Supplemental AA Report: Technical Update on Shared-Track Alternative

July 8, 2010
Update to Shared-Track Alternative

• Objectives
  – Consolidate/Rationalize Operations
  – BNSF Maintains Customer Access
  – Reduce Right of Way Impacts
  – Reduce Construction Costs
Update to Shared-Track Alternative

California High-Speed Train Project

Los Angeles to Anaheim Project EIR/EIS

Key Subsection with Constraints
LA-A HST Section
- 5.1. Los Angeles Station
- 5.2. Los Angeles River Adjacent
- 5.3. Los Angeles River Crossing
- 5.4. Norwalk / Santa Fe Springs Station
- 5.5. La Mirada Rail Yards
- 5.6. Buena Park / Fullerton Airport
- 5.7. Fullerton
- 5.8. Fullerton Station
- 5.9. Anaheim
- 5.10. ARTIC

Source: STV Incorporated, AE LLC
June 8, 2010
California High-Speed Train Alternatives Analysis Report

Key Subsections with Constraints
Los Angeles to Anaheim -
Update to Shared-Track Alternative

Los Angeles Union Station

Redondo Flyover

Legend:
- BNSF Track
- HSR Track Elevated
- HSR Track at Grade
- HSR Track Trench
- Metrolink Track at Grade
- UP Track
- HSR Track Los Angeles to San Diego

Metrolink Station with Pedestrian Crossing

Alameda Corridor
Update to Shared-Track Alternative

California High-Speed Train Project
Los Angeles to Anaheim Project EIR/EIS

Fullerton Junction

ARTIC

LEGEND
- BNSF TRACK
- HSR TRACK ELEVATED
- HSR TRACK AT GRADE
- HSR TRACK TRENCH
- METROLINK TRACK AT GRADE
- UP TRACK
- HSR TRACK LOS ANGELES TO SAN DIEGO

METROLINK STATION WITH PEDESTRIAN CROSSING
Options Examined for the Shared-Track Alternative
Technical Outreach

- **Corridor Cities**
  - 175 briefings, council workshops and community meetings
- **Gateway Cities Technical Working Group** - 5
- **Gateway Cities Administrative Committee** - 2
- **Interagency Working Groups** - 6
- **OC City Managers** - 3
- **Scoping Meetings** 3
- **Stakeholder Working Groups** - 2
Stakeholder Outreach

Since 2007, more than 400 presentations and briefings reaching stakeholders:

- Elected Officials
- Chambers of Commerce
- Neighborhood Councils / Homeowners Associations
- Community and Business Organizations
- Trade Organizations
- Environmental Justice Groups
Los Angeles Union Station

- Options Examined for LAUS with City:
  - LAUS Aerial HST Station
  - LAUS At-Grade HST Station (NEW)
  - LAUS Deep Tunnel HST Station
  - West Bank Trench HST Station
  - Vignes Aerial HST Station (NEW)

- Recommended to Carry Forward:
  - LAUS Aerial HST Station
  - LAUS At-Grade HST Station
LAUS to Redondo Flyover

• Options Examined
  – Under First Street
  – Aerial and Tunnel connections for San Diego
  – Storage Tracks for HST
  – Dedicated HST Tracks from Redondo Flyover to LAUS
  – Utilize Metrolink Redondo Flyover Bridge
  – Connection for Amtrak to their 8th Street Yard
  – Retain full function of Redline Yard
  – Reduce impacts to road bridges in area

• Recommended to Carry Forward:
  – Under first Street with flexible connection to San Diego
LAUS to Redondo Flyover

California High-Speed Train Project
Los Angeles to Anaheim Project EIR/EIS

Connection to San Diego Section

8th Street Vehicle Maintenance Facility Option
Update to Shared-Track Alternative

- Redondo Flyover to Fullerton:
  - Requires five tracks between
    • 2 Passenger Tracks
      - HST and Metrolink (OC) / Amtrak (San Diego)
    • 3 Freight Tracks
      - BNSF and Metrolink (91) / Amtrak (Long distance)
  - Track arrangement developed in coordination with local cities
    • Operational considerations
    • Technical Criteria
    • Minimize ROW impacts
    • Working sessions examined issues at City level
    • Transition from City to City requires close coordination and agreement on alignment
Update to Shared-Track Alternative

- Initial Concept – safety, operational, access and constructability issues
- BNSF rejected
Update to Shared-Track Alternative

