

# Sepulveda Pass Corridor Systems Planning Study Update

September 2012



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## Measure R Transit Corridors

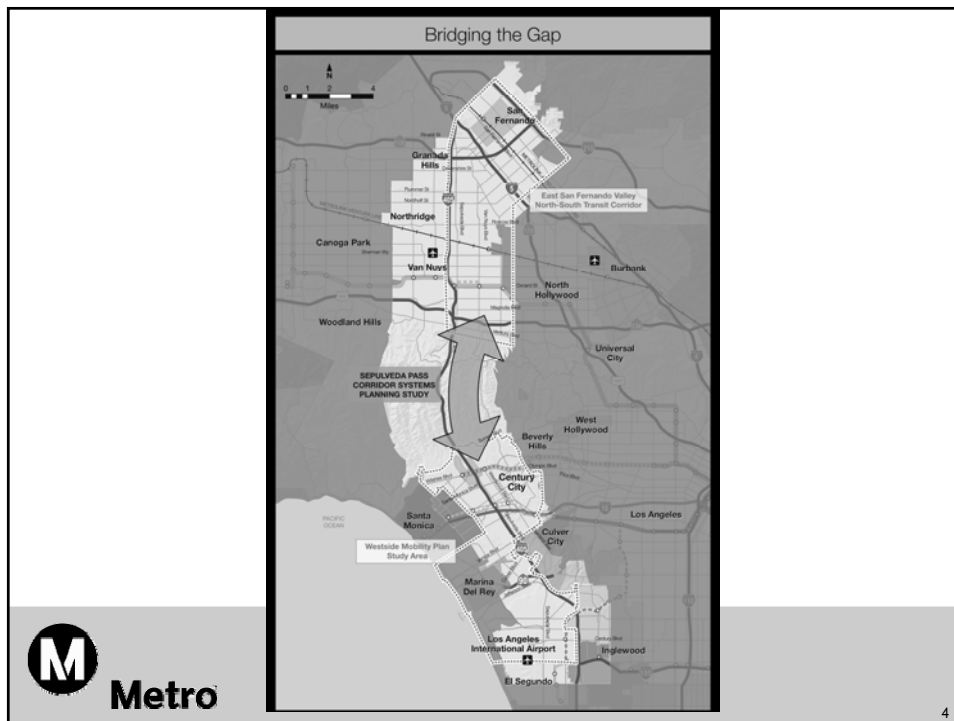
- One of 12 Measure R Transit Corridors approved by Voters in 2008
- Systems Planning Study is first step in corridor planning
- LRTP includes \$2.468 billion (escalated) in third decade



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# Sepulveda Pass Study Corridor

- Extends for 30 miles
  - San Fernando Valley - 12 miles
  - Sepulveda Pass – 8 miles
  - Westside to LAX – 10 miles
- Potential Transit Connections:
  - Metrolink Antelope Valley Line
  - Metrolink Ventura Line
  - East San Fernando Valley North/South Corridor
  - Metro Orange Line
  - Westside Subway Extension
  - Expo Line Phase 2
  - Crenshaw/LAX LRT Project
  - Airport Metro Connector
  - Metro Green Line
- Current I-405 Improvement Project
  - Adding NB HOV Lane
  - Existing SB HOV lane operates over capacity at peak periods (2+ carpool)



## Corridor Travel Challenges

- 3<sup>rd</sup> Most Congested Highway Segment in the U.S.\*
  - 295,000 vehicles per day (2010)
  - 430,000 vehicles per day (2030)
- Severe Transit Limitations
  - Metro Rapid 761 scheduled run time between Van Nuys and Westwood:
    - AM Southbound – 65 minutes to go 12 miles (11 mph)
    - PM Northbound – 74 minutes to go 12 miles (9.7 mph)
- Peak Demand Between US 101 and I-10
  - 45% of trips enter and exit in this 12 miles segment



\*Source: Texas Transportation Institute (2011)

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## Sepulveda Pass Corridor Concepts

- Lower Cost (within Measure R Budget)
  - Concept 1: At-Grade BRT
  - Concept 2: Managed Lanes with BRT
- Higher Cost (requires supplemental funding, long-term phasing or other delivery strategies)
  - Concept 3: Caltrans Project Report Aerial Viaduct
  - Concept 4: Toll Tunnel (Highway and BRT)
  - Concept 5: Fixed Guideway Rail Tunnel
  - Concept 6: Toll Tunnel and Rail Tunnel



