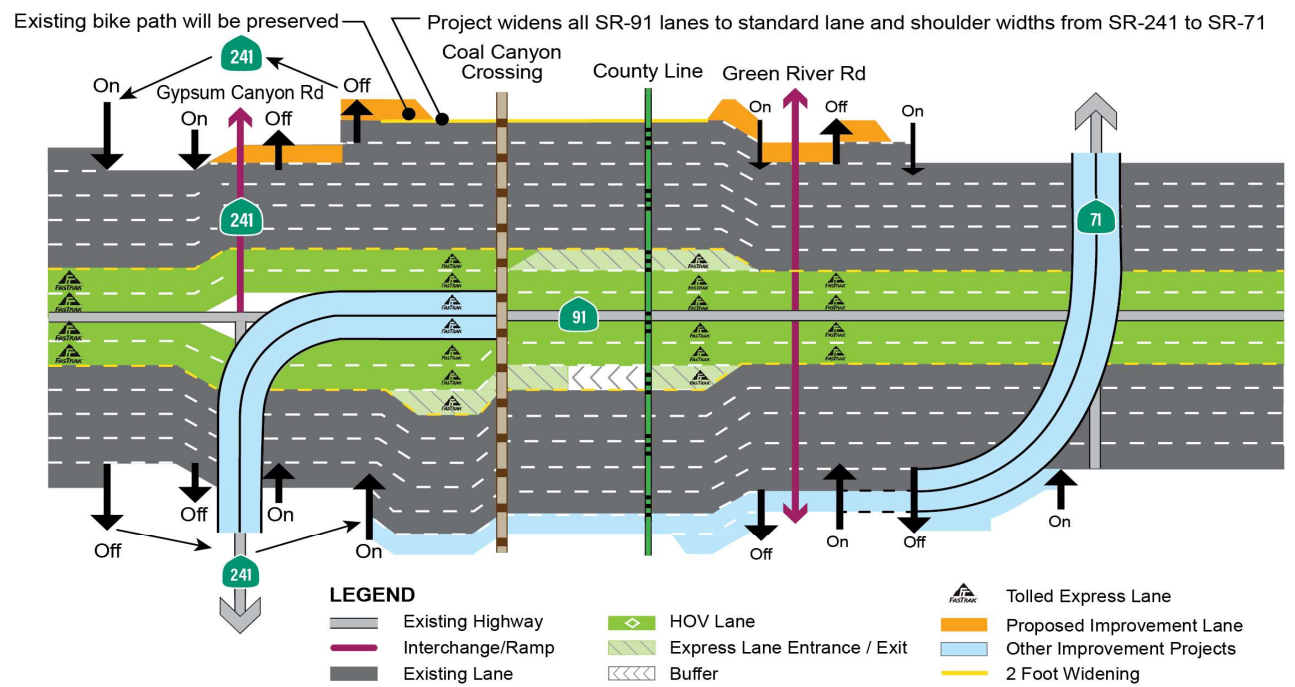
The 91 Westbound Improvements will reduce congestion and delays by providing additional operational improvements on SR-91 from SR-241 to SR-71.

## Schedule and Cost

Anticipated project completion and cost are to be determined.

## Current Status

Preliminary engineering is complete but may need to be revisited at a future date. The 91 Westbound Improvements are Included in the SR-91 CIP environmental document that was completed in 2012.





## Post-2035 and Conceptual Projects

Concepts for potential Post-2035 implementation focus on longer-lead time projects. This multi-billion dollar program may include: Green River Road Bike Lane Gap Closure, North Main Transit Connector, an elevated 4-lane facility (MIS Corridor A) from SR-241 to I-15; Westbound SR-91 to Southbound SR-55 Connector Improvements, Eastbound SR-91 Fifth Lane Addition at SR-241, and Fairmont Boulevard Improvements. These potential concepts include significant environmental constraints and right of way requirements in addition to requiring a significant amount of planning, design, and future policy and public input.

Concept Summary	Cost (Millions)
Green River Road Bike Lane Gap Closure	TBD
North Main Transit Connector	\$175
Elevated 4-Lane Facility (MIS Corridor A) from SR-241 to I-15	\$2,720
Westbound SR-91 to Southbound SR-55 Connector Improvements	\$75-\$150
Eastbound SR-91 Fifth Lane Addition at SR-241	\$31
Fairmont Boulevard Improvements	\$76.8
<b>SUBTOTAL</b>	<b>\$3,077.8 - \$3,152.8+</b>



# Green River Road Bike Lane Gap Closure

## Project Description



The project consists of adding bike lanes along Green River Road between the Eastbound SR-91 Ramp intersection and Crestridge Drive intersection.

## Key Considerations

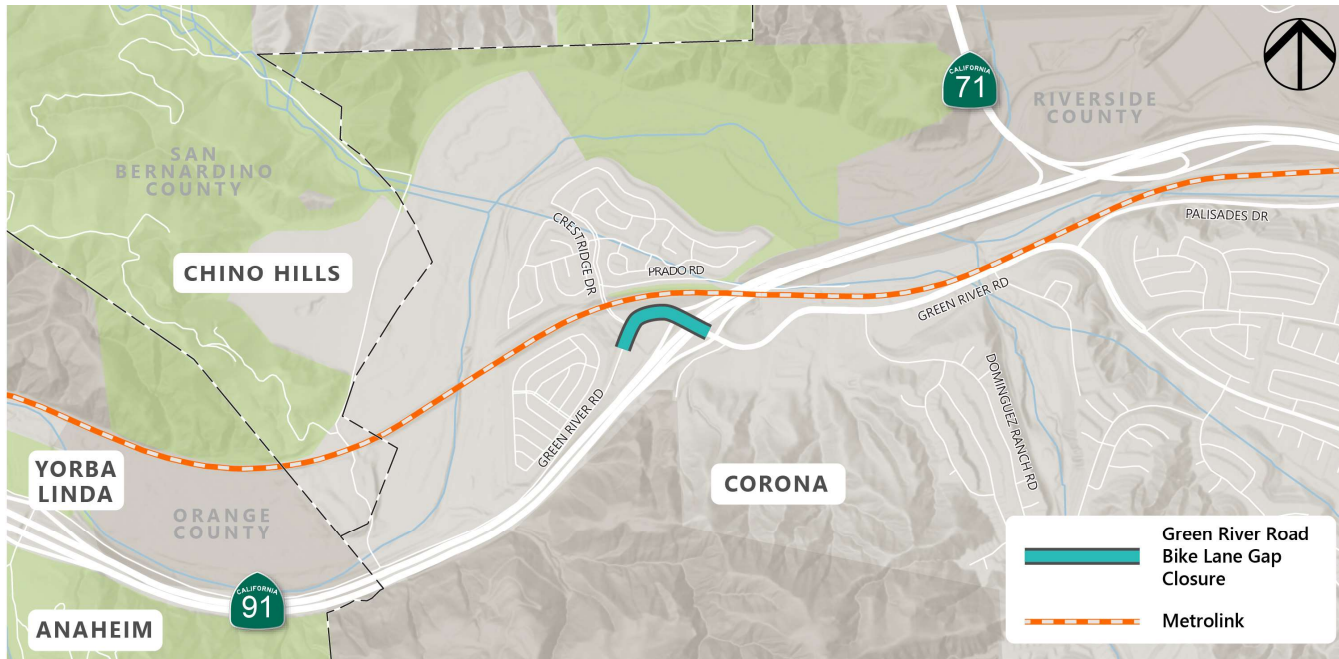
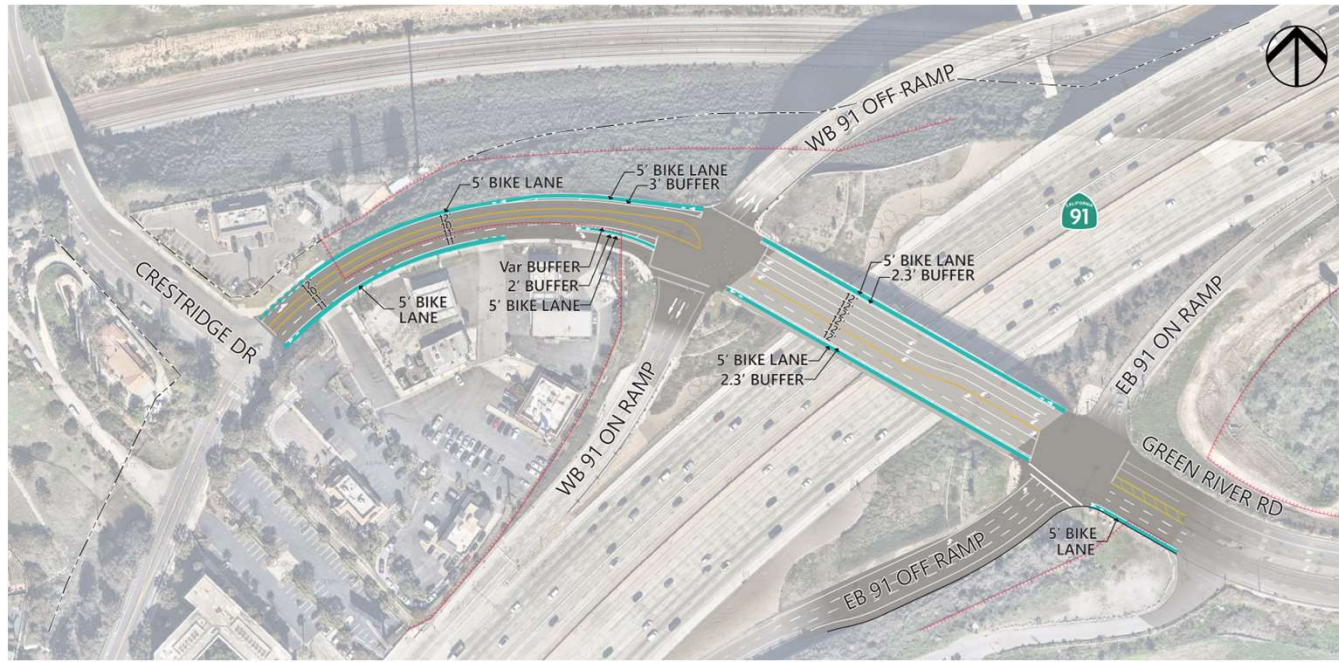


The project proposes to restripe the existing roadway to provide bike lanes in both directions along Green River Road between the Eastbound SR-91 Ramp intersection and Crestridge Drive intersection.

