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I-710 Corridor Project EIR/EIS

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RDEIR/SDEIS Traffic Forecast Assumptions Update

presented to the

Technical Advisory Committee

April 17, 2013



Key Assumptions for Traffic Forecasting

1. RDEIR/SDEIS Planning Horizon Year
2. Socio-Economic Inputs
3. No Build Definition
4. Multimodal Assumptions
5. Goods Movement Assumptions

Socio-Economic Inputs

- Use SCAG 2012 RTP Inputs for RDEIR/SDEIS
- Population and Employment Changes from SCAG 2008 RTP to 2012 RTP

Source	<u>Population</u>	Year 2008	Year 2035	Numeric Change	Percent Change
2008 RTP	Region-Wide	18,905,000	24,050,000	5,145,000	27%
	I-710 Study Area	1,488,000	1,656,000	168,000	11%
2012 RTP	Region-Wide	17,888,000	22,137,000	4,249,000	24%
	I-710 Study Area	1,366,000	1,481,000	115,000	8%

Source	<u>Employment</u>	Year 2008	Year 2035	Numeric Change	Percent Change
2008 RTP	Region-Wide	8,115,000	10,284,000	2,169,000	27%
	I-710 Study Area	584,000	625,000	41,000	7%
2012 RTP	Region-Wide	7,734,000	9,428,000	1,694,000	22%
	I-710 Study Area	566,000	621,000	55,000	10%

- Results in 5% reduction in Year 2035 I-710 Study Area trips vs. DEIR (2008 RTP)

2035 No Build Transportation System Projects Update (added to RDEIR No Build)

A. Freeways

- I-10 from I-605 to SR-57/I-210 add 1 HOV lane/direction
- SR-710 from I-10 to I-210/SR-134 add 4 General Purpose lanes/direction in tunnel

B. Transit

- Crenshaw – LAX LRT
- Westside Purple Line Extension Segment 1 Wilshire/Western to La Cienega

C. Arterials

- Under discussion



Multimodal Components of Alternatives

A. Transit

- i. Bus Service
- ii. Blue/Green Line Service
- iii. Community Shuttles

B. TSM/TDM

- i. Rideshare incentive programs
- ii. Telecommuting/Webinars/Conference Calls
- iii. Flex Work Schedules
- iv. Peak Period Arterial Parking Restrictions

C. ITS

- i. Adaptive traffic signals/ramp meters
- ii. Smart Corridors
- iii. Real time system traffic info

D. Active Transportation

- i. Bicycle roadway facilities
- ii. Complete streets
- iii. Sidewalks/Bike Lanes
- iv. Bicycle transit facilities



Auto Reduction Effects from TSM/TDM/ITS & Transit

- A. Enhanced SCAG Background Assumptions - 2012 RTP vs. 2008 RTP
- B. I-710 DEIR Build Alternatives
 - i. Reduce study area daily vehicle trips from No Build by 2.8% (400,000)
 - ii. ITS: arterial capacity increase of 6% (40 veh/lane/hr)
 - iii. ITS + Parking Removal: arterial capacity increase of 17% (160 veh/lane/hr)
- C. I-710 RDEIR Build Alternatives
 - i. Same as DEIR

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Draft Multimodal Review Overview for Discussion Purposes Only

Presented to
I-710 Technical Advisory Committee

November 19, 2008



Multimodal Review (2008)

Purpose:

To assess the ability of other modes in the I-710 corridor to reduce auto and truck traffic on I-710.

Modes Assessed (2008)

- Person Trips:
 - Bus Transit
 - Rail Transit
 - Non-motorized
 - HOV
 - TSM - ITS

Mode Shares (2008)

- 2035 Study Area Work Trips
 - Auto person trips: 83.2%
 - Transit person trips: 10.1%
 - Non-motorized trips: 6.7%

Source: SCAG 2008 RTP Travel Demand Model

Transit (2008)

- Bus Transit:
 - proposed 68% increase in corridor local bus services (service frequency)
 - proposed 33% increase in corridor Metro Rapid service (frequency and speed)
- Estimated Ridership Response:
 - 27% increase in local bus ridership
 - 8% increase in express bus ridership

Transit (2008)

- Rail Transit:
 - 16% increase in Blue Line and Green Line peak period service (service frequency)
 - New “Orangeline” service (Orange County to Los Angeles) – ridership estimates vary widely
 - Associated increases in station parking and feeder service
- Ridership Response:
 - 20% overall increase in rail ridership
 - 2,500 new park and ride spaces would be needed

Transit (2008)

- Total (bus + rail) study area transit ridership increase = 23%
- Reduction in peak period study area auto vehicle trips = 2.5%
- Reduction in peak period I-710 auto trips = 2.5%

Non-Motorized (2008)

