

# **MRT 2**

## **An Affordable Alternative Valley-to-LAX Monorail Route Through the Sepulveda Pass**

*Because Metro Cannot Afford Any of Their Four Concepts  
With Currently Available Measure M Funding*

*May 2019*

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# Metro's Four Concepts

**HRT 1** 👍



**Heavy Rail**  
**Fully Underground**

**HRT 2** 👍



**Heavy Rail**  
**Fully Underground**

**HRT 3** 👎



**Heavy Rail**  
**Valley Elevated**

**MRT 1** 👎



**Monorail**  
**Pass & Valley Elevated**

# Sepulveda Pass Funding Dilemma

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- ◆ SOHA and SONC **strongly support** HRT 1 and HRT 2
  - Both fully underground heavy rail in Valley and Westside
  - Highest capacity, shortest travel times, and least invasive
  - **Not affordable** under available Measure M funding
- ◆ SOHA and SONC **vehemently oppose** HRT 3 – **Not Viable** 🚫
  - Heavy rail elevated above Sepulveda Boulevard in Valley
  - Inequitable – Aerial in Valley – Underground on Westside
  - **Not affordable** under available Measure M funding
- ◆ SOHA and SONC **vehemently oppose** MRT 1 – **Not Viable** 🚫
  - Monorail elevated in Pass and above Sepulveda Boulevard in Valley
  - Inequitable – Aerial in Valley – Underground on Westside
  - **Not affordable** under available Measure M funding

**QUESTION 1 – Why Is Valley Getting Short End of the Stick Again With Elevated Trains on Sepulveda?**

**Everyone Deserves A Viable, Affordable, and Equitable Alternative**

# Why HRT 3 and MRT 1 Aren't Viable

## HRT 3

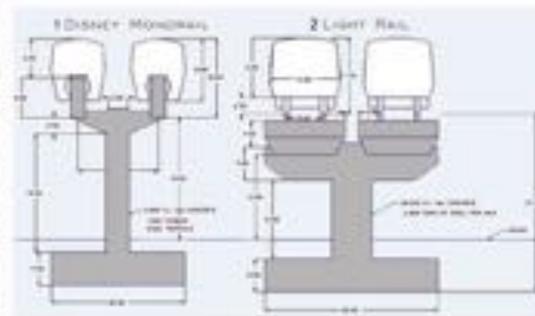


## MRT 1



- ◆ Both operate aerial 20 feet above Sepulveda Boulevard for five miles – Valley Vista to Raymer
- ◆ MRT 1 operates aerial or at-grade through Pass
- ◆ Both encroach on residents and businesses
- ◆ Both demolish about 100 homes in Sherman Oaks
- ◆ Both destroy community's light, air, and privacy
- ◆ Both eliminate lanes on Sepulveda Boulevard and increase traffic congestion
- ◆ Both reduce street parking on Sepulveda Boulevard
- ◆ Both stress 96-inch water main under Sepulveda
- ◆ Both construction nightmares for years and years
- ◆ Both high potential for legal battles and delays
- ◆ Both inequitably underground on the Westside
- ◆ Both are high cost and long schedule because of underground Westside tunnels and stations

# HRT 3 – Aerial on Sepulveda in Valley



TRAINS CAN NEGOTIATE A 5.8% GRADE  
20' DROP = 345' LENGTH, 40' = 690'