## Benefits



The project will provide bike lane connectivity between the existing Green River Road bike lanes to the east and the Santa Ana River Trail to the west, closing the existing bike lane gap along Green River Road. These lanes will support regional connectivity via the Santa Ana River Trail which, once completed, will connect San Bernardino, Riverside, and Orange counties on over 100 miles of multi-use trail.





## Concept Description



The concept project consist of a transit connector between the RTA express bus route on SR-91 (Route 200) and the transit facilities at North Main in the City of Corona, specifically the North Main Metrolink Station, the Corona Transit Station, and the Caltrans park-n-ride facility.

## Key Considerations



There are three design concepts currently under consideration:

- At-grade in-line bus station in the SR-91 express lanes
- Elevated in-line bus station in the SR-91 express lanes
- Direct Access Ramps for buses from the SR-91 express lanes to W Grand Blvd

Depending on the alternative that is chosen, this project may have impacts to freeway and local street right-of-way, freeway operations, and transit operations.

## Schedule and Cost



A feasibility study is underway. Preliminary design concepts have been developed, but construction is not yet approved or funded.

## Benefits

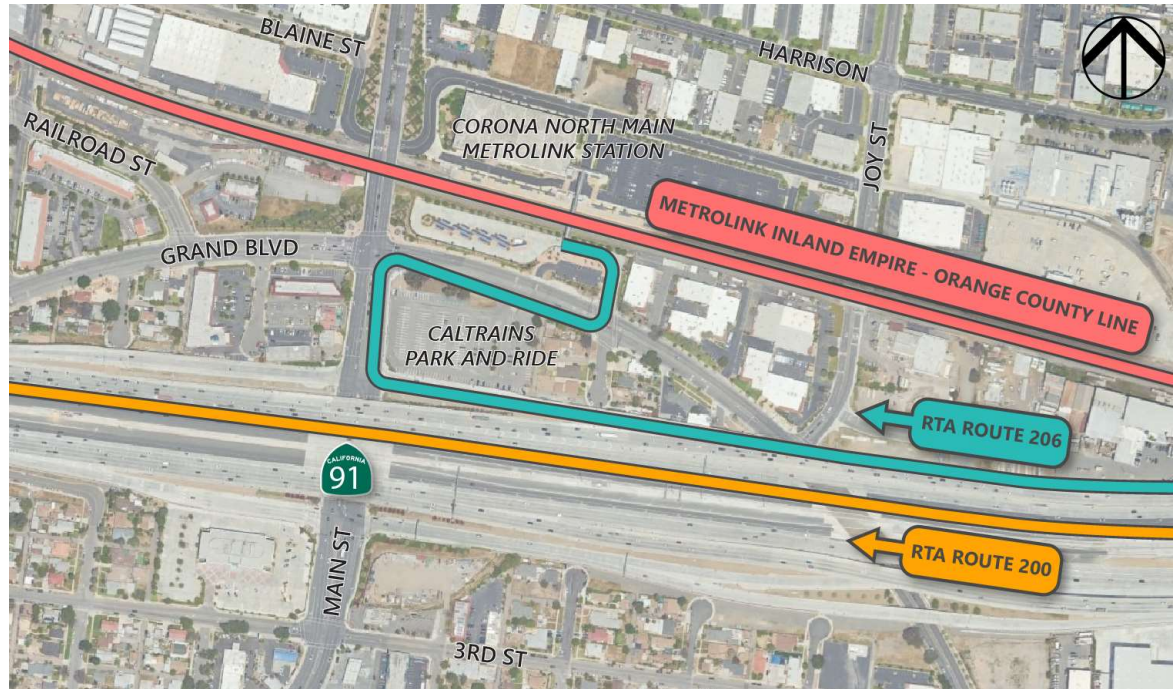


The North Main Transit Connector would improve transit connectivity between the SR-91/I-15 Express Lanes and the North Main Metrolink and bus facilities, creating a regional transit hub. Connecting this missing link would yield both local and regional benefits such as improved transit access, increased ridership, and reduced vehicle miles traveled.

## Current Status



The project team is currently assessing conceptual design alternatives. There are three conceptual design alternatives being evaluated. Preferred alternative(s) may be chosen for further study based on evaluation metrics and stakeholder input.



## Concept Description

The improvements primarily consist of constructing a new 4-lane elevated expressway near or within the Santa Ana Canyon with freeway-to-freeway connectors at SR-241 and I-15. The facility may include managed lanes and potential reversible operations.

## Key Considerations

Choice of alignment will be key to determining net capacity increase. Extensive right-of-way (R/W) will be required to implement the improvements if the alignment is not in the SR-91 corridor. When median connector projects or HOV/HOT projects are constructed and this 4-lane elevated facility is proposed within the median of SR-91 through Corona, then extensive managed lane closures would be required during construction (thus temporarily reducing SR-91 capacity during construction).

An alternative could be studied for the median Corridor A viaduct along with reduced SR-91 geometric standards to minimize R/W impacts.

Also, direct connectors (such as for High Occupancy Vehicle (HOV) / High Occupancy Toll (HOT) at I-15/SR-91) to/from the median could be precluded by Maglev columns located within the same median area. Caltrans and Maglev highway R/W, maintenance, safety, and operations considerations would need to be analyzed if shared use with a Maglev facility were pursued. Additional mitigation costs may be required for improvements to SR-241 and SR-133 as a result of additional Corridor traffic volumes. With Corridor A as managed lanes, and the extension of 91 Express Lanes to I-15, this project concept may affect traffic distribution due to “parallel” tolled facilities.

## Benefits

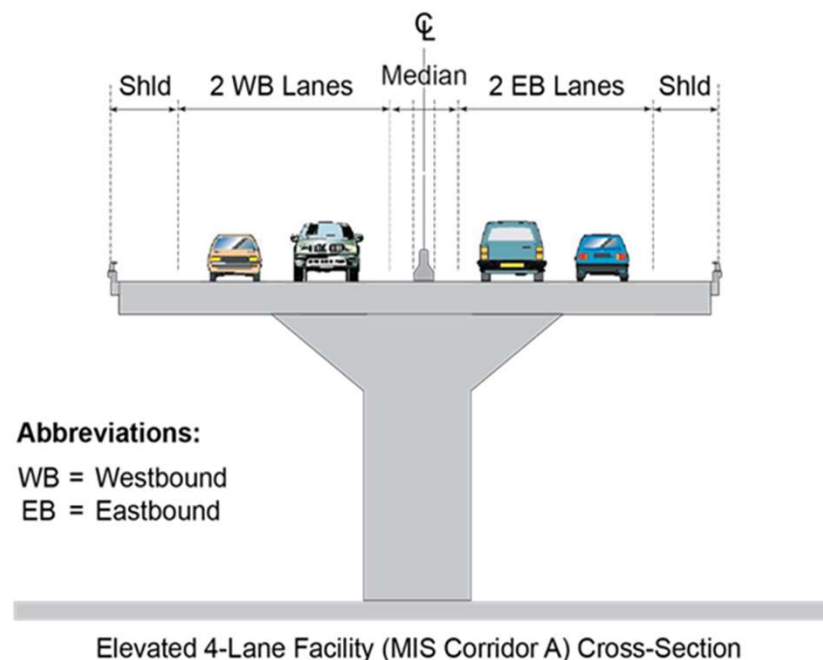
The concept would provide significant congestion relief by allowing vehicles to bypass the at-grade freeway lanes and local arterial interchanges between SR-241 and I-15. Connections are proposed directly between SR-91, SR-241, and I-15.

## Schedule and Cost

This concept is identified in the Riverside County - Orange County Major Investment Study (MIS) as part of the Locally Preferred Strategy to improve mobility between Riverside County and Orange County. No project development work is planned at this time.

## Current Status

Anticipated project completion is post-2035 and construction cost is estimated to be \$2,720,000,000 (2005 dollars).





## Concept Description

The project consists of operational improvements by modifying the connector to SB SR-55 from WB SR-91. The improvements would extend to Lakeview Avenue to the east and would include a new connector from WB SR-91 to SB SR-55 as a potential right-hand exit.

## Key Considerations

Right-of-way impacts, detailed SR-55/SR-91 interchange improvements, and downstream impacts to SR-55 require further evaluation in a subsequent phase of project development. Conceptual design of SR-55/SR-91 would be coordinated with completed improvements at SR-91 and Tustin Avenue, and with the SR-91 Environmental Study Improvements from SR-57 to SR-55.

Operational enhancements between SR-55 and Lakeview Avenue will provide some benefit for SR-55/SR-91 by addressing WB SR-91 weaving issues. In addition, the proposed WB drop-ramp from Lakeview Avenue has been designed to accommodate three WB through lanes on either side in order to reduce throwaway costs in the future should the SR-91 be shifted to accommodate a right-hand exit for SB SR-55.

## Benefits

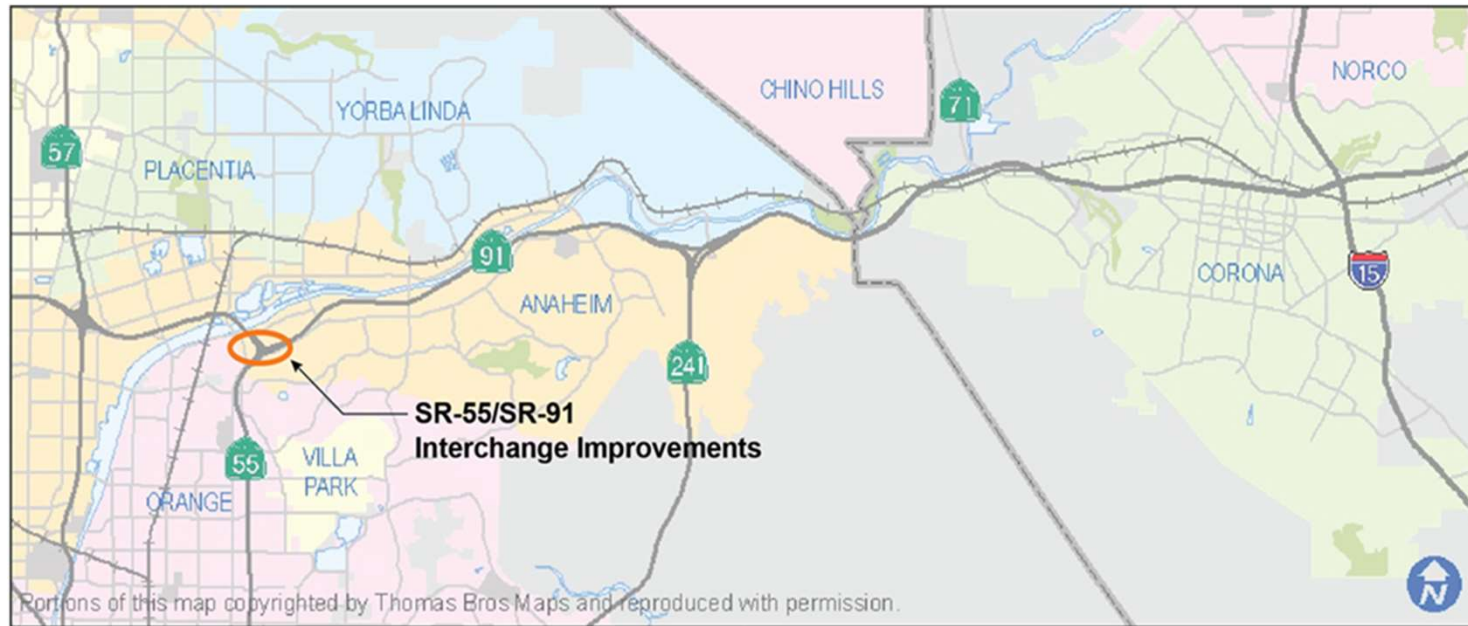
Interchange improvements are anticipated to provide congestion relief for WB SR-91 traffic and potentially improve the connection from WB SR-91 to SB SR-55.