- Operator Acceptable Concept
- Maintains BNSF access to industries on either side
- Stays within ROW but requires viaducts through cities
- Eliminates most reconstruction of grade separations
Update to Shared-Track Alternative

- At Grade Operator Acceptable Initial Concept
- Maintains BNSF access to industries on one side only
- Requires additional ROW
- Requires reconstruction of some grade separations on corridor
Options Examined with Cities

- Vernon - Aerial Structure on south side of BNSF
  - Reduce ROW acquisition and impacts to City improvements
  - Integrate new I-710 designs
- Commerce - Aerial Structure on south side of BNSF
  - Reduce ROW acquisition
  - Avoid Metrolink Station
  - Avoid Home Depot
- Montebello - Aerial Structure on south side of BNSF
  - City recently indicated desire to be at grade
  - BNSF wants to retain access to industrial tracks
  - Transition from Commerce to Pico Rivera aerial alignment
Redondo Flyover to Fullerton Junction

• Options Examined with Cities
  – Pico Rivera - Aerial Structure on south side of BNSF
    • Avoid residential takes on south side by reconfiguring BNSF Yard
    • Grade Separation assistance
    • Cross over Slauson Avenue across San Gabriel
  – Unincorporated LA County (Whittier) - Aerial Structure on south side of BNSF
    • San Gabriel River crossing
    • I-605 Crossing
    • UPRR Patata and La Habra Subs cross at grade
Redondo Flyover to Fullerton Junction
Redondo Flyover to Fullerton Junction

• Options Examined with Cities
  – Santa Fe Springs - Aerial Structure on south side of BNSF crossing over at Imperial Hwy
    • Redevelopment potential along Enterprise
    • ROW impacts reduced
    • East HST Station (Aerial/Fill) connected to Metrolink station
    • No HST Station
    • At grade east of Valley View
  – La Mirada – At Grade on north side of BNSF
    • Redevelopment potential south of BNSF yards
    • ROW acquisition required for BNSF storage yard replacement
Redondo Flyover to Fullerton Junction
Redondo Flyover to Fullerton Junction

• Options Examined with Cities
  – Buena Park – At Grade on north side of BNSF
    • Metrolink Station relocation
    • Duck under BNSF at the end of Fullerton Airport runway
    • Limited ROW acquisition west of Beach Blvd
  – Fullerton - At Grade on south side of BNSF
    • ROW acquisition from airport to station – no residential
    • Station located across Harbor and south of BNSF
    • Connection to Fullerton Transportation Center
    • Impacts to Walnut Street
    • ROW acquisition required inside of curve to Anaheim – no residential
Redondo Flyover to Fullerton Junction

California High-Speed Train Project

Los Angeles to Anaheim Project EIR/EIS

Underpass Option
HST crosses under existing tracks east of Metrolink Station while in trench under flight path

Flyover Option
HST crosses over existing tracks on aerial structure west of Metrolink Station

Source: STV Incorporated, AE LLC
Redondo Flyover to Fullerton Junction

No HST Station Option
No Station at Fullerton

At-Grade HST Station Option
At-Grade HST Station between Highland Ave and Harbor Blvd

Legend
- Vertical Profile
- Land Uses
- Military Installations
- Mixed Use
- Medium / High Density Residential
- Open Space / Recreation
- Commercial
- Agriculture
- Industrial
- Water / Floodplains
- Extraction
- Public Facilities / Institutions
- Transportation / Utilities
- Vacant

Source: STV Incorporated, AE LLC
June 16, 2010
California High-Speed Train Alternatives Analysis Report
Options Examined with Cities

- Anaheim – At Grade on south/west side of BNSF
  - Four tracks necking down to two tracks through 50’ ROW
  - Three tracks south of 50’ ROW into ARTIC
  - Two HST platforms under SR – 57
  - ROW acquisitions required for grade separations
  - Rolling Stock Maintenance Facility
    - ROW acquisition required – no residential
• Fullerton to Anaheim
  – Shared Track, two tracks within 50’ ROW
  – Temporal Separation of Freight
VMF Options

• Options Examined:
  – Los Angeles Golden Pig
  – Anaheim West
  – Anaheim East

• Recommended to Carry Forward:
  – Anaheim West

• Recent Option still being Vetted
  – Los Angeles 8th Street
    • Requires 8 storage tracks in Anaheim