High Desert Corridor
Joint Powers Authority

November 30, 2012

Meeting Materials

Item 7

Presentation by InfraConsult of the Financial Feasibility Evaluation

Los Angeles County
Metropolitan Transportation Authority

Public-Private Partnership Program

High Desert Multipurpose Corridor (HDMC)

InfraConsult LLC
November 30, 2012

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Objectives

- Augment High Desert Corridor (HDC) Interim Business Plan
- Enhance Regional Connectivity (connecting with CaHSR and XpressWest)
- High quality passenger rail service
- Explore other development opportunities along the Corridor
- Water conveyance
- Electrical transmission
- Energy generation (Wind and Solar)

HDC + Other Opportunities = HDMC

Regional Setting

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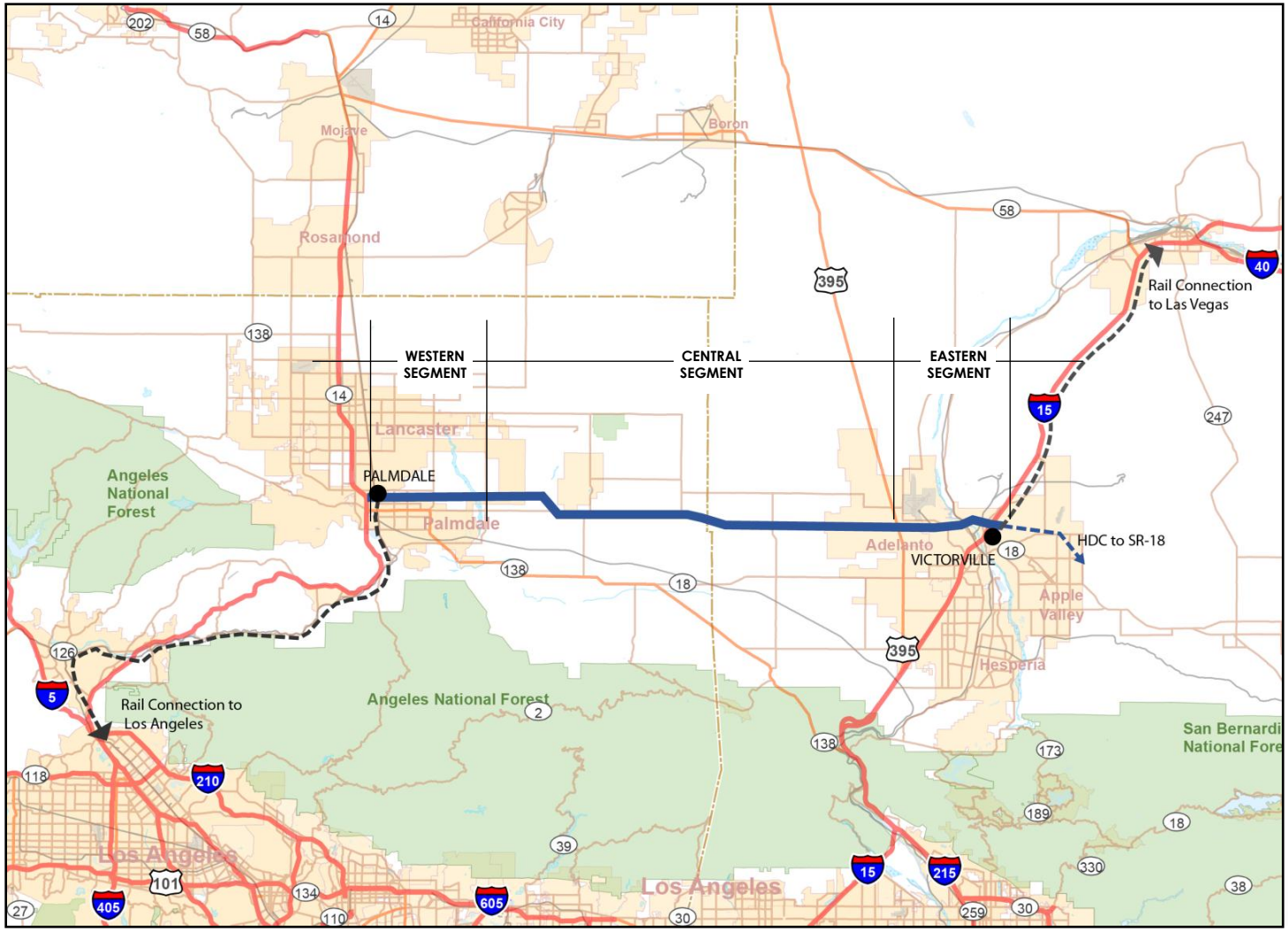
Primary Project Components

- NEW 50-mile 4 to 8 lanes Freeway/tollway from:
  - SR-14 in Palmdale to
  - I-15 in Victorville
  - 3 Segments
    - Freeway Segments: East and West Segments, 9-miles each
    - Tollway Segment: Central Segment, 32 miles

