



Status of the Interstate 405 Improvement Project Between State Route 55 and Interstate 605





DEIR/EIS Build Alternatives

Alt	General Description	Original Cost Estimate	Revised Cost Estimate With Variations*
1	Measure M2 Project K - one general purpose (GP) lane in each direction	\$1.3 billion	\$1.25 billion
2	Measure M2 Project K - one GP lane in each direction <ul style="list-style-type: none"> • Plus one additional GP lane in each direction 	\$1.4 billion	\$1.35 billion
3**	Measure M2 Project K - one GP lane in each direction <ul style="list-style-type: none"> • Plus one high-occupancy toll (HOT)/express lane to be combined with the existing HOV lane to create a two lane HOT/express facility 	\$1.7 billion	\$1.47 billion

DEIR/EIS = Draft Environmental Impact Report / Environmental Impact Statement

Alt = Alternative

*Alts 1, 2, 3 – eliminates southbound braided ramps in the City of Fountain Valley (reduces costs by \$50 million)

**Alt 3 – truncates express lanes at Euclid Street/Ellis Street, eliminates State Route 73 connector (reduces costs by \$180 million)

Note: Costs based on scope contained in draft project report, approximately 20 percent design



Project History

Major Investment Study Launched	2003
Major Investment Study Approved	2005
M2 Approved (Project K)	2006
Project Study Report Approved	2008
Draft EIR/EIS Initiated	2009
Phase I Traffic and Revenue Completed	2010
Phase II Traffic and Revenue Completed	2011
OCTA Board Recommends Alt 1	Oct 2012
Concept A and B Screening	Apr 2013
Supplemental Draft EIR/EIS	Jun 2013



Supplemental Draft EIR/EIS Public Comments

❖ Fair share calculation

❖ College Park Drive/Studebaker Road


Signal

❖ Traffic at the county line

**San Diego Freeway
(I-405) Improvement Project**



ORANGE AND LOS ANGELES COUNTIES, CALIFORNIA
12-ORA-405 PM 9.3/24.2 / 07-LA-405 PM 0.0/1.2
12-ORA-22 PM R0.7/R3.8 / 12-ORA-22 PM R0.5/R0.7
12-ORA-73 PM R27.2/R27.8 / 12-ORA-605 PM 3.5/R1.6
07-LA-605 PM R0.0/R1.2
EA 0H1000 / PN 1200000180

**Supplemental Draft Environmental Impact Report/
Environmental Impact Statement**



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action in accordance with applicable federal laws for this project is being, or has been, carried out by the State of California Department of Transportation under its assumption of responsibility pursuant to 23 U.S.C. 327.



June 2013



Concept A Feasibility (Separate from Draft EIR/EIS)

Concept A

M2 Project K 

+

one more GP

+

Convert HOV to
HOT

HOT = High-Occupancy Toll



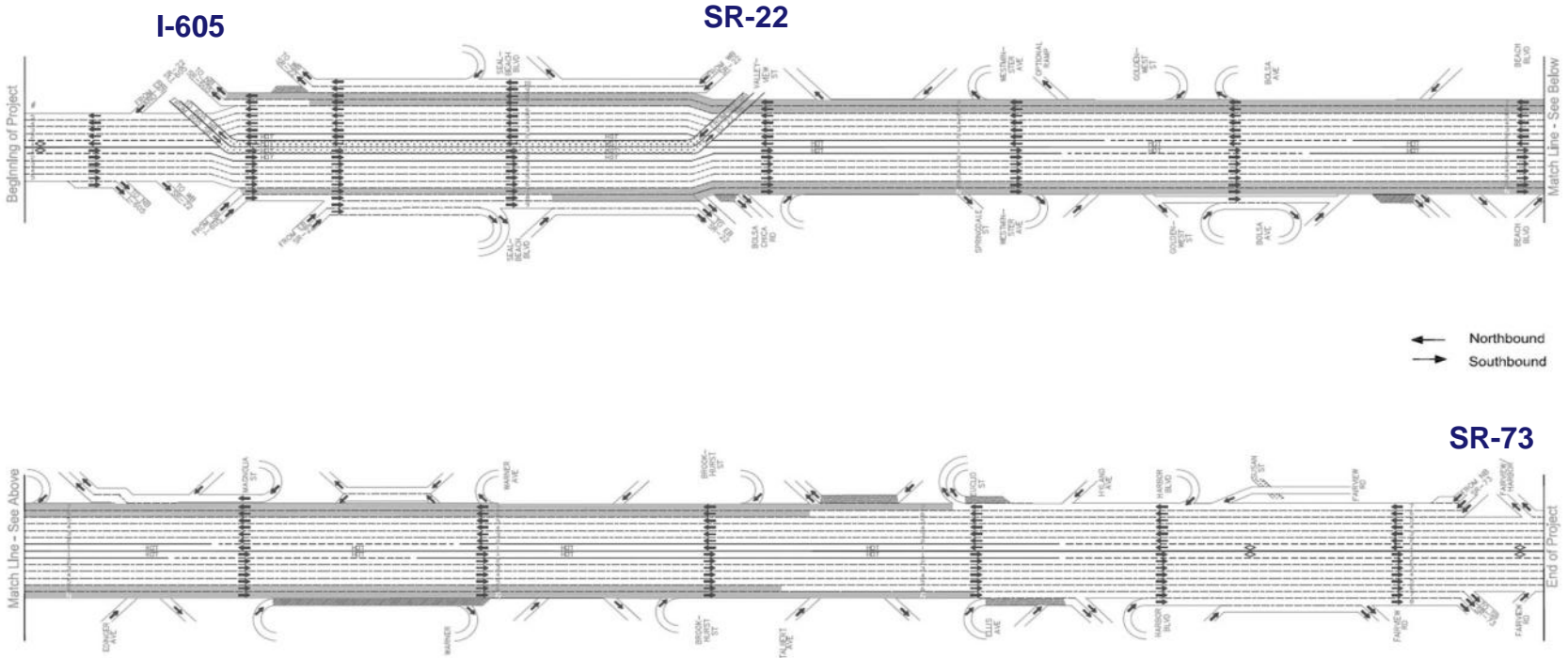
Concept A – Traffic & Revenue

Interstate 405 Update - Stantec





Concept A



Concept A (Add two general purpose lanes north of Euclid/Brookhurst to SR-22/I-605 and change management the HOV lanes to HOT lanes)

