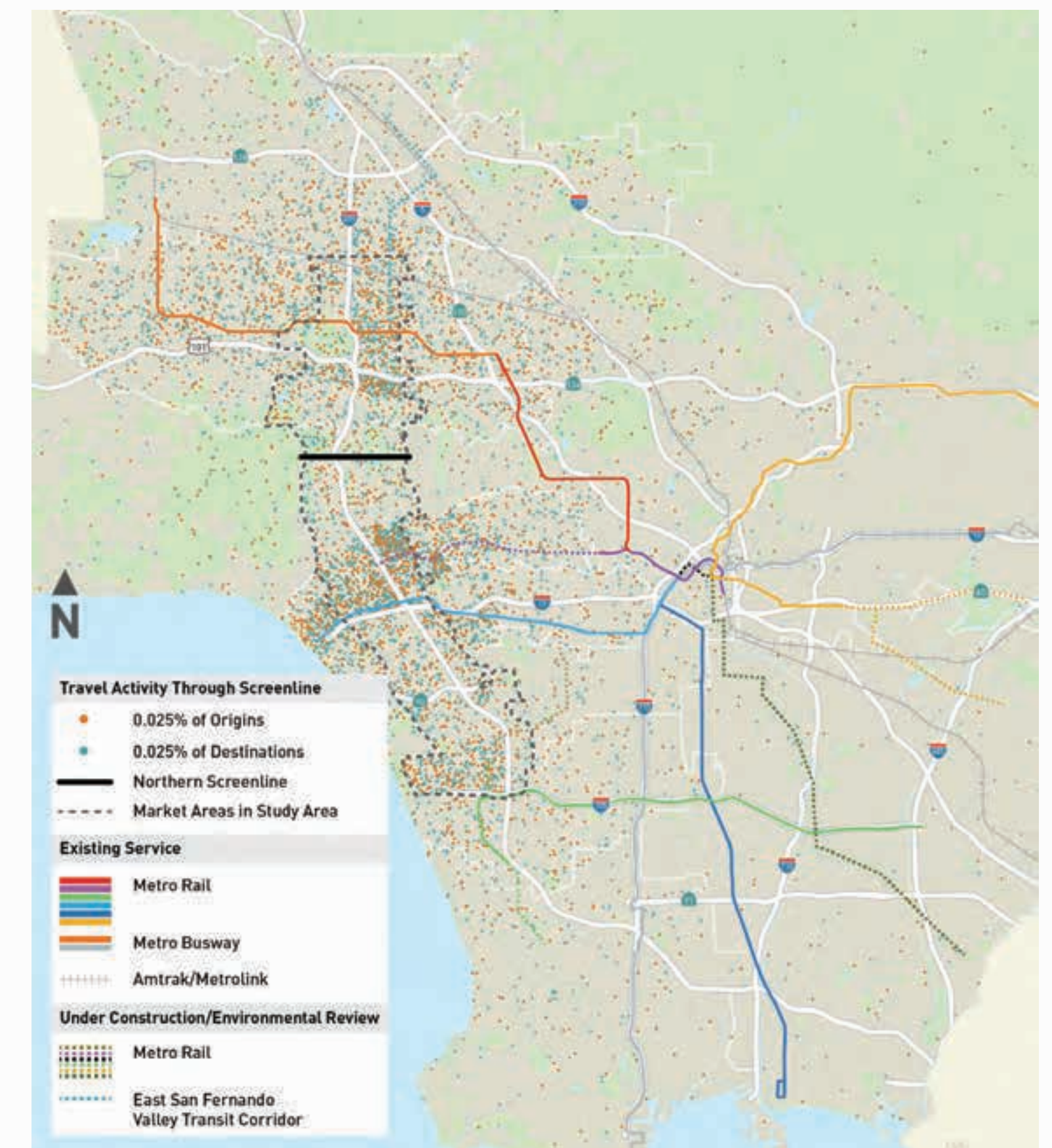


Study Area, Related Projects and Travel Markets

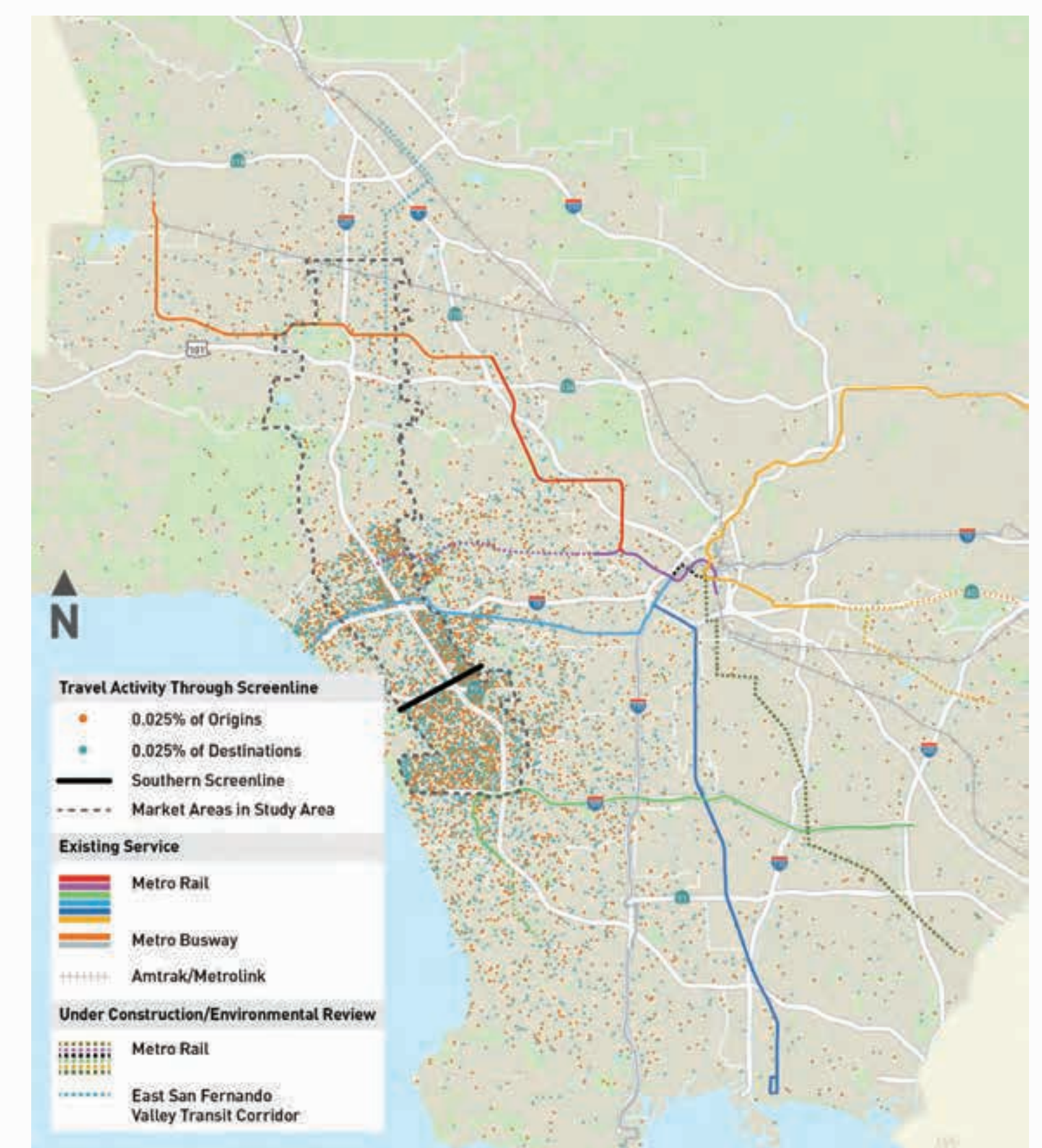
Study area and related projects



Travel between Valley and Westside



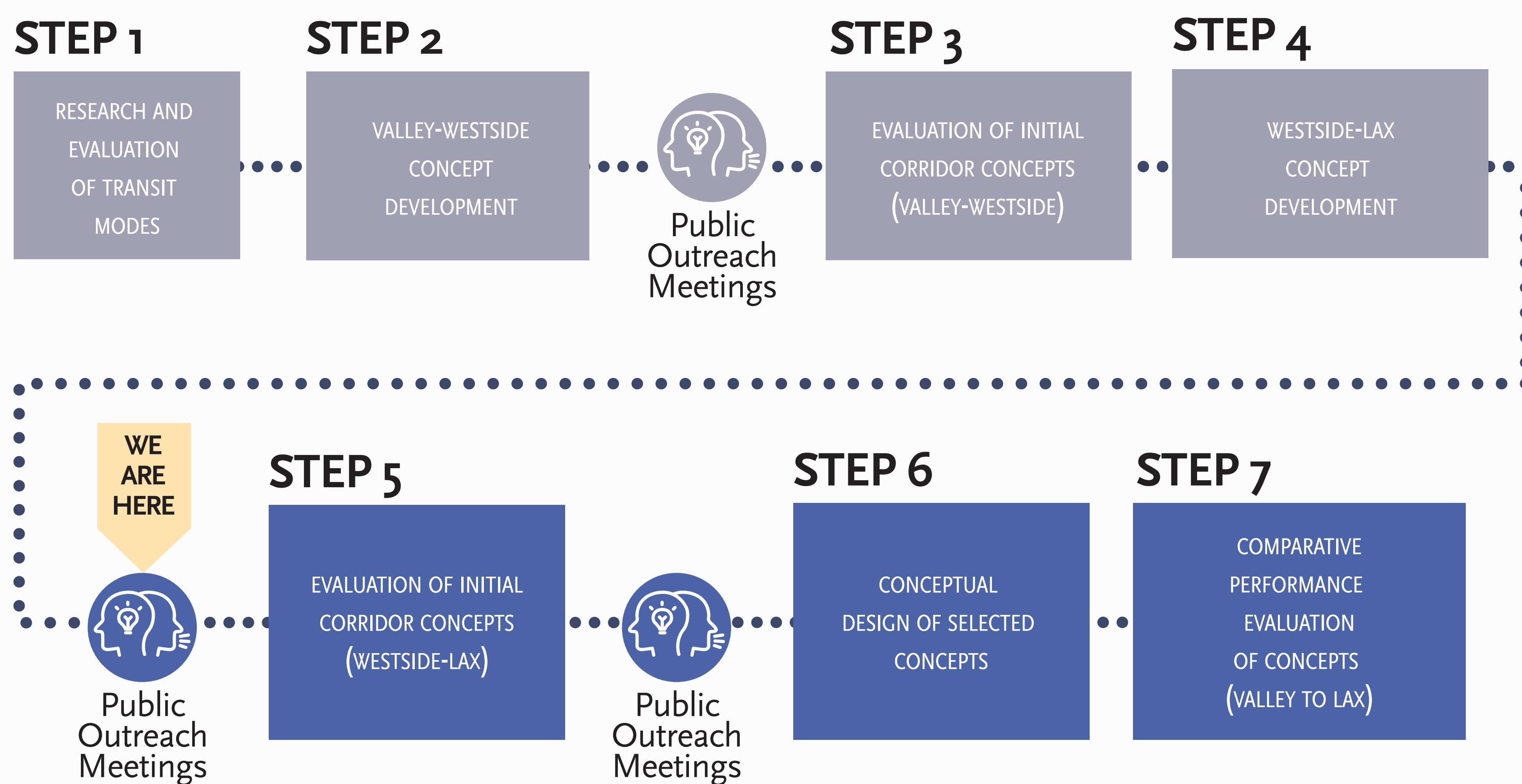
Travel between Westside and LAX



Purpose and Need

Provide a **high-quality transit service** that effectively serves a **large and growing travel market** between the San Fernando Valley and the Westside, including the LAX area. For transit to be a **competitive travel option** that attracts new riders, there is a need to **increase the speed, frequency, capacity, and reliability of transit service** and provide **convenient connections** to existing and planned transit corridors.

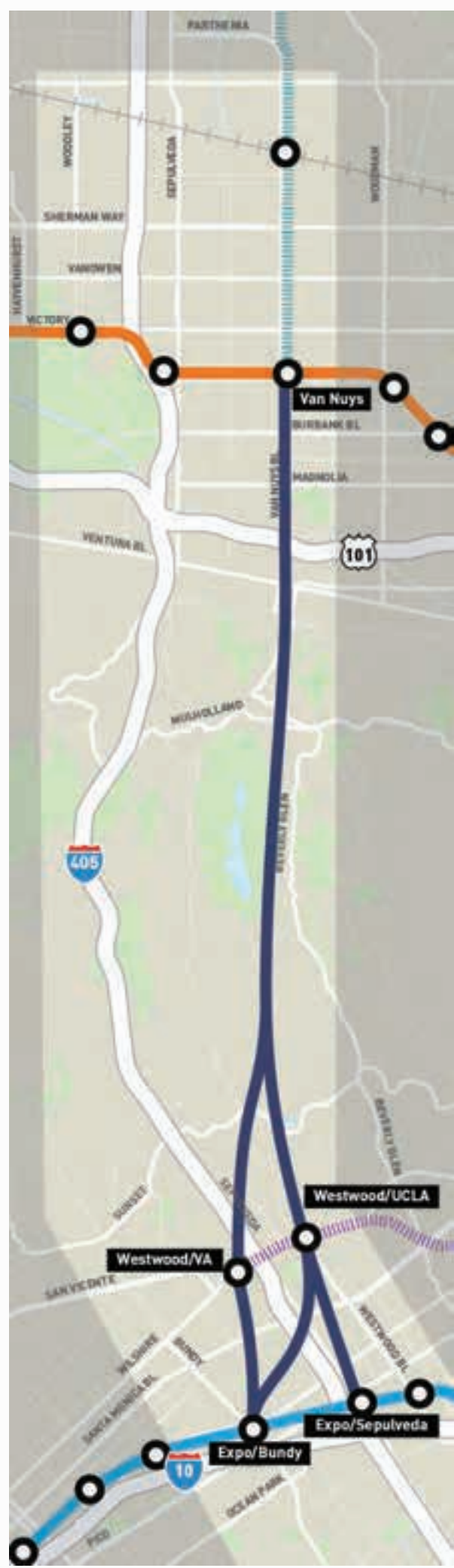
Because of the barrier posed by the Santa Monica Mountains, there are limited high-capacity travel options between the San Fernando Valley, Westside and LAX areas.



The Feasibility Study will first consider transit concepts that connect the San Fernando Valley and the Westside. It will then consider extensions of those concepts to LAX.