**HRT 3 Transitions  
from Underground to  
Aerial near Valley  
Vista Boulevard**

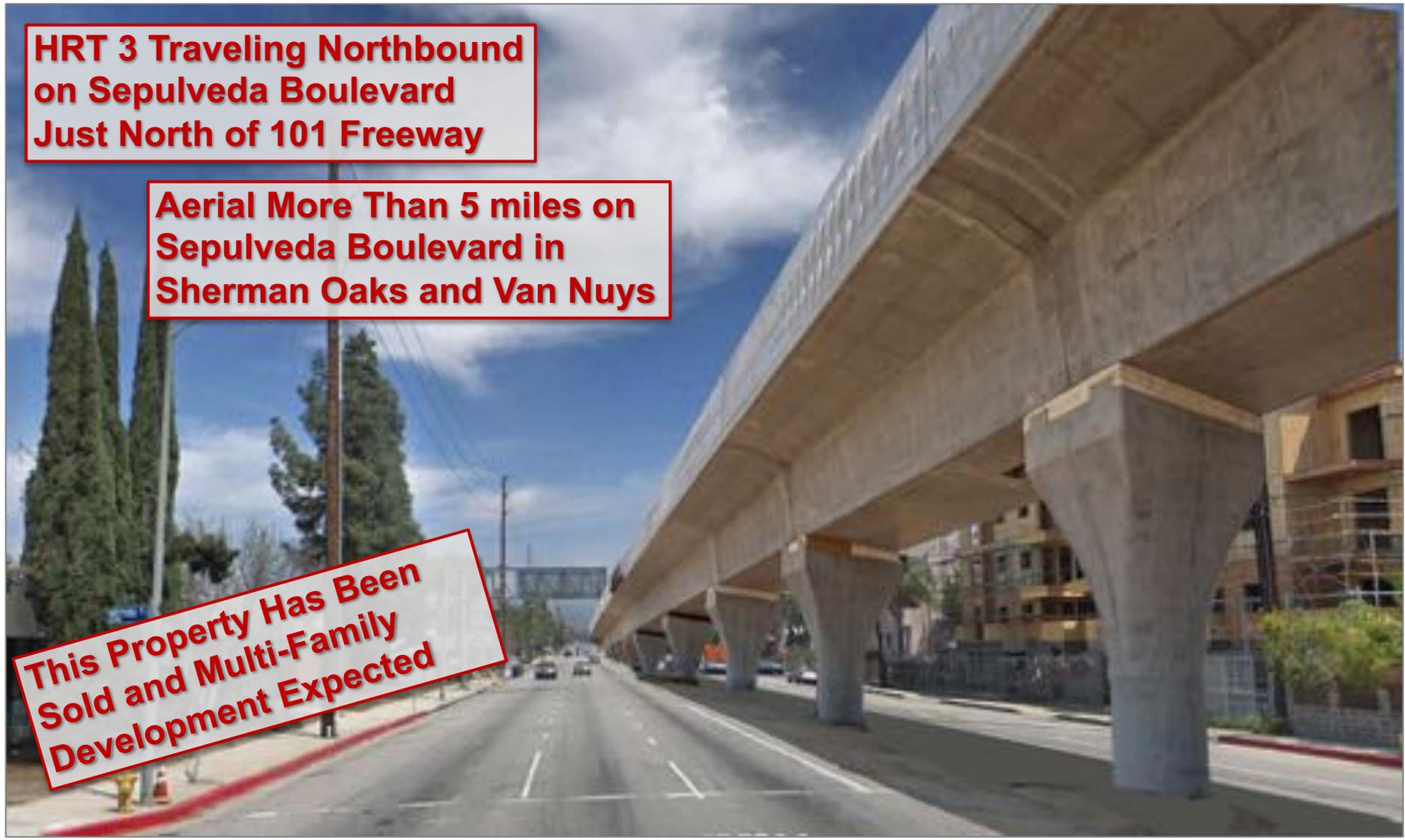
- Aerial on Sepulveda Boulevard
- Transition from underground to aerial