Baseline Improvement to Existing Condition
 Proposed General Purpose Lane
 Proposed Auxiliary Lane

DRAFT

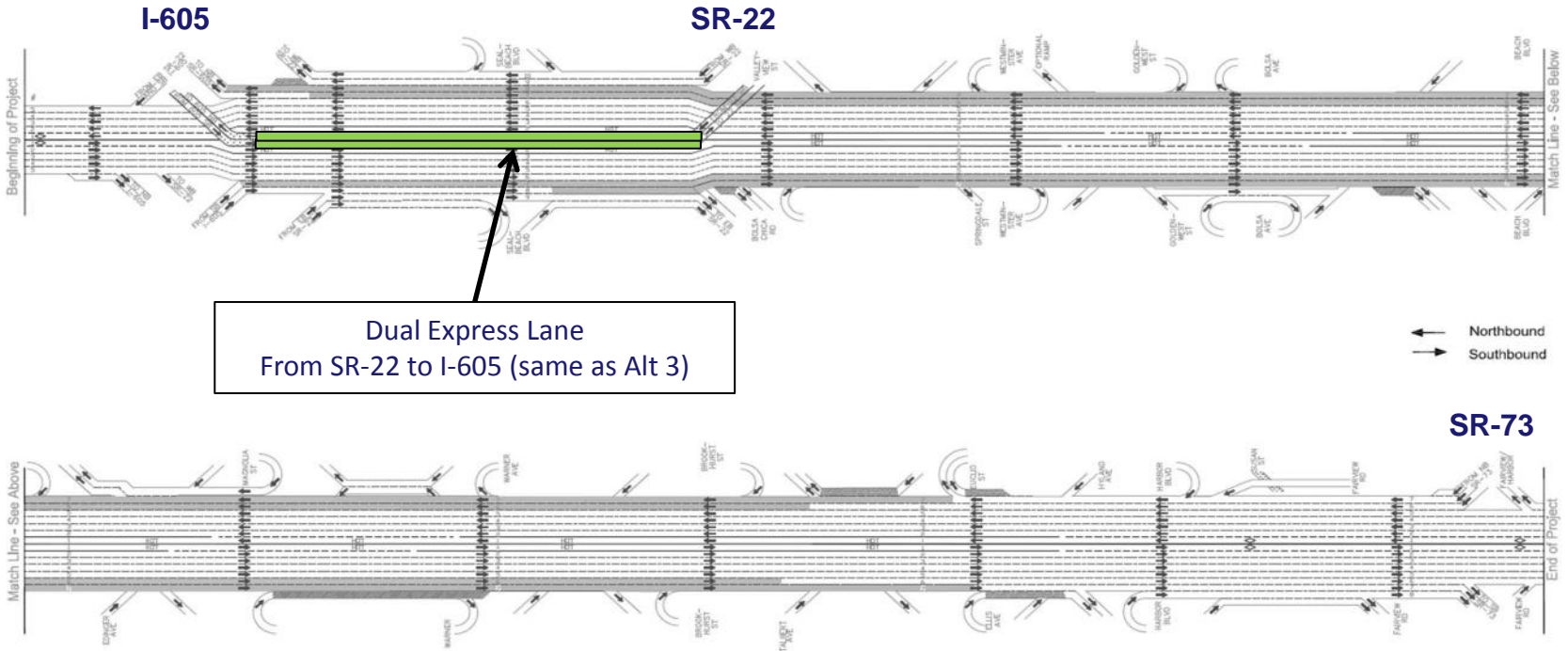
I-405 PA/ED CONCEPT A LANE SCHEMATIC

DRAFT

SHEET 1 OF 1

PARSONS

Concept A

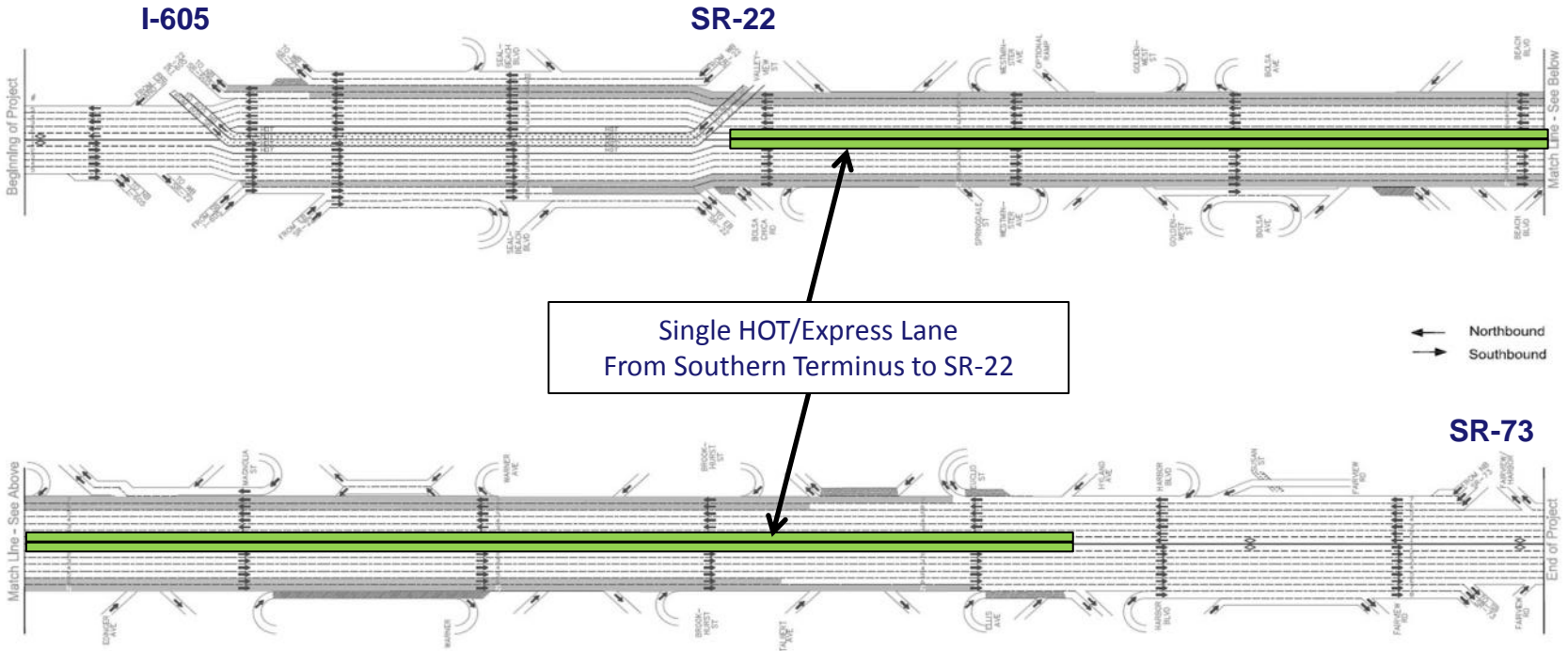


Dual Express Lane
From SR-22 to I-605 (same as Alt 3)