- Non-motorized (pedestrian and bicycle)
- National average trip length 1.2 miles
- Increase in non-motorized trips by 10% would reduce study area auto trips by 0.7%
- Due to short average trip length of non-motorized trips, no assumed reduction in I-710 auto trips

HOV (2008)

- Each 10% increase in study area HOV peak period users = 0.7% reduction in peak period auto vehicle trips
- I-710 MCS found HOV lane reduced traffic by 15% on I-710 GP lanes
- I-710 HOV lanes will be assessed in alternatives screening

TSM/TDM (2008)

- TSM Roadway Capacity Increase
 - 6% increase in I-710 freeway capacity
 - 23% increase in targeted arterial peak period capacity (ITS + peak period parking ban)
 - 6% increase in other arterial capacity

TSM/TDM (2008)

- Extended Port Terminal Gate Hours
 - Current Shift Distribution (with PierPass):
 - 60-65% Day shift; 30-35% Night + Hoot shift
 - Future I-710 Baseline Shift Distribution:
 - 60% Day shift; 20% Night shift; 20% Hoot shift
 - Future I-710 TSM/TDM Shift Distribution:
 - 40% Day shift; 40% Night shift; 20% Hoot shift

TSM/TDM (2008)

- Extended Gate Hours Traffic Reduction:
 - 12% reduction in AM peak period truck trips
 - 33% reduction in Midday period truck trips
 - 3% reduction in PM peak period truck trips
- TSM – Empty Container Management
 - All future scenarios already include aggressive 20% reuse assumption

Multimodal Summary (2008)

- Effects on I-710
 - 2-3% reduction in peak period autos due to expanded transit
 - 1-12% reduction in peak period port trucks from TDM (1-6% reduction in peak period total PCE)
 - 0% reduction in peak period autos from non-motorized mode
 - 6% increase in capacity from ITS
- Tested in Initial Feasibility Analysis
 - As TSM/TDM Alternative 2
 - Along with Maximum Rail and Advanced Goods Movement Technology Alternative 3

I-710 RDEIR Goods Movement

Compare DEIR Assumptions to RDEIR Assumptions for:

- A. Port Cargo Volume
- B. Rail/Truck mode shares
- C. Inclusion of SCIG & ICTF rail yards in No Build
- D. Activity by intermodal yards (on-dock, near-dock, off-dock)
- E. TSM/TDM/ITS for Goods Movement (e.g. PierPass, ECM, ATIS, Technology Plan for Goods Movement etc.)

I-710 Port Cargo Volumes

- A. DEIR 2035 Volume: 43 Million Annual TEUs (capacity constrained)
- B. Ports 2009 (Post Recession Update) 2035 Forecast: 43 Million Annual TEUs
- C. SCAG 2012 RTP 2035 Forecast: 43 Million Annual TEUs (demand = capacity)
- D. Current (2013) Ports 2035 Forecast: 41.4 Million Annual TEUs (revised estimate of terminal capacity), will be used in RDEIR

Port Cargo Volume Rail/Truck Mode Share

- Rail: 55.8% (percent of total)
 - On-dock: 29.7%
 - Near-dock/Off-dock (generates truck trips): 10.4%
 - Transload to rail (generates truck trips): 15.7%
- Truck: 44.2%

SCIG/ICTF Assumptions for RDEIR/SDEIS

- A. I-710 DEIR/DEIS assumed without SCIG or improved ICTF
- B. SCIG RDEIR certified by POLA March 2013
- C. ICTF DEIR scheduled for public circulation early 2014
- D. I-710 RDEIR/SDEIS to assume 2035 No Build and Build Alternatives include SCIG and improved ICTF

Intermodal Rail Yards Assumptions

North End:

LATC (UP)

East LA (UP)

Hobart (BNSF)