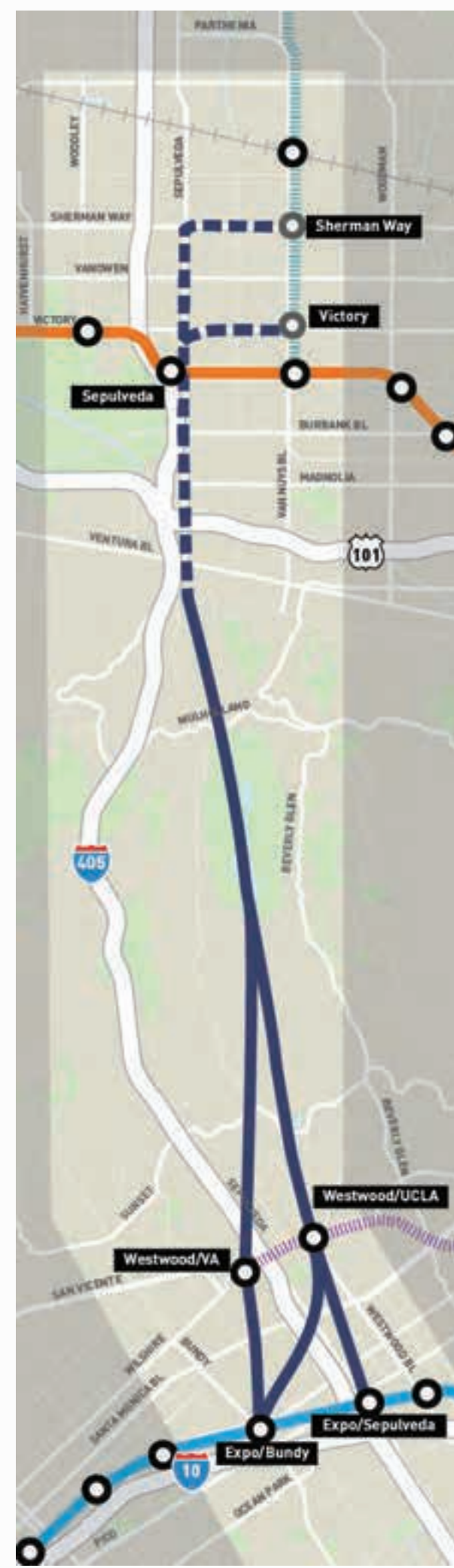
Initial Concepts and Modes (June 2018)