- NEW Passenger High Speed Passenger Rail from:
  - Existing Metrolink Station in Palmdale to
  - XpressWest Station in Victorville

Primary Project Components



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Rail Component Options

- One Seat Ride
  - Los Angeles Union Station (LAUS) to Victorville
  - Average operating speed of 150 mph
  - Intermediate stop at Palmdale (potential stops at Burbank and Santa Clarita)
- Two Seat Ride
  - Palmdale to Victorville
  - Access to Palmdale via auto or existing Metrolink service between LAUS and Palmdale
- “Enhanced” Two Seat Ride
  - Same as Two Seat, but CaSHR between LAUS and Palmdale

Travel Market and Ridership

Total Travel Market in Southern California

2012	2020	2030	2040	2050
21.0 M	25.8 M	30.7 M	35.6 M	39.4 M

Annual Ridership (in Person Trips)

	2020	2030	2040	2050
One Seat Ride	5.51 M	6.56 M	7.60 M	8.40 M
Two Seat Ride (Basic)	2.91 M	3.39 M	3.87 M	4.30 M
Two Seat Ride (Enhanced)	4.20 M	4.90 M	5.56 M	6.22 M

Other Possible Project Components Explored

- Water Usage
  - Conveyance of groundwater from Mohave aquifer to Coast (Not determined feasible)
- Energy Generation
  - Solar (Potentially Feasible)
  - Wind (Does not appear cost Effective)

Solar Scenario Total Cost	Total Gross Income	Total Net Income
$88.4 M	$123.6 M	$35.2 M

Total kWh	Average kWh per year	Average Cost per kWh
1,073,000,000	35,800,000	$0.08236

- Compressed Natural Gas (CNG) Refueling Stations

  (Potentially cost effective but not significant contributor)
- Transmission Line Infrastructure

  (Potentially cost effective)

Fundamental Conclusions

Project Component	Self-Financing	Contribution to Funding Gap Reduction
West Segment of Highway Corridor	NO	NONE
East Segment of Highway Corridor	NO	NONE
Central Segment of Highway Corridor	YES	MINIMAL to NONE
Rail Service in Corridor: 1 seat ride LA Union Station to Las Vegas	YES	STRONG*
Rail Service in Corridor: 2 seat ride LA Union Station to Las Vegas	NO	NO**
Rail Service in Corridor: Enhanced 2 seat ride LA Union Station to Las Vegas	YES	<$100M**
Solar Energy Development in the Corridor	YES	LIMITED***

** On the order of $1.0 Billion*

*** Enhanced potential for obtaining a 49 percent share of TIFIA through a multimodal approach. Also, this scenario generates substantial revenue for the operator of the service between LAUS and Palmdale which is not included in the financial analysis for the Palmdale to Victorville segment.*

**** Potential for reducing the operating cost of the trains by providing electrical energy approximately 20% more cost effectively than traditional sources*

Summary

- Rail service enhances overall financial viability of HDC (assuming XpressWest service is implemented)
- One Seat Ride scenario may result in a corridor that is self-financing and self-supporting (based on highway toll revenue and rail fare box revenue)
- The “right” connection between LAUS and Palmdale is critical to ridership and revenue generation
- Potential for being “zero” energy corridor if solar energy use for the corridor is implemented

Key Assumptions

- Accuracy of ridership and revenue forecasts
- Assumption of the cost of track improvements for the Los Angeles - Palmdale corridor by the CaHSRA
- Availability of TIFIA and RRIF loans up to the statutory program maximums
- Adequate market appetite for the level of equity participation required in a revenue risk, greenfield project
- Availability of early public funding for at least $520 million YOE in pre-development costs

Project Capital Cost

HDMC Project Element	Total Capital Cost	Cost Retained by Public Sector	Cost Attributed to Private Partner(s)
2011$			
Palmdale – Victorville Highway	$2,243 M	$476 M	$1,724 M
Palmdale – Victorville Rail Corridor	$1,604 M	0	$1,604 M
Los Angeles – Palmdale Rail Corridor			
Trainsets & Systems	$680 M	0	$680 M
Track Improvements	TBD	TBD	0
Solar Energy Corridor	$90 M	0	$90 M
TOTAL	**$4,527 M**	**$476 M**	**$4,028 M**

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Rail Revenue

Scenario	Average Annual Revenue	Total Gross Revenue (thru FY 2064)	
	2012$	2012$	YOE
One Seat Ride	$368 M	$15,672 M	$44,955 M
Two Seat Ride	$82 M	$3,842 M	$10,035 M
Enhanced Two Seat Ride	$124 M	$5,259 M	$14,638 M
Incremental LAUS to Palmdale under "Enhanced" Two Seat Ride	$149 M	$6,550 M	$18,225 M

Financial Assumptions (1 of 2)