## Schedule and Cost

SR-55/SR-91 project information was derived from the Final Alternatives Evaluation and Refinement Report, December 2005, by the Riverside County - Orange County Major Investment Study (MIS). Focused SR-91/SR-55 conceptual engineering needs to be scheduled. However, initial conceptual engineering was also studied as part of the SR-91 Feasibility Study Between State Route 57 and State Route 55 Interchange Areas in June 2009, and as part of the SR-91 Environmental Study Improvements from SR-57 to SR-55.

## Current Status

Anticipated project completion is post-2035 and construction cost is estimated to be from \$75,000,000 to \$150,000,000 (2014 dollars).



## Concept Description

The location of the proposed EB SR-91 fifth general purpose (GP) lane addition (The Segment) is on EB SR-91 from Weir Canyon Road to the NB SR-241 Connector. The Segment consists of four GP lanes and two managed lanes (91 Express Lanes).

Upstream (westerly) from The Segment the EB SR-91 has 5 GP lanes and the 5th lane drops to the SB SR-241 Connector as some traffic volume exits to the SB SR-241. Downstream from The Segment the EB SR-91 gains the 5th lane back as the NB SR-241 Connector merges with SR-91 in a dedicated lane addition. This 5th lane continues beyond the Riverside County line providing enhanced mobility.

## Key Considerations

This segment with four GP lanes might be creating a traffic choke point due to the decrease of capacity, potentially contributing to significant traffic delays passing through this segment along with other traffic issues such as queue jumping, weaving, merging and operational speed differential. However, additional traffic from NB SR-241 to EB SR-91 and Gypsum Canyon Rd on-ramp suggest balancing the number of lanes should be carefully examined. As such, additional capacity will enhance EB freeway operations along this Segment.

## Benefits

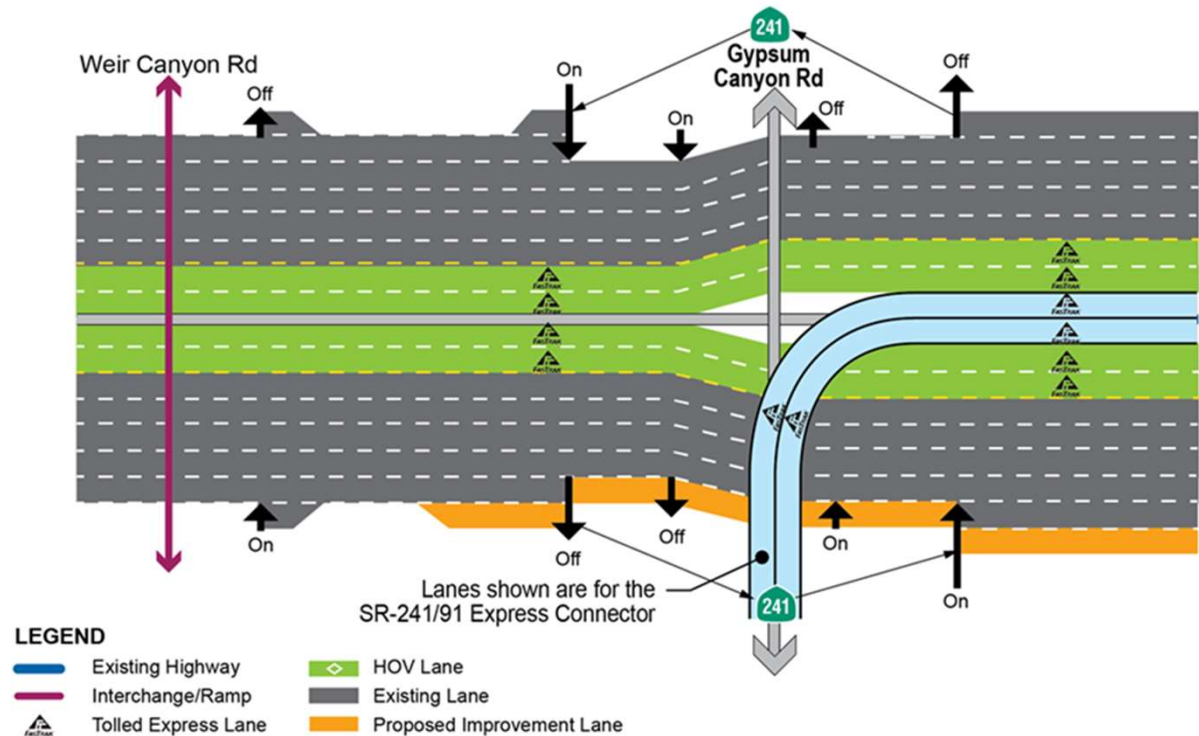
- Extends the existing 5th EB GP lane easterly and ties it to the existing 5th lane downstream. This could provide capacity enhancement and may result in removing an existing choke point. Significant delay savings is anticipated.
- Potentially eliminate queue jumping in this area from EB SR-91 as well as Weir Canyon Rd.
- Potentially reduce speed differential between through lanes, thus creating a more balanced flow.
- Potentially provide balanced lane utilization at high traffic demand area.

## Schedule and Cost

Additional traffic analysis and study is required to confirm the benefits to EB SR-91 by the proposed improvements. This location was identified by Caltrans as a high congestion location in the County. The concept is intended to improve the choke point that exists due to the presence of a 4-lane segment between 5-lane freeway segments.

## Current Status

Total project cost, based on Caltrans' estimate, is \$31.25 million. Project schedule has not been determined.



## Concept Description



The project would provide a new interchange with SR-91 at Fairmont Boulevard. On and off ramps will connect Fairmont Boulevard from the north to eastbound (EB) and westbound (WB) SR-91. The proposed interchange does not include a vehicular Fairmont Boulevard connection to Santa Ana Canyon Road to the south. A pedestrian/bicycle connection is also proposed between La Palma Avenue and Santa Ana Canyon Road. This bridge and pathway will allow for direct Santa Ana River Trail access from both Anaheim south of SR-91 and from Yorba Linda.

## Key Considerations



Interchange spacing and weaving issues (to SR-55) need to be evaluated. Widening of SR-91 may be needed to accommodate interchange ramps. Proximity of the Santa Ana River may require that the WB ramp junction be located north of the river. New connection requirements and interchange spacing needs to be considered. Ramp and bridge placement needs to take pedestrian/bicycle bridge into account or incorporate the pedestrian/bike path into the design beyond the vehicular access limits of the project.

## Schedule and Cost



The City of Anaheim completed a conceptual engineering study in December 2009 for the interchange. Multiple alternatives have been developed as part of the conceptual engineering study. Bicycle/pedestrian bridge is currently in initial planning stages. Project development is pending funding identification. On July 24, 2017, OCTA staff along with a senior staff member of WSP presented the findings of a 91 Express Lanes intermediate access study. The study provided various alternatives, traffic modeling, and financial impacts of the additional access. At the conclusion of the discussion, the OCTA Board of Directors did not authorize additional analysis for the intermediate access.

## Benefits

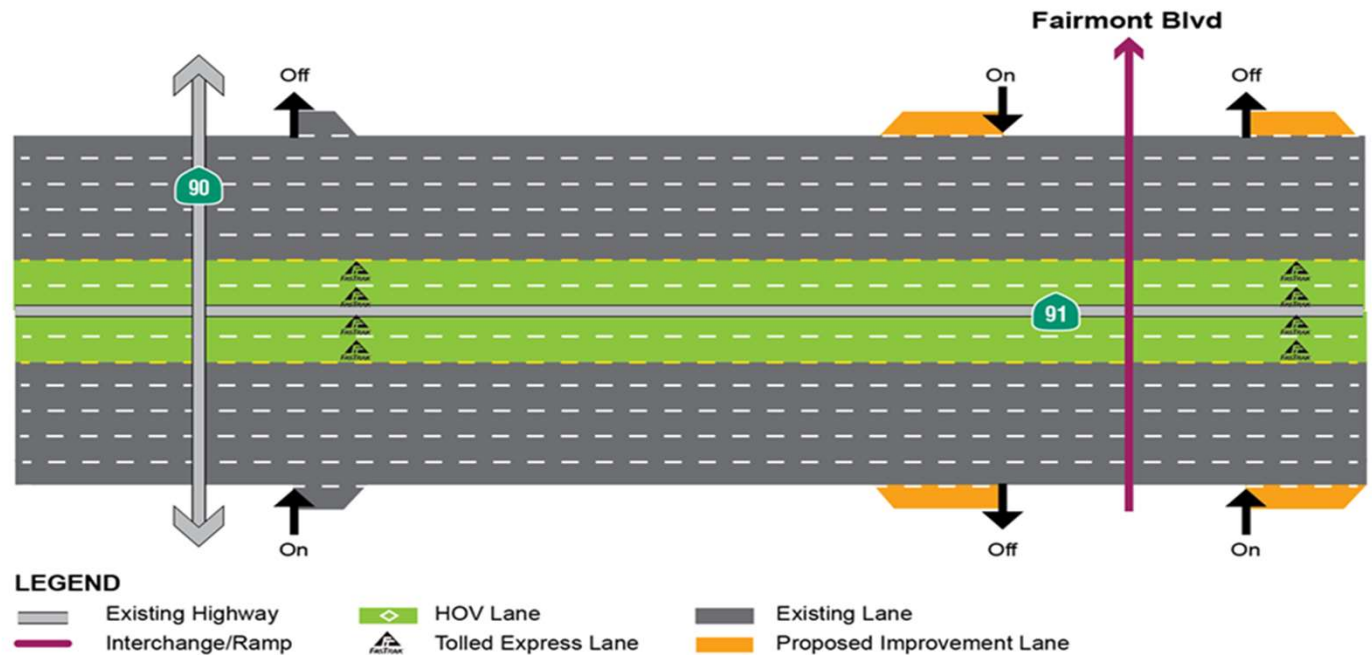


The interchange is expected to relieve congestion at Imperial Highway (SR-90), Lakeview Avenue, and Weir Canyon Road Interchanges. Preliminary traffic modeling shows a 10-15% decrease in volumes at Weir Canyon and SR-90 interchanges with the interchange alternative.