Concept 1



HRT

Concept 2



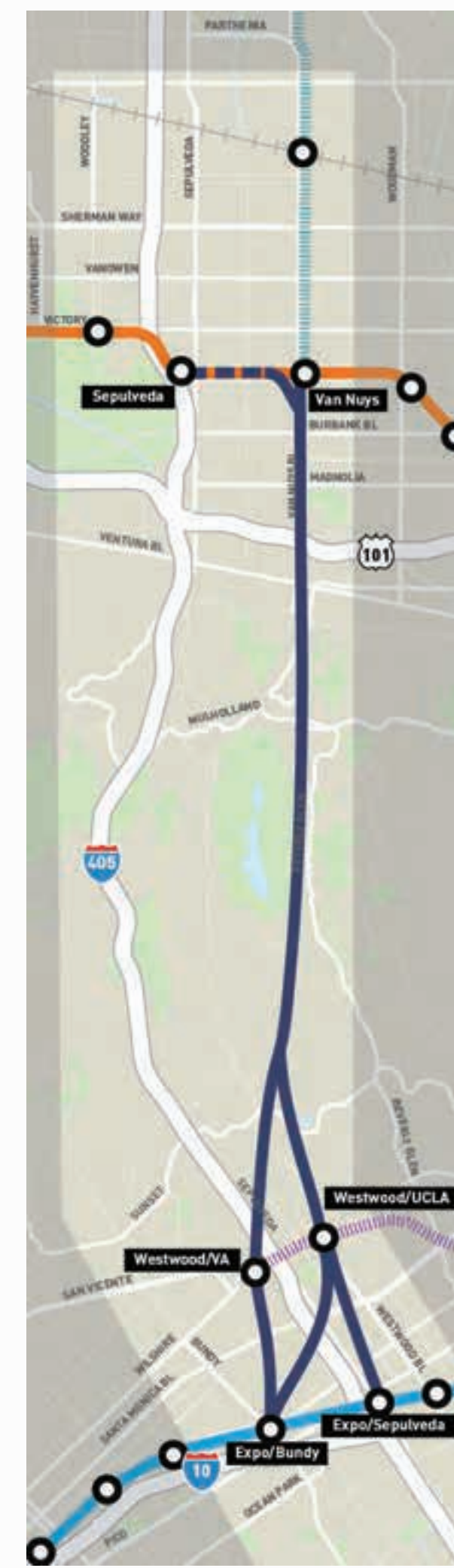
HRT

Concept 3



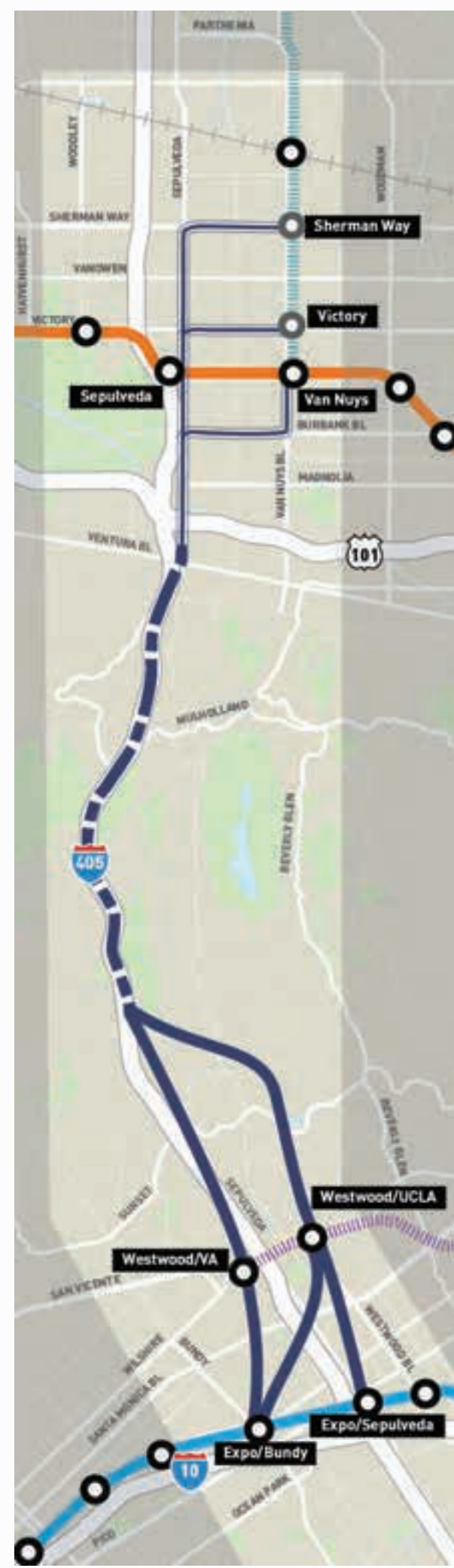
LRT

Concept 4



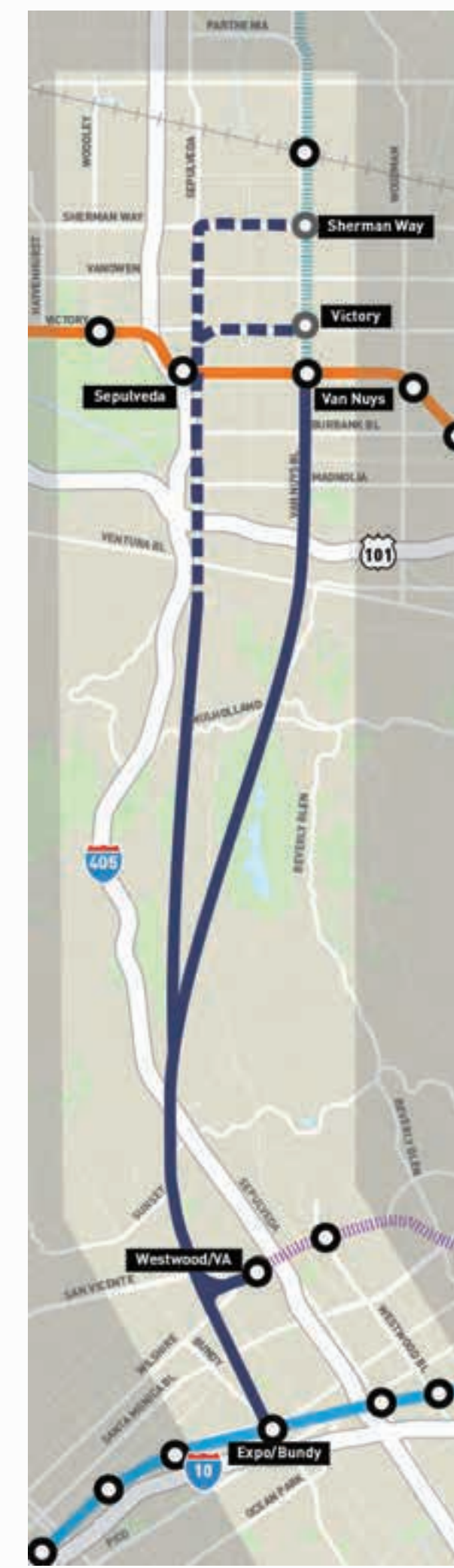
LRT

Concept 5



Monorail/
Rubber Tire

Concept 6



HRT Purple
Line Extension

Sepulveda Transit Corridor Project (alignment options)

- Aerial
- Aerial or Underground
- Aerial or At Grade
- Underground

Existing Service

- Existing Metro Expo Line & Station
- Existing Metro Orange Line & Station
- Amtrak/Metrolink & Station

Pre-Construction

- Purple Line Extension & Station (Section 3)
- East San Fernando Valley Transit Corridor & Station

Modes

Heavy Rail Transit (HRT)



Highest speed, fastest loading, requires fully separated right-of-way

- > No street-level crossings (uses third rail for power)
- > Up to 70 mph
- > Typical capacity of 12,000 passengers per hour per direction; can operate longer trains because tracks are separated from city streets
- > Typically 3 doors per car (each side) for faster loading
- > Limited ability to operate on steep grades
- > Examples: Red and Purple Lines

Light Rail Transit (LRT)



High speed, most flexible, can operate in-street or on separated right-of-way

- > Can operate in urban environment with street-level crossings (uses overhead wire for power)
- > At-grade crossings can cause delays, even with signal priority
- > Up to 65 mph
- > Typical capacity of 4,800 passengers per hour per direction; can operate longer trains, but they would block intersections in an urban environment
- > Typically 2 doors per car (each side)
- > Limited ability to operate on steep grades
- > Examples: Blue, Green, Gold and Expo Lines

Monorail/Rubber Tire (MRT)



Lower speed, requires fully separated right-of-way, can operate on steeper grades