Concept A (Add two general purpose lanes north of Euclid/Brookhurst to SR-22/I-605 and change management the HOV lanes to HOT lanes)

Baseline Improvement to Existing Condition
 Proposed General Purpose Lane
 Proposed Auxiliary Lane

Concept A

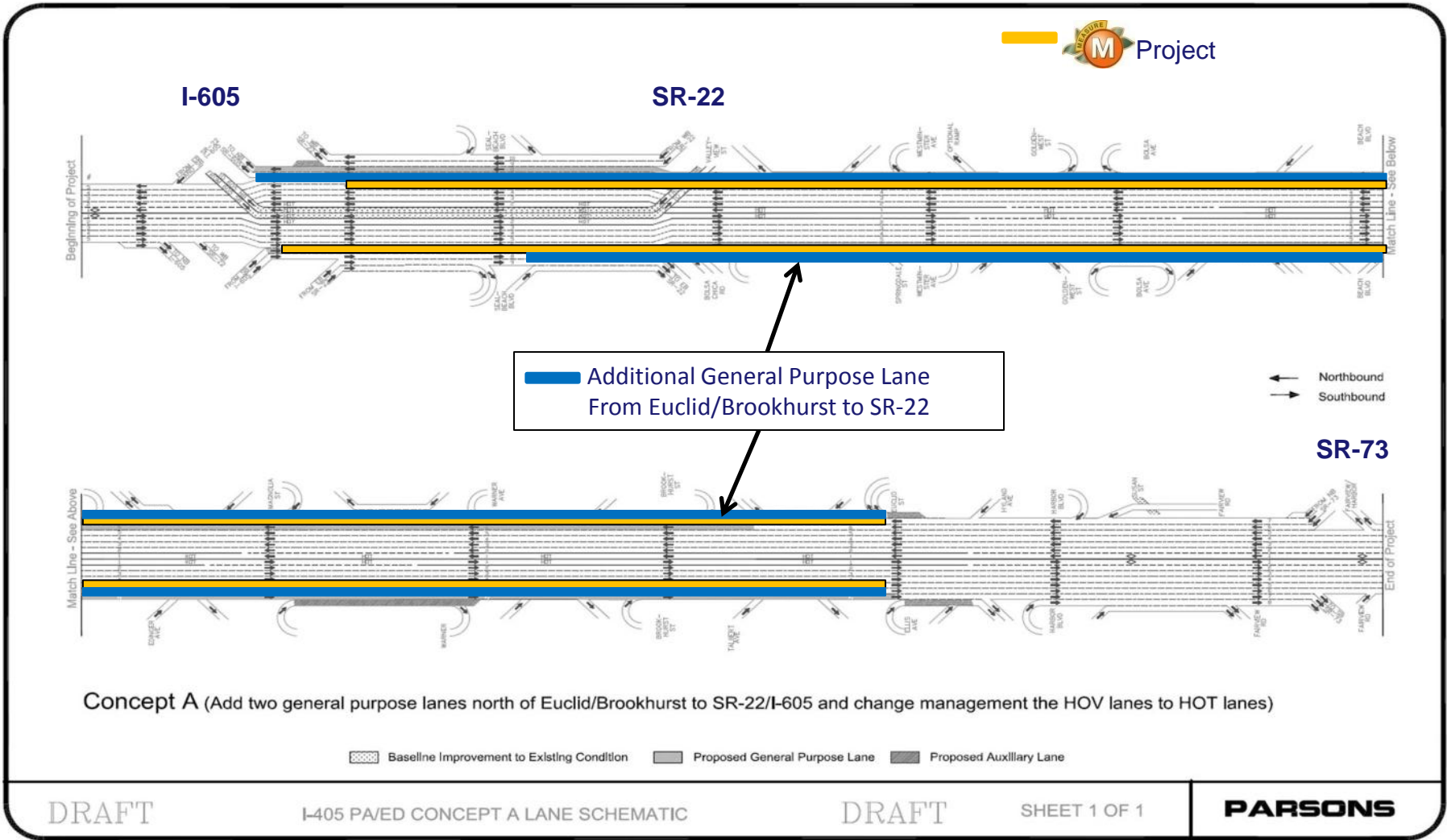


Concept A (Add two general purpose lanes north of Euclid/Brookhurst to SR-22/I-605 and change management the HOV lanes to HOT lanes)

