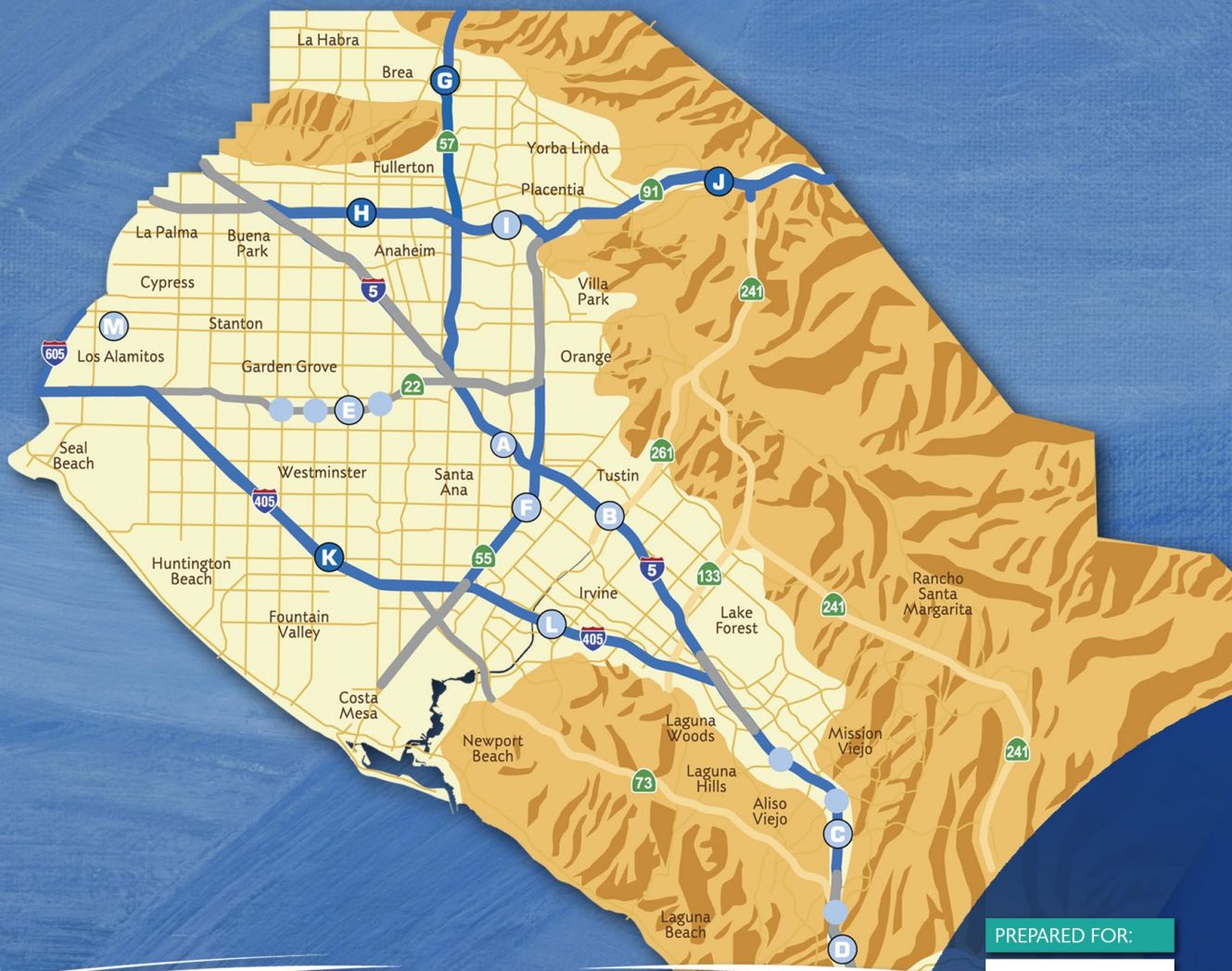




FEBRUARY 2012

# Measure M2 Freeway Plan



PREPARED FOR:



PREPARED BY:



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# SECTION 1: \_\_\_\_\_ MEASURE M2 OVERVIEW

## INTRODUCTION

On November 6, 1990, Orange County voters approved Measure M, the first half-cent local transportation sales tax in Orange County. Measure M was in place for twenty years and concluded on March 31, 2011. All of the major projects promised to and approved by the voters in Measure M are now complete.

## CONTINUED INVESTMENT NEEDED

The primary focus of Measure M was addressing existing congestion resulting from two decades of constrained funding for transportation programs in California. While Measure M achieved that goal, Orange County continued to grow.

## RENEWING MEASURE M

On November 7, 2006, the half-cent local transportation sales tax was extended for an additional 30 years in the form of Measure M2 (M2). The M2 Transportation Investment Plan is a 30-year (2011-2041) program designed to address both existing and future transportation needs in Orange County by upgrading key freeways, fixing major freeway interchanges, improving and maintaining streets and roads, synchronizing traffic signals countywide, improving Metrolink and its connections to communities, providing new and expanded community based transit, and protecting our environment.

## FREEWAYS

Improving Orange County freeways is the largest of the three major programs (freeways, streets and roads and transit) in the M2 program: Forty-three percent of net revenues will be invested in new freeway construction. Relieving congestion on the Riverside/Artesia Freeway (SR-91) is the centerpiece of the M2 freeway program, and will include new lanes and improved interchanges. Other major projects will make substantial improvements on Interstate 5 (I-5) from central to southern Orange County, the San Diego Freeway (I-405), the Orange Freeway (SR-57) and the Costa Mesa Freeway (SR-55). I-5 will also be improved between SR-57 (the "Orange Crush interchange) and SR-55. Under the Plan, major traffic chokepoints on almost every Orange County freeway will be improved.

## M2 CAPITAL ACTION PLAN

Although M2 was approved in November 2006, the sales tax collections did not begin until April 1, 2011. In order to expedite some of this work, OCTA instituted an Early Action Plan (EAP) that advanced the development of nine freeway projects before April 2011. The plan used state infrastructure bonds, federal stimulus funds, and other debt financing to start the projects early. The EAP included the advancement of conceptual design, environmental clearance, design, and construction of a number of projects. With the M2 program now under way, the EAP has been transitioned to the Capital Action Plan (CAP) and was expanded to its current list (see Table 1).

## M2 ACCOMPLISHMENTS

As a result of the CAP, much progress has been made in executing the M2 program since the voters approved the renewal of Measure M in 2006. The following is a summary of the progress made through December 2011.

- ❖ Project A - Interstate 5 (SR-55 to SR-57): A Project Study Report was prepared to identify ways to relieve freeway congestion along the corridor which included looking at adding a second High Occupancy Vehicle (HOV) lane on I-5 between SR-55 and SR-57 in the City of Santa Ana. The study looked at ways to increase capacity and improve traffic flow through this section of I-5 that connects four major freeways in central Orange County. The project is intended to provide additional capacity needed to accommodate HOV traffic from the direct HOV connectors at both the SR-55 and SR-57 interchanges. The Project Study Report was completed and the project is now in the environmental phase with completion of the environmental document anticipated in 2013.
- ❖ Projects C/D - Interstate 5 (I-405 to Avenida Pico): A Project Study Report was prepared to identify options to increase capacity of the I-5 corridor between Avenida Pico and Pacific Coast Highway through the cities of San Juan Capistrano, Dana Point and San Clemente. This study evaluated the benefits of extending the existing high-occupancy vehicle (HOV) lanes on I-5 that presently terminate south of Camino



Capistrano in the City of San Juan Capistrano to Avenida Pico in the City of San Clemente. As this project moved into the environmental phase, improvements to the Avenida Pico interchange (Project D) were incorporated into the study. The environmental phase was completed in 2011 with the design phase being initiated that same year.

- ❖ Projects C/D - Interstate 5 (El Toro Road to SR-73): A Project Study Report was prepared in 2011 to analyze options to improve the I-5 between El Toro Road in the City of Lake Forest and SR-73 in the City of Mission Viejo. The study evaluated the feasibility of lane additions within this corridor and possible improvements to key freeway interchanges such as La Paz Road and Avery Parkway to reduce traffic congestion in the area. This project is now in the environmental phase and is anticipated to be complete in late 2014.
- ❖ Project D - Interstate 5/State Route 74 Interchange: In December 2008, the City Council of San Juan Capistrano approved the selection of a locally preferred alternative. The Project Report, Environmental Document and Modified Access Report were approved in May 2009 and the Design phase was initiated in January 2009 and is scheduled for completion later this year. Construction is anticipated to be complete in 2014.
- ❖ Project F - State Route 55 (I-405 to I-5): A Project Study Report was prepared to analyze options to improve the SR-55 between I-405 and I-5, passing through the cities of Tustin, Santa Ana, and Irvine. The study evaluated the feasibility of lane additions within this corridor and possible improvements to key interchanges to reduce traffic congestion in the area. This project is currently in the environmental phase and is anticipated to be complete in late 2013.
- ❖ Project G - State Route 57 Northbound Widening: Construction is underway for a new northbound lane on SR-57 from Orangethorpe Avenue to Lambert Road through the cities of Placentia, Fullerton and Brea with completion in July 2014. Additionally, construction will begin to add a new northbound lane on SR-57 between Katella Avenue and Lincoln

Avenue in the Anaheim area in late 2011 with completion in 2014/2015.

- ❖ Project H - State Route 91 (I-5 to SR-57): This project is currently in design to add a new westbound lane to the freeway between the I-5 and the SR-57 in the City of Anaheim. Construction is scheduled to begin in early 2013 and is anticipated to be complete in late 2015.
- ❖ Project I - State Route 91 (SR-57 to SR-55): A feasibility study was prepared to identify options for improving the SR-91/SR-55 interchange and adding capacity along SR-91 between SR-57 and SR-55. A Project Study Report is currently being prepared to further analyze these options. The Project Study Report is anticipated to be complete in early 2013.
- ❖ Project J - State Route 91 (SR-55 to I-15): Three projects are being advanced along SR-91 to relieve traffic congestion in the corridor connecting Orange County and Riverside County. Construction of a new eastbound lane between SR-241 and SR-71 in Riverside County was completed in January 2011. This project extended the existing eastbound auxiliary lane that terminated before Green River Road to the SR-71 interchange. Construction is underway to add one new lane in each direction along SR-91 from SR-55 to SR-241. This project is anticipated to be completed in late 2012/early 2013 and will improve freeway capacity through the cities of Anaheim and Placentia. The third project is being advanced by the Riverside County Transportation Commission (RCTC) and is a two-phase (initial & ultimate) project that will add capacity on SR-91 each way between SR-241 in the City of Anaheim to I-15 in the City of Corona. Scheduled for completion by 2017, the initial phase of the project is being funded by RCTC and will add one eastbound lane and one westbound lane of capacity between SR-241 and the Riverside County line. The ultimate project will provide one additional eastbound and westbound lane of capacity between SR-241 and the Riverside County line. A schedule for delivery of the ultimate improvements has not yet been established.

- ❖ **Project K - Interstate 405 (I-605 to SR-55):** A Project Study Report was prepared to analyze the addition of one or two new lanes each way on I-405 between SR-55 and I-605. These improvements will add mainline capacity and improve key interchanges along the corridor that serves the cities of Santa Ana, Costa Mesa, Fountain Valley, Huntington Beach, Westminster, Seal Beach, and Los Alamitos. This project is currently in the environmental phase and is anticipated to be complete in 2012.

#### **FREEWAY PLAN SUMMARY**

The M2 Freeway Plan includes an overview of issues and needs, time frames for project packages to improve mobility on Orange County freeway facilities. Project descriptions include some conceptual lane diagrams (as appropriate), cost estimates based upon 2011 and year of expenditure (YOE), and discussion of key considerations that need to be addressed in the planning and development of each project. This Plan will provide OCTA and other partner agencies with a framework to implement M2 improvements. Future plan updates will continue to refine the scope, cost, and schedule of each project

included in this version of the plan. Table 1 summarizes the various projects in the 2012 Plan, and they are outlined below by implementation schedule (see Section 2 for detailed project summaries):

- ❖ The first set of twelve (12) freeway projects is included in the CAP and is anticipated to be completed by 2022 at a total cost of approximately \$3.3 billion. As noted in the project summaries, the status of these projects falls into one of the following phases: 1) environmental phase, 2) design phase, 3) in construction, or 4) construction complete. Execution of subsequent phases will be subject to OCTA Board approval.
- ❖ The second set of nine (9) freeway projects is included in the M2 freeway program, but is not included in the CAP. Also included is the Freeway Service Patrol program. These projects are anticipated to be completed by 2040 at a total cost of approximately \$1.5 billion. As noted in the project summaries, the status of these projects falls into one of the following phases: 1) preliminary engineering, or 2) environmental phase.

Table 1 –Measure M2 Freeway Plan Projects

Project	Project Summary	Cost (2011 \$M)	Cost (YOE \$M)
<u>Capital Action Plan Freeway Projects</u>			
A	I-5 Widening (SR-55 to SR-57)	40.2	46.4
C / D	I-5 Widening (PCH to Avenida Pico)	239.5	259.3
C / D	I-5 Widening (El Toro Road to SR-73)	471.8	558.75
D	I-5/SR-74 (Ortega Hwy) Interchange Improvements	80.7	90.9
E	SR-22 Access Improvements	0*	0*
F	SR-55 Widening (I-405 to I-5)	207.3	274.9
G	SR-57 Widening (Orangethorpe Avenue to Lambert Road)	114.0	114.0
G	SR-57 Widening (Katella Avenue to Lincoln Avenue)	37.8	37.8
H	SR-91 Widening (I-5 to SR-57)	67.5	78.1
I	SR-91 Widening (SR-55 to Tustin Avenue)	45.6	49.9
J	SR-91 Widening (SR-55 to SR-71)	141.1	141.1
K	I-405 Widening (I-605 to SR-55)	1,533.3	1,712.8
<u>Future Freeway Projects</u>			
B	I-5 Widening (SR-55 to I-405)	424.8	N/A
D	I-5 at El Toro Road Interchange Improvements	60.1	N/A
F	SR-55 Widening (I-5 to SR-22)	70.5	N/A
G	SR-57 NB Widening (Orangewood Avenue to Katella Avenue)	14.7	N/A
G	SR-57 NB Widening (Lambert Road to County Line)	82.4	N/A
I	SR-91 Widening (SR-57 to SR-55)	307.2	N/A
J	SR-91 Widening (SR-241 to I-15)	124.0**	N/A
L	I-405 Widening (SR-55 to I-5)	322.9	N/A
M	I-605/Katella Ave Interchange Improvements	22.2	N/A
N	Freeway Service Patrol	189.1	N/A

\* - Delivered with the SR-22 HOV Lane Project in 2007

\*\* - Reserve funding for ultimate improvements



## SECTION 2: \_\_\_\_\_ FREEWAY PLAN

### OVERVIEW

A substantial component of the Measure M2 Transportation Investment Plan is a multi-billion program designed to reduce traffic congestion, strengthen our economy and improve our quality of life by upgrading key freeways and improving major freeway interchanges. Honoring its commitment to the Orange County voters, the Authority has developed the Measure M2 Freeway Plan (Plan), which will serve as a critical tool that enables the Authority to successfully manage and deliver this monumental program over the next 30-years and build upon the tremendous success of the original Measure M program.