# HRT 3 – Very Intrusive Valley Operation

**HRT 3 Traveling Northbound  
on Sepulveda Boulevard  
Just North of 101 Freeway**

**Aerial More Than 5 miles on  
Sepulveda Boulevard in  
Sherman Oaks and Van Nuys**

**This Property Has Been  
Sold and Multi-Family  
Development Expected**



# MRT 1 – Aerial on Sepulveda in Valley



Runs Along 405 West Shoulder Through Pass

South  
↑

Runs Aerial Above Sepulveda Boulevard

Crosses 405 Near Valley Vista Boulevard

Continues Aerial 5 miles to Van Nuys Metrolink

# MRT 1 – Intrusive Valley Operation

**MRT 1 Traveling Northbound  
Above Sepulveda Boulevard  
Near Valley Vista Boulevard**

**Aerial Above Sepulveda  
Boulevard for 5 miles in  
Sherman Oaks and Van Nuys**

# Sepulveda at Morrison Looking East



# Sepulveda at Morrison Looking East



**With HRT 3**

# Sepulveda at Ventura Looking South

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**Today**

# Sepulveda at Ventura Looking South

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# Ventura at Sepulveda Looking East

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**Today**

# Ventura at Sepulveda Looking East

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# Sepulveda at Greenleaf Looking West



# Sepulveda at Greenleaf Looking West



# Sepulveda at Sutton Looking South



**Today**

# Sepulveda at Sutton Looking South

**More Than 100 Apartments and Condos Demolished To Allow HRT 3 To Go Underground**



**With HRT 3**

# Measure M Funding Is Not Enough

## Measure M Funding for Sepulveda Transit Corridor Project (in \$2015 billions)

Metro Subregion	Measure M Funding	Local, State, Federal, & Other Funding	TOTAL
San Fernando Valley	\$1.270	\$1.567	\$2.837
Westside	\$1.270	\$1.567	\$2.837
<b>TOTAL (Phase 2)</b>	<b>\$2.540</b>	<b>\$3.134</b>	<b>\$5.674</b>

Average U.S. inflation rate of 3.4 percent per year optimistically applied over four years

**At Most \$6.5 billion Maximum Available from Measure M (\$2019)**

# HRT 1 and 2 Cost Per Mile Is High

- ◆ **Metro Purple Line Extension is best for cost comparison**
  - Ongoing heavy rail subway construction under Wilshire Boulevard
  - 9.07 miles (3 sections), 7 stations, and maintenance facility upgrade
  - 14 years to construct (10 years first 4-mile section)
  - \$9.35 billion forecast cost (per Metro Program Management Dashboard)
  - **\$1.03 billion per mile (\$1.43 billion per mile for last section)**
- ◆ **HRT 1 and 2 same heavy rail subway but fewer stations**
  - 14 miles, 6 or 7 stations, and new maintenance facility
  - \$1.0 billion per mile lowest supported by Metro data
- ◆ **Lowest to highest possible HRT 1 and 2 construction cost**
  - 14 miles at \$1.0 billion per mile = **\$14.0 billion – Possible**
  - 14 miles at \$1.2 billion per mile = **\$16.8 billion – Probable**
  - 14 miles at \$1.4 billion per mile = **\$19.6 billion – Pessimistic**

**HRT 1 and 2 Will Cost \$14 billion and Take 10 years – Probably More**

# Metro's Huge Funding Gaps

- ◆ Measure M provides at most **\$6.5 billion** (\$2019)
  - 28x28 Olympics initiative \$8.6 billion not available because **NONE** of Metro concepts can meet 2028 deadline
  - Congestion pricing and mobility fees insufficient to fill gaps
  - Public-private partnerships (PPPs) help finance projects but **PPPs DO NOT** fill huge funding gaps
- ◆ Concepts HRT 1 and HRT 2 cost **\$14 to \$17 billion**
  - Not affordable – 14 to 15 miles of tunneling
- ◆ Concept HRT 3 costs **\$10 to \$14 billion**
  - Not affordable – 9 miles of costly tunneling in Westside and Pass
- ◆ Concept MRT 1 costs **\$8 to \$12 billion**
  - Not affordable – 6 miles of costly tunneling in Westside

**QUESTION 2 – Why Is Metro Spending Taxpayer Dollars To Continue Analyzing Four Obviously Unaffordable Concepts?**

**Huge Funding Gaps Will Force Metro to Downgrade Their Concepts  
Public Perceives As Bait & Switch – Like East Valley Transit Corridor**