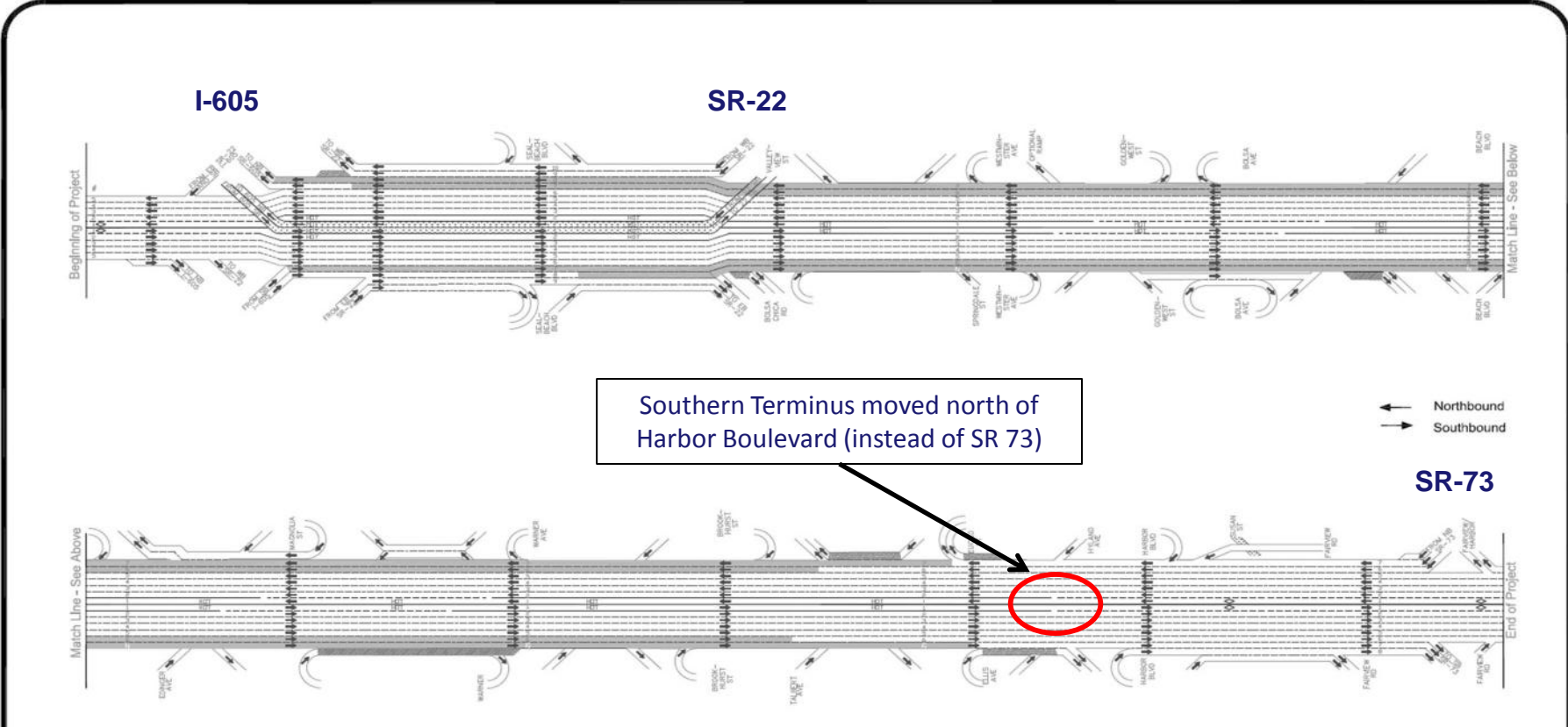
Baseline Improvement to Existing Condition
 Proposed General Purpose Lane
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Concept A