The Plan captures the key relationships between project cost and biddability, financial capacity, facility priority and program phasing, and includes updated freeway cost estimates, proposed project segments and phasing, project summary fact sheets, and integration of OCTA's financial capacity. The Plan describes projects, implementation schedules, key considerations, benefits, and costs for major projects through 2041. The projects are grouped into two categories: 1) freeway projects that are currently included in the CAP, and 2) freeway projects that are in the M2 freeway program, but not currently included in the CAP.

Each of the project improvements includes an estimate of project schedules. Schedules for implementation of the

packages can be heavily influenced by the engineering and environmental complexities of each specific project.

It is important to note that implementing various time saving measures, such as design-build or contractor incentives for early completion may potentially reduce project schedules. The implementation phases are defined as follows:

- ❖ **Preliminary Engineering = Project Study Report (PSR)** – Conceptual planning and engineering phase that allows for programming of funds. This phase also includes feasibility studies conducted prior to formal initiation of the PSR phase.
- ❖ **Environmental = Project Approval/Environmental Documentation (PA/ED)** – The detailed concept design that provides environmental clearance for the project and programs for design and right of way acquisition.
- ❖ **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.

The intent of these Plan project packages is to provide an action list for OCTA to pursue in the project development process.



# CAPITAL ACTION PLAN FREEWAY PROJECTS

The OCTA Board of Directors approved CAP includes 12 freeway projects that are scheduled to be completed by 2022 at a total estimated cost of \$3.0 billion in 2011 dollars (\$3.4 billion in YOE dollars). An overview of the CAP freeway projects is provided below. Detailed project fact sheets are provided on the following pages.

Project	Project Summary	Cost (2011 \$M)	Cost (YOE \$M)
A	I-5 Widening (SR-55 to SR-57)	40.2	46.4
C / D	I-5 Widening (PCH to Avenida Pico)	239.5	259.3
C / D	I-5 Widening (El Toro to SR-73)	471.8	558.7
D	I-5/SR-74 (Ortega Hwy) Interchange Improvements	80.7	90.9
E	SR-22 Access Improvements	0*	0*
F	SR-55 Widening (I-405 to I-5)	207.3	274.9
G	SR-57 Widening (Orangethorpe Avenue to Lambert Road)	114.0	114.0
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I	SR-91 Widening (SR-55 to Tustin Avenue)	45.6	49.9
J	SR-91 Widening (SR-55 to SR-71)	141.1	141.1
K	I-405 Widening (I-605 to SR-55)	1,533.3	1,712.8

\* - Delivered with the SR-22 HOV Lane Project in 2007

Figure 2-1 – Summary of Capital Action Plan Freeway Projects





# I-5 Widening (SR-55 to SR-57)

## Project A

Anticipated Completion: 2017

### Project Cost Estimate (2011):

Capital Cost	\$ 26,474,000
R/W Cost	\$ 20,000
Support Cost	\$ 8,265,000
Management & Contingency	\$ 5,462,000
<b>Total Project Cost</b>	<b>\$ 40,221,000</b>

### Project Cost Estimate (YOE):

Capital Cost	\$ 30,691,000
R/W Cost	\$ 24,000
Support Cost	\$ 9,346,000
Management & Contingency	\$ 6,295,000
<b>Total Project Cost</b>	<b>\$ 46,356,000</b>

### Project Schedule:

Preliminary Engineering	Completed
Environmental	2013
Design	24 months
Construction	24 months

## Project Description

Reduce freeway congestion by adding a second HOV lane, northbound and southbound, on Interstate 5 (I-5) between State Route 55 (SR-55) and State Route 57 (SR-57).

Additionally, this project will relieve congestion on I-5 in Santa Ana through improvements at the I-5/SR-55 interchange area between the Fourth Street and SR-55. The project will generally be constructed within the existing right of way. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities.

## Key Considerations

The HOV lane improvement project proposes to utilize the available right of way to add a second continuous ingress/egress HOV lane.

The I-5/SR-55 interchange improvement project should be coordinated with Project F, and may require special landscaping, treatment of runoff, biological resources permitting, hazardous lead disposal, and noise barriers.

## Benefits

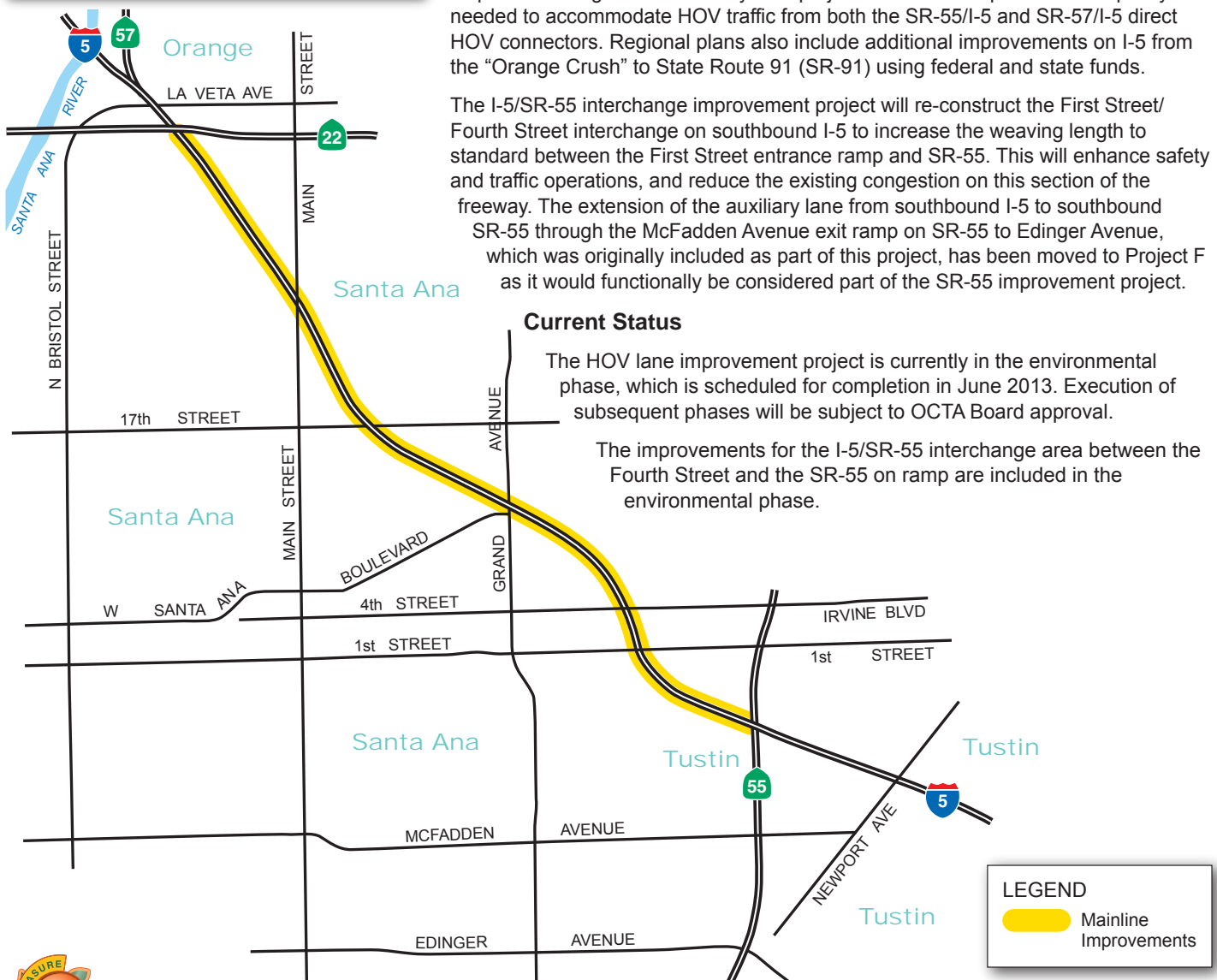
The purpose of the HOV lane improvement project is to increase the capacity of the HOV facility on I-5 in Santa Ana to meet traffic demands and eliminate bottlenecks to help relieve congestion and delay. The project is intended to provide the capacity needed to accommodate HOV traffic from both the SR-55/I-5 and SR-57/I-5 direct HOV connectors. Regional plans also include additional improvements on I-5 from the "Orange Crush" to State Route 91 (SR-91) using federal and state funds.

The I-5/SR-55 interchange improvement project will re-construct the First Street/ Fourth Street interchange on southbound I-5 to increase the weaving length to standard between the First Street entrance ramp and SR-55. This will enhance safety and traffic operations, and reduce the existing congestion on this section of the freeway. The extension of the auxiliary lane from southbound I-5 to southbound SR-55 through the McFadden Avenue exit ramp on SR-55 to Edinger Avenue, which was originally included as part of this project, has been moved to Project F as it would functionally be considered part of the SR-55 improvement project.

## Current Status

The HOV lane improvement project is currently in the environmental phase, which is scheduled for completion in June 2013. Execution of subsequent phases will be subject to OCTA Board approval.

The improvements for the I-5/SR-55 interchange area between the Fourth Street and the SR-55 on ramp are included in the environmental phase.



# I-5 Widening (PCH to Avenida Pico)

## Project C / Project D Anticipated Completion: 2018

### Project Cost Estimate (2011):

Capital Cost	\$ 154,264,000
R/W Cost	\$ 8,224,000
Support Cost	\$ 53,468,000
Management & Contingency	\$ 23,509,000
<b>Total Project Cost</b>	<b>\$ 239,463,000</b>

### Project Cost Estimate (YOE):

Capital Cost	\$ 165,656,000
R/W Cost	\$ 8,726,000
Support Cost	\$ 59,474,000
Management & Contingency	\$ 25,462,000
<b>Total Project Cost</b>	<b>\$ 259,318,000</b>

### Project Schedule:

Preliminary Engineering	Completed
Environmental	Completed
Design	2015
Construction	2018

## Project Description

Extend the HOV lanes on Interstate 5 (I-5) from Camino Capistrano to Avenida Pico to reduce freeway congestion in the cities of San Juan Capistrano, Dana Point and San Clemente. The project also includes major interchange improvements at Avenida Pico as previously listed in Project D. The project will generally be constructed within the existing right of way. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities.

## Key Considerations

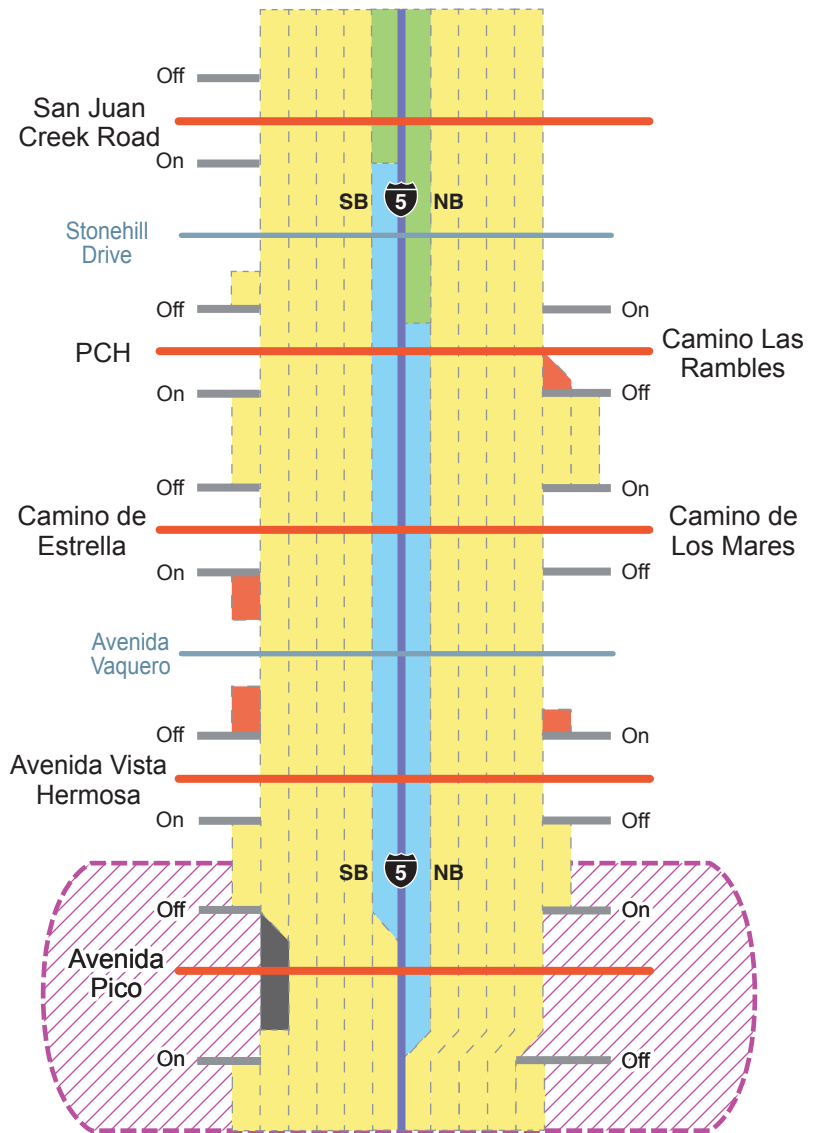
The right of way acquisition process at the Avenida Pico interchange will have to be closely monitored due to the acquisition of a few commercial properties.

## Benefits

The improvement project on I-5 between PCH and Avenida Pico would consist of extending the HOV lane between Camino Capistrano and Avenida Pico southbound, and Avenida Pico and PCH northbound. By providing a continuous flow of HOV lanes this project will also eliminate a southbound lane drop at Pacific Coast Highway and enable more efficient operation of general purpose lanes, and also serve projected traffic volumes for the year 2035 at an acceptable level of service (LOS).

## Current Status

The project is currently in the design phase, which is scheduled for completion in January 2015. The major interchange improvements at Avenida Pico (formerly Project D) are included in the design phase.



**LEGEND**

- Existing Highway / Freeway
- Existing Local Roadway
- Interchange/Ramp
- Existing HOV Lane
- Existing Lane
- Project Improvement Lane
- Project Auxiliary Lane
- Project HOV Lane
- Interchange Improvements



**Project C / Project D**

**Anticipated Completion: 2022**

**Project Cost Estimate (2011):**

Capital Cost	\$ 245,143,000
R/W Cost	\$ 76,796,000
Support Cost	\$ 83,012,000
Management & Contingency	\$ 66,880,000
<b>Total Project Cost</b>	<b>\$ 471,831,000</b>

**Project Cost Estimate (YOE):**

Capital Cost	\$ 290,300,000
R/W Cost	\$ 90,943,000
Support Cost	\$ 98,303,000
Management & Contingency	\$ 79,200,000
<b>Total Project Cost</b>	<b>\$ 558,746,000</b>

**Project Schedule:**

Preliminary Engineering	Completed
Environmental	2014
Design	24 months
Construction	36 months

**Project Description**

Add new lanes to Interstate 5 (I-5) from the vicinity of the El Toro Road Interchange in the City of Lake Forest to the vicinity of State Route 73 (SR-73) in the City of Mission Viejo. The project will also include major improvements at the Avery Parkway and La Paz interchanges as part of Project D. The project will generally be constructed within the existing right of way. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities.

Current traffic volume on I-5 near the El Toro ‘Y’ is about 342,000 vehicles per day. This volume will increase in the future by 35 percent, bringing it up to 460,000 vehicles per day.