# PPP May Bring Affordable Concepts

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- ◆ Metro soliciting Public-Private Partnership (PPP) concepts for Sepulveda Transit Corridor Project
  - Through Request for Qualifications/Proposals (RFQ/P) in 2019 leading to Preliminary Development Agreement (PDA) in 2020
- ◆ Commercial organizations propose innovative concepts
  - Combined rail-auto tunnels?
  - Alternative monorail routes?
  - Other?
- ◆ Metro Board selects PPP concept(s) in December 2019
  - Selected PPP and Metro concepts proceed side-by-side into environmental analyses from 2020 to 2022

**QUESTION 3 – Why Hasn't Metro Explained Their PPP Plan?  
Public-Private Partnership Proposals from Commercial Organizations  
Hopefully Offer Additional Innovative and Affordable Concepts**

# Meet MRT 2 – A Monorail on the I-405



- ◆ Futuristic look and appeal
- ◆ Aerial above 405 freeway median
- ◆ Dual tracks on streamlined single support structure
- ◆ Similar stations to Metro's MRT 1
- ◆ Equitably elevated in Valley, Westside, and LAX regions
- ◆ Almost zero impacts to communities and streets – Even during construction
- ◆ Minimal potential for legal actions
- ◆ Shortest schedule – No tunneling
- ◆ Possibility of Valley to LAX by 2028
- ◆ Lowest cost – \$6 to \$7 billion to LAX

**QUESTION 4 – Why Didn't Metro Consider MRT 2?**

# Why MRT 2 Happened and Is Viable

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- ◆ February 2<sup>nd</sup> – Metro discloses four concepts at public meeting
- ◆ February 7<sup>th</sup> – Jeff Kalban (SONC) and Bob Anderson (SOHA) worry about affordability and think about better concept
- ◆ February 18<sup>th</sup> – Bob and Jeff work together on President’s Day to develop alternative monorail concept on 405
- ◆ February 28<sup>th</sup> – SOHA and SONC present MRT 2 concept to Councilmember Ryu and Council Districts 3, 4, and 6 staff
- ◆ March 8<sup>th</sup> – BYD SkyRail learns of MRT 2 concept – contacts us
- ◆ March 11<sup>th</sup> – SONC Board approves MRT 2 concept
- ◆ March 12<sup>th</sup> – Jeff and Bob meet with BYD SkyRail to learn about their “remarkably similar” affordable and viable monorail concept on 405
- ◆ March 12<sup>th</sup> – Jeff and Bob start presenting MRT 2 widely – Supervisor Kuehl’s office, Metro Sepulveda Transit Corridor Project Manager & staff, Mayor Garcetti’s staff, Metro Chief Innovation Officer, Senator Hertzberg office, Village at Sherman Oaks Business Improvement District, Sherman Oaks Chamber of Commerce, and more ...

# MRT 2 – Minimal Community Impact

**Envious Drivers Will Watch Monorail Fly By!**



- ◆ **Dual-track monorail on single support operates above freeway median in both directions**
- ◆ **No interference with freeway traffic**
- ◆ **Quiet operation with rubber tires on concrete track**
- ◆ **Easy & safe emergency evacuation path between tracks**