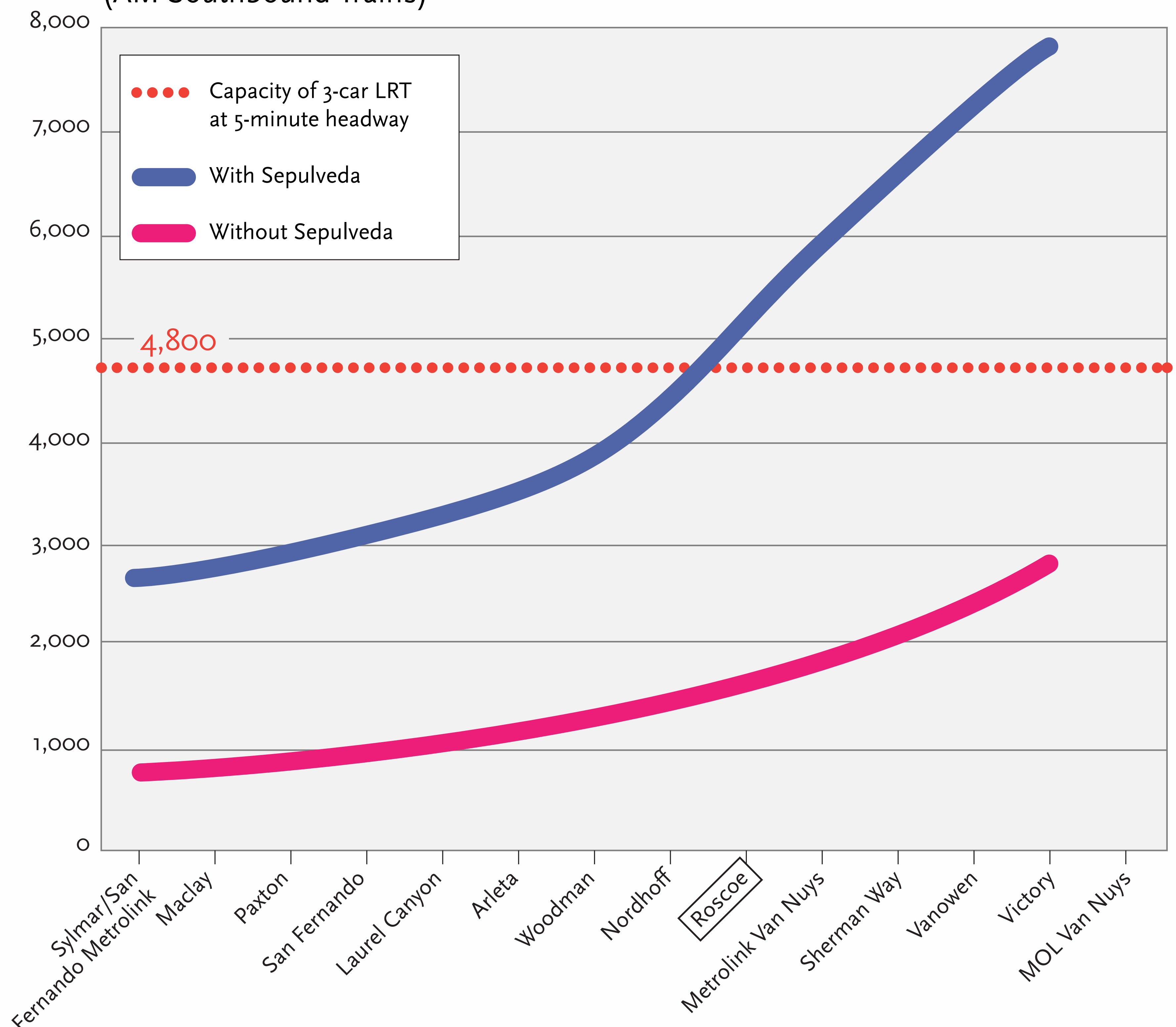
- > No street-level crossings
- > Up to 50 mph
- > Typical capacity of 7,500 passengers per hour per direction for monorail or 15,000 for rubber tire; can operate longer trains because tracks are separated from city streets
- > Can sustain operations on steep grades
- > Examples: Las Vegas Monorail and Mexico City Metro

Screening and Refinement of Initial Concepts

Ridership forecasts indicate that the additional passengers using the East San Fernando Valley (ESFV) Transit Corridor to reach the Sepulveda Transit Corridor will overload some ESFV trains.



East San Fernando Valley Transit Corridor Loads (AM Southbound Trains)



The initial transit concepts were refined to address the high demand:

- > Eliminate LRT concepts from consideration – insufficient capacity along ESFV corridor for one-seat ride
- > Refine the initial MRT and HRT concepts to extend farther north – intercept demand on ESFV

> Eliminate other lower performing concepts/options:

- Purple Line Extension – lowest performer
- Connection at Westwood/VA – low ridership