## Current Status



Anticipated project completion is post 2035 and construction cost is estimated to be \$76,800,000 (costs from 2009 Feasibility Study). R/W cost is undetermined. Cost excludes any potential impact to Santa Ana River.





## Completed Projects

The following exhibits represent completed projects from previous Plans since 2006 and are intended to be used as a reference to illustrate the progress made since the inception of the Plan. Note: some projects listed in the Plan as completed (see Section 1, Project Accomplishments) are not included herein since there was no exhibit created or necessary for use with prior Plans (such as for restriping projects, various safety enhancements, minor operational improvements, etc.).

Project Improvements	Constructed
Green River Road Overcrossing Replacement	March 2009
North Main Street Corona Metrolink Station Parking Structure	June 2009
Eastbound Lane Addition from SR-241 to SR-71	September 2010
Widen SR-91 between SR-55 and SR-241 by Adding a 5th GP Lane in Each Direction	December 2012
SR-91 WB Lane at Tustin Avenue	April 2016
Metrolink Service Improvements	June 2016
Initial Phase CIP: Widen SR-91 by One GP Lane in Each Direction East of Green River Rd, CD Roads and I-15/SR-91 Direct South Connector, Extension of Express Lanes to I-15 and System/Local Interchange Improvements	July 2017
Express Bus Service	2019
La Sierra Metrolink Parking Improvements	February 2019
SR-91 Corridor Operations Project	February 2022
Anaheim Canyon Metrolink Station Improvements	January 2023
15/91 Express Lanes Connector	November 2023
Eastbound 91 Express Lane Extension	November 2023

## Project Description



Improvements primarily consist of replacing the existing Green River Road overcrossing with a new six-lane wide, 4 span overcrossing to accommodate future widening of SR-91. The interior spans will accommodate up to eight mainline lanes in each direction including two HOV lanes. The exterior spans can accommodate two lanes, either for Auxiliary lanes or collector distributor roads. Entrance and exit ramps will be realigned and widened to accommodate the new bridge, yet the interchange will retain its current configuration. New Signals will be installed at the ramp intersections. Ramp and bridge improvements will be constructed within the existing right of way.

## Key Considerations



Design interface is required with the Eastbound Lane Addition from SR-241 to SR-71. SR-71/SR-91 Interchange Improvements, SR-91 Corridor Improvement Project, and SR-241/SR-91 HOV/HOT Connector.

## Current Status



The project began construction in March 2007 and was completed in March 2009.

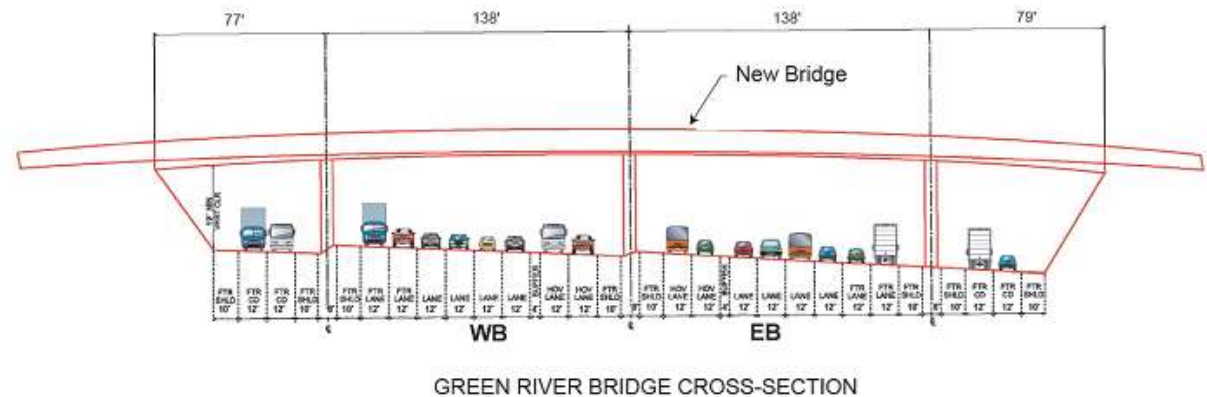
## Benefits



The project will improve the level of service at ramp and local street intersections at the interchange. Improvements will reduce ramp queues that extend into the freeway's general-purpose lanes, thus contributing to congestion relief on SR-91.

Project Costs	\$
Capital Cost	\$21,000,000
Support Cost	\$3,000,000
Right of Way Cost	\$301,000
Total Project Cost	\$24,301,000

Project Schedule	Status
Preliminary Engineering	Completed
Environmental	Completed
Design	Completed
Construction	Completed



## Project Description



The project provides a six level parking structure with 1,065 parking stalls. The construction is within the existing North Main Street Metrolink station property in Corona.

## Key Considerations



Proposed improvements were constructed within existing right of way. Currently there are 700 users of the facility, 200 more that were previously able to accommodate. Additionally, RCTC has opened up the lot to park and ride carpools and vanpools and has issued over 120 permits for carpools to use the expanded station. This shows an added benefit of supporting carpooling as well as transit to offset congestion on SR-91.

## Benefits



Demand for parking currently exceeds the capacity at the North Main Street Corona station. New parking capacity will allow Metrolink ridership to increase thereby diverting vehicle trips from SR-91.

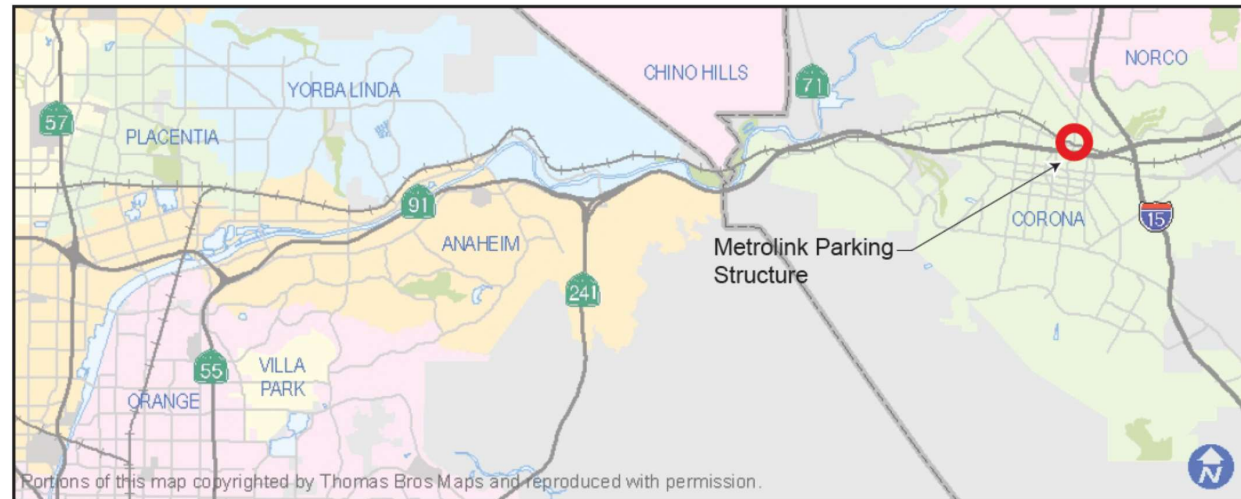
## Current Status



Construction was initiated in January 2008 and was completed in June 2009. The Project was funded with Federal Congestion Management and Air Quality (CMAQ) funds.

Project Costs	\$
Capital Cost	\$20,000,000
Support Cost	\$5,000,000
Right of Way Cost	\$0
Total Project Cost	\$25,000,000

Project Schedule	Status
Preliminary Engineering	Completed
Environmental	Completed
Design	Completed
Construction	Completed





# Eastbound Lane Addition from SR-241 to SR-71

## Project Description

The project will provide an additional eastbound (EB) lane from the SR-91/SR-241 interchange to the SR-71/SR-91 interchange and will widen all EB lanes and shoulders to standard widths.

## Key Considerations

Coordination with the SR-91 Corridor Improvement Projects will be required. Staged construction would be required for all ramp reconstruction and freeway widening. Freeway operations would most likely be affected by this project, however, freeway lane closures are not anticipated. An EB concrete shoulder will be constructed with a 12-foot width to provide for future widening.