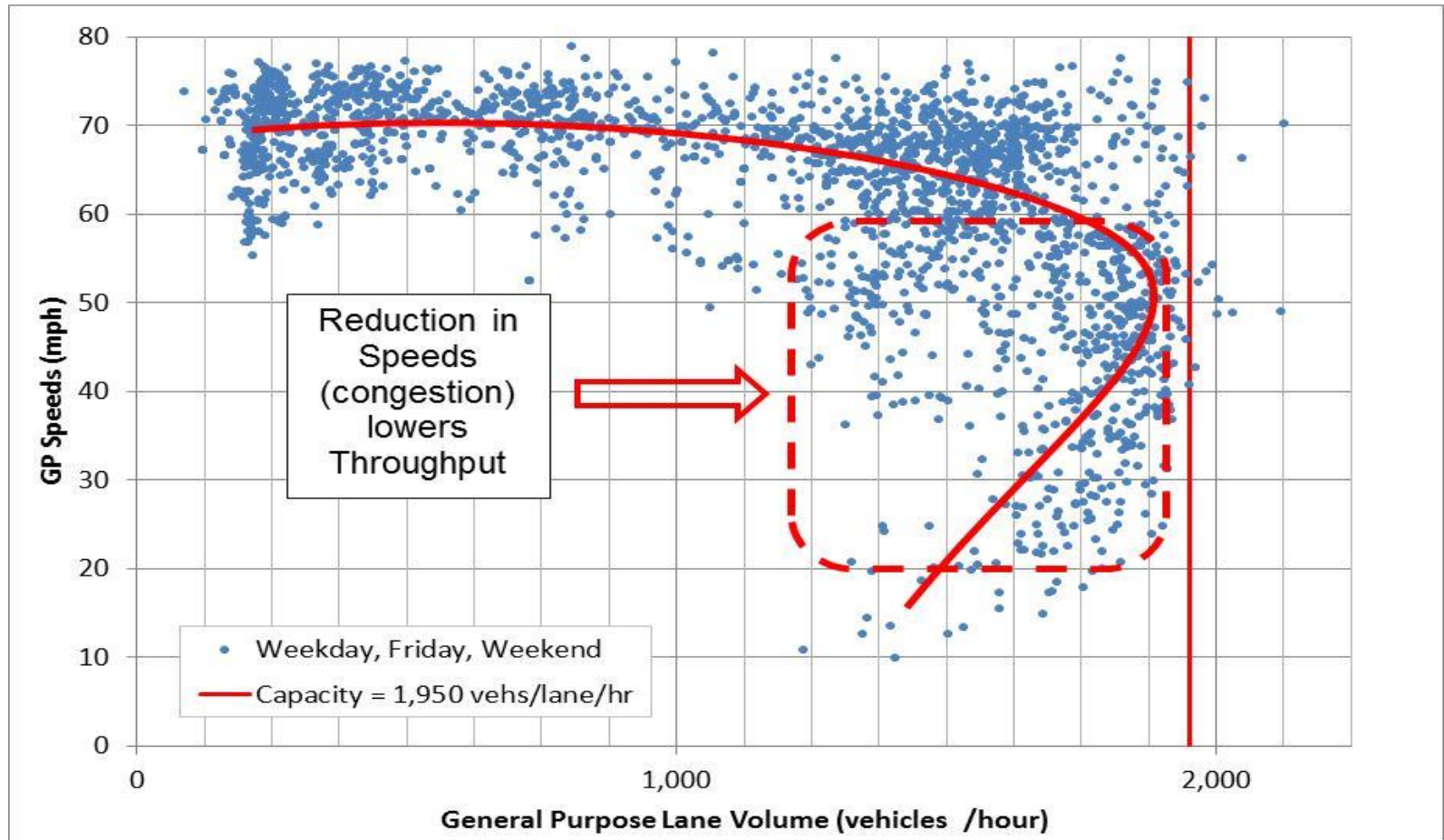
Concept A



Concept A (Add two general purpose lanes north of Euclid/Brookhurst to SR-22/I-605 and change management the HOV lanes to HOT lanes)

Baseline Improvement to Existing Condition
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How Congestion Impacts Throughput