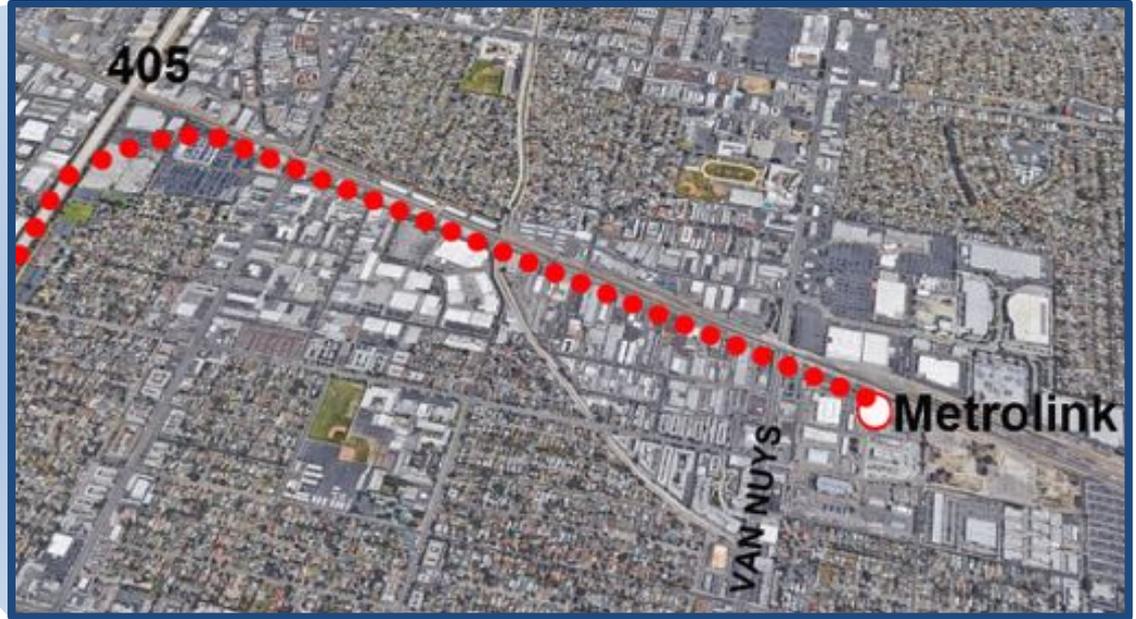
# Easy Ride Over Sepulveda Pass To LAX

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- ◆ **MRT 2 travels under Mulholland Bridge**
- ◆ **Travels over smaller bridges and overpasses**
  - Skirball and Sunset Bridges, and Burbank Boulevard Overpass
- ◆ **Travels over or around major freeway interchanges**
  - Ventura (101), Santa Monica (10), and Marina (90) freeways

# MRT 2 Van Nuys Metrolink Station



- ◆ Northern terminus at Van Nuys Metrolink station – Easy connection
- ◆ Runs aerial and parallel to Metrolink tracks before turning above I-405 freeway median
- ◆ Additional parking for east Valley possible at station