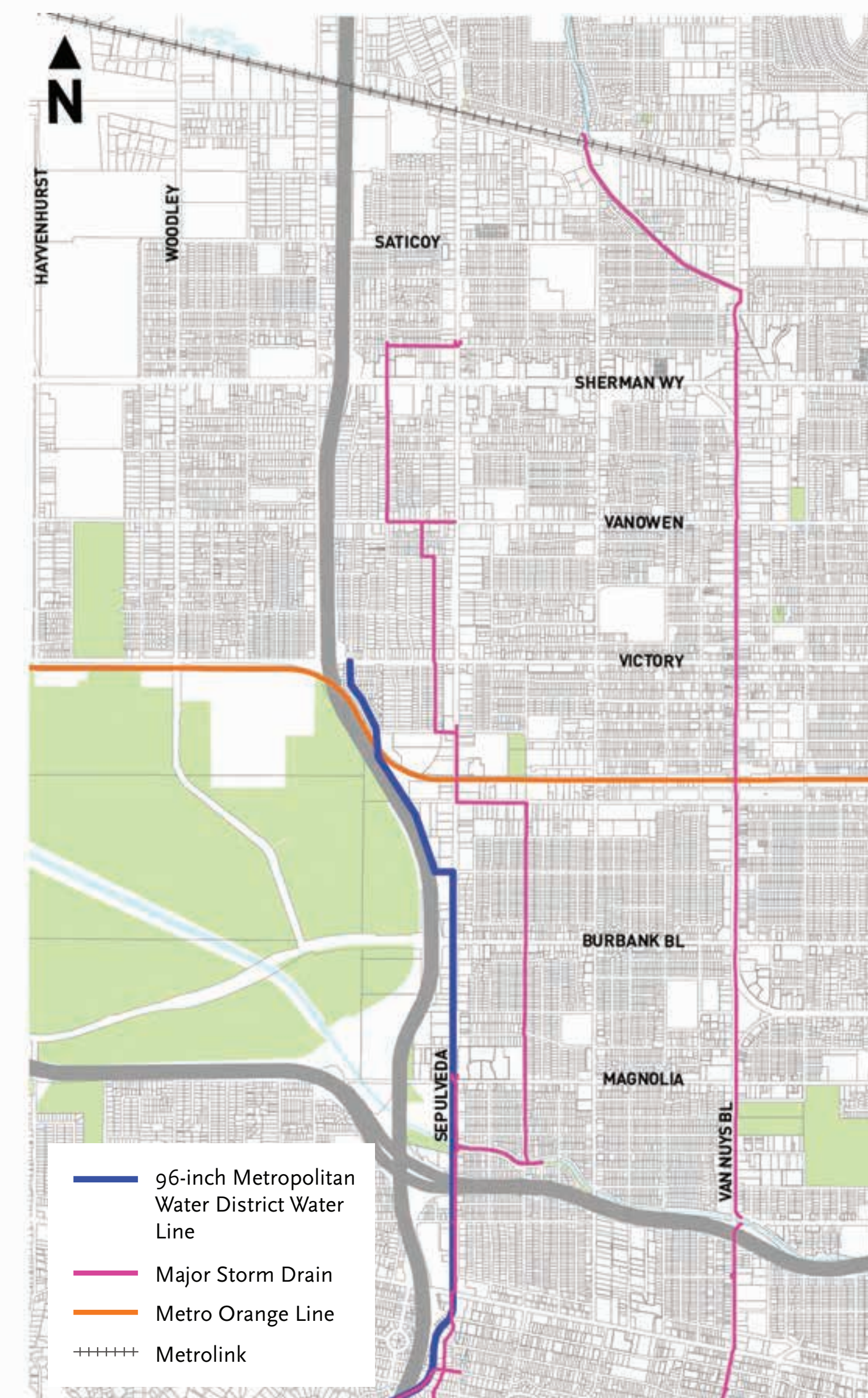


Major Physical Constraints

San Fernando Valley

- > 96-inch high-pressure water main under Sepulveda Bl through the entire study area south of the Orange Line
- > Major storm drains under Sepulveda Bl and Van Nuys Bl

Infrastructure in the San Fernando Valley



Sepulveda Pass

- > Open space, wildlife crossings and streams adjacent to I-405 in the Santa Monica Mountains
- > Topography and existing infrastructure limit aerial alignment options