**Key Considerations**

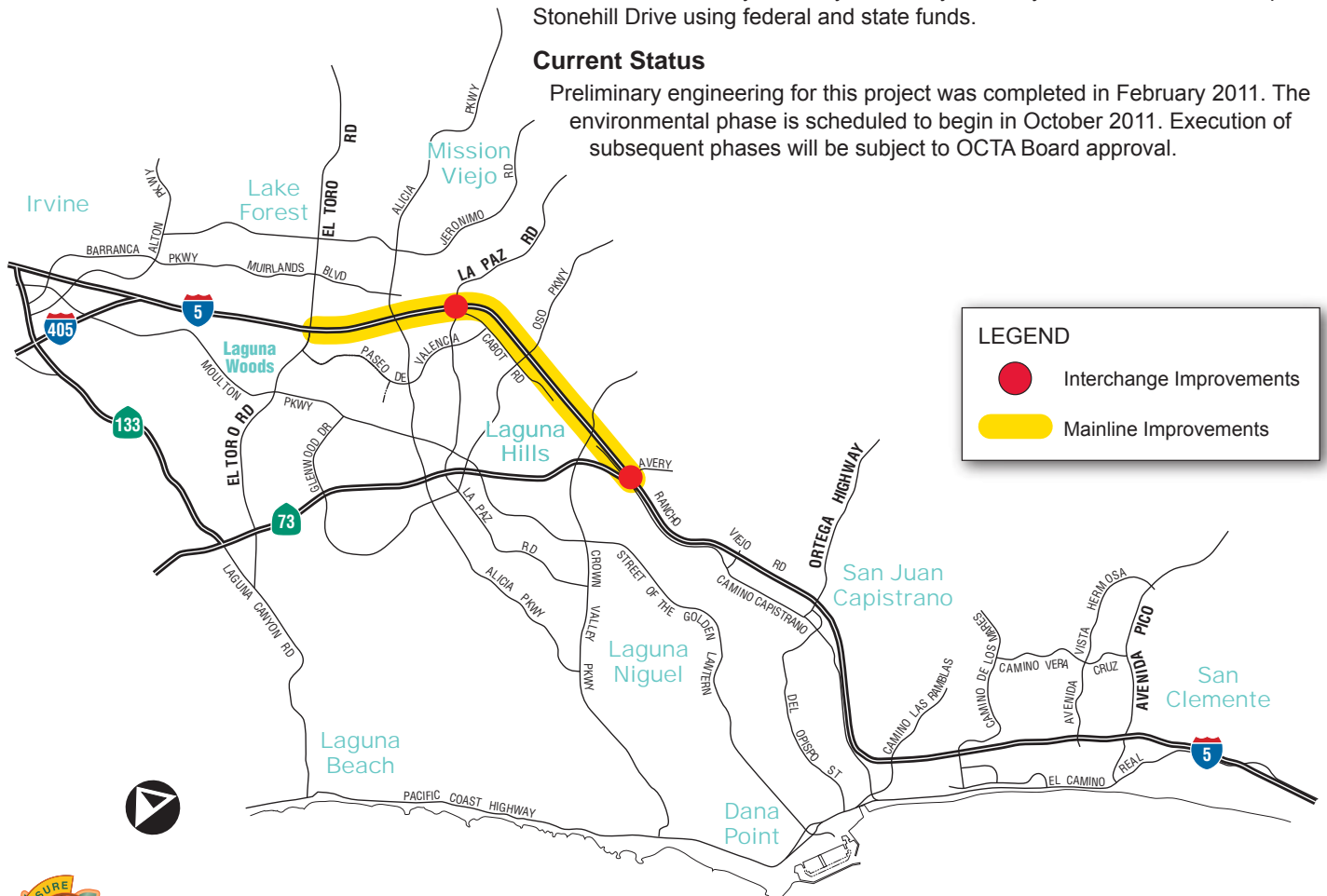
Mainline improvements will need to be closely coordinated with the El Toro Road interchange improvements provided under Project D. The I-5/La Paz Road interchange improvement project proposes to reconstruct the La Paz Road Undercrossing, which involves raising the I-5 profile grade and lowering the La Paz Road profile grade. The I-5/Avery Parkway interchange improvement project proposes to reconstruct the Avery Parkway Undercrossing, which involves raising the I-5 profile.

**Benefits**

The improvement project on I-5 between El Toro ‘Y’ and SR-73 would consist of adding (1) lane in each direction which would help alleviate congestion and reduce delay. The interchange improvement projects I-5/La Paz Road and I-5/Avery Parkway will each reduce chokepoints and congestion, as well as accommodate forecast traffic demands on the local roads at each interchange. Regional plans also include construction of a new freeway access point between Crown Valley Parkway and Avery Parkway as well as new off ramps at Stonehill Drive using federal and state funds.

**Current Status**

Preliminary engineering for this project was completed in February 2011. The environmental phase is scheduled to begin in October 2011. Execution of subsequent phases will be subject to OCTA Board approval.



# I-5 / SR-74 (Ortega Highway) Interchange Improvements

## Project D

**Anticipated Completion: 2014**

### Project Cost Estimate (2011):

Capital Cost	\$ 34,437,000
R/W Cost	\$ 25,511,000
Support Cost	\$ 17,320,000
Management & Contingency	\$ 3,424,000
<b>Total Project Cost</b>	<b>\$ 80,692,000</b>

### Project Cost Estimate (YOE):

Capital Cost	\$ 38,814,000
R/W Cost	\$ 28,753,000
Support Cost	\$ 19,521,000
Management & Contingency	\$ 3,859,000
<b>Total Project Cost</b>	<b>\$ 90,947,000</b>

### Project Schedule:

Preliminary Engineering	Completed
Environmental	Completed
Design	2012
Construction	2014

## Project Description

The project proposes improvements to the Interstate 5 (I-5) interchange at State Route 74 (SR-74) in south Orange County. Improvements include widening SR-74, modifying entrance and exit ramps, and replacing the existing bridge structure, modifying entrance and exit ramps, and modifying or replacing existing bridge structures.

## Key Considerations

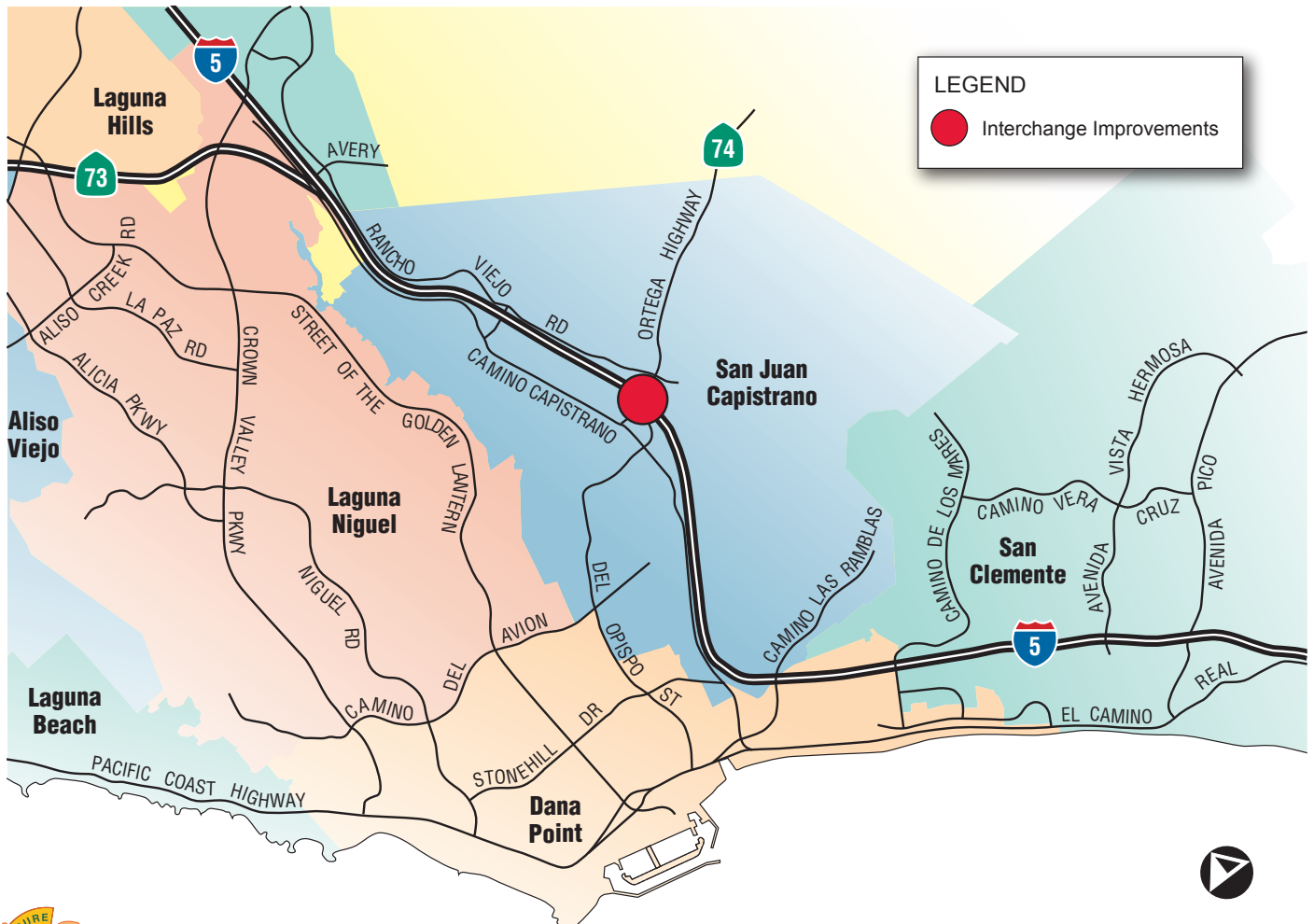
The I-5/SR-74 (Ortega Hwy) interchange improvement project will replace the freeway overcrossing and result in a deeper bridge superstructure. This will require the SR-74 roadway and bridge profile to be raised to maintain the minimum required vertical clearance. Also, the project has substantial right of way acquisition.

## Benefits

The purpose of the I-5/SR-74 (Ortega Hwy) interchange improvement project is to eliminate a chokepoint, reduce congestion, and accommodate forecast traffic demands on SR-74 at this interchange.

## Current Status

This project completed the environmental phase in May 2009. The San Juan Capistrano City Council approved the selection of a locally preferred alternative consistent with alternative 3 in the Environmental Document. The design phase is in progress and scheduled for completion in March 2012. Construction is scheduled to begin in April 2012.



## Project E

**Project Completion: 2007**

### Project Cost Estimate:

Total Project Cost Complete

## Project Description

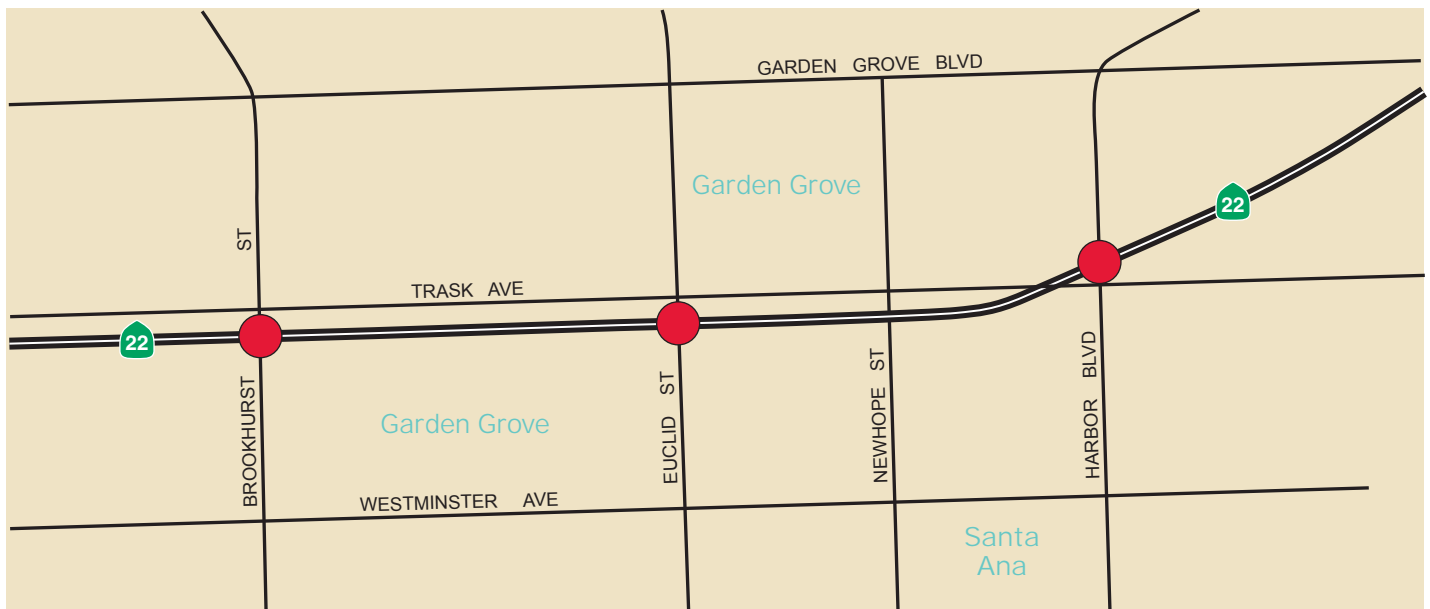
Construct interchange improvements at Euclid Street, Brookhurst Street and Harbor Boulevard to reduce freeway and street congestion near these interchanges. Specific improvements were developed in cooperation with local jurisdictions and affected communities.

## Benefits


Regional plans also include the construction of new freeway-to-freeway carpool ramps to the State Route 22 (SR-22)/Interstate 405 (I-405) interchange.

## Current Status

The project improvements were constructed as part of the SR-22 HOV project completed in late 2007 using other funds.



### LEGEND

 Interchange Improvements

<b>Project F</b>	
<b>Anticipated Completion: 2020</b>	
<b>Project Cost Estimate (2011) for SR-55 (I-405 to I-5):</b>	
Capital Cost	\$ 100,537,000
R/W Cost	\$ 38,935,000
Support Cost	\$ 40,453,000
Management & Contingency	\$ 27,387,000
Total Project Cost Cost	\$ 207,311,000
<b>Project Cost Estimate (YOE) for SR-55 (I-405 to I-5):</b>	
Capital Cost	\$ 130,729,000
R/W Cost	\$ 57,526,000
Support Cost	\$ 50,449,000
Management & Contingency	\$ 36,221,000
Total Project Cost Cost	\$ 274,925,000
<b>Project Schedule for SR-55 (I-405 to I-5):</b>	
Preliminary Engineering	Complete
Environmental	2013
Design	24 months
Construction	36 months

**Project Description**

Add new lanes to SR-55 between Interstate 5 (I-5) and Interstate 405 (I-405), including merging lanes between interchanges to smooth traffic flow. The project will generally be constructed within the existing right of way. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities.

The project will increase freeway capacity and reduce congestion. This freeway carries about 295,000 vehicles on a daily basis. This volume is expected to increase by nearly 13 percent, bringing it up to 332,000 vehicles per day in the future.

**Key Considerations**

The project improvements on SR-55 between I-405 and I-5 propose to add one auxiliary lane and one general purpose lane in each direction. This addition will reduce the space available for ramps at several interchanges; therefore, the ramp alignments would need to be altered.