## Benefits

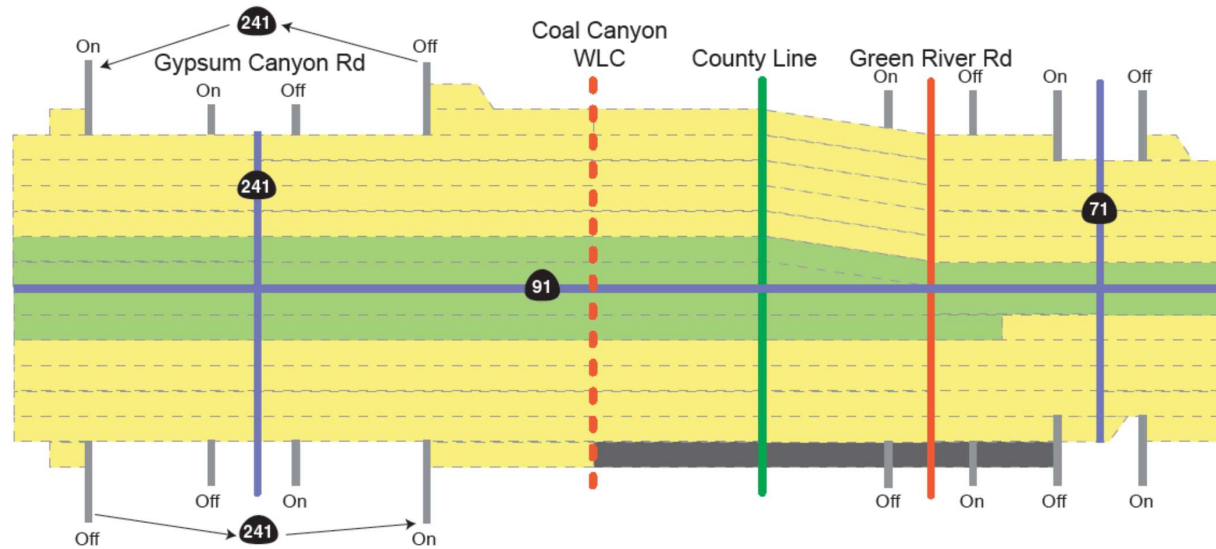
The lane addition would help alleviate the weaving condition between SR-241 and SR-71, as well as remove vehicles from the SR-91 mainline that would be exiting at Green River Road and SR-71.

## Current Status

Funding is from the American Recovery and Reinvestment Act (ARRA) with \$71.44M approved, and the balance of project costs are from other sources. Construction began in late 2009 and was completed in September 2010.

Project Costs	\$
Capital Cost	\$41,000,000
Support Cost	\$8,000,000
Right of Way Cost	\$2,200,000
Total Project Cost	\$51,200,000

Project Schedule	Status
Preliminary Engineering	Completed
Environmental	Completed
Design	Completed
Construction	Completed



## Project Description



The project will add a westbound (WB) auxiliary lane on SR-91 beginning at the northbound (NB) SR-55 to WB SR-91 connector through the Tustin Avenue interchange. This project includes approximately 1.1 lane miles.

## Key Considerations



Build alternative 3 was selected from the Project Study Report (PSR). On Westbound (WB) SR-91 Auxiliary Lane from the Northbound (NB) SR-55/WB SR-91 Connector to the Tustin Avenue Interchange and requires additional right-of-way. City of Anaheim utilities are within proximity of the proposed widening section. Widening of the Santa Ana River Bridge is required. Coordination with the City of Anaheim occurred for widening of Tustin Avenue and the WB SR-91 Off-Ramp that was completed early 2011.

## Benefits



The project would reduce or eliminate operational problems and deficiencies on this section of WB SR-91 including weaving and merging maneuvers. This project would also address choke-point conditions, which are caused primarily by extensive weaving between the NB SR-55 to WB SR-91 connector and the WB SR-91 off-ramp to Tustin Avenue.

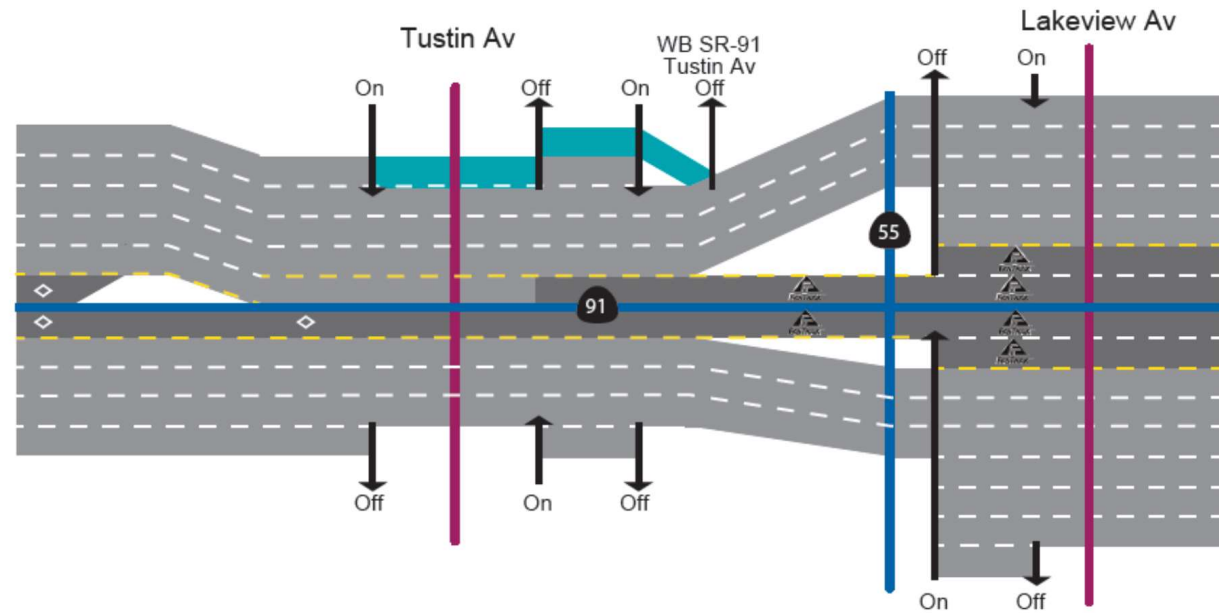
## Current Status



Preliminary engineering was completed and approved by Caltrans. The environmental phases was completed in November 2010, and design was completed mid-2013. Construction was initiated in February 2014. The project received \$14M from the proposition 1B State-Local Partnership Program (SLPP), \$14M from Measure M, with the balance from Regional Improvement Program (RIP) funds. Contract acceptance and open to traffic in May 2016.

Project Costs	\$
Capital Cost	\$22,218,000
Support Cost	\$16,382,000
Right of Way Cost	\$4,682,000
Total Project Cost	\$43,282,000

Project Schedule	Status
Preliminary Engineering	Completed
Environmental	Completed
Design	Completed
Construction	Completed



## Project Description



There are sixteen daily trains that run on the IEOC Line and nine trains running on the Los Angeles to Riverside portion of 91/Perris Valley (91/PV) Line for a total of 25 daily trains. The Long-term service improvements will include 24 IEOC trains by 2030.

The Perris Valley portion of the 91 Line extends Metrolink service southeast by 25 miles, from Riverside to Perris. The project is located within the right of way of the existing San Jacinto Branch Line through Riverside, Moreno Valley and Perris. Construction began in October 2013. Cost approximately \$248 million, and the extension opened to the public in June 2016. The inaugural schedule (December 2015) includes nine trains through to Los Angeles and 12 between Perris and Riverside.

## Key Considerations



Construction of the new Placentia Metrolink station will improve passenger access to the 91/PV Line, by creating a station between Fullerton and Corona. Improvements at the Anaheim Canyon station are designed to account for the future expansion of the IEOC rail service.

## Benefits



Enables development of expanded Metrolink service, improved efficiency, and fosters train ridership growth in the region, which will contribute to congestion relief on SR-91.

## Current Status



Two additional IEOC Line roundtrips were added in late 2015, and in Mid-2016, nine trains began service on the Perris Valley Extension to the 91/PV Line.

## Project Costs Estimates

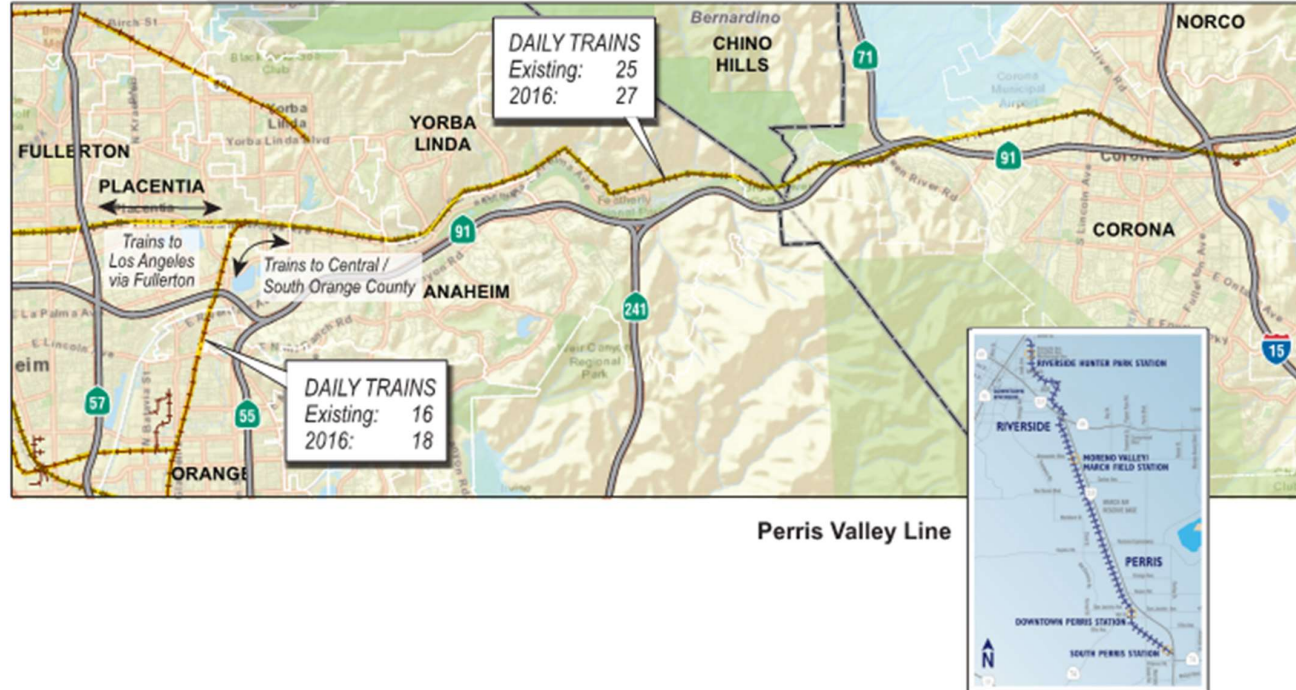
\$

IEOC Service Cost	\$1,160,000
Perris Valley Line Cost	\$248,000,000
Right of Way Cost	\$249,160,000

Costs from OCTA and RCTC (in 2015 dollars)

## Project Schedule

Completed 2016



Perris Valley Line



# Initial Phase CIP: Widen SR-91 by one GP Lane In Each Direction East of Green River Road, CD Roads and I-15/SR-91 Direct South Connector, Extension of Express Lanes to I-15 and System / Local Interchange Improvements