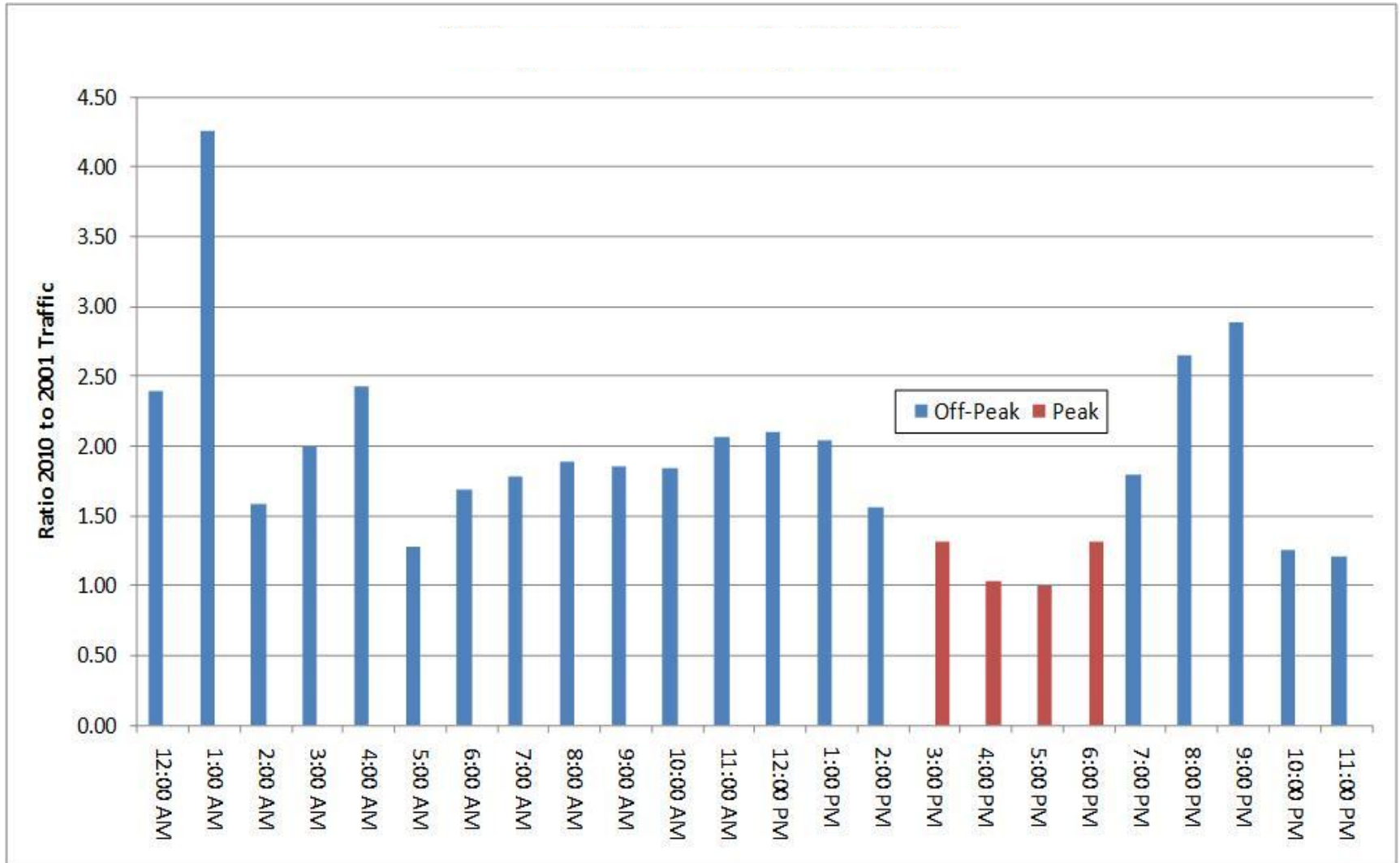


OCTA Toll Policy Assumptions

- Utilized existing 91 Express Lanes toll policy
- Establishes trigger points to avoid congestion in toll lanes
- Toll rates adjusted up or down, depending on traffic volumes
 - Peak tolls can be increased by either \$0.75 or \$1.00
 - Peak tolls can be decreased by \$0.50
- Includes annual cost of living adjustments (3%) for non-peak hours and HOV 3+ free



91 Express Eastbound Growth 2001-2010





Concept A – Traffic & Revenue

Forecasting for Single Express Lane

- Lower volume threshold on single lane (1,550 veh / hr) and direct connector (1,450 veh/hr)
- Toll rates on SR-22/I-605 segment must be increased to ensure total volume does not exceed 3,000 vehicles
- Results in higher rates on SR-22/I-605 segment for Concept A vs. Alternative 3



I-405 Concept A HOV 3+ Toll Rates

2020 Average Weekday

Segment	Dir	Segment Distance (mi)	Average Toll Rate (2013 \$s)	Peak Toll Rate (2013 \$s)
Harbor to Magnolia	NB	3.8 mi.	\$1.57	\$2.06
	SB	3.6 mi.	\$1.43	\$1.99
Magnolia to Goldenwest	NB	2.6 mi.	\$0.91	\$1.23
	SB	2.4 mi.	\$0.93	\$1.12
Goldenwest to SR-22	NB	2.9 mi.	\$1.65	\$3.56
	SB	3.3 mi.	\$1.25	\$1.83
SR-22 to I-605	NB	2.8 mi.	\$2.18	\$4.73
	SB	2.8 mi.	\$1.37	\$2.02
Full Length Trip	NB	12.0 mi.	\$6.31	\$11.58
	SB	12.1 mi.	\$4.99	\$6.96