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## Concept 1: Sepulveda/Van Nuys BRT



Freeway with Shoulder Running BRT - Minneapolis

Metro Orange Line BRT

## Concept 1: At-Grade Sepulveda/Van Nuys Blvd Fixed-Guideway BRT



- Bus Rapid Transit (BRT) from Sylmar Metrolink Station to Century/Aviation
- Route length: 30 miles (partial exclusive lanes)
- Bus use of freeway shoulders during peak
- Median running BRT on Van Nuys Blvd. - Joined with ESFV Transit Corridor
- Priority treatment on Sepulveda Blvd through and south of the Pass
- 2-mile station spacing: Sylmar Metrolink Station, Nordhoff St, Sherman Way, Orange Line, Wilshire (Purple Line), Expo Line, SR-90/Culver City Transit Mall, Century/Aviation
- 12 min headways peak and 20 min headways off-peak

## Concept 2: Managed Lanes with BRT



I-15 Managed Lanes San Diego County



Metro Express Lanes Project I-10 and I-110 Freeways



Route 91 Toll Lanes- Riverside/Orange Counties

## Concept 2: Managed Lanes with BRT



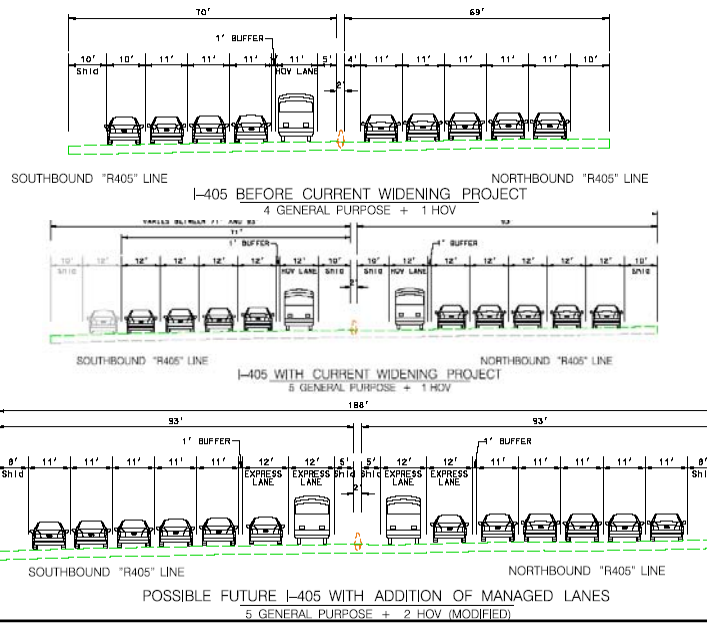
### Highway and Transit Components

- Managed lane (3+ HOV) route length: 29 miles
  - Configuration through Sepulveda Pass: 5 general purpose lanes plus 2 HOV lanes in each direction
  - Single HOV lane north of Sepulveda Pass and south of I-10
- 3 BRT routes, all connecting at Orange Line/I-405 Transfer Station:
  - Sylmar to LAX via managed lanes
  - Sylmar to Purple Line via Van Nuys Blvd
  - Orange Line to Expo Line/Culver City/LAX

### Physical Improvements

- Orange Line direct access ramp for BRT
- Direct connectors from eastbound US 101 to southbound I-405 and from northbound I-405 to westbound US 101
- Direct access ramps south of Santa Monica Blvd (La Grange Ave), and south of SR-90 (Sepulveda Blvd or Howard Hughes Pkwy)