## Project Description

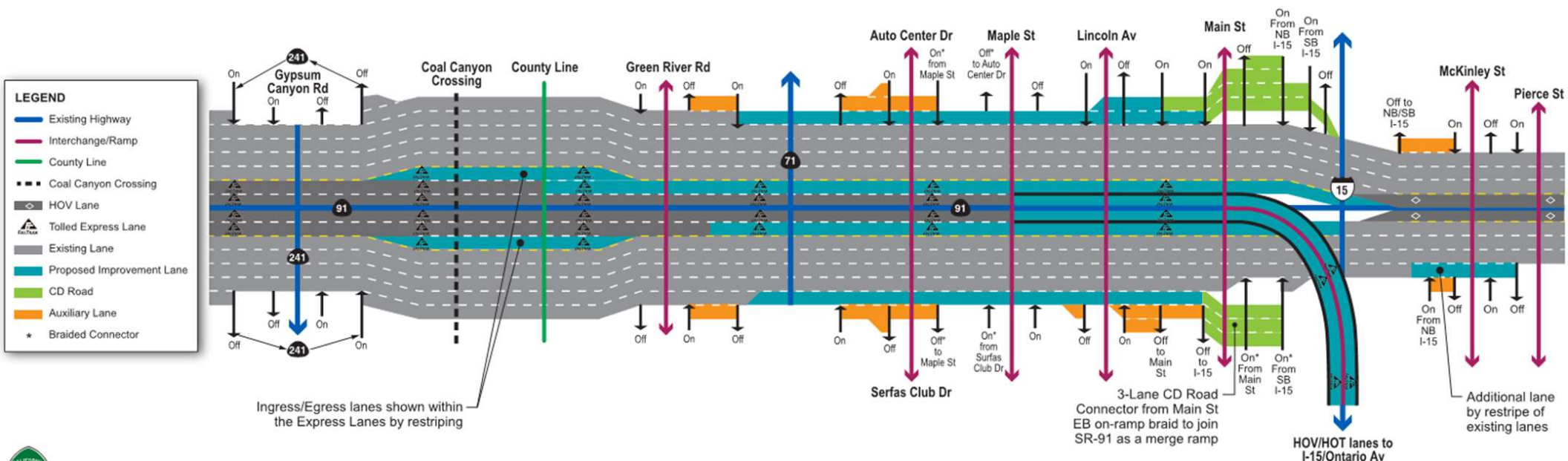


The approved Project Study Report (PSR) for the SR-91 Corridor Improvements Project (CIP), from SR-241 to Pierce Street, includes the addition of a 5<sup>th</sup> general purpose lane in each direction, the addition of auxiliary lanes at various locations, additional lanes at the SR-71/SR-91 interchange (Project #5), and collector-distributor (CD) lanes at the I-15/SR-91 interchange. Subsequently, the Riverside County Transportation Commission's (RCTC) 10 year Delivery Plan recommended the following addition to the PSR recommended improvements: the extension of the 91 Express Lanes from the Orange County line to I-15, the construction of SR-91 (EB/WB)/I-15 (SB/NB) Express Lanes median direct connectors, and the construction of one Express Lane in each direction from the I-15/SR-91 interchange southerly to I-15/Cajalco Road, and northerly to I-15/ Hidden Valley Parkway. An Express Lane ingress/egress lane is also planned near the county line. Due to economic conditions, a Project Phasing Plan was developed to allow an Initial Phase with reduced improvements to move forward as scheduled, with the remaining ultimate improvements to be completed later. The following is a summary of the deferred ultimate improvements: I-15/SR-91 median North Direct Connector, and I-15 Express Lanes to Hidden Valley Parkway (Project #9): general purpose lanes to Express Lanes from I-15 to Pierce Street; and general purpose lanes from SR-241 to SR-71. The I-15 Express Lanes to be extended from Ontario Avenue to Cajalco Road are included in RCTC's I-15 Express Lane Project with an anticipated completion in 2020.

## Key Considerations



Coordination among many of the SR-91 freeway projects that overlap the project limits is critical to successfully delivering these projects on schedule and within budget. Designing to accommodate future projects is a recurring theme for each of these projects. Minimizing conflicts in scope between projects requires direct coordination between each project team. Additionally, future projects frequently have multiple alternatives under study, each with a differing scope and construction footprints. Specifically, the project improvements need to continue to be coordinated with the SR-71/SR-91 Interchange, the SR-241/91 Express Connector, and RCTC's I-15 Express Lane Project.



**(Continued)**

**Current Status**



The environmental phase was completed in Fall 2012. A Design-Build contractor was selected in May 2013 and construction activities began in early 2014 for the Initial Phase. The project is anticipated to open to traffic in Spring 2017 with final project acceptance anticipated at the end of 2017.

**Benefits**



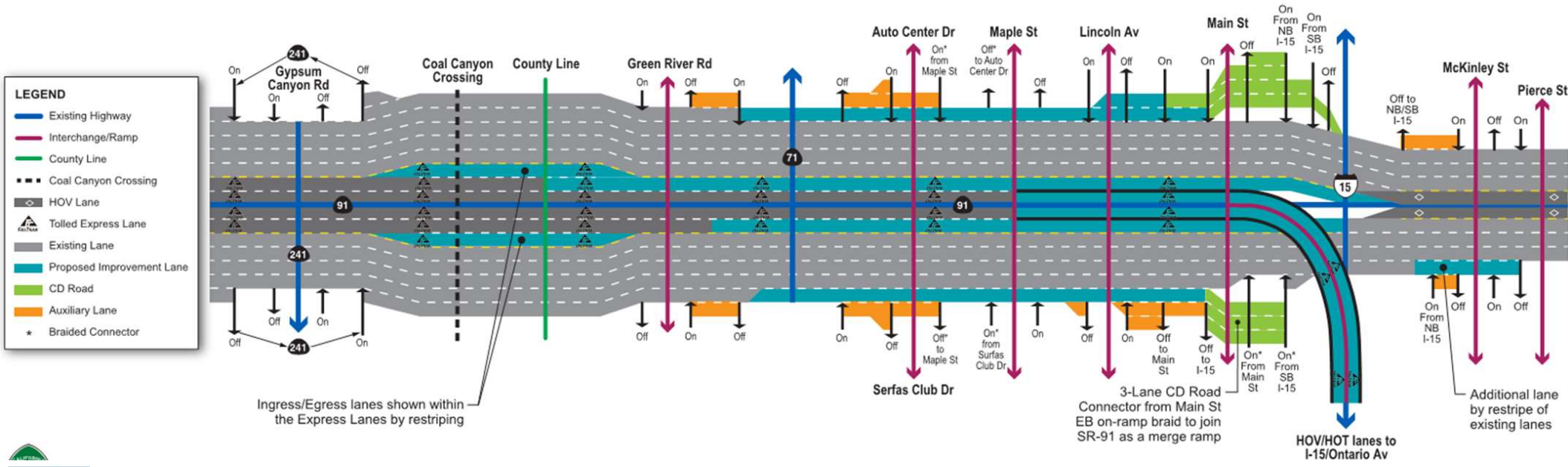
The Initial Phase and Ultimate CIP projects will reduce congestion and delays by providing additional SR-91 capacity from SR-241 to Pierce Street, along I-15 from SR-91 to Cajalco Road to the south, and to Hidden Valley Parkway to the North. Traffic operations will improve by eliminating or reducing weaving conflicts along SR-91 and I-15 by the use of CD roads and auxiliary lanes. The project will provide motorists a choice to use Express Lanes for a fee in exchange for time savings.

Project Costs*	\$
Capital Cost	\$1,161,000,000
Support Cost	\$246,000,000
<b>Total Project Cost</b>	<b>\$1,407,000,000</b>

Project Schedule**	Status
Preliminary Engineering	Completed
Environmental	Completed
Design/Construction	2013-2017

\* Cost obtained for Initial Phase is from RCTC (2014 dollars)

\*\* Schedule for Initial Phase; subsequent Phase for Ultimate Project anticipated in 2035





## Project Description

Orange County Transportation Authority (OCTA), working with the Riverside County Transportation Commission (RCTC) and the Riverside Transit Agency (RTA), operate Express Bus service between Riverside and Orange counties. Commuters lack direct transit connections to some Orange County employment centers not served by Metrolink. The Express Bus service provides this connection.

## Existing Service

OCTA has operated Route 794 since 2006 from Riverside County to Hutton Centre and South Coast Metro (shown in orange above). On Route 794, OCTA removed trips to Corona in February 2018 based on low ridership. OCTA currently operates six morning westbound trips and five afternoon eastbound trips to/from the La Sierra Metrolink Station. Two new Express Bus routes were implemented by RTA in January 2018 between Riverside County and Orange County including RTA Route 200 (shown in blue above) from San Bernardino/Riverside to the Anaheim Resort. The route provides hourly service on weekdays and 90 to 120 minute service on weekends with a fleet of six buses. RTA Route 205 (shown in green above) from Lake Elsinore/Temecula/ Corona to the Village at Orange includes three AM and three PM roundtrips with 3 buses.

## New Service

The Express Bus Routes have been fully implemented as of FY19 and there are no planned service additions. Changes to routes may be made in the future based on available funding and ridership demand.

## Key Considerations

Intercounty Express Bus service is effective between locations where transit travel times by Express Bus would be more competitive than Metrolink and connecting rail feeder buses.

## Benefits

The Express Bus Routes have been fully implemented as of FY19 and there are no planned service additions. Changes to routes may be made in the future based on available funding and ridership demand.

## Schedule and Cost

The Express Bus Routes have been fully implemented as of FY19. Ongoing operating costs average \$4,892,000 per year and capital costs average \$1,174,000 per year (2019 dollars). The annual capital cost was increased in 2019 to reflect the future cost of complying with the new Innovative Clean Transit regulation.

## Current Status

Since completion of the 91 Express Lanes, RTA more than doubled its Express Bus service on SR-91. Currently, OCTA operates 11 bus trips per day on SR-91. RTA now operates 47 trips on weekdays (up from 18 trips that Route 216 provided weekdays) and 18 trips on weekends (up from 8 trips provided by Route 216) on SR-91 Express Lanes. Service hours for this expansion is an extra 21,445 hours per year and is being served by five new coaches added to the RTA fleet.





## Project Description



There are currently 1,000 spaces available. RCTC is implementing a parking lot expansion to include an additional 496 spaces and six bus bays to accommodate RTA Express Lane Service 200 that originates at Metrolink San Bernardino Transit Center with stops along Riverside Downtown Metrolink Station, Metrolink La Sierra, the Village at Orange, ARTIC, Disneyland, and Anaheim Convention Center, as well as other potential bus routes for the future.