**Benefits**

The project improvements on SR-55 between I-405 and I-5 will improve mobility and reduce congestion by providing an improved level of operation for existing and forecasted traffic volumes; especially for weaving and lane efficiency at ramp junctions.

**Current Status**

The preliminary engineering phase for the SR-55 (I-405 to I-5) project was completed in November 2008.

The Project is currently in the environmental phase, which is scheduled for completion in November 2013. Execution of subsequent phases will be subject to OCTA Board approval.



# SR-57 Widening (Orangethorpe Avenue to Lambert Road)

## Project G

Anticipated Completion: 2014

### Project Cost Estimate (Forecast at Completion):

Capital Cost	\$ 65,250,000
R/W Cost	\$ 4,622,000
Support Cost	\$ 36,895,000
Management & Contingency	\$ 7,220,000
<b>Total Project Cost</b>	<b>\$ 113,987,000</b>

### Project Schedule:

Preliminary Engineering	Completed
Environmental	Completed
Design	Completed
Construction	2014

## Project Description

The improvements along State Route 57 (SR-57) primarily consist of adding one general purpose lane in the northbound (NB) direction from Orangethorpe Avenue in the City of Placentia to Lambert Road in the City of Brea. The project will maintain existing auxiliary lanes and add new auxiliary lanes in select locations.

## Key Considerations

Project improvements on SR-57 from Orangethorpe Avenue to Lambert Road will require right of way acquisition that includes partial parcel acquisitions and temporary construction easements for the construction of proposed retaining walls and widened bridge structures. Railroad involvement will be required; a Construction & Maintenance Agreement will be needed for three overhead bridge structures.








## Benefits

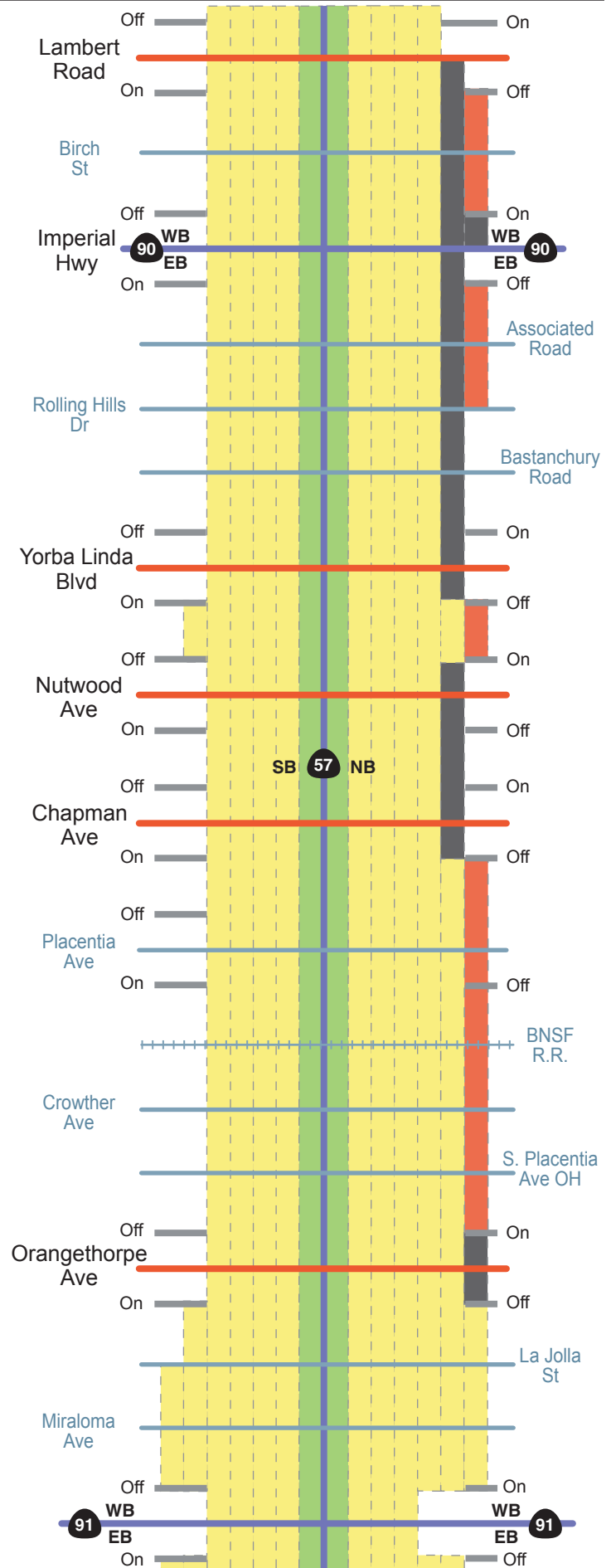
On SR-57, from Orangethorpe Avenue to Lambert Road, improvements will substantially improve existing and future mobility, reduce congestion, improve mainline weaving, merge and diverge movements, which will improve both traffic operations and safety. A 20% reduction in total delay is anticipated.

## Current Status

The design phase was completed in March 2010. The project is currently under construction and is scheduled for completion in July 2014.

### LEGEND

-  Existing Highway / Freeway
-  Existing Local Roadway
-  Interchange/Ramp
-  HOV Lane
-  Existing Lane
-  Project Improvement Lane
-  Project Auxiliary Lane



# SR-57 Widening (Katella Avenue to Lincoln Avenue)

**Project G**  
**Anticipated Completion: 2015**

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**Project Cost Estimate (Forecast at Completion):**

Capital Cost	\$ 20,669,000
R/W Cost	\$ 1,707,000
Support Cost	\$ 12,765,000
Management & Contingency	\$ 2,635,000
<b>Total Project Cost</b>	<b>\$ 37,776,000</b>

**Project Schedule:**

Preliminary Engineering	Completed
Environmental	Completed
Design	Completed
Construction	2015

## Project Description

The improvements along State Route 57 (SR-57), from Katella Avenue to Lincoln Avenue, primarily consist of adding one general purpose lane in the northbound (NB) direction. Additional widening will also be implemented to bring the lane widths and the left shoulder into compliance with design standards. Generally, the proposed improvements will be able to stay within the existing right of way with the utilization of tie-back walls along the project area.

## Key Considerations

Project improvements will require entrance and exit ramps to be realigned and mainline bridges widened. Modified interchanges will retain their current configurations.

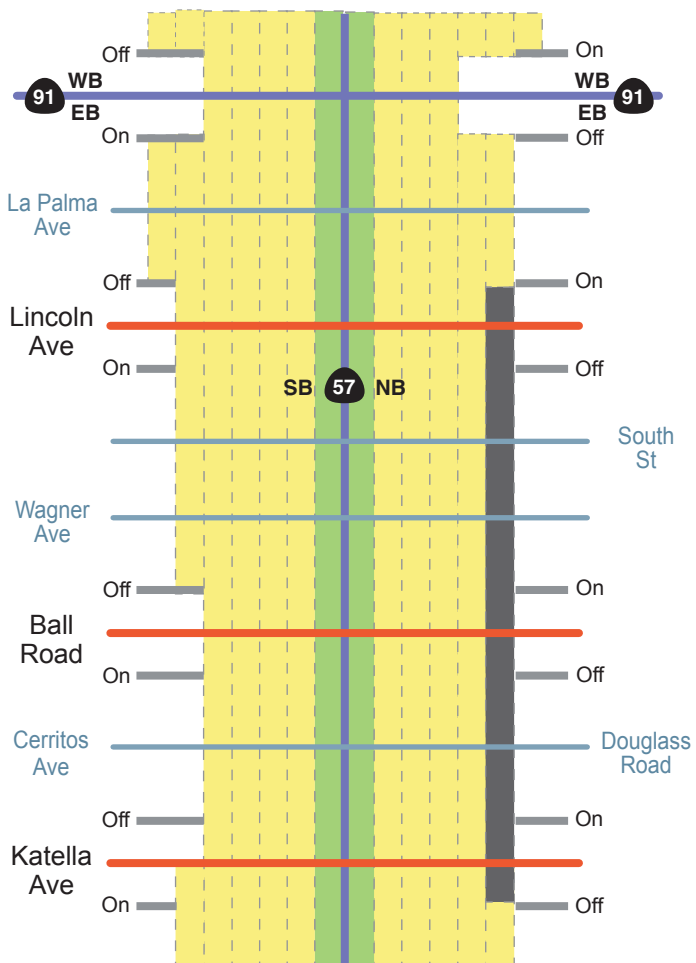
Project improvements on SR-57 from Katella Avenue to Lincoln Avenue will require temporary construction easements for the construction of proposed retaining walls. Railroad involvement will be required; a Construction & Maintenance Agreement will be needed for the widening of the Douglass Road railroad overhead.

## Benefits

The addition of a general purpose lane along SR-57 from Katella Avenue to Lincoln Avenue will relieve mainline capacity constraints by providing system continuity with the northbound lane configuration just south of Katella Avenue with the intent of reducing mainline congestion and delay.

## Current Status

The design phase of this project was completed in April 2011. Construction is scheduled to begin in December 2011.



**LEGEND**

- Existing Highway / Freeway
- Existing Local Roadway
- Interchange/Ramp
- HOV Lane
- Existing Lane
- Project Improvement Lane





# SR-91 Widening (I-5 to SR-57)

## Project H

**Anticipated Completion: 2015**

### Project Cost Estimate (2011):

Capital Cost	\$ 39,940,000
R/W Cost	\$ 4,079,000
Support Cost	\$ 16,113,000
Mgmt & Contingency	\$ 7,373,000
<b>Total Project Cost</b>	<b>\$ 67,504,000</b>

### Project Cost Estimate (YOE):

Capital Cost	\$ 46,205,000
R/W Cost	\$ 4,719,000
Support Cost	\$ 18,640,000
Mgmt & Contingency	\$ 8,529,000
<b>Total Project Cost</b>	<b>\$ 78,094,000</b>

### Project Schedule:

Preliminary Engineering	Completed
Environmental	Completed
Design	2012
Construction	2015

## Project Description

The project proposes to widen westbound (WB) State Route 91 (SR-91) by connecting existing auxiliary lanes through interchanges, thus forming a fourth continuous general purpose lane between State Route 57 (SR-57) and Interstate 5 (I-5). In addition to the proposed general purpose lane, the existing auxiliary lanes on WB SR-91 between State College Boulevard and Raymond Avenue and between Euclid Street and Brookhurst Street will be replaced. A new auxiliary lane is planned on WB SR-91 between Raymond Avenue and Lemon Street.

## Key Considerations

The widening of WB SR-91 will affect several parcels resulting in right of way involvements and temporary construction easements. An existing 12 kilovolt overhead electrical power line will be permanently relocated outside the project footprint. The widening between Euclid Street and Brookhurst Street will impact an existing reinforced concrete box culvert (Houston Channel) that will be extended to accommodate the proposed freeway ramp and widening improvements.

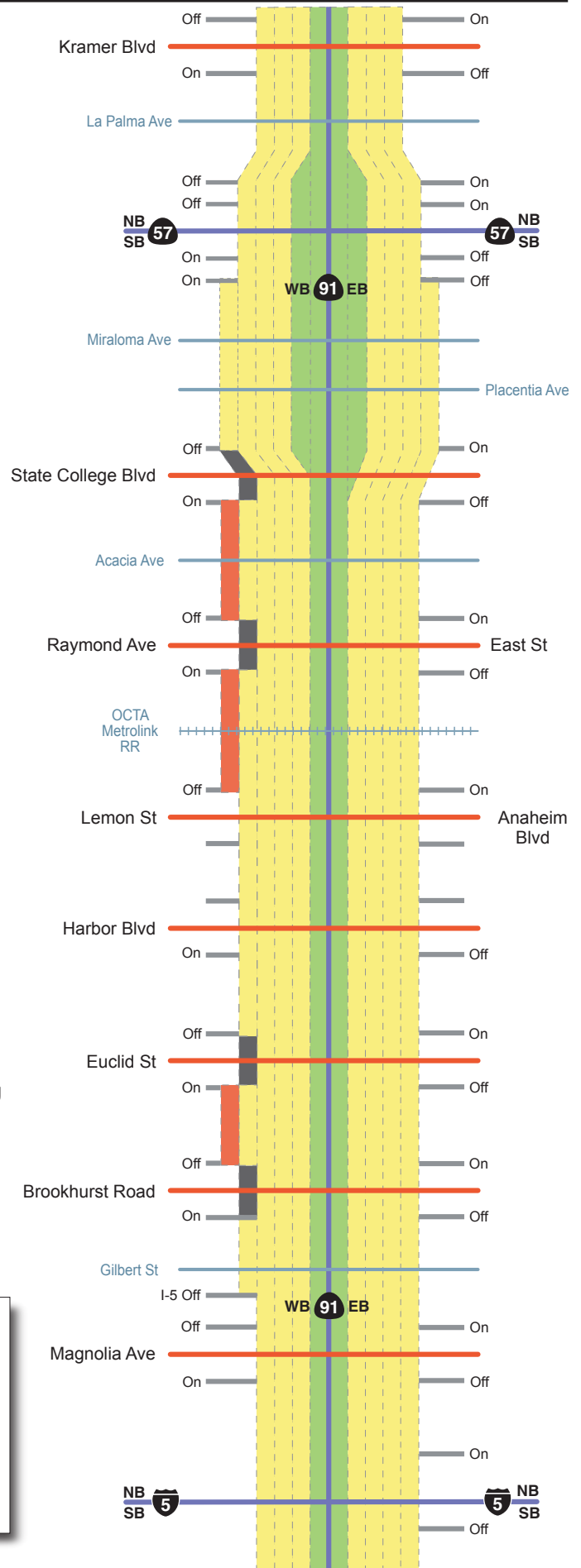
## Benefits

The addition of a new general purpose lane and proposed auxiliary lanes on WB SR-91 are intended to reduce congestion, provide additional mainline capacity, and improve diverge operations at each interchange.

## Current Status

The project is currently in the design phase, which is expected to be completed in July 2012. Construction is scheduled to begin in December 2012.

LEGEND	
	Existing Highway / Freeway
	Existing Local Roadway
	Interchange/Ramp
	HOV
	Existing Lane
	Project Improvement Lane
	Project Auxiliary Lane



# SR-91 Widening (SR-55 to Tustin Avenue)

## Project I

**Anticipated Completion: 2016**

### Project Cost Estimate (2011):

Capital Cost	\$ 22,044,000
R/W Cost	\$ 4,531,000
Support Cost	\$ 14,600,000
Management & Contingency	\$ 4,430,000
<b>Total Project Cost</b>	<b>\$ 45,605,000</b>

### Project Cost Estimate (YOE):

Capital Cost	\$ 24,087,000
R/W Cost	\$ 5,246,000
Support Cost	\$ 15,741,000
Management & Contingency	\$ 4,845,000
<b>Total Project Cost</b>	<b>\$ 49,919,000</b>

### Project Schedule:

Preliminary Engineering	Completed
Environmental	Completed
Design	2013
Construction	2016

## 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.

## Key Considerations

The SR-91 Widening (SR-55 to Tustin Avenue) will require the acquisition of right of way and the widening of the Santa Ana River bridge. Existing underground utilities will need to be considered within the proposed widening section. In addition, there are two projects adjacent to the project study area: 1) the SR-55/SR-91 interchange project, and 2) the WB SR-91/Tustin Avenue intersection project. These two projects need to be taken into consideration during the design phase of this project.

