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I-710 Corridor Project EIR/EIS

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Water Technical Studies Key Findings Briefing

presented to the

Technical Advisory Committee

October 19, 2011



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Technical Studies Briefing Agenda

- Purpose & Need
- Project Alternatives
- Key Analysis Questions - Project Effects on
 - Storm Water Runoff
 - Water Quality
 - Los Angeles River
- Analysis Methodology & Tools
- Project Findings & Mitigation Strategies

Project Purpose and Need

1. Improve air quality and public health
2. Improve traffic safety
3. Provide a modern design for the I-710
4. Address projected traffic volume increase
5. Address projected growth in population, employment and economic activity related to goods movement

Project Alternatives Review

No Build Improvements

- Planned and Committed Projects in 2008 RTIP
- Enhanced Goods Movement by Rail
- Clean Trucks Program
- Expanded Night Gate Ops at Ports
- I-710 Pavement Rehabilitation
- Traffic Signal coordination

TSM/TDM and ITS

- Ramp Metering
- Improved Arterial Signage
- Peak Period Parking Restrictions
- Increased Transit Service
- Upgraded Traffic Signals (ITS)

Arterial System Improvements

- Signal Timing Improvements
- Local Arterial Intersection Improvements at 42 Locations

I-710 Widening

- Widen the I-710 up to 10 Lanes
- Modernize Geometric Design of all of the Local I-710 Interchanges

Freight Corridor

- Separate Four-Lane Freight Corridor


Alternative 1

No Build Improvements



Alternative 5A

I-710 Widening
 Modernize I-710 Geometrics
 Arterial System Improvements
 TSM/TDM & ITS
 No Build Improvements



Alternative 6A

Freight Corridor
 I-710 Widening
 Modernize I-710 Geometrics
 Arterial System Improvements
 TSM/TDM & ITS
 No Build Improvements




Alternative 6B

Zero Emissions Automated Guidance
 Freight Corridor
 I-710 Widening
 Modernize I-710 Geometrics
 Arterial System Improvements
 TSM/TDM & ITS
 No Build Improvements



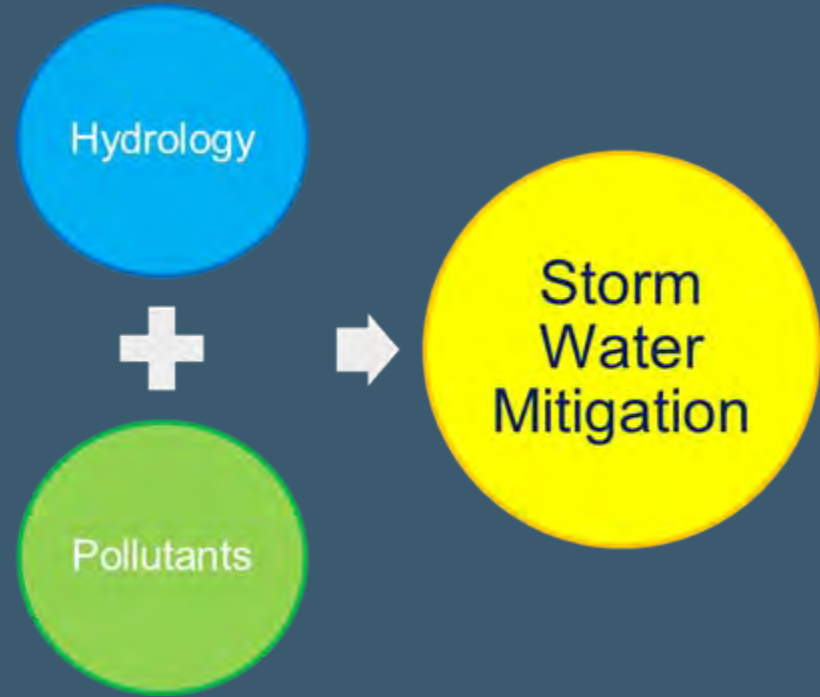
Alternative 6C

Tolling Feature
 Zero Emissions Automated Guidance
 Freight Corridor
 I-710 Widening
 Modernize I-710 Geometrics
 Arterial System Improvements
 TSM/TDM & ITS
 No Build Improvements



Technical Reports

- Hydrology Report
- Water Quality Report
- Storm Water Data Report
- LA River Impact Report



Physical Effects &
Design Mitigation

Key Analysis Questions

Storm Water Runoff

- Can existing drainage systems safely convey *Project related* storm water?
- What drainage systems are needed?