## Schedule and Cost



Construction was completed in February 2019. The project cost is estimated to be \$6,260,000.

## Current Status



Construction and project implementation has begun.

## Benefits



The 496 parking spaces will provide for existing and future demand. The parking lot expansion will provide for ADA parking. RTA express service, commuter rail, and vanpool.



## Project Description



The Riverside County portion of the 91 Express Lanes began operation in March 2017. Throughout the first year of operation, RCTC made minor operational improvements to improve the SR-91 corridor travel between State Route 241 (SR-241) and McKinley Street. In November 2018, RCTC implemented additional striping and signage improvements to westbound SR-91 at the McKinley entrance to the 91 Express Lanes as well as the County Line access location to further enhance efficiency along the westbound SR-91 corridor between McKinley Street and SR-241. In December 2018, the RCTC Commission authorized its staff to proceed with a project to construct an additional westbound lane along SR-91 between Green River Road and SR-241 (the subject of this project). This new project is now known as the SR-91 Corridor Operations Project (91 COP).

## Key Considerations



The goal of this project is to implement a substantial operational improvement that is cost effective and timely to address the peak period bottleneck conditions along westbound SR-91 near the County Line. Key considerations include reducing impacts to adjacent land and local streets using retaining walls and minimizing throw-away costs with future projects. Specifically, the project improvements need to be coordinated with the SR-241/SR-91 Tolled Express Connector and the SR-91 Sixth GP Lane Addition projects.

## Benefits



The 91 COP will reduce congestion and delays along westbound SR-91 between McKinley Street and SR-241.

## Schedule and Cost

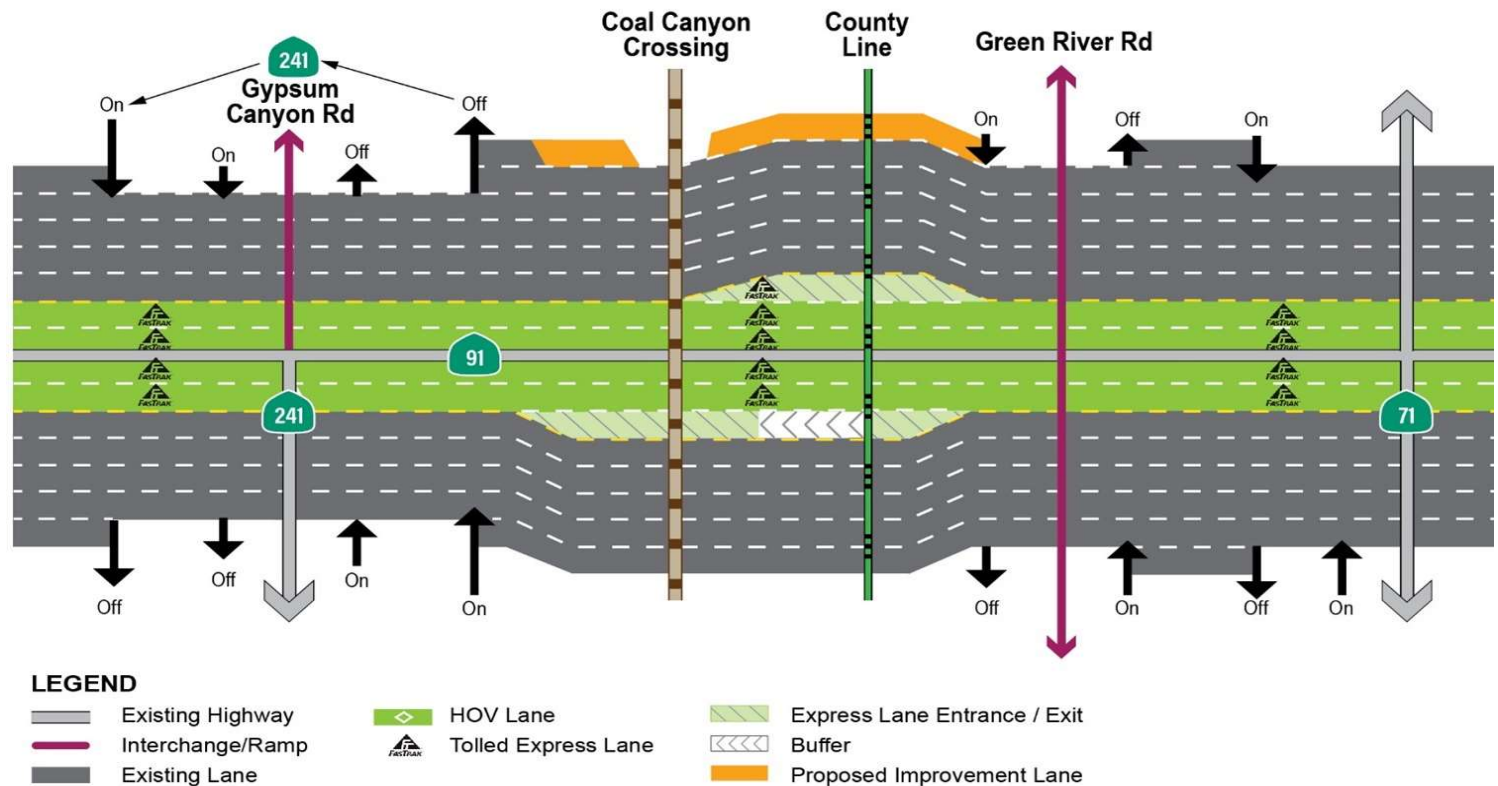


Construction is planned for completion in 2022. The total project cost is estimated to be \$38,000,000.

## Current Status



This project is within the footprint of the SR-91 Sixth GP Lane Addition project that was an element of the SR-91 CIP environmental document approved in 2012. An environmental revalidation for the 91 COP was completed in Spring 2020. Construction began in November 2020.



### LEGEND

- Existing Highway
- HOV Lane
- Tolled Express Lane
- Express Lane Entrance / Exit
- Buffer
- Proposed Improvement Lane
- Interchange/Ramp
- Existing Lane



# Anaheim Canyon Metrolink Station Improvements

## Project Description



The Anaheim Canyon Metrolink Station Improvement Project will include the addition of approximately 3,400 linear feet of secondary track; a second platform; extending the existing platform; improvements at two at-grade railroad crossings located at Tustin and La Palma; as well as new shade structures, benches, and ticket vending machines. These project improvements will accommodate planned future train service and will enhance on time service and safety.

## Schedule and Cost

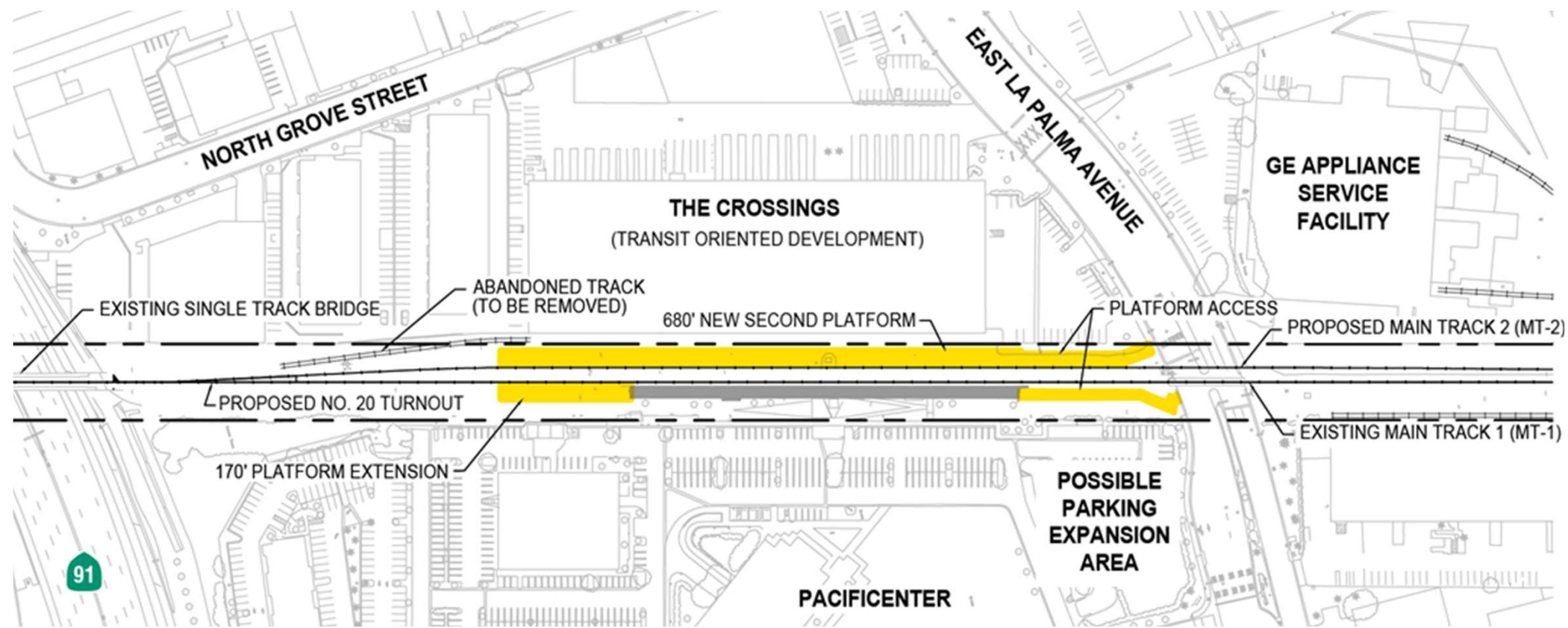


The plans were completed, and the project was advertised for bid in October 2020. Construction began in May 2021 and is anticipated to be completed in November 2022. The total project cost is estimated to be \$34.2 million.

## Benefits



The project will enable future Metrolink service expansion, improve train service efficiency, and foster train ridership growth in the region, which will contribute to congestion relief on SR-91.