## Benefits

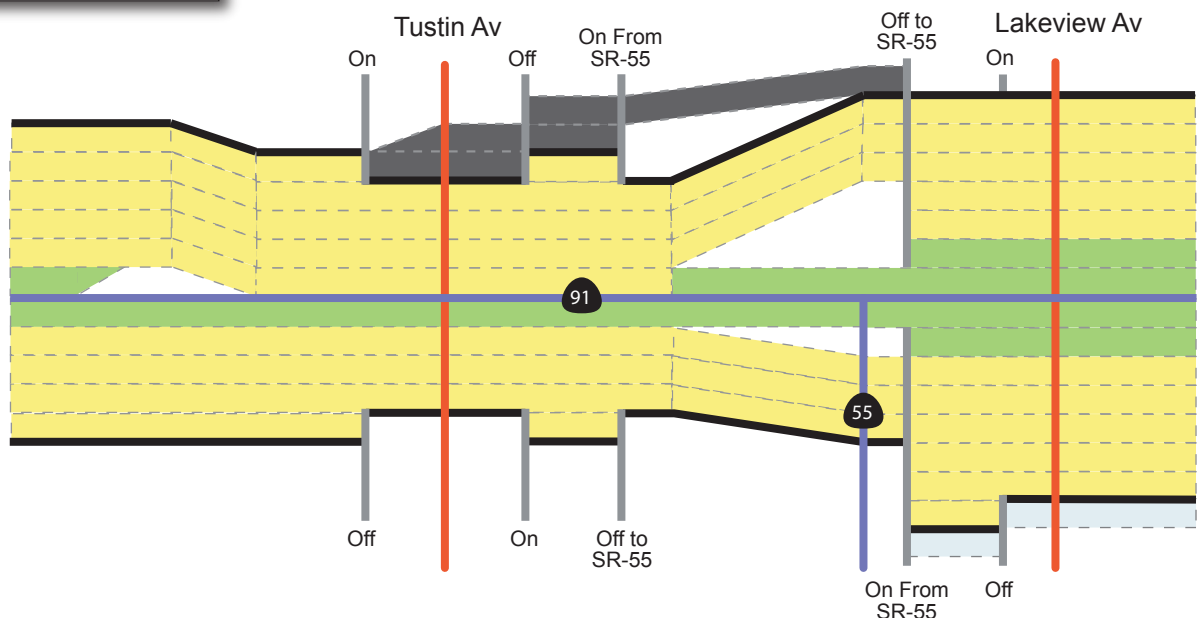
The project is intended to reduce or eliminate operational problems and deficiencies on this section of WB SR-91 including weaving and merging maneuvers. This project would also address choke-point conditions, which are caused primarily by extensive weaving between the NB SR-55 to WB SR-91 connector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

## Current Status

The project is currently in the design phase, which is scheduled for completion in May 2013.

### LEGEND

- Existing Highway / Freeway
- Interchange / Ramp
- HOV or HOT Lane
- Existing Lane
- Project Improvement Lane
- Existing Lanes Outline
- SR-91 (SR-55 to SR-241) Project Improvement Lane



**Project J**

**Anticipated Completion: 2013**

**Project Cost Estimate (Complete) for SR-91 (SR-241 to SR-71):**

Capital Cost	\$ 40,010,000
R/W Cost	\$ 2,090,000
Support Cost	\$ 17,240,000
Management & Contingency	\$ 850,000
<b>Total Project Cost</b>	<b>\$ 60,190,000</b>

**Project Schedule for SR-91 (SR-241 to SR-71):**

Preliminary Engineering	Completed
Environmental	Completed
Design	Completed
Construction	Completed

**Project Cost Estimate (Forecast at Completion) for SR-91 (SR-55 to SR-241):**

Capital Cost	\$ 51,128,000
R/W Cost	\$ 573,000
Support Cost	\$ 24,551,000
Management & Contingency	\$ 4,690,000
<b>Total Project Cost</b>	<b>\$ 80,942,000</b>

**Project Schedule for SR-91 (SR-55 to SR-241):**

Preliminary Engineering	Completed
Environmental	Completed
Design	Completed
Construction	2013

**Project Description**

These projects add capacity on State Route 91 (SR-91) beginning at State Route 55 (SR-55) and extending to State Route 71 (SR-71) in Riverside County.

The first project, which has been completed, improves the segment of SR-91 east of State Route 241 (SR-241). One eastbound lane was provided between one mile east of SR-241 and SR-71 in Riverside County. The second project will improve the segment of SR-91 between SR-55 and SR-241. The project adds one new lane in each direction and improves key interchanges.

Today, this freeway carries about 314,000 vehicles every day. This volume is expected to increase by 36 percent, bringing it up to 426,000 vehicles by 2030.

**Key Considerations**

The proposed project improvements on SR-91 between SR-55 to SR-241 will have to consider maintenance of traffic through the construction phase.

**Benefits**

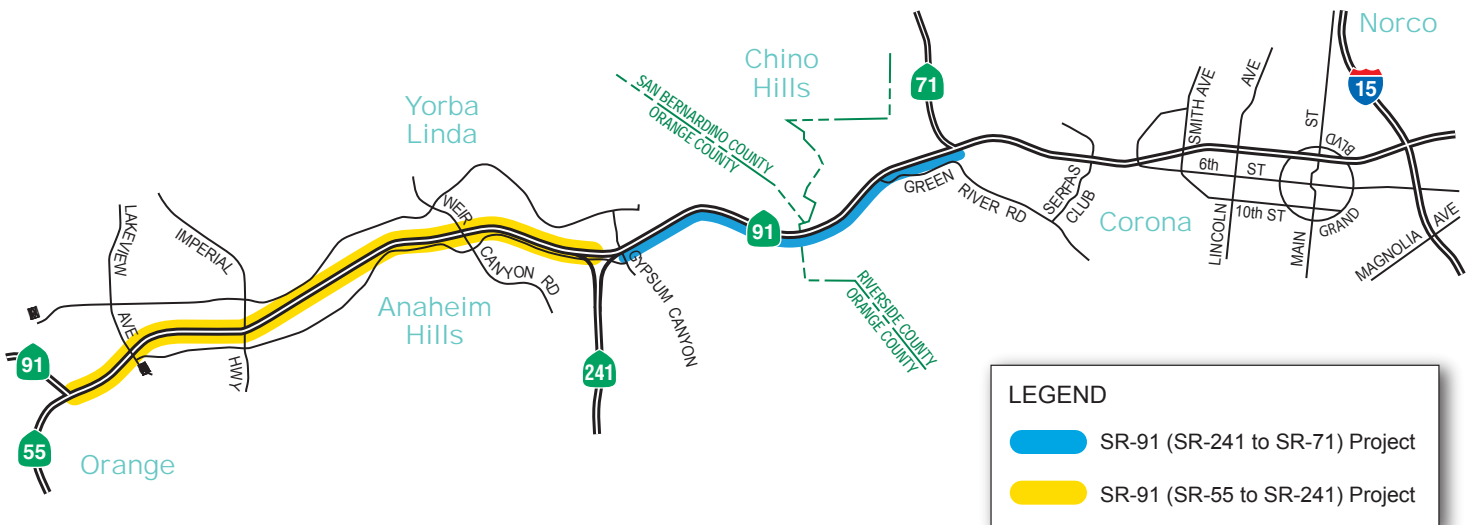
The project improvements on EB SR-91 between SR-241 to SR-71 added one general purpose lane. This project improves weaving in this segment as it reduces the volume of exiting vehicles in the SR-91 mainline through lanes that are exiting at Green River Road and SR-71.

The proposed project improvement on SR-91 between SR-55 and SR-241 will alleviate congestion and reduce delay.

**Current Status**

The project improvement on EB SR-91 between SR-241 and SR-71 was completed in January 2011.

The improvement project on SR-91 between SR-55 and SR-241 is currently under construction, and is scheduled to be completed by December 2012.



# I-405 Widening (I-605 to SR-55)

## Project K

Anticipated Completion: 2021

### Project Cost Estimate (2011):

Capital Cost	\$ 1,112,169,000
R/W Cost	\$ 89,070,000
Support Cost	\$ 162,465,000
Management & Contingency	\$ 169,590,000
<b>Total Project Cost</b>	<b>\$ 1,533,335,000</b>

### Project Cost Estimate (YOE):

Capital Cost	\$ 1,242,369,000
R/W Cost	\$ 99,498,000
Support Cost	\$ 181,485,000
Management & Contingency	\$ 189,444,000
<b>Total Project Cost</b>	<b>\$ 1,712,796,000*</b>

\* M2 contribution \$600 M.

### Project Schedule:

Preliminary Engineering	Completed
Environmental	2012
Design-Build	2018

## Project Description

Add new lanes to Interstate 405 (I-405) between Interstate 605 (I-605) and State Route 55 (SR-55) generally within the existing right of way. The project will make best use of available freeway property and update key interchanges. The improvements will be coordinated with other planned I-405 improvements in the I-405/State Route 22 (SR-22)/I-605 interchange area.

Today, I-405 carries over 300,000 vehicles daily. The volume is expected to increase by nearly 23 percent, bringing it up to 528,000 vehicles daily by 2030. The project will increase freeway capacity, reduce congestion, improve interchange operations and enhance safety.

## Key Considerations

The improvement project on I-405 between I-605 and SR-55 is intended to limit right of way acquisition to ensure impacts to residents are minimized.

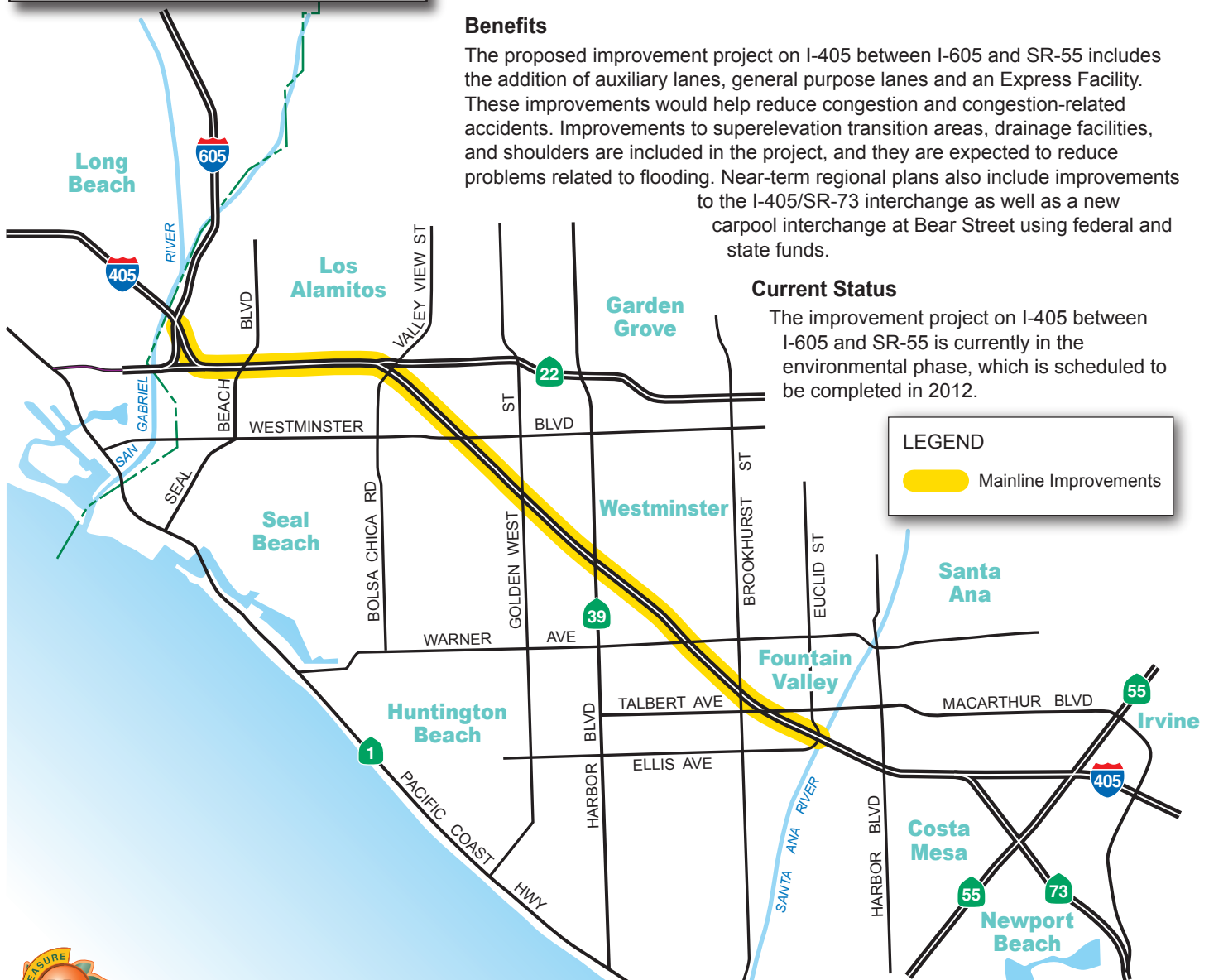
The current proposed project delivery approach includes the following assumptions: 1) project will include Express Lanes, which will accommodate both High Occupancy Vehicle (HOV) and toll operations, 2) project will be partially funded by toll revenue bonds, 3) project will be delivered through a design-build contract, 4) toll collection systems will be installed by the design-build contractor or through a separate contract, and 5) OCTA will purchase the required right of way and pay for necessary utility relocations.

## Benefits

The proposed improvement project on I-405 between I-605 and SR-55 includes the addition of auxiliary lanes, general purpose lanes and an Express Facility. These improvements would help reduce congestion and congestion-related accidents. Improvements to superelevation transition areas, drainage facilities, and shoulders are included in the project, and they are expected to reduce problems related to flooding. Near-term regional plans also include improvements to the I-405/SR-73 interchange as well as a new carpool interchange at Bear Street using federal and state funds.

## Current Status

The improvement project on I-405 between I-605 and SR-55 is currently in the environmental phase, which is scheduled to be completed in 2012.



**LEGEND**

Mainline Improvements



# FUTURE FREEWAY PROJECTS

Beyond the CAP freeway program, Measure M2 includes 9 freeway projects that are scheduled to be completed by 2040, as well as the ongoing countywide Freeway Service Patrol program. The total estimated cost is \$1.6 billion in 2011 dollars. An overview of these freeway projects is provided below. Detailed project fact sheets are provided on the following pages. Project delivery schedules will be determined by the Board of Directors in future updates of the CAP.