# MRT 2 Sherman Way Parking Station



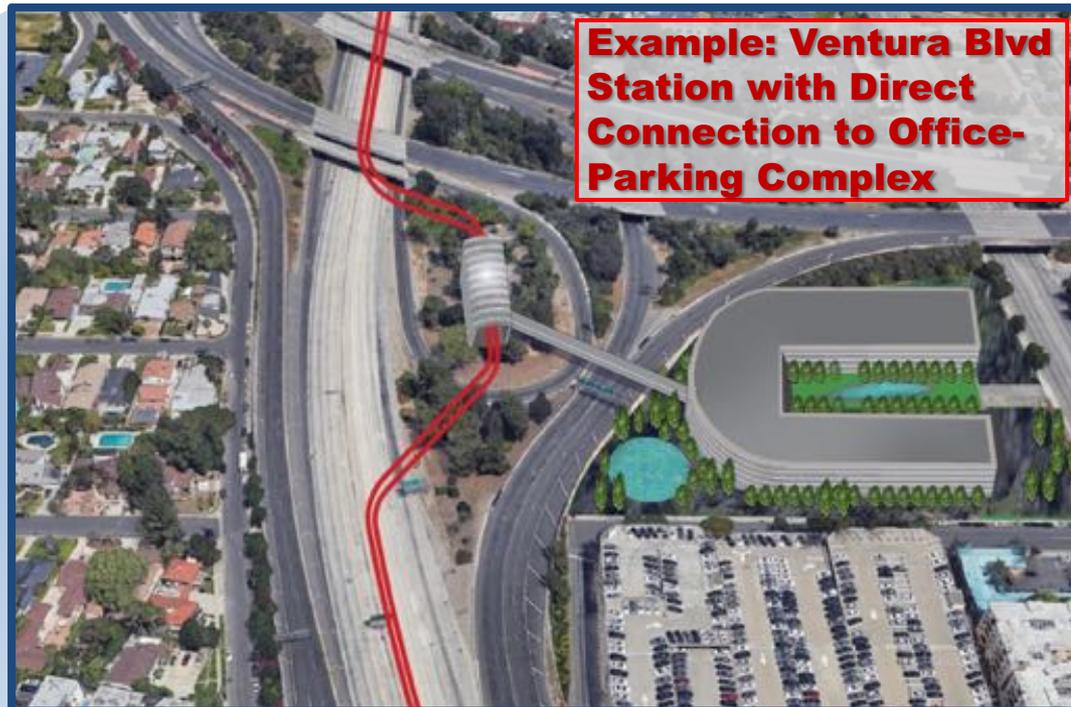
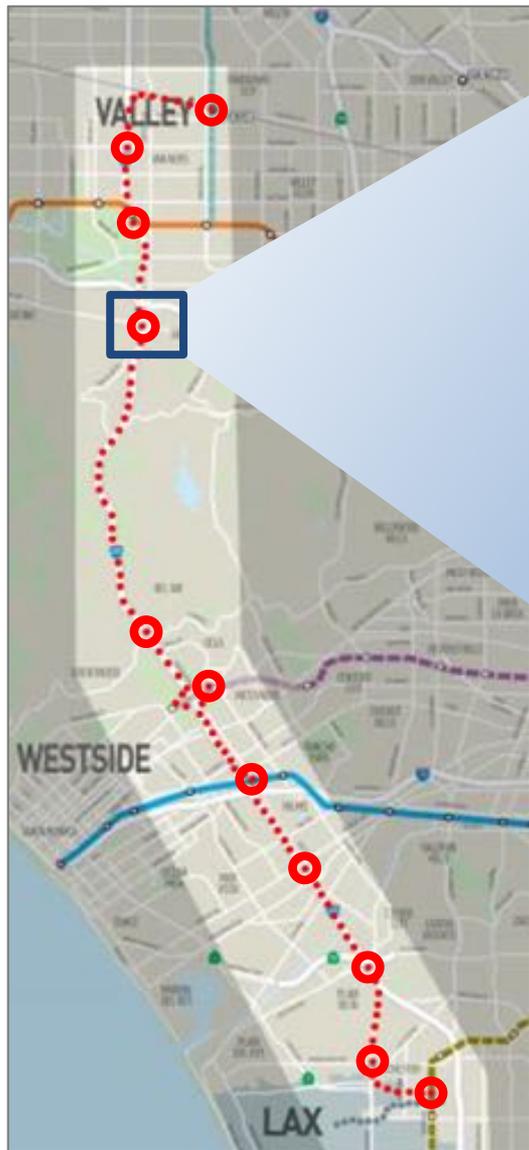
- ◆ Major driver access from north Valley, North County, Metrolink, and more
- ◆ Huge 10,000-car parking structure at Sherman Way with easy access to/from 405 freeway
- ◆ Station inside parking structure on dogleg track