## Concept 2: Managed Lanes and BRT



## Concept 3: Highway Viaduct



I-5 Highway Viaduct – Santa Ana

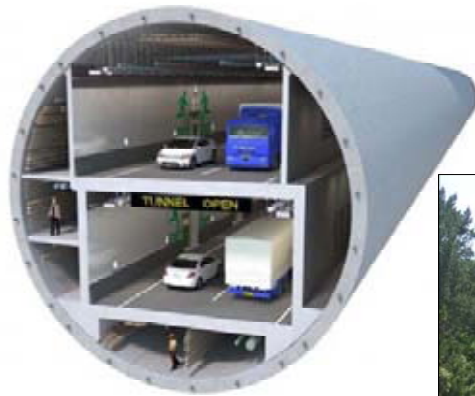
## Concept 3: Highway Viaduct with BRT



- Highway Viaduct constructed above the I-405 from US-101 to I-10
- Viaduct length: 10 miles
- BRT route length: 21 miles
- BRT service connecting Sylmar Metrolink Station to Expo Sepulveda Station
- 2 HOT lanes in each direction on an elevated structure, freeing existing HOV lanes for dedicated busway beneath viaduct
- Potential south terminus at Purple Line or Expo Line
- Viaduct alternative screened out in I-405 Widening EIR/EIS due to seismic/safety issues
- Does not merit further study, but will be documented in the final report

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## Concept 4: Highway Toll Tunnel



Concept Envisions one large bore tunnel similar to above left  
 Alaska Highway Viaduct Tunnel (Under Construction) – Seattle  
 Subway entrance portals would be similar to above Sepulveda Pass Tunnel on Sepulveda  
 Boulevard near Mulholland Drive

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## Concept 4: Highway Toll Tunnel



- Tunnel with four toll lanes (two per direction) through Sepulveda Pass
- Tunnel length: 10.5 miles
- Northern portal north of US-101 and a southern portal near Santa Monica Blvd
- Direct connectors from eastbound US 101 and southbound I-405 freeways
- Buses and private automobiles would be allowed to use the tunnels; trucks would be prohibited
- Carpools pay a regular toll
- Public-Private-Partnership potential
- Same BRT service plan as in Concept 2

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## Concept 5: Fixed-Guideway Rail LRT or HRT Transit



Metro Gold Line – Pasadena Tunnel near Colorado Boulevard

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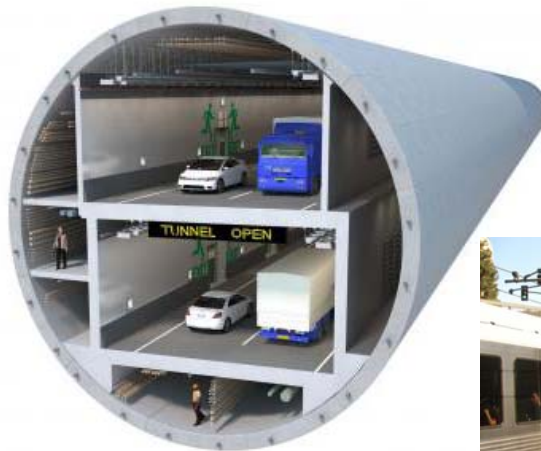
## Concept 5: Fixed-Guideway Rail LRT or HRT Transit



- Light Rail Transit (LRT) or Heavy Rail Transit (HRT) Line from Sylmar Metrolink Station to Century/Aviation
- Route length: 28 miles
- Most of LRT alignment at-grade in a dedicated median-running right-of-way, with grade-separated crossings at major intersections
- LRT travels underground in transit-only tunnel in the Sepulveda Pass (tunnel length 6 miles)
- HRT would be fully separated
- 15 stations
- Northern portal near Ventura Blvd and Van Nuys Blvd
- Southern portal south of Santa Monica Boulevard
- Connectivity to Metro Rail system
- No public private partnership potential

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## Concept 6: Highway and Shuttle Tunnel



Concept Envisions one large bore tunnel similar to above left Alaska Highway Viaduct Tunnel (Under Construction) – Seattle and two 20' diameter rail tunnels similar to Metro Gold Line (shown above)

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## Concept 6: Highway and Shuttle Tunnel



Separate highway and private shuttle tunnels from US-101 to Century/Aviation

### Highway Tunnel:

- Highway tunnel length: 21 miles
- Northern portal at Roscoe Boulevard, Southern portals near I-405 and Century Blvd
- Direct connectors from eastbound US 101 and southbound I-405 freeways
- Three intermediate access points: Ventura, La Grange and Howard Hughes

### Private Shuttle Tunnel

- Shuttle tunnel length: 21 miles
- Private shuttle rail tunnel between Van Nuys Metrolink Station and Century/Aviation
- Public-private partnership potential

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## Next Steps

- September 2012
  - FTA Livability Grant Notification  
(Provides funding for Alternatives Analysis Study)
- November 2012
  - Complete Systems Planning Study

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