Project	Project Summary	Cost (\$M)
B	I-5 Widening (SR-55 to I-405)	424.8
D	I-5 at El Toro Road Interchange Improvements	60.1
F	SR-55 Widening (I-5 to SR-22)	70.5
G	SR-57 NB Widening (Orangewood Avenue to Katella Avenue)	14.7
G	SR-57 NB Widening (Lambert Road to County Line)	82.4
I	SR-91 Widening (SR-57 to SR-55)	307.2
J	SR-91 Widening (SR-241 to I-15)	124.0*
L	I-405 Widening (SR-55 to I-5)	322.9
M	I-605/Katella Ave Interchange Improvements	22.2
N	Freeway Service Patrol	189.1

\* - Reserve Funding for Ultimate Improvements

Figure 2-2 – Summary of Future Freeway Projects



**Project B**

**Project Cost Estimate (2011):**

Capital Cost	\$ 257,240,000
R/W Cost	\$ 25,200,000
Support Cost	\$ 85,380,000
Management & Contingency	\$ 56,930,000
<b>Total Project Cost</b>	<b>\$ 424,750,000</b>

**Project Schedule:**

Preliminary Engineering	2011
Environmental	30 months
Design	24 months
Construction	36 months

**Project Description**

The project will increase Interstate 5 (I-5) freeway capacity and reduce congestion by constructing new northbound and southbound general purpose lanes and improving key interchanges in the area between State Route 55 (SR-55) and State Route 133 (SR-133) (near the El Toro "Y"). This segment of I-5 is the major route serving activity areas in the cities of Irvine, Tustin, Santa Ana and north Orange County. The project will generally be constructed within the existing right of way. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities.

The current traffic volume on this segment of I-5 is about 356,000 vehicles per day and is expected to increase by nearly 24 percent, bringing it up to 440,000 vehicles per day.

**Key Considerations**

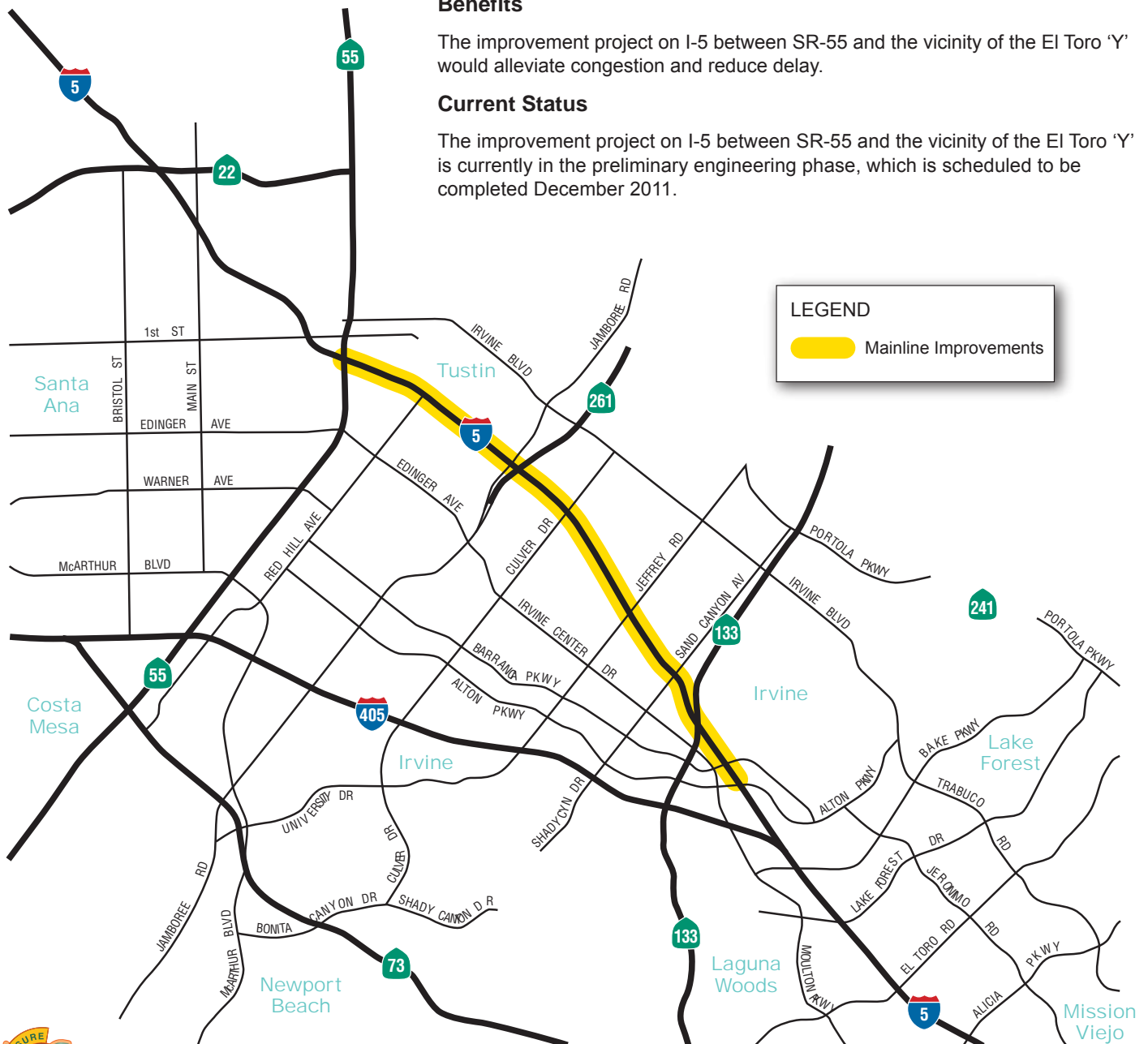
The I-5 mainline improvement project will have to be closely coordinated with local interchange improvement projects that are currently in the preliminary engineering or environmental phases of project development.

**Benefits**

The improvement project on I-5 between SR-55 and the vicinity of the El Toro 'Y' would alleviate congestion and reduce delay.

**Current Status**

The improvement project on I-5 between SR-55 and the vicinity of the El Toro 'Y' is currently in the preliminary engineering phase, which is scheduled to be completed December 2011.



# I-5 at El Toro Road Interchange Improvements

## Project D

### Project Cost Estimate (2011):

Capital Cost	\$ 37,580,000
R/W Cost	\$ 3,130,000
Support Cost	\$ 11,950,000
Management & Contingency	\$ 7,390,000
<b>Total Project Cost</b>	<b>\$ 60,050,000</b>

### Project Schedule:

Preliminary Engineering	2012
Environmental	30 months
Design	24 months
Construction	36 months

## Project Description

The project proposes improvements at the El Toro Road interchange with Interstate 5 (I-5) in south Orange County. Improvements at the interchange include widening the local roads, modifying entrance and exit ramps, and modifying or replacing existing bridge structures.

## Key Considerations

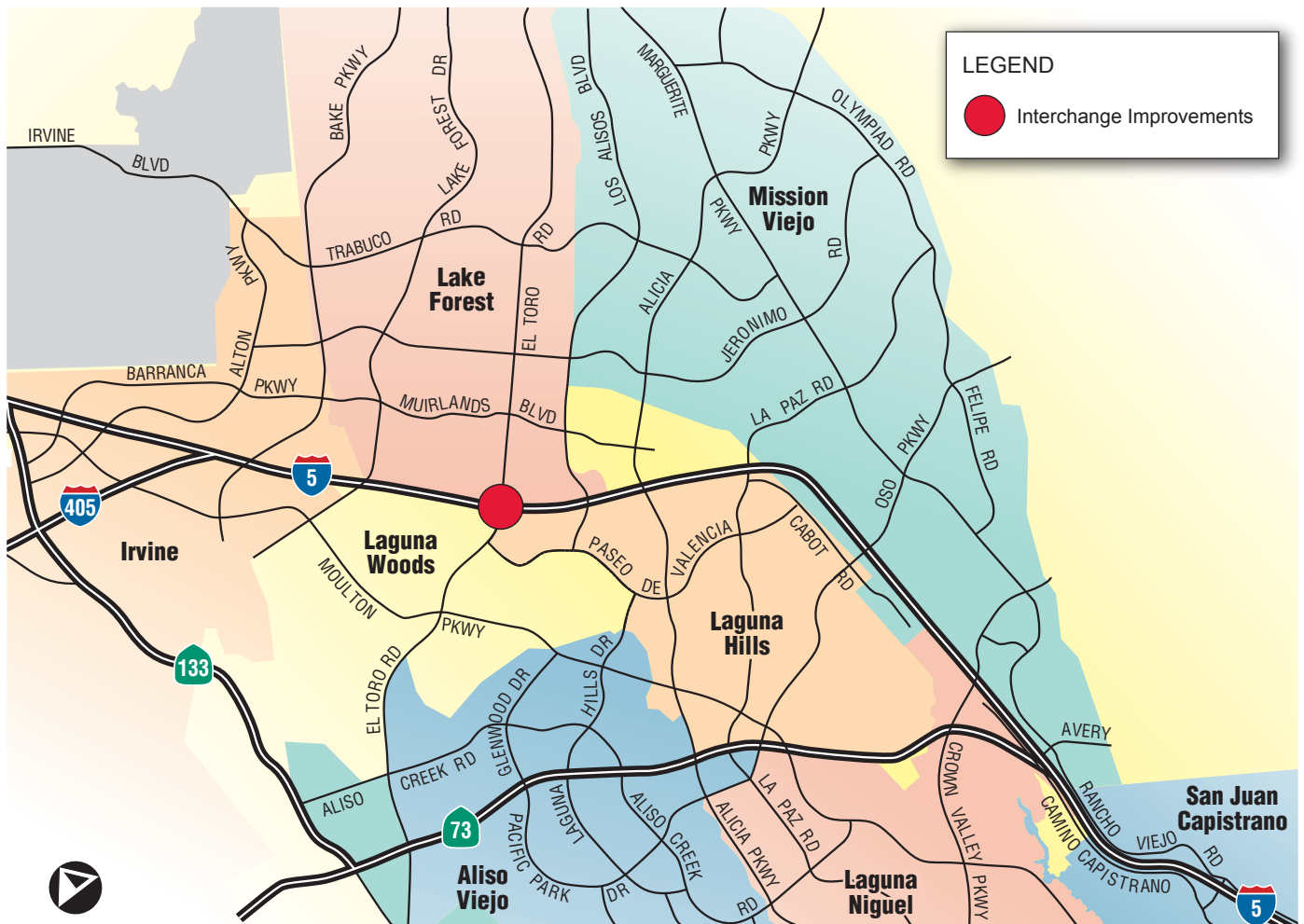
Depending on selection of the preferred alternative, the I-5/El Toro interchange improvement project could require a substantial amount of right of way acquisition.

## Benefits

The interchange improvement project at I-5/El Toro Road will reduce chokepoints and accommodate forecast traffic demands on the local roads. Modification of the entrance and exit ramps will alleviate congestion at adjacent intersections.

## Current Status

The interchange improvement project at I-5/El Toro Road is currently in the preliminary engineering phase, which is scheduled to be completed in 2012.



**Project F**

**Project Cost Estimate (2011):**

Capital Cost	\$ 38,770,000
R/W Cost	\$ 8,280,000
Support Cost	\$ 14,150,000
Management & Contingency	\$ 9,310,000
<b>Total Project Cost</b>	<b>\$ 70,510,000</b>

**Project Schedule:**

Preliminary Engineering	2014
Environmental	30 months
Design	24 months
Construction	36 months

**Project Description**

Add new lanes to SR-55 between State Route 22 (SR-22) and Interstate 5 (I-5), including merging lanes between interchanges to smooth traffic flow. The project will generally be constructed within the existing right of way. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and also affected communities. Operational improvements between SR-22 and SR-91 will also be evaluated.

The purpose of the project is to increase freeway capacity and reduce congestion. This freeway carries about 295,000 vehicles on a daily basis. This volume is expected to increase by nearly 13 percent, bringing it up to 332,000 vehicles per day in the future.

**Key Considerations**

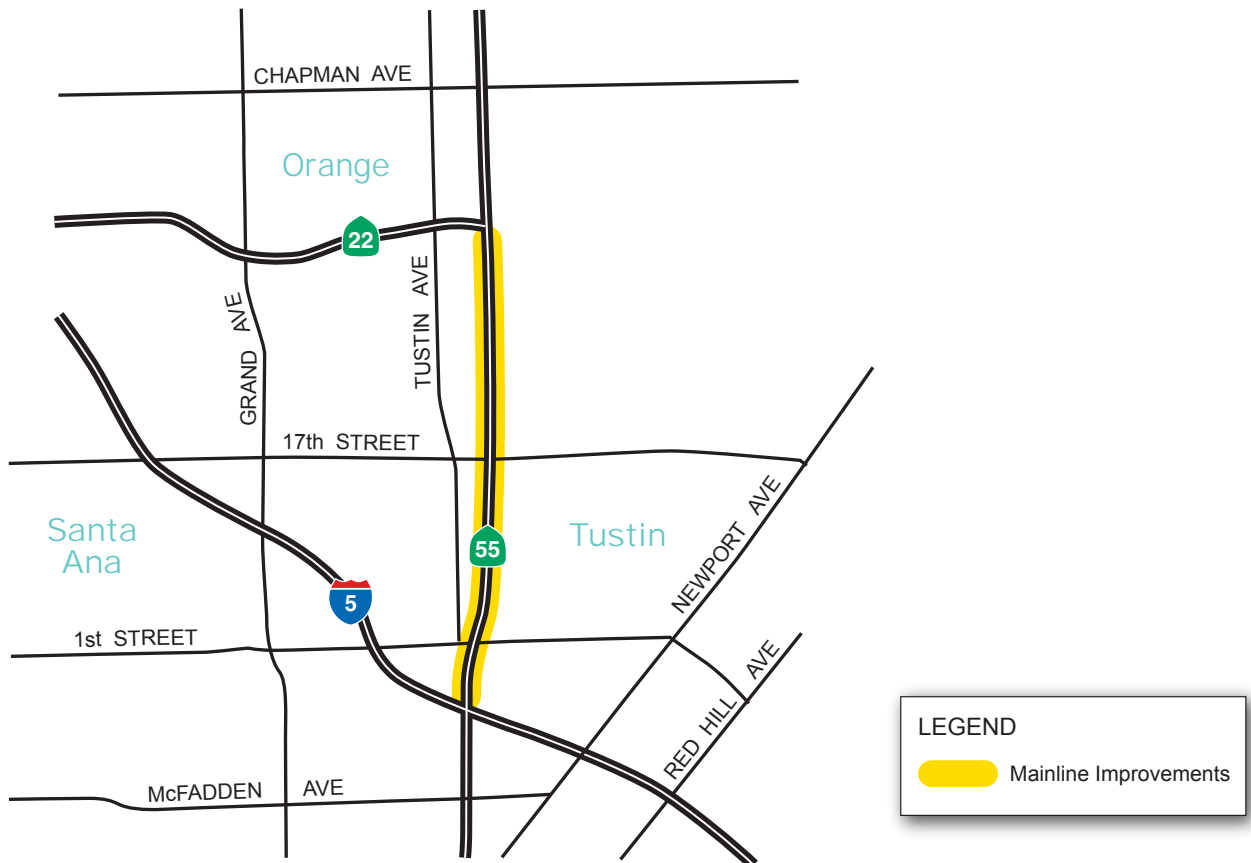
The project improvements on SR-55 between I-5 and SR-22 add (1) general purpose lane in each direction.

**Benefits**

The purpose of the project improvements on SR-55 between I-5 and SR-22 is to improve mobility and reduce congestion by providing an improved level of operation for existing and forecasted traffic volumes; especially for weaving and lane efficiency at ramp junctions. The specific improvements will be developed subject to further study.

**Current Status**

A feasibility study for improvements on SR-55 from I-5 to SR-91 was completed in June 2010. The preliminary engineering phase will be initiated in mid-2012.