# MRT 2 Orange Line Parking Station



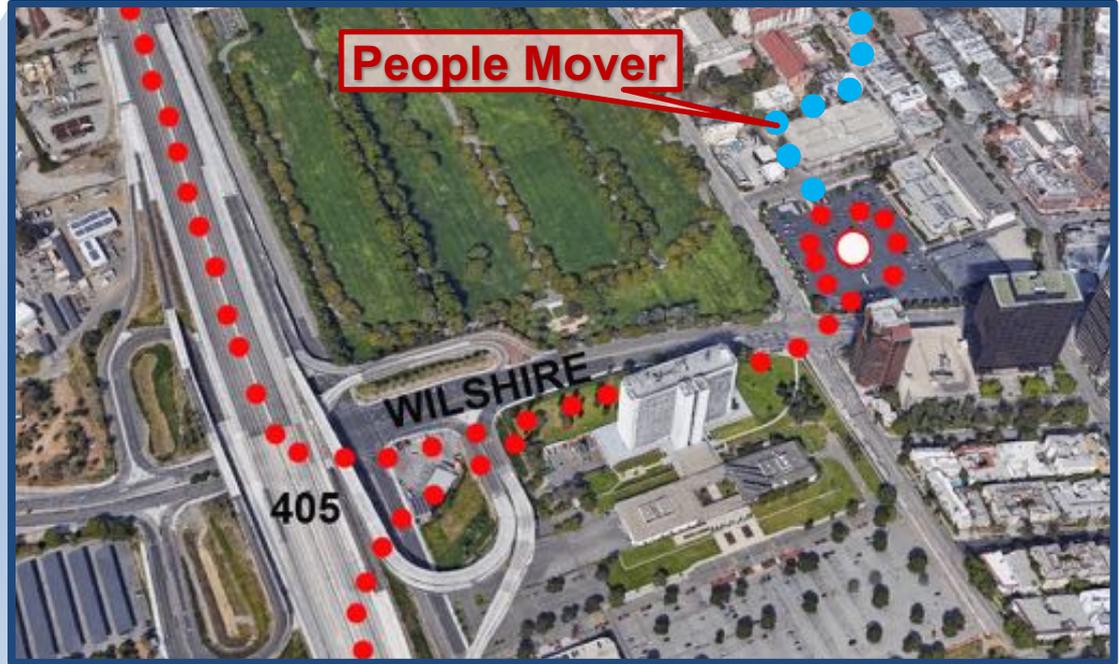
- ◆ Major driver access from north Valley, south Valley, Orange Line, and more
- ◆ Large parking structure on existing Orange Line parking lot with easy access to/from Sepulveda Boulevard
- ◆ Station inside parking structure on dogleg track
- ◆ People mover to Orange Line station

# MRT 2 Ventura Blvd Parking Station



- ◆ Station adjacent to freeway on dogleg track with people mover to parking
- ◆ Easy access to Sepulveda and Ventura Boulevard transit
- ◆ Station could be closer to Ventura Boulevard if desirable – Or even above 405

# MRT 2 Wilshire/UCLA Station



- ◆ Easy access to/from 405 freeway, Wilshire Boulevard, and UCLA
- ◆ Large UCLA on-campus parking structure with station on dogleg track
- ◆ People mover onto UCLA campus
- ◆ Direct connection to Purple Line on Wilshire Boulevard

# MRT 2 Expo Line Station



- ◆ Direct connection to Expo Line for either Santa Monica or downtown Los Angeles
- ◆ Station adjacent to 405 and 10 freeways on dogleg track
- ◆ Continues south to LAX terminus station and connections to Green Line, Crenshaw Line, and LAX Automated People Mover

# Monorail As Good As Heavy Rail

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- ◆ **Metro heavy rail performance estimates – HRT 1, 2, & 3**
  - Six-car trains traveling up to 70 mph
  - 12,000 passengers per hour with four minutes between trains
  - 15 to 16 minutes from Van Nuys Metrolink to Expo Line
- ◆ **Metro performance for their monorail – MRT 1**
  - Three-car trains traveling up to 50 mph
  - 7,500 passengers per hour with four minutes between trains
  - 26 minutes from Van Nuys Metrolink to Expo Line
- ◆ **State-of-the-art monorail performance – MRT 2**
  - Six-car trains traveling up to 75 mph
  - 14,000 passengers per hour with two minutes between trains
  - 20 minutes from Van Nuys Metrolink to Expo Line