I-405 Concept A

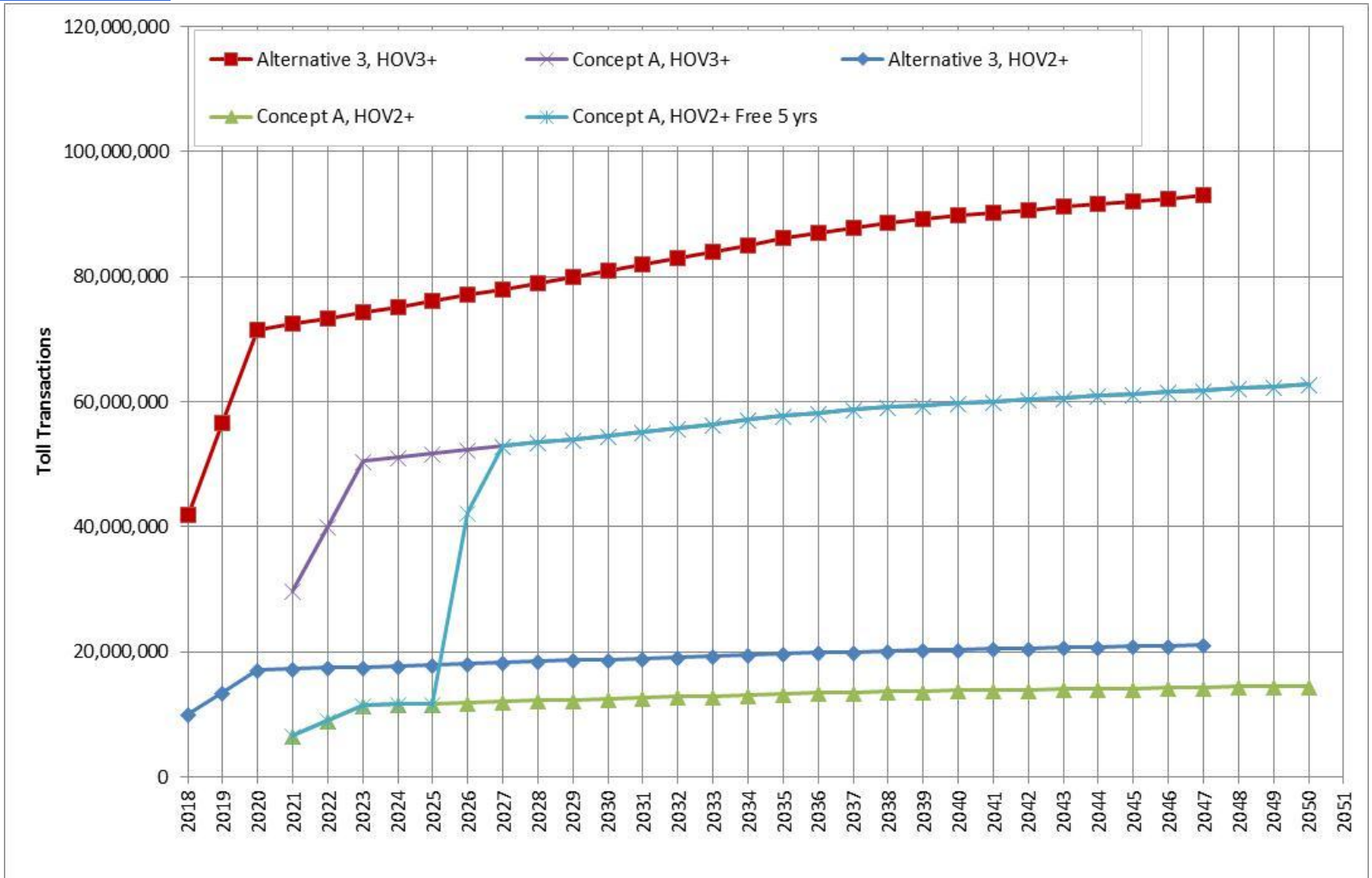
HOV 3+ Toll Rates

2035 Average Weekday

Segment	Dir	Segment Distance (mi)	Average Toll Rate (2013 \$s)	Peak Toll Rate (2013 \$s)
Harbor to Magnolia	NB	3.8 mi.	\$1.53	\$2.06
	SB	3.6 mi.	\$1.44	\$1.99
Magnolia to Goldenwest	NB	2.6 mi.	\$0.90	\$1.23
	SB	2.4 mi.	\$0.92	\$1.12
Goldenwest to SR-22	NB	2.9 mi.	\$3.17	\$5.06
	SB	3.3 mi.	\$1.65	\$2.98
SR-22 to I-605	NB	2.8 mi.	\$4.21	\$6.72
	SB	2.8 mi.	\$1.80	\$3.29
Full Length Trip	NB	12.0 mi.	\$9.82	\$15.07
	SB	12.1 mi.	\$5.80	\$9.38

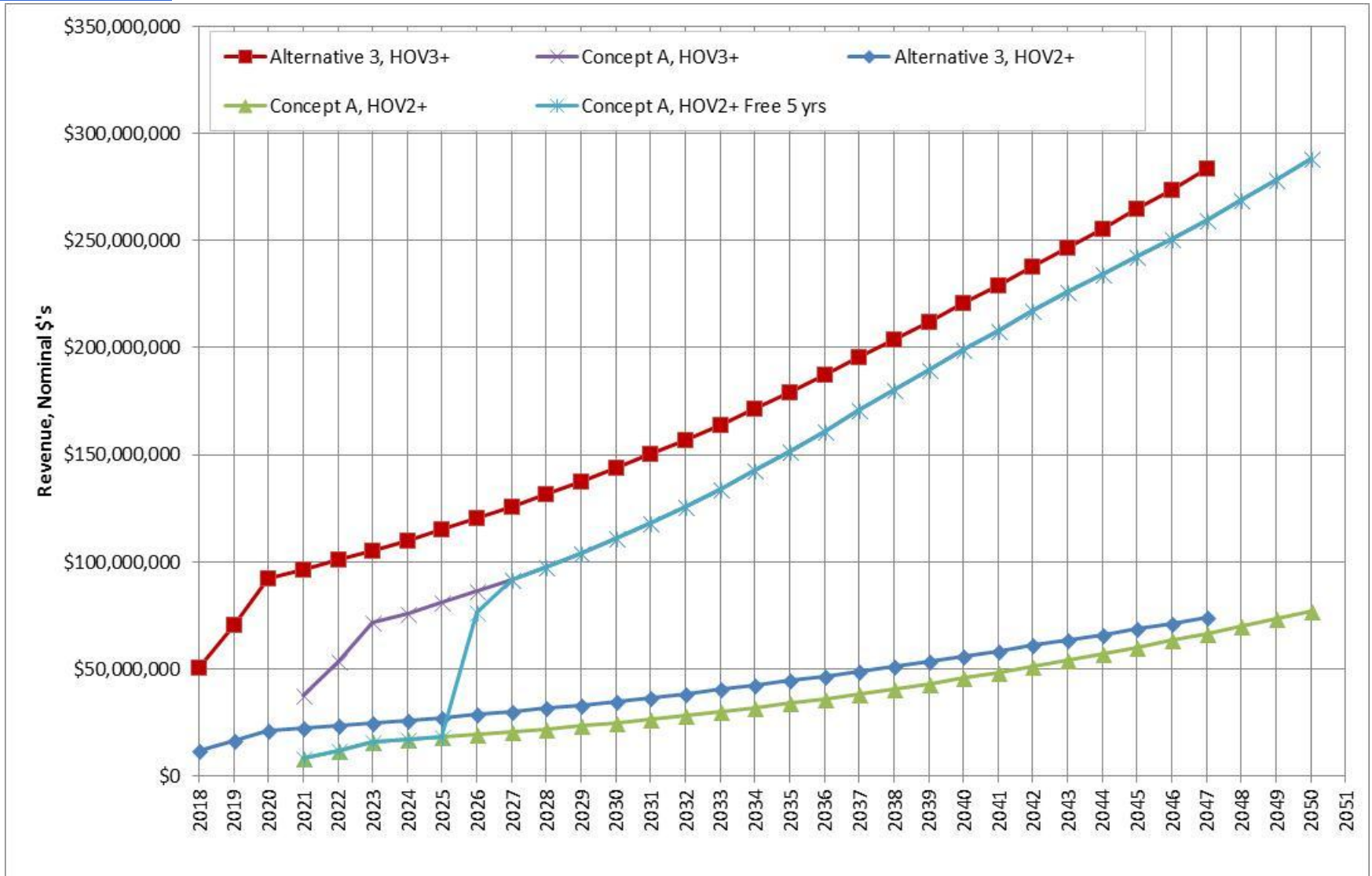


I-405 Concept A vs. Alternative 3 Toll Transactions





I-405 Concept A vs. Alternative 3 Toll Revenue





Concept A - Financing

❖ Assumptions:

- Toll revenues based on Stantec's July 2013 projections
- Non-toll revenues and operating expenses projected by OCTA and based upon 91 Express Lanes model
- Debt issuance in FY 2016-17
- Capitalize interest for 4 or more years
- 2.0 times debt service coverage ratio

❖ Results:

- HOV3+ scenario generates \$163.3 to \$186.6 million in toll road bond proceeds
 - Requires additional non-toll revenue funds (\$67.2 to \$90.5 million)
- HOV2+ scenario generates \$3.3 to \$7.4 million in toll road bond proceeds
 - Requires additional non-toll revenue funds (\$246.4 to \$250.5 million)



Concept B Feasibility (Separate from Draft EIR/EIS)

Concept B*

M2 Project K 

+

One (shorter) GP

* Alt 2 design option, second northbound GP lane eliminated north of Valley View Street



Concept B – Findings (cont.)