# SR-57 Widening (Orangewood Avenue to Katella Avenue)

## Project G

### Project Cost Estimate (2011):

Capital Cost	\$ 10,040,000
R/W Cost	\$ 400,000
Support Cost	\$ 2,540,000
Management & Contingency	\$1,740,000
<b>Total Project Cost</b>	<b>\$14,720,000</b>

### Project Schedule:

Preliminary Engineering	2013
Environmental	30 months
Design	24 months
Construction	24 months

## Project Description

The improvements along State Route 57 (SR-57) primarily consist of adding one general purpose lane in the northbound (NB) direction from Orangewood Avenue in the City of Orange to Katella Avenue in the City of Anaheim. The project will maintain the existing auxiliary lane between Orangewood Avenue and Katella Avenue. Specific improvements will be subject to approved plans developed in coordination with local jurisdictions and affected communities.

## Key Considerations

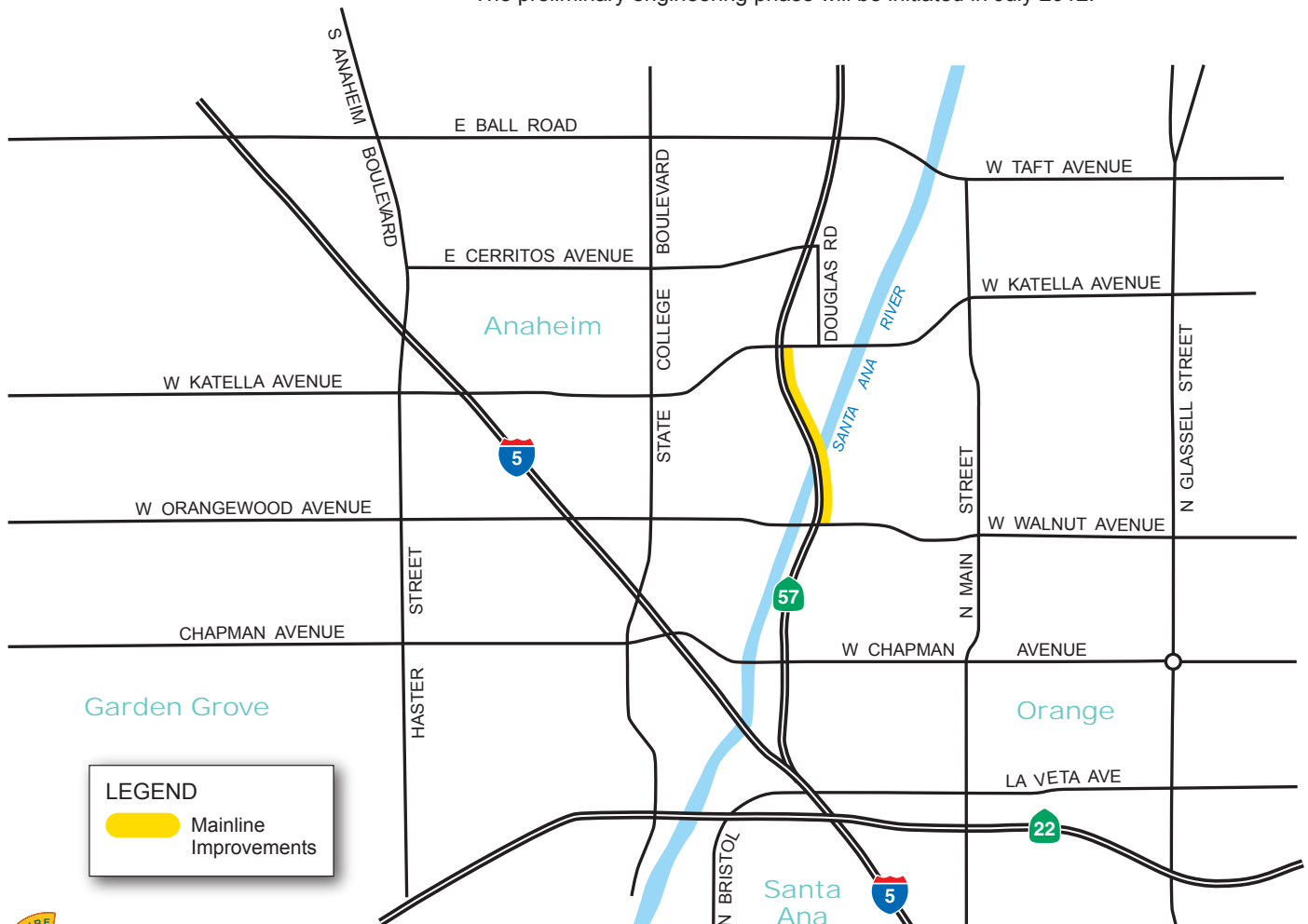
Project improvements on SR-57 from Orangewood Avenue to Katella Avenue may require limited right of way acquisition that includes partial parcel acquisitions and temporary construction easements for the construction of proposed retaining walls and widened bridge structures. Railroad involvement will be required; a Construction & Maintenance Agreement will be needed for one overhead bridge structure. Proposed improvements will need to be coordinated with the SR-57 Northbound Widening Project (Katella Avenue to Lincoln Avenue), which will be under construction in December 2011.

## Benefits


On SR-57, from Orangewood Avenue to Katella Avenue, improvements will substantially improve existing and future mobility, reduce congestion, improve mainline weaving, merge and diverge movements, which will improve both traffic operations and safety.

## Current Status

The preliminary engineering phase will be initiated in July 2012.



**LEGEND**

 Mainline Improvements



# SR-57 Widening (Lambert Road to County Line)

## Project G

### Project Cost Estimate (2011):

Capital Cost	\$ 53,280,000
R/W Cost	\$ 1,100,000
Support Cost	\$ 16,790,000
Management & Contingency	\$ 11,200,000
Total Project Cost	\$ 82,370,000

### Project Schedule:

Preliminary Engineering	Completed
Environmental	36 months
Design	24 months
Construction	36 months

## Project Description

The improvements along State Route 57 (SR-57) from Lambert Road to one-half mile north of the Los Angeles County line include the addition of a northbound truck climbing lane. The constructed width of the project will enable future provision of a second northbound lane.

## Key Considerations

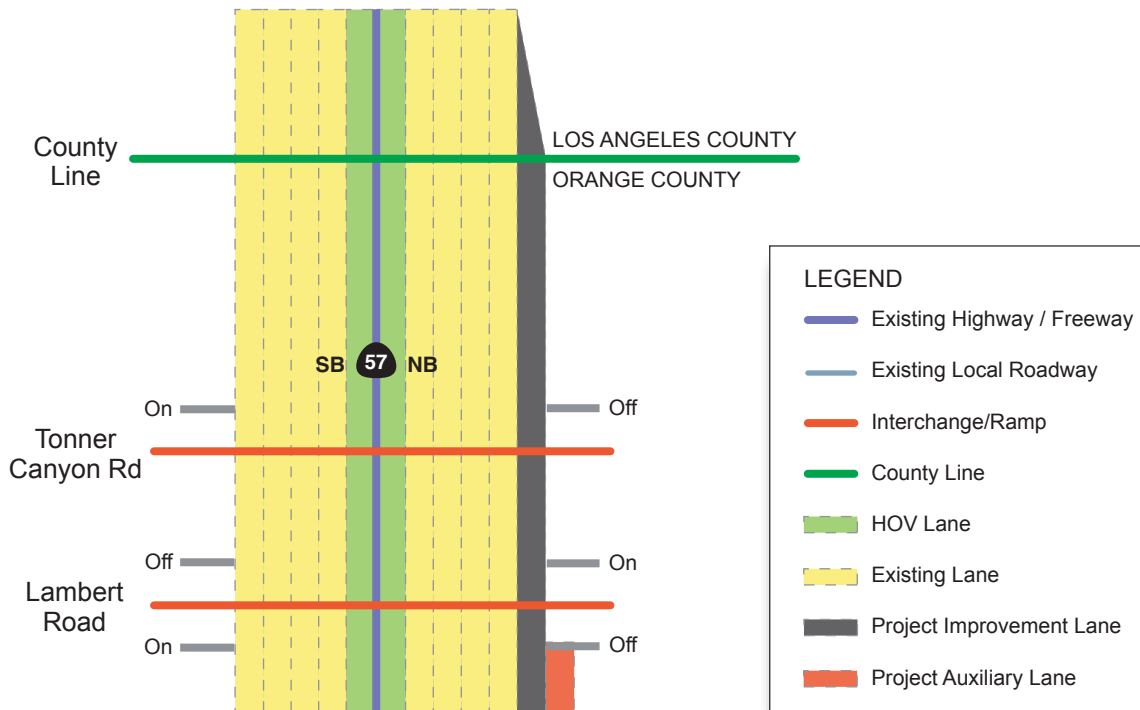
The segment of the project from Lambert Road to the County Line will require improvements in areas with both environmental and geotechnical challenges. This project will include coordination with Caltrans District 7 and the County of Los Angeles.

## Benefits

On SR-57 from Lambert Road to the County Line project improvements will increase truck traffic travel speed and throughput in the northbound direction. The project will also substantially improve future mobility and reduce congestion, which will improve both traffic operations and safety. In conjunction with the SR-57 northbound improvements from Orangethorpe Avenue to Lambert Road, a 40% reduction in total delay could be achieved through the SR-57 northbound corridor.

## Current Status

A Project Study Report was approved by Caltrans in July 2001, which completed the preliminary engineering phase. The project is scheduled to complete the environmental phase in 2022.



## Project I

### Project Cost Estimate (2011):

Capital Cost	\$ 183,240,000
R/W Cost	\$ 21,880,000
Support Cost	\$ 61,420,000
Management & Contingency	\$ 40,640,000
<b>Total Project Cost</b>	<b>\$ 307,180,000</b>

### Project Schedule:

Preliminary Engineering	2012
Environmental	30 months
Design	24 months
Construction	36 months

## Project Description

Improve State Route 91 (SR-91) with the addition of freeway capacity between SR-55 and SR-57. The proposed capacity improvement on SR-91 between SR-57 and SR-55 includes adding one (1) general purpose lane in the eastbound direction. Improvements for the SR-91 / SR-55 interchange will also be evaluated. The project will generally be constructed within the existing right of way. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities.

Current freeway volume on this segment of the SR-91 is about 245,000 vehicles per day. This vehicular demand is expected to increase by 22 percent, bringing it up to 300,000 vehicles per day in the future.

## Key Considerations

The proposed project improvements need to be closely coordinated if phased delivery of the project is executed.

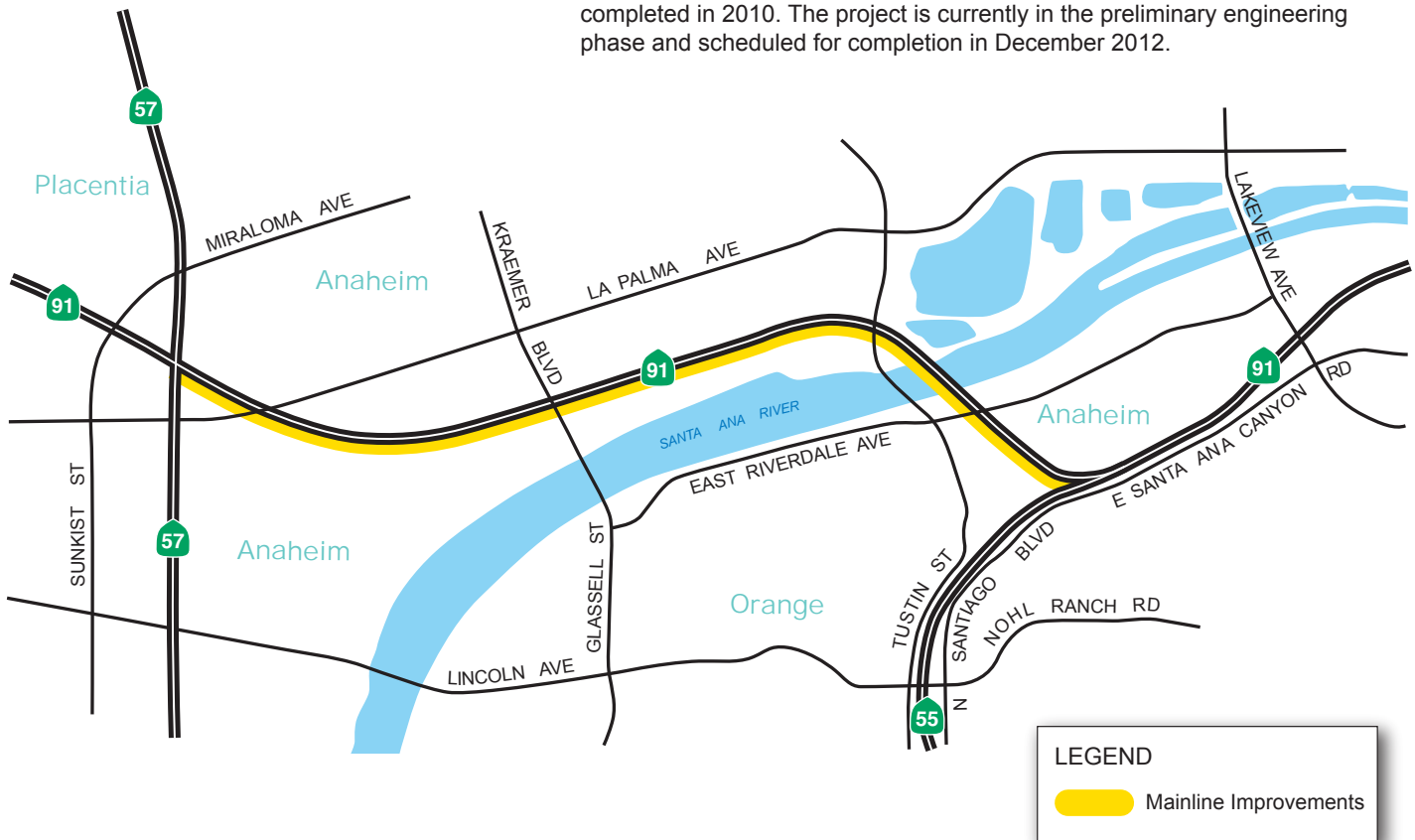
The definition of the SR-91/SR-55 interchange improvements requires further study, including an evaluation of right of way impacts. Implementation of the interchange improvements may be considered for later phasing than the freeway widening between SR-55 and SR-57. Also, these proposed improvements need to be coordinated with SR-91 widening improvements delivered as part of Project I and Project J.

## Benefits

The project improvement will alleviate congestion and reduce delay. The SR-91/SR-55 interchange improvements are expected to provide congestion relief for westbound SR-91 traffic and improve the connection from westbound SR-91 to southbound SR-55.

## Current Status

A SR-91 feasibility study for widening SR-91 from SR-55 to SR-57 was completed in 2010. The project is currently in the preliminary engineering phase and scheduled for completion in December 2012.



