I-680 Northbound Express Lane Project Overview and Update

A presentation for the I-680 Sunol Smart Carpool Lane Joint Powers Authority (SSCLJPA)
September 12, 2016

I-680 Northbound Express Lane Project from SR 237 to SR 84

- 15 miles of HOV/HOT
- Environmental July 2015
- Project capital cost estimate:
  - Full build - $380 million
  - Phase 1 - $260 million

Section at Washington on-ramp to SR 238 (Mission) off-ramp
Purpose
- Implement I-680 Express Lane per Metropolitan Transportation Commission (MTC) Transportation 2035 Plan to:
  - Increase efficiency on northbound I-680 between SR 237 and SR 84 to accommodate current and future traffic demand
  - Improve travel time and travel reliability for all users
  - Optimize freeway system management and traffic operations
  - Maintain consistency with the provisions in California State Assembly Bill (AB) 2032 and AB 574 to implement an HOV/express lanes system in Alameda County

Need
- Capacity and Transportation Demand
- Travel Time Delay for all Users
- Traffic Diversion and Unused Capacity
- Legislation

Historical Traffic Speed Trends

Corridor traffic volume increase resulted in lower PM peak average speed from north of Scott Creek Road through SR-84 in 2014 compared to 2008.
Bottlenecks occur during PM peak
- SR 262 to Washington
- SR 238 to Andrade

Queues begin to form around 2:00 p.m. on weekdays and extend past Scott Creek Road by height of the commute

Traffic diversions

Calaveras Boulevard (17 miles)
- 17 mile diversion
- 14 mile freeway

Mission Road (1.5 miles)
- 1.5 mile diversion
- Up to 600 vph during PM peak
- 1.5 mile freeway

Mission Boulevard (3 miles)
- 3 mile diversion
- 4 mile freeway
I-680 Northbound HOV/Express Lane (Phase 1)

- New continuous-access HOV/express lane from Grimmer to SR 84 (Calaveras)
- New auxiliary lane from Washington on-ramp to SR 238 (Mission) off-ramp
- Modify 3 bridges (Sheridan, Palm, Calaveras)
- Construct 10 retaining walls to accommodate Widening
- Install electronic tolling equipment and signage
- Install enhanced lighting and other safety features
I-680 Southbound Sunol Express Lane Conversion Project

- Convert SB express lane to continuous access from SR262 (Mission) to SR84
- Integrate the converted express lane system with existing SB toll system, south of SR262
- Create a single toll operation for NB & SB

I-680 Southbound Sunol Express Lane Conversion

I-580 Express Lanes
Open Access

I-680 Southbound Express Lanes
Limited Access
I-680 Rehabilitation Project
- Grimmer to Koopman
- $32.6 million

I-680 Sunol Express Lane Project Components

Southbound Conversion
- Southbound Conversion to continuous access from SR262 (Mission) to SR84
- Integrate the converted express lane system with existing SB toll system, south of SR262
- Create a single toll operation for NB and SB

Northbound Phase 1
- South of Auto Mall to SR 84
- 8.2 miles of HOV/HOT lane

Caltrans Rehab
- Grimmer to Koopman
Partnership = Cost Savings

- Reduced lane and shoulder widths
- Reduced number of bridge modifications and retaining walls
- No impacts to creeks or riparian areas
- Minor right-of-way acquisition
- No utility relocation
- Incorporation of Caltrans rehab work

Construction Staging Strategy

“Safety + Minimize Public Inconvenience”

Daytime Work (7 AM to 5 PM - typical)
- Maintain existing lane configurations
- Shoulder closures
- Work behind k-rail

Nighttime Work (11 PM to 5 AM)
- Mainline lane closures
- Ramp closures
- Full Freeway Closure - one direction only
  - Sheridan Road Overcrossing

✓ Traffic use detours for ramp and full closures
✓ Restrictions on closures for holidays and special events
Stage Construction Median Widening

- Pavement widening (Grimmer to Washington)
- Overhead signs, lighting and toll equipment
Stage Construction Outside Widening

- Pavement widening
- Retaining walls

Stage Construction Pavement Rehab

- Slab replacement
- Pavement overlay
- Loop detectors
Expedited Delivery Schedule

CIVIL DESIGN
- 2016
- 2017
- 2018
- 2019
- 2020

SYSTEM DESIGN
- Award System Integration Contract
- Award System Manager Contract

PROJECT DELIVERED
- OPEN TO TRAFFIC
- GO LIVE
- Testing (3 months)
- Complete Civil Construction
- Begin System Installation
- System Integration
- System Manager

The Final Product

SOUTHBOUND

NORTHBOUND

I-680 Sunol Express Lanes

I-680 SSCLJPA Meeting – September 12, 2016