❖ PM Peak Hours – (Compared to Alt 2/Year 2040)

- Throughput 900-1400 vehicles/hr less
 - South of Valley View Blvd

- Throughput 2550 vehicles/hr less
 - North of Valley View lane drop

Speed Changes I-405 Northbound

	Beach to Bolsa	Goldenwest to Westminster	Westminster to Valley View	SR-22 to Seal Beach Blvd	7th St to I-605
Alt 2	58 mph	57 mph	59 mph	22 mph	24 mph
Concept B	57 mph	36 mph	25 mph	17 mph	27 mph
Change in Speed	-1 mph	-21 mph	-34 mph	-5 mph	3 mph



Concept B - Considerations

- Results in bottleneck at Valley View St.
- Traffic anticipated to disburse to local arterials in the cities of Garden Grove, Westminster, Seal Beach
- Traffic delays approximately 47% higher than Alt 2 in the Year 2040

Year 2040	Annual Delay Hours	Annual Cost of Delay \$\$
Alt 2	1.7 million	\$18 million
Concept B	2.4 million	\$27 million

- Caltrans is not supportive of concept



I-405 Revenue Sources (In Millions)

Column	A	B	C	D	E
Description	Cost Assumption	Measure M	Toll Financing Proceeds*	Total Available (B+C)	Funding Gap (D-A)
Alt 1	\$ 1,250.0	\$ 1,250.0	N/A	\$ 1,250.0	No Funding Gap
Alt 2	\$ 1,350.0	\$ 1,250.0	N/A	\$ 1,250.0	\$100.00
Concept B	\$ 1,380.0	\$ 1,250.0	N/A	\$ 1,250.0	\$130.00
Tolled Alternatives (No SR-73 HOT Direct Connector)					
Alt 3 - Assumes HOV3+ Free**	\$ 1,470.0	\$ 1,250.0	\$255.4 - \$355.6	\$1,505.4 - \$1,605.6	No Funding Gap
Concept A - Assumes HOV3+ Free***	\$ 1,503.8	\$ 1,250.0	\$163.3 - \$186.6	\$1,413.3 - \$1,436.6	\$67.2 to \$90.5
Alt 3 - Assumes HOV2+ Free for 5 Years***	\$ 1,470.0	\$ 1,250.0	\$181.4 - \$261.5	\$1,431.4 - \$1,511.5	\$0 to \$38.6
Concept A -- Assumes HOV2+ Free for 5 Years***	\$ 1,503.8	\$ 1,250.0	\$3.3 - \$7.4	\$1,253.3 - \$1,257.4	\$246.4 to \$250.5
Alt 3 - Assumes HOV2+ Free***	\$ 1,470.0	\$ 1,250.0	\$3.3 - \$12.1	\$1,253.3 - \$1,262.1	\$207.9 to \$216.7
Concept A - Assumes HOV2+ Free***	\$ 1,503.8	\$ 1,250.0	\$3.3 - \$7.4	\$1,253.3 - \$1,257.4	\$246.4 to \$250.5

* Lower range value includes level debt structure and higher range value includes ascending debt structure

** Potential net toll revenues ~ \$1.5 billion over 30 yrs

*** Requires other non-toll revenue and/or Transportation Infrastructure Finance and Innovation Act (TIFIA) financing



Key Findings

- ❖ **Concept A feasible but performance lags Alt. 3**
 - Requires additional funding

- ❖ **Concept B not recommended for further study**
 - Creates significant bottleneck at Valley View Street
 - Caltrans is not supportive of concept

- ❖ **New performance requirements on HOV lanes may affect overall strategy on I-405 corridor**



Staff Recommendations

A	Direct staff to continue development of the Interstate 405 improvement, Measure M2 Project K, which adds a single general purpose lane in each direction between Euclid Street and Interstate 605, as approved by the Orange County Transportation Authority Board of Directors on October 22, 2012.
B	Preclude further study of the Interstate 405 improvement project Concept B, which includes the addition of a second general purpose lane from northbound from Brookhurst Street to Valley View Street, and southbound from the Seal Beach Boulevard on-ramp to Brookhurst Street.
C	Direct staff to examine options for addressing high-occupancy vehicle degradation, including those that could be implemented in coordination with the Interstate 405 improvement project.



Committee Recommendations

D	Direct staff under Recommendation C to analyze tolling policies and the use of potential excess toll revenue for use in improving public transportation in and near the project boundaries (i.e., additional roadway and transit improvements).
E	Direct staff to explore and coordinate with the Transportation Corridor Agencies on solutions to resolve high-occupancy vehicle lane degradation and opportunities to increase high-occupancy vehicle capacity and connectivity between the Interstate 405 and State Route 73, including opportunities for financial participation in transportation projects in the region.



Project Schedule & Next Steps

OCTA Board Update	September 23, 2013
Caltrans Selects Preferred Alternative	Late 2013
Soundwall Survey and Meetings	Late 2013
AB 401 effective, if approved	January 2014
Final EIR/EIS	May 2014
Design-Build Milestones:	
Issue Request for Qualifications (RFQ)	March 2014
Issue Draft Request for Proposal (DRFP)	August 2014
Issue Request for Proposal (RFP)	January 2015
Design-Build Notice to Proceed	August 2015
Project Construction	2015 to 2019