Analysis Methodology & Tools

Storm Water Runoff

- Calculate *Project* (on-site) Runoff
- Identify Crossing (off-site) Flows
- Identify and Evaluate Outlets
- Calculate Water Quality Flows
- Caltrans Highway Design Manual
- Los Angeles County Hydrology Manual
- Drainage System As-Builts

Storm Water Runoff Key Findings

Alternative 5A

- 3% increase in runoff
- Reconstruct Drainage:
 - 75% of freeway (on-site) systems
 - 40% of some outlets
 - 85% of pump stations

Alternative 6A/B/C

- 27% increase in runoff
- Reconstruct Drainage:
 - 90% of freeway (on-site) systems
 - 40% of outlets
 - 85% of pump stations
- Construct New Drainage:
 - freight corridor systems

Key Analysis Questions

Water Quality

- What are the water quality requirements of the LA Basin watersheds?
- What are the Water Board permit requirements for Caltrans? for Cities?
- How much pollutant is potentially discharged by the project?
- What treatment options are feasible?
- What are proposed mitigations?
- What is the project's effect on groundwater?

Analysis Methodology & Tools

Water Quality

- Evaluate storm water characteristics and potential impacts during *Project* construction and operation
- Calculate water quality flows and identify discharge points
- Identify applicable Nat'l Pollution Discharge Elimination Systems (NPDES) and other permitting requirements
- Prepare Storm Water Data Report
 - Identify Best Management Practices (BMPs) for:
 - Pollution prevention
 - Permanent treatment
 - Temporary construction site
 - Maintenance
 - Develop preliminary size, locations, and costs of treatment control devices and BMPs

Water Quality Key Findings

Incorporate Permanent BMPs into all the Build Alternatives

- Biofiltration strips and swales
- Infiltration basins
- Media filters
- Gross solids removal devices



Systems are estimated to treat approximately 87% of the Project area

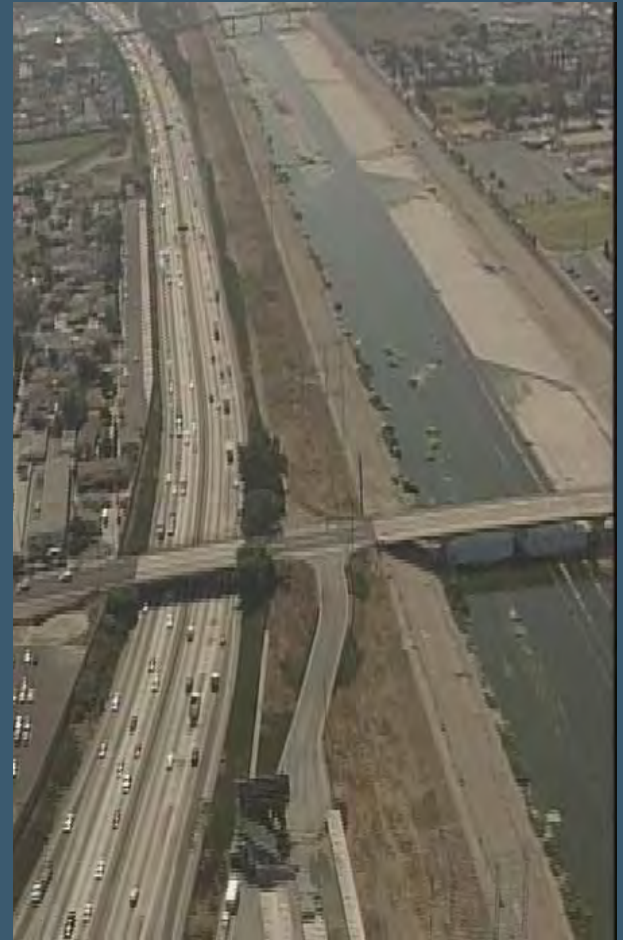
BMP Examples



Key Analysis Questions

Los Angeles River

- What are the potential risks to flood protection?
- What are the impacts to the floodway and flood control resources?
- What design mitigations are proposed?



Analysis Methodology & Tools

Los Angeles River

- Review
 - FEMA flood plain mapping
 - USACE hydraulic models
 - LA River Master Plan
- Quantify floodway impacts and flood control right of way impacts
- Prepare Location Hydraulic Studies
- Identify design mitigation

LA River Key Findings

Alt. 5A

- Over 2 miles of river levees affected
- 26 acres of flood control property needed for Project
- 1.0 acre of the floodway is affected

Alt. 6A/B/C

- Over 13 miles of river levees affected
- 79 acres of flood control property needed for Project
- 10.5 acres of the floodway is affected

LA River Crossings Findings

- Channel Structures
 - Alternative 5A
 - 5 new bridges
 - 19 replaced/widened bridges
 - Alternative 6A/B/C
 - 13 new bridges
 - 20 replaced/widened bridges
- Design Mitigation
 - Bridge type selection / pier design
 - Localized channel modification
- No Significant Risk to Floodplain



LA River and Utility Relocation Findings

Alt. 6A/B/C requires:

- Electrical Transmission Relocation

- 5 Circuits
- 10 Towers on Platforms

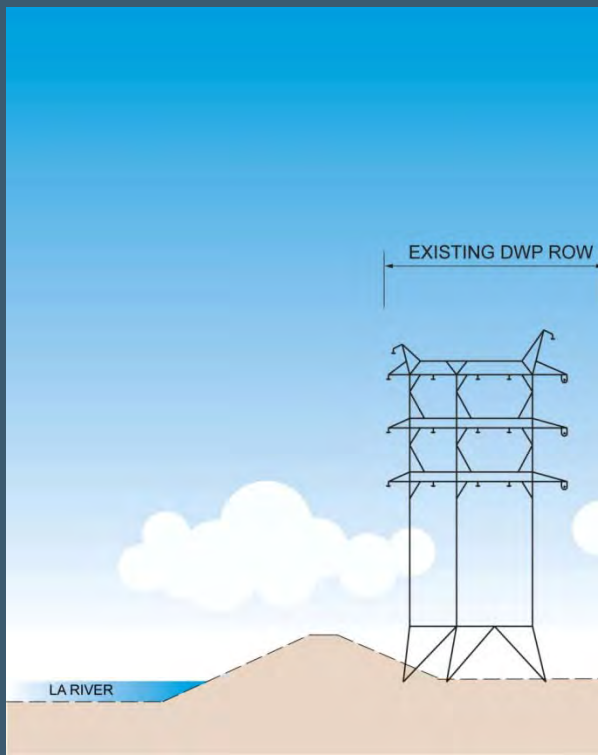
- Design Mitigation

- Longitudinal channel modifications (1.5 miles)
- Reinforced concrete box platforms

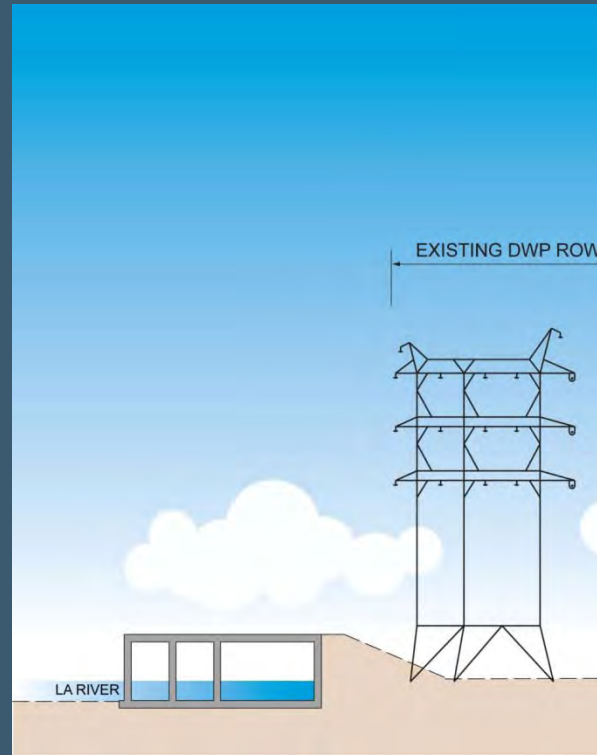
- No Significant Risk to Floodplain



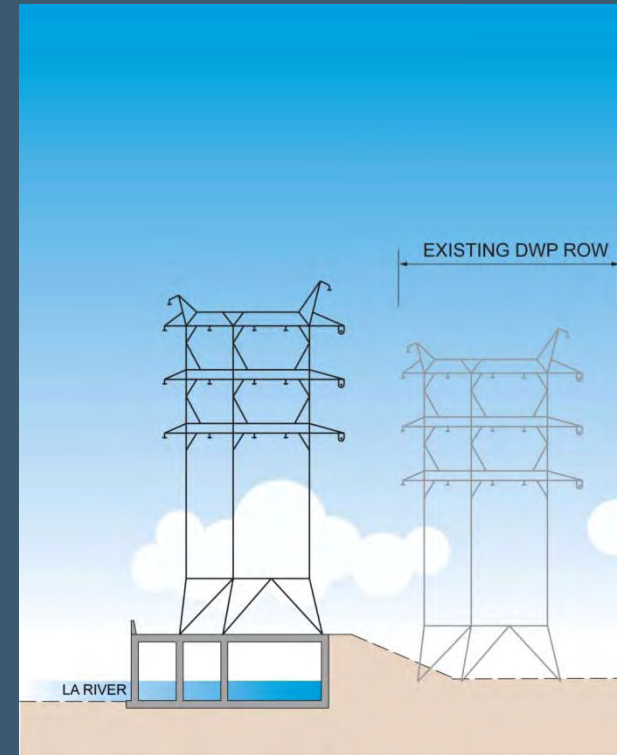
Relocation of Transmission Towers



Existing Tower



Construct River Platform



Relocate Tower

LA River Master Plan Assessment Findings

- Master Plan of Environmental Enhancement and Recreational Opportunities
- All Build Alternatives impact three master plan elements:
 1. *Cesar Chavez Park*
 2. *LARIO Trail / County of LA Bike Path*
 3. *South Gate Riparian Restoration*



Next Steps

- Review technical studies key findings with I-710 committees
- Incorporate technical studies into DEIR/DEIS
- Draft EIR/EIS available for public and agency review and comment in Feb. 2012
- Formal public review and comment opportunities during circulation period