**QUESTION 6 – Why Does Metro Degrade Monorail Performance and Capacity Compared To Heavy Rail?**

**MRT 2 Is Equitable, Quickest To Build, and Most Affordable**

# Ensure Toll Lanes Can't Preclude MRT 2

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- ◆ Metro adding two Toll ExpressLanes to 405 freeway
  - Measure M Sepulveda Transit Corridor Project Phase 1
  - One toll lane in each direction from 10 freeway to 101 freeway
- ◆ ExpressLanes cannot preclude MRT 2 monorail above 405 median through Sepulveda Pass
  - One part of Metro says ExpressLanes preclude MRT 2
  - Another part of Metro says ExpressLanes compatible with MRT 2
- ◆ Metro must ensure toll lanes and MRT 2 work together
  - Stop considering unacceptable elevated tracks above Sepulveda Boulevard in Sherman Oaks and Van Nuys

**QUESTION 7 – Why Can't Metro Simply Ensure Toll Lanes and Monorail Can Work Together on 405?**

# **Questions Metro Needs To Answer**

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**QUESTION 1: Why Is Valley Getting Short End of the Stick Again With Elevated Trains on Sepulveda?**

**QUESTION 2: Why Is Metro Spending Taxpayer Dollars To Continue Analyzing Four Obviously Unaffordable Concepts?**

**QUESTION 3: Why Hasn't Metro Explained Their PPP Plan?**

**QUESTION 4: Why Didn't Metro Consider MRT 2?**

**QUESTION 5: Why Does Metro Degrade Monorail Capacity and Performance Compared To Heavy Rail?**

**QUESTION 6: Why Can't Metro Simply Ensure Toll Lanes and Monorail Can Work Together on 405?**

# MRT 2 Monorail – A Better Alternative

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- ◆ **Heavy Rail Subways HRT 1 and 2 Are Terrific But Unaffordable**
  - \$8 to \$10 billion Funding Shortfall
- ◆ **HRT 3 and MRT 1 Are Inequitable To Valley, Unaffordable, and Destroy Van Nuys and Sherman Oaks**
  - Elevated 20 feet Above Sepulveda Boulevard for Five Miles
- ◆ **MRT 2 Monorail Above 405 Median Is Only Affordable and Equitable Concept**
  - Can Be Operating by 2028 Olympics
- ◆ **Metro Must Fairly Consider MRT 2**

# Comment on Sepulveda Transit Project

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- ◆ I absolutely oppose any elevated tracks above any Valley streets – Unfair!
- ◆ I support a fully underground subway in the Valley, but only if it's affordable
- ◆ The ONLY acceptable alternative is a monorail along the middle of the 405
- ◆ Email comments to:
  - Supervisor Sheila Kuehl, Chair, Metro Board, [sheila@bos.lacounty.gov](mailto:sheila@bos.lacounty.gov)
  - Mayor James Butts, First Vice Chair, Metro Board, [mayor@cityofinglewood.org](mailto:mayor@cityofinglewood.org)
  - Mayor Eric Garcetti, Second Vice Chair, Metro Board, [mayor.garcetti@lacity.org](mailto:mayor.garcetti@lacity.org)
  - Supervisor Kathryn Barger, Metro Board, [kathryn@bos.lacounty.gov](mailto:kathryn@bos.lacounty.gov)
  - Councilmember Mike Bonin, Metro Board, [councilmember.bonin@lacity.org](mailto:councilmember.bonin@lacity.org)
  - Councilmember Paul Krekorian, Metro Board, [councilmember.krekorian@lacity.org](mailto:councilmember.krekorian@lacity.org)
  - Mayor Ara Najarian, Metro Board, [anajarian@glendaleca.gov](mailto:anajarian@glendaleca.gov)
  - Joshua Schank, Metro Chief Innovation Officer, [schankj@metro.net](mailto:schankj@metro.net)
  - Cory Zelmer, Metro Project Manager, [zelmerc@metro.net](mailto:zelmerc@metro.net)
  - Metro Email Comment Box, [sepulvedatransit@metro.net](mailto:sepulvedatransit@metro.net)
- ◆ Mail comments to:
  - Cory Zelmer, Metro Project Manager, Sepulveda Transit Corridor Project  
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