## Project Description



The Project Approval and Environmental Document (PA/ED) for the SR-91 Corridor Improvement Project (CIP), from SR-241 to Pierce Street, included the addition of a 5th lane in each direction, the addition of auxiliary lanes at various locations, the addition of collector-distributor lanes at the I-15/SR-91 interchange, the extension of the 91 Express Lanes from the Orange County line to I-15, the construction of a SR-91 Express Lanes median direct connector to and from I-15 South, a SR-91 Express Lanes median direct connector to and from I-15 North (15/91 Express Lanes Connector, the subject project), and the construction of one Express Lane in each direction from the I-15/SR-91 interchange southerly to I-15/Cajalco Road (completed as part of RCTC I-15 Express Lanes Project), and easterly to east of McKinley Street. Due to funding constraints, a Project Phasing Plan was developed to allow an Initial Phase, with reduced improvements, to move forward as scheduled, with the remaining ultimate improvements to be completed later. Subsequently, the proposed 15/91 Express Lanes Connector improvements (the subject of this project) have been pulled out from the CIP as a standalone project.

## Key Considerations



Coordination among many of the SR-91 freeway projects that overlap the project limits is critical to successfully delivering these projects on schedule and within budget. Designing to accommodate future projects is a recurring theme for each of these projects. Minimizing conflicts in scope between projects requires direct coordination between each project team. Additionally, future projects frequently have multiple alternatives under study, each with differing scope and construction footprints. Specifically, the project improvements need to continue to be coordinated with the SR-71/SR-91 interchange, the SR-241/SR-91 Tolloed Express Connector, and the Eastbound 91 Express Lane Extension.

## Benefits



The 15/91 Express Lanes Connector project will reduce congestion and operational delays by providing direct median-to-median access between the SR-91 Express Lanes and I-15 Express Lanes. Traffic operations will improve by eliminating weaving conflicts and out-of-direction travel along SR-91 and I-15 by the use of the direct connectors. The project will provide motorists a choice to use the 15/91 Express Lanes Connector for a fee in exchange for time savings.

## Schedule and Cost



Construction is planned to be completed in late 2023. The total project cost is estimated to be \$270,000,000.

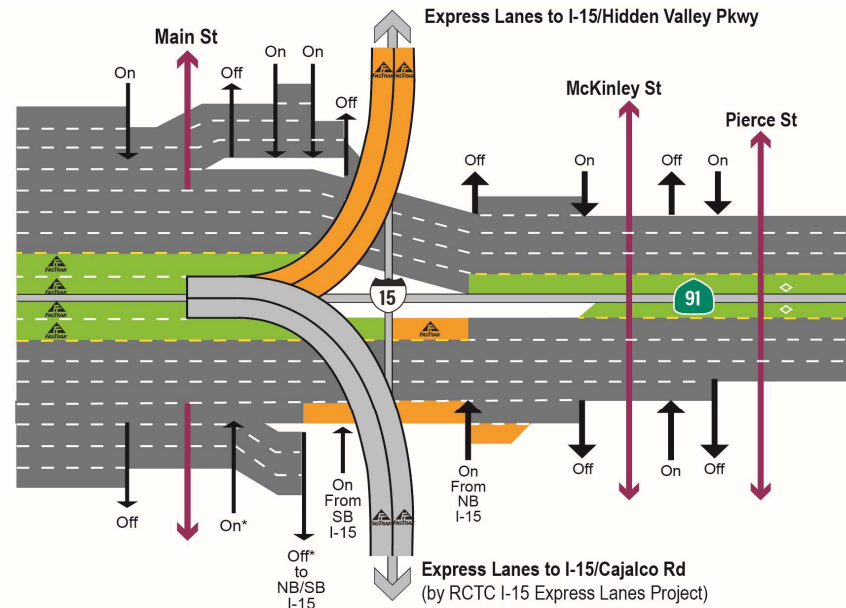
## Current Status



The 15/91 Express Lanes Connector is currently discussed in the environmental document for the SR-91 CIP that was completed in 2012. An environmental revalidation was completed in 2019. A Design-Build contract was awarded in Spring 2020 and the project is currently under construction.

### LEGEND

- Existing Highway
- Interchange/Ramp
- HOV Lane
- Tolloed Express Lane
- Existing Lane
- Proposed Improvement Lane



## Project Description



The Eastbound 91 Express Lane Extension is a new project that was initiated in 2022. The scope of the project is to extend a second eastbound toll express lane from the exit to the express lane connectors (just east of the Main Street Undercrossing) to the beginning of the SR-91 HOV lane just east of Promenade Avenue Overcrossing.

## Key Considerations



Coordination among many of the SR-91 freeway projects that overlap the project limits is critical to successfully delivering these projects on schedule and within budget. Designing to accommodate future projects is a recurring theme for each of these projects. Minimizing conflicts in scope between projects requires direct coordination between each project team. Additionally, future projects frequently have multiple alternatives under study, each with differing scope and construction footprints. Specifically, the project improvements need to continue to be coordinated with the SR-71/SR-91 interchange, the SR-241/SR-91 Tolled Express Connector, and the 15/91 Express Lanes Connector.

## Benefits



The Eastbound 91 Express Lane Extension will reduce congestion and improve operations in the express lanes and general-purpose lanes by providing a gap closure lane between the existing express lanes and HOV lane reducing merging and weaving on eastbound 91 within the existing bottleneck of the I-15 interchange area.

## Schedule and Cost



Construction is planned to be completed in late 2023. The total project cost is estimated to be \$10,000,000.

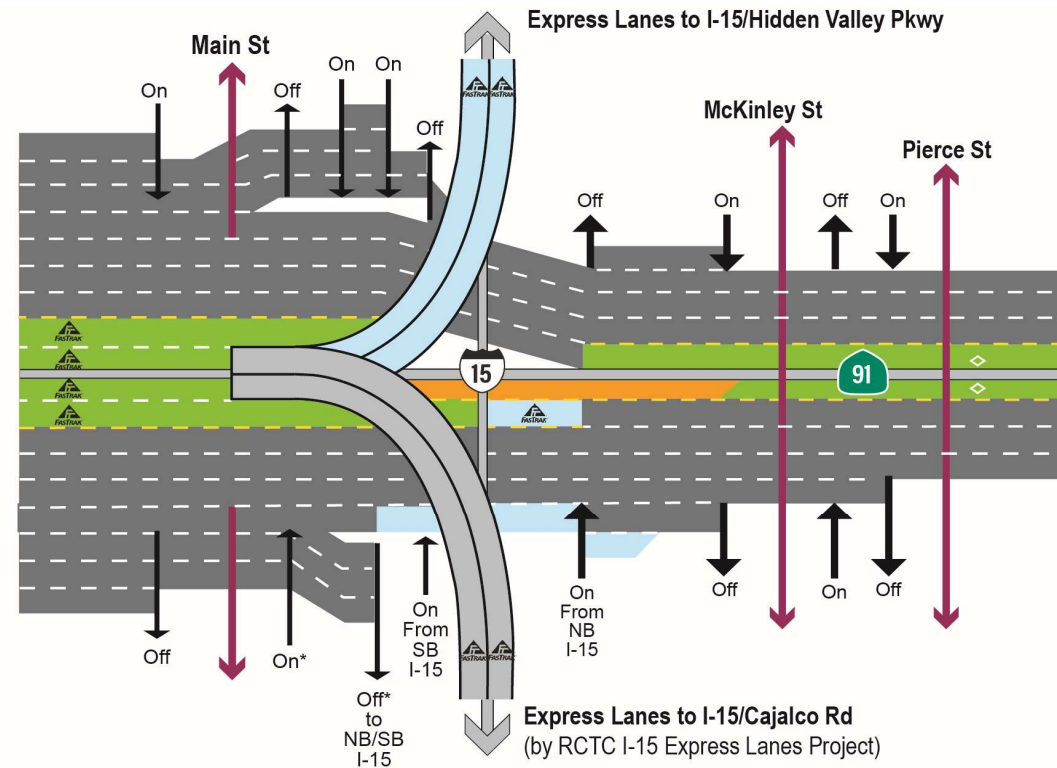
## Current Status



The Project Approval and Environmental Document (PA/ED) phase is currently underway.

### LEGEND

- Existing Highway
- Interchange/Ramp
- HOV Lane
- Tolled Express Lane
- Existing Lane
- Other Improvement Projects
- Proposed Improvement Lane



The following documents and resources were used in the development of the Plan. Data was provided by OCTA, RCTC, Caltrans Districts 8 and 12, Transportation Corridor Agencies (TCA), other agencies, and online resources.

Measure M Next 10 Delivery Plan (Next 10 Plan), November 14, 2016

Riverside Transit Agency, Ten-Year Transit Network Plan, January 22, 2015

PSR-PDS on Route 91 Between SR-57 and SR-55, October 2014

PS&E for “Westbound State Route 91 Auxiliary Lane from the NB SR-55/WB SR-91 Connector to the Tustin Avenue Interchange”, 2014

PS&E for Initial SR-91 CIP Project, 2014

California Transportation Commission, Corridor Mobility Improvement Account (CMIA), Amended December 2012

M2020 Plan (Measure M), September 2012

PSR-PDS for SR-241/SR-91 Tolloed Express Connector, January 2012

Project Report and Environmental Document (EIR/EIS) for SR-91 CIP from SR-241 to Pierce Street Project, October 2012

PS&E “On State Route 91 Between the SR-91/SR-55 Interchange and the SR-91/SR-241 Interchange in Orange County”, April 2011

Corridor System Management Plan (CSMP) Orange County SR-91 Corridor Final Report, August 2010

Project Study Report/Project Report “Right of Way Relinquishment on Westbound State Route 91 Between Weir Canyon Road and Coal Canyon”, May 2010

SR-91/Fairmont Boulevard Feasibility Study, December 2009

Feasibility Evaluation Report for Irvine-Corona Expressway Tunnels, December 2009

Plans, Specifications and Estimates (PS&E) for Eastbound SR-91 lane addition from SR-241 to SR-71, May 2009

PSR “On State Route 91 Between the SR-91/SR-55 Interchange and the SR-91/SR-241 Interchange in Orange County”, April 2009

91 Express Lanes Extension and State Route 241 Connector Feasibility Study, March 2009

PSR/PR “On Gypsum Canyon Road Between the Gypsum Canyon Road/SR-91 Westbound Off-Ramp (PM 16.4) and the Gypsum Canyon Road/SR-91 Eastbound Direct On-Ramp (PM 16.4)”, June 2008

Orange County Transportation Authority Renewed Measure M Transportation Investment Plan, November 2006

Riverside County-Orange County Major Investment Study (MIS) – Final Project Report: Locally Preferred Strategy Report, January 2006

Route Concept Reports for SR-91, Caltrans Districts 8 and 12

Various Preliminary Drawings and Cross Sections, Caltrans Districts 8 and 12