Items	One Seat Ride	Two Seat Ride (Basic and Enhanced)
P3 approach	Toll and rail concession including transfer of risks associated with design, construction, operations, financing and maintenance.	Same as One-Seat Ride
P3 contract term	50 years from the start of construction	Same as One-Seat Ride
Analysis start date	2012 – includes predevelopment activities to be completed by Metro	Same as One-Seat Ride
Construction start date – end date	2015-2019	Same as One-Seat Ride
Operations start date – end date	2020-2064	Same as One-Seat Ride

Financial Assumptions (2 of 2)

Items	One Seat Ride	Two Seat Ride (Basic and Enhanced)
Revenues	Highway: Tolls Rail: Fare revenues LAUS-VV	Highway: Tolls Rail: Fare revenues Palmdale to Victorville only
Timing	50-year concession	Same as One-Seat Ride
Financing structure	TIFIA loan, RRIF loan, and private equity	Same as One-Seat Ride
Target Gearing	70:30 (debt to equity)	80:20 (debt to equity)
Cost of financing	3.00% - TIFIA 3.00% - RRIF 14% - Private Equity IRR (pre-tax)	Same as One-Seat Ride

Comparative Financial Analysis

Sources of Funds	One Seat	Two Seat	Enhanced Two Seat	Highway Only
PAB				$824 M
TIFIA Proceeds	$2,861 M	$1,946 M	$2,305 M	$789 M
RRIF Proceeds	$1,349 M	$585 M	$1,039 M	$0 M
Equity	$1,212 M	$360 M	$615 M	$315 M
Interest Income	$89 M	$54 M	$69 M	$29 M
Total Private Financing	***$5,511 M***	***$2,945 M***	***$4,028 M***	***$1,957 M***
Construction Subsidy	*$0 M*	*$1,492 M*	*$525 M*	*$607 M*
Total Capital Cost	**$5,511 M**	**$4,437 M**	**$4,553 M**	**$2,564 M**
Construction Costs	$4,999 M	$4,147 M	$4,147 M	$2,166 M
Financing Costs	$512 M	$289 M	$406 M	$398 M
Debt to Equity Ratio	**78:22**	**88:22**	**84:16**	**81:19**

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O & M Cost

	Unit	Cost/ Unit	Palmdale to Victorville	Los Angeles to Palmdale	Total Los Angeles to Victorville
Route Length	Miles		55	63	118
Train Operations (2)	Train-Miles	$0.025	$23,800	$27,200	$51,000
Maintenance of Infrastructure	Route-Miles	$250	$13,700	$15,800	$29,500
Cleaning of Stations and Trains	# of Stations	$5,100	$5,100	$5,100	$10,200
Insurance	Route-Miles	$62	$3,400	$3,400	$6,800
Administration	% of Costs	10%	$4,600	$5,100	$9,700
Contingency	% of Costs	10%	$5,100	$5,700	$10,800
TOTAL			**$55,700**	**$62,300**	**$118,000**

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Public Funding Sources

Source	Total	Prior	FY 2010	FY 2011	FY 2012	FY 2013	...	FY 2021-2040
Local								
Measure R	$33.0 M		$0.03 M	$12.5 M	$11.5 M	$8.8 M		
Measure I	$16.0 – 27.7 M							$16.0 – 27.7 M
Federal Earmarks	$16.8 M	$16.8 M						
TOTAL	**$65.8 – 77.5 M**	**$16.8 M**	**$0.03 M**	**$12.5 M**	**$11.5 M**	**$8.8 M**		**$16.0 – 27.7 M**

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Potential Implementation Schedule

Milestone/Items/Action	Project Dates
Begin Work	08/2010
Initiate Public Scoping	10/2010
Prepare Draft Technical Studies	08/2010 – 06/2013
Draft EIR/EIS Circulation	Summer 2013
Public Hearings	10/2013
Respond to Comments/Complete Final EIR/EIS	12/2013 – 03/2014
Caltrans signs Final EIR/EIS	04/2014
Caltrans Signs ROD and files NOD	06/2014

Notes: Revised PA&ED schedule for HDMC
Source: Caltrans

Potential Key Milestone Dates

Activity	P3 Combined DB/DBFOM Delivery	Traditional DBB Procurement
Draft EIR/EIS circulation	3rd Quarter 2013	3rd Quarter 2013
Complete Final EIR/EIS	1st Quarter 2014	1st Quarter 2014
Record of Decision	2nd Quarter 2014	2nd Quarter 2014
Issue Request for Proposal	4th Quarter 2013	2nd Quarter 2016
Commercial Close	4th Quarter 2014	3nd Quarter 2016
Contract Award	4th Quarter 2014	4th Quarter 2016
Construction Commencement	1st Quarter 2015	1st Quarter 2017
East & West Segments complete	4th Quarter 2017	4th Quarter 2020
Central Segment complete	4th Quarter 2019	4th Quarter 2023
Operations Commencement	1st Quarter 2020	1st Quarter 2025

Questions???