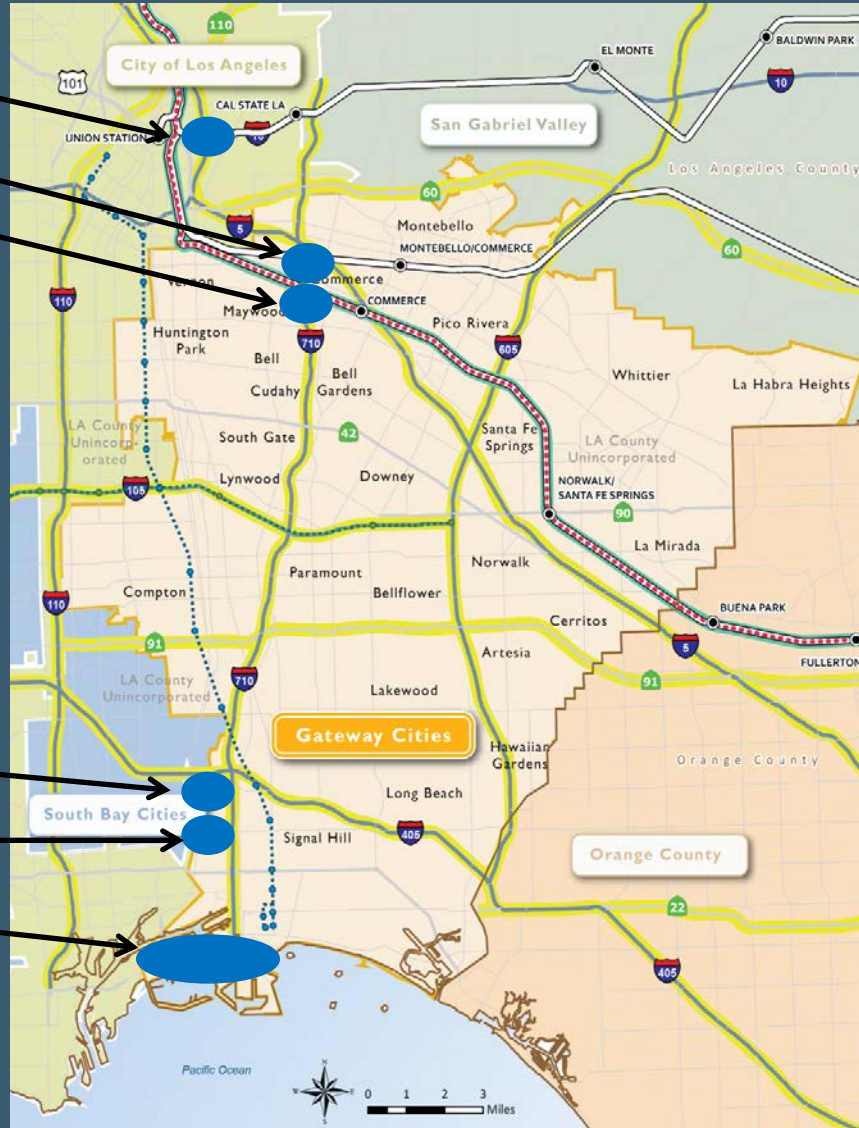
South End:

ICTF (UP)

SCIG (BNSF)*

On-Dock Yards

* Proposed



Eastern (Off Map):

City of Industry (UP)

San Bernardino (BNSF)



Intermodal Rail Yards Assumptions: Demand

Rail Yard Annual Demand (Millions of Lifts)*

Yards	2010	2035 W/O SCIG and ICTF Improvements	2035 W/SCIG and ICTF Improvements	Difference
North End	1.56	4.99	3.95	-1.04
South End	2.26	7.14	8.40	+1.26
Eastern	0.66	1.19	0.97	-0.22
Total	4.48	13.32	13.32	0.00

North: LATC, ELA, Hobart

South: ICTF, SCIG, On-dock

Eastern: COI, SB

*Includes IPI, Transload, and Domestic Containers, Based on SCIG EIR

Intermodal Rail Yards Assumptions: Capacity

Rail Yard Annual Capacity (Millions of Lifts)

	2010	2035
North End	2.69	5.15
LATC	0.34	0.90
ELA	0.65	1.25
Hobart	1.70	3.00*
South End	3.66	9.92
ICTF	0.82	1.50
SCIG	0.00	1.50
On-Dock	2.84	6.92
Eastern	0.89	1.19
COI	0.23	0.53
SB	0.66	0.66
Total	7.24	16.26

*Could be reduced to less than 2M if SCIG Built, Based on SCIG EIR

Port/Transload Truck O-D Patterns

A. SCAG Regional Goods Movement Study

- New warehouse supply/demand forecasts
- New port gate surveys

B. Increased share of port-related trips

- Gateway Cities and South Bay Cities
- Inland Empire

C. Reduced share of port-related trips

- San Fernando Valley and North LA
- High Desert
- Orange County

Goods Movement TSM/TDM/TSM

- Extended Gate Hours (PierPass & OffPeak)
 - DEIR assumed 40% of gate moves in night and hoot owl shift. More traffic in hoot owl shift avoids PM peak period. Re-evaluate assumptions based on current PierPass experience
 - Initial Feasibility Analysis estimated that shifting 60% of gate moves to night and hoot would result in small changes in AM peak (12%) and PM peak (3%).



Goods Movement TSM/TDM/ITS

- Information systems to improve truck efficiency
 - RDEIR will assume greater level of truck double-cycling and empty chassis re-use at intermodal yards
 - Working with Metro/COG to determine appropriate adjustments for other Freight ITS elements

Next Steps

- Finalize assumptions
- Begin forecast modeling
- Report on initial model runs
- Target June meetings for initial findings update