## Project J

**Project Cost Estimate Initial Phase:**  
Funded by RCTC

**Project Cost Estimate Ultimate Phase (2011):**

Capital Cost	\$ 87,787,000
R/W Cost	\$ 5,758,000
Support Cost	\$ 15,215,000
Management & Contingency	\$ 15,215,000
<b>Total Project Cost</b>	<b>\$ 123,975,000*</b>

\* M2 reserve funds for Orange County improvements

**Project Schedule for Initial Phase:**

Preliminary Engineering	Completed
Environmental	2012
Design - Build	2017

**Project Schedule for Ultimate Phase:**  
TBD

## Project Description

The Riverside County Transportation Commission (RCTC) is leading the two-phase (initial & ultimate) delivery of this project, which adds capacity on State Route 91 (SR-91) beginning at State Route 241 (SR-241) and extending to Interstate 15 (I-15) in Riverside County, which would provide a continuous set of improvements between SR-241 and I-15. Scheduled for completion by 2017, the initial phase of the project is being funded by RCTC and will provide (1) eastbound lane and (1) westbound lane of capacity between SR-241 and the Riverside County line. The ultimate project will provide (1) additional eastbound lane and (1) additional westbound lane of capacity between SR-241 and the Riverside County line. However, the Orange County improvements are contingent upon RCTC's delivery of the complementary improvements within Riverside County. The M2 funding currently assigned to Project J are reserve funds dedicated to the delivery of the ultimate phase SR-91 improvements within Orange County and are subject to change pending further project definition and development. A schedule for delivery of the ultimate improvements has not yet been established. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities. Today, this freeway carries about 314,000 vehicles every day. This volume is expected to increase by 36 percent, bringing it up to 426,000 vehicles by 2030.

## Key Considerations

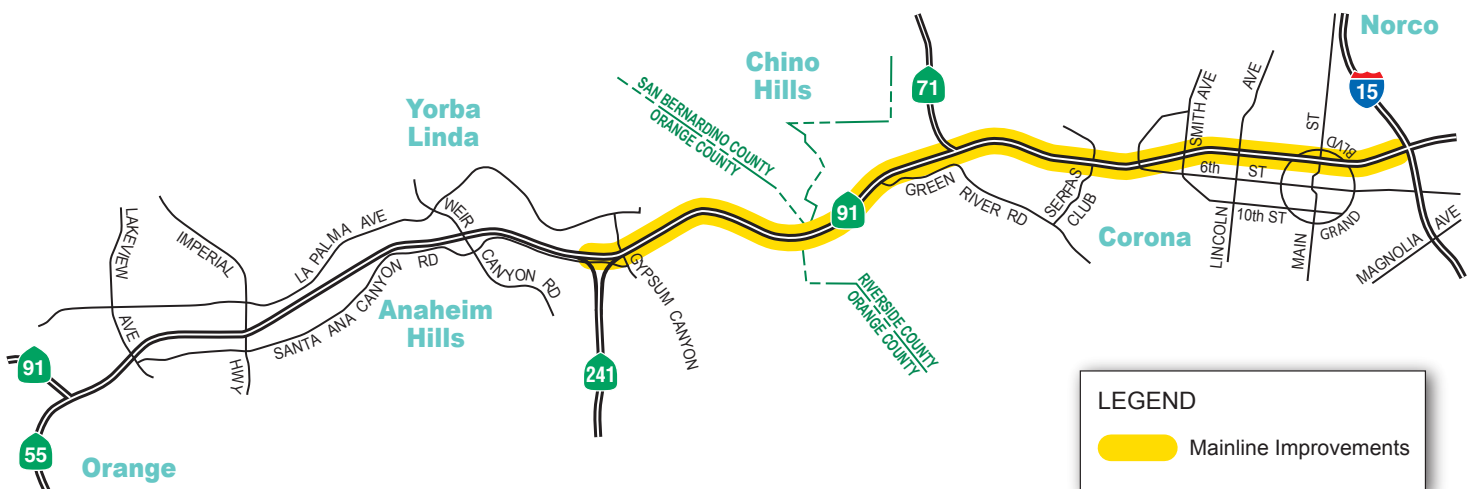
This improvement project will have to be coordinated with three other major improvement projects on SR-91: 1) Project J widened SR-91 from SR-241 to SR-71, 2) the elevated 4-lane facility (Corridor A) proposed by the Riverside County - Orange County Major Investment Study (MIS), which could potentially be located in the median of SR-91, and 3) the SR-241/SR-91 High Occupancy Vehicle/High Occupancy Toll (HOV/HOT) direct connectors.

## Benefits

The proposed project improvements on EB and WB SR-91 between SR-241 and I-15 are expected to reduce congestion and improve the safety and operational efficiency of the facility by increasing the carrying capacity of the facility and by reducing the existing chokepoints within the project limits.

## Current Status

The SR-91 improvement project is currently in the environmental phase, which is scheduled to be completed by April 2012.



**Project L**

**Project Cost Estimate (2011):**

Capital Cost	\$ 209,580,000
R/W Cost	\$ 8,300,000
Support Cost	\$ 65,890,000
Management & Contingency	\$ 39,120,000
<b>Total Project Cost</b>	<b>\$ 322,890,000</b>

**Project Schedule:**

Preliminary Engineering	2013
Environmental	30 months
Design	24 months
Construction	36 months

**Project Description**

Add new lanes to Interstate 405 (I-405) from State Route 55 (SR-55) to the vicinity of Interstate 5 (I-5) to alleviate congestion and reduce delay. The project could also improve chokepoints at interchanges and add merging lanes near on/off ramps such as Lake Forest Drive, Irvine Center Drive and State Route 133 (SR-133) to improve the overall freeway operations in the Interstate 405 (I-405)/I-5 El Toro “Y” area. The project will generally be constructed within the existing right of way. Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities.

This segment of the freeway carries 354,000 vehicles a day. This number will increase by nearly 13 percent, bringing it up to 401,000 vehicles per day by 2030. The project will increase freeway capacity and reduce congestion.

**Key Considerations**

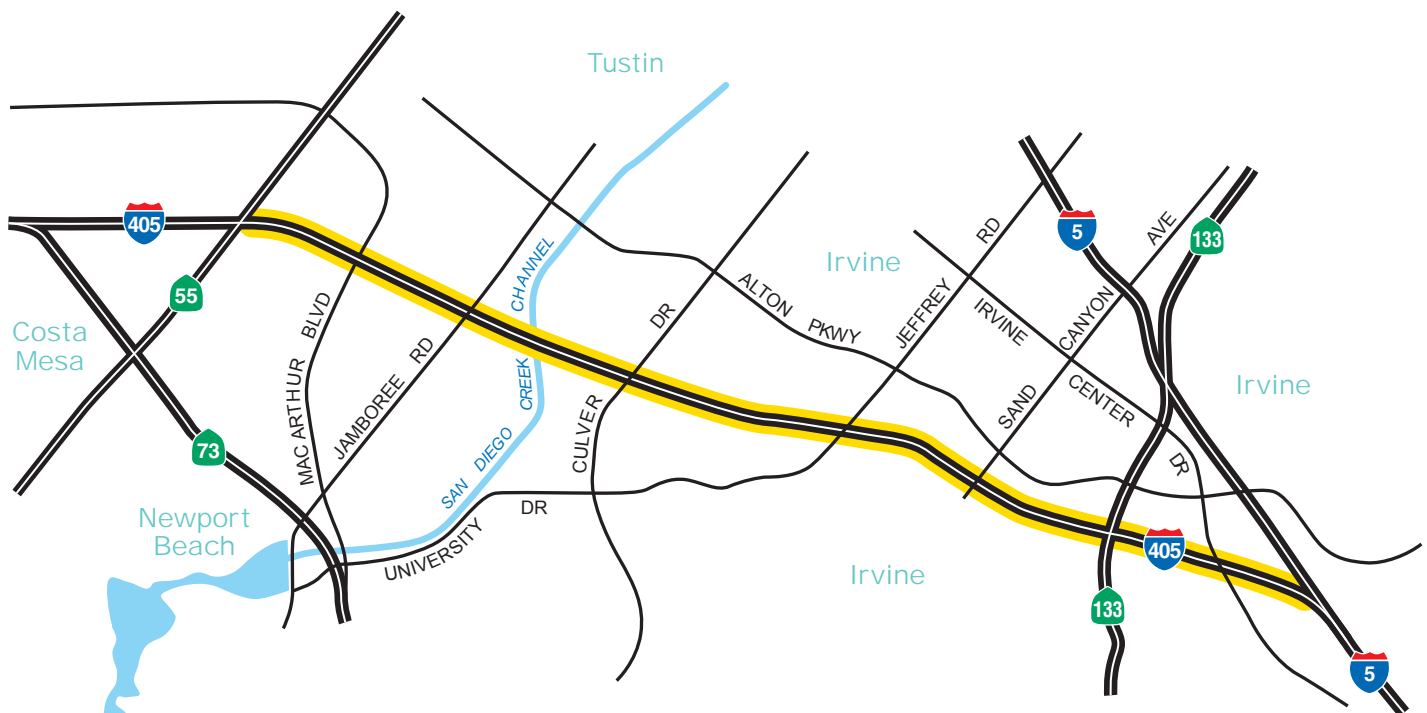
The I-405 mainline improvement project will have to be closely coordinated with local interchange improvement projects that are currently in the preliminary engineering or environmental phases of project development. The project should also be coordinated with Project B and Project C to ensure that lane balancing issues are addressed.

**Benefits**

The improvement project on I-405 between SR-55 and El Toro ‘Y’ would help alleviate congestion and reduce delay.

**Current Status**

The project is currently in the preliminary engineering phase and is scheduled to be completed in 2013.



# I-605 at Katella Avenue Interchange Improvements

## Project M

### Project Cost Estimate (2011):

Capital Cost	\$ 13,110,000
R/W Cost	\$ 1,390,000
Support Cost	\$ 4,490,000
Management & Contingency	\$ 3,190,000
<b>Total Project Cost</b>	<b>\$ 22,180,000</b>

### Project Schedule:

Preliminary Engineering	18 months
Environmental	24 months
Design	24 months
Construction	24 months

## Project Description

Improve freeway access and arterial connection to Interstate 605 (I-605) at Katella Avenue, which serves the communities of Los Alamitos and Cypress. The project will be coordinated with other planned improvements along State Route 22 (SR-22) and Interstate 405 (I-405). Specific improvements will be subject to approved plans developed in cooperation with local jurisdictions and affected communities.

Regional plans also include the addition of new freeway-to-freeway HOV connectors to the I-405/I-605 interchange using federal and state funds. This improvement will connect to interchange improvements at I-405 and SR-22, as well as new freeway lanes between I-405 and I-605.

## Benefits

The purpose of the I-605/Katella Avenue interchange improvements is to reduce both freeway and arterial congestion, traffic queuing, and delay within the interchange area.

## Current Status

The preliminary engineering phase for this project has not been initiated yet, and will be done in cooperation with the City of Los Alamitos in the future.



**Project N**  
**Anticipated Completion: 2011-2041**  
**Project Cost**  
**Estimate (YOE): \$ 150,000,000**

**Project Description**

Currently Freeway Service Patrol (FSP) is available on Orange County freeways Monday through Friday during peak commuting hours. This project assures that this basic level of service would be continued through 2041. As demand and congestion levels increase, this project would also permit service hours to be extended throughout the day and into the weekend.

**Benefits**

The Freeway Service Patrol provides competitively bid, privately contracted tow truck service for motorists with disabled vehicles on the freeway system. This service helps stranded motorists and quickly clears disabled vehicles out of the freeway lanes to minimize congestion caused by vehicles blocking traffic and passing motorists rubbernecking.



## **SECTION 3: \_\_\_\_\_ REFERENCES**

The following documents and resources were used in the development of the Measure M2 Freeway Plan. Data was provided by OCTA, RCTC, Caltrans District 12, Caltrans District 8 and other agencies.

### **PROJECT A: I-5 Widening between SR-55 and SR-57**

1. Project Study Report/Project Development Support “Add second HOV lane on I-5 between SR-55 and SR-57”, November 2010
2. Project Study Report “On Interstate 5 between Fourth Street and Newport Avenue, On State Route 55 between Fourth Street and Edinger Avenue”, October 2005

### **PROJECT B: I-5 Widening between SR-55 and I-405**

3. Project Study Report/Project Development Support (Working Draft) “I-5 Widening between I-405 and SR-55”, May, 2011

### **PROJECT C: I-5 Widening between South County Line and I-405**

4. Draft Project Report “Extend I-5 HOV lane between 0.1 mile south of Avenida Pico UC and 0.1 mile south of San Juan Creek Rd UC”, January 2011
5. Project Study Report/Project Development Support “I-5 Widening between SR-73 and El Toro Road”, February 2011
6. Caltrans Project Fact Sheet “I-5 at La Paz UC - Reconstruct UC and Widen SB Off-ramp”, June 2008
7. Feasibility Study “Replace Avery Pkwy UC, Bridge No. 55-232 R/L on I-5”, April 2011

### **PROJECT D: I-5 South County Interchange Improvements**

8. 95% PS&E “On Route I-5, in the City of San Juan Capistrano at Ortega Highway (SR-74) Interchange”, July 2011
9. Caltrans Project Fact Sheet “On SB I-5 between El Toro Road and Los Alisos in the City of Laguna Hills”, July 2008

### **PROJECT F: SR-55 Widening between I-405 and SR-22**

10. Project Study Report/Project Development Support “On State Route 55 between Interstate 405 and Interstate 5”, April 2008
11. Feasibility Study “SR-55 Widening between I-5 and SR-91”, June 2010





### **PROJECT G: SR-57 Northbound Widening between I-5 and County Line**

12. 100% PS&E “Northbound Widening On State Route 57 between 0.5-km South of Katella Avenue and 0.5-km North of Lincoln Avenue”, August 2011
13. Construction Contract “SR-57 Northbound Widening between Orangethorpe Avenue and Yorba Linda Boulevard”, July 2011
14. Construction Contract “SR-57 Northbound Widening between Yorba Linda Boulevard and Lambert Road”, July 2011
15. Project Study Report “SR-57 Northbound Climbing Lane Widening between Lambert Road Undercrossing and 1 km North of Orange County/Los Angeles County Line”, September 2001

### **PROJECT H: SR-91 Westbound Widening between I-5 and SR-57**

16. 65% PS&E “SR-91 Westbound Widening between I-5 and SR-57”, May 2011

### **PROJECT I: SR-91 Widening between SR-55 and SR-57**

17. Project Study Report/Project Development Support (Working Draft) “SR-91 Widening between SR-55 and SR-57”, December 2011
18. Project Report “On Westbound State Route 91 Auxiliary Lane from NB SR-55/WB SR-91 Connector to the Tustin Avenue Interchange”, May 2011
19. State Route 91 Implementation Plan, June 2011

### **PROJECT J: SR-91 Widening between SR-55 and Orange/Riverside County Line**

20. PS&E & Construction Contract “On Eastbound SR-91 between SR-241 in Orange County and SR-71 in Riverside County”, July 2011
21. Project Report “On State Route 91 between SR-55 and SR-241”, July 2011
22. Draft Project Report (Working Draft) “SR-91 Corridor Improvement Project”, September 2008
23. State Route 91 Implementation Plan, June 2011

### **PROJECT K: I-405 Widening between SR-55 and I-605**

24. Project Study Report/Project Development Support (Working Draft) “On Interstate 405 between State Route 73 and Interstate 605”, April 2008
25. Preliminary Construction Cost Estimate, November 2010 (cited in OCTA Project Status Report, June 2011)

### **MISCELLANEOUS**

26. Orange County Transportation Authority Renewed Measure M Transportation Investment Plan, November 2006
27. South County Major Investment Study, June 2008
28. OCTA Project Status Reports, June 2011





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