Santa Monica Mountains Conservancy Parklands and Open Space

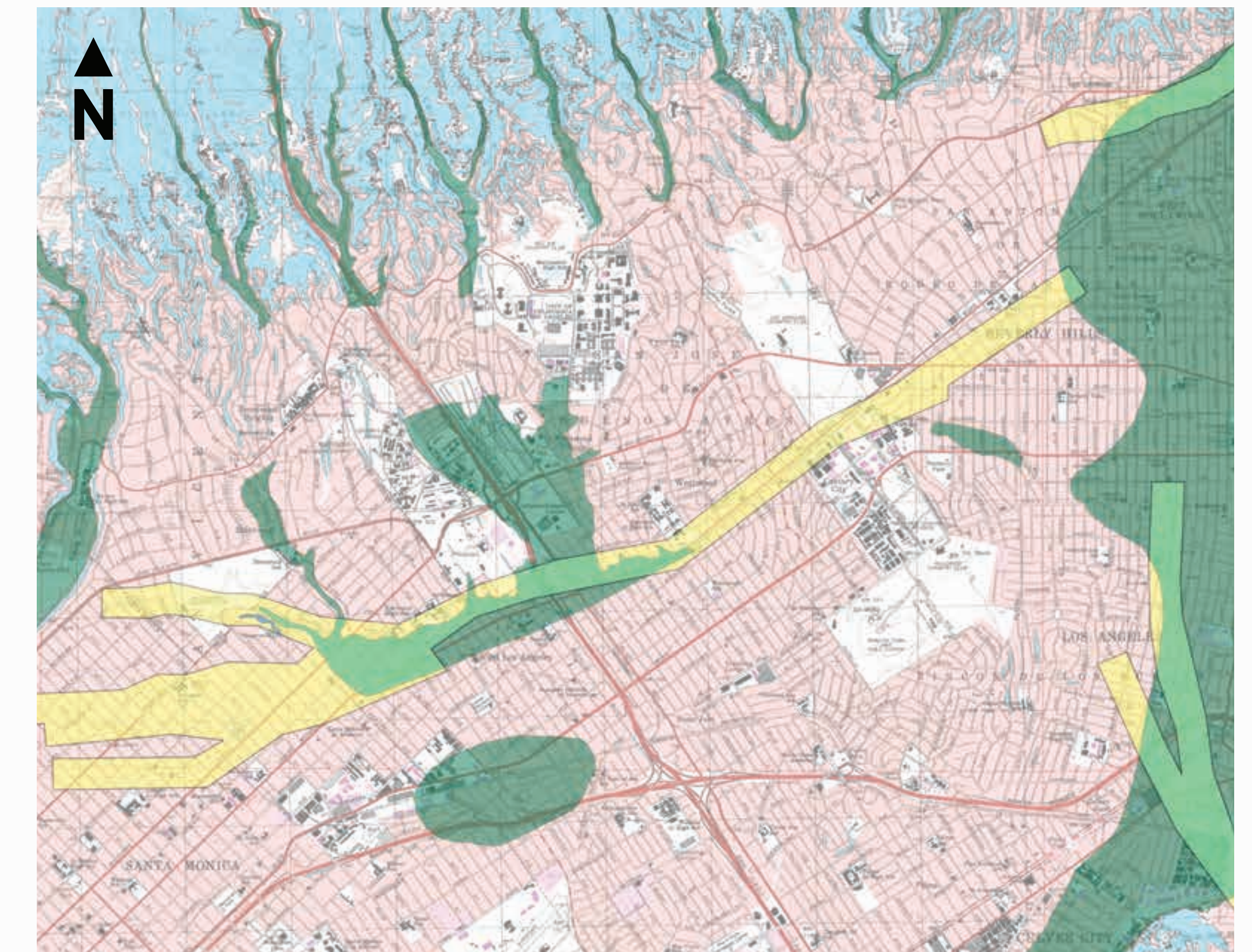


Source: Santa Monica Mountain Conservancy and Mountains Recreation and Conservation Authority, 2015

Westside

- > Tall buildings on Wilshire Bl have deep foundations that constrain tunnel alignment options
- > Santa Monica Fault Zone limits station location options
- > 96-inch high-pressure water main under Sepulveda Bl

Santa Monica Fault Zone



- Earthquake Fault Zones
- Liquefaction Zones
- Earthquake-Induced Landslide Zones

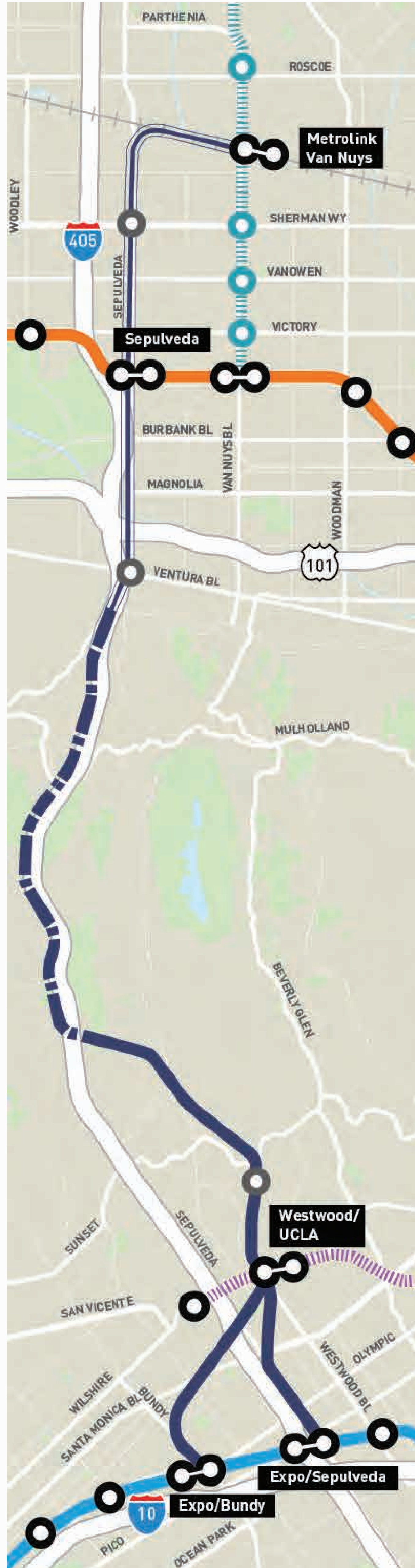
Source: California Geological Survey Geologic Information and Publications, 2018



Refined Concepts – Monorail/Rubber Tire

MRT 1

Sepulveda Transit Corridor Project (alignment options)	
	Aerial
	Aerial and At Grade
	Underground
	Transfer Station
Existing Service	
	Existing Metro Expo Line & Station
	Existing Metro Orange Line & Station
	Amtrak/Metrolink & Station
Pre-Construction	
	Purple Line Extension & Station (Section 3)
	East San Fernando Valley Transit Corridor & Station



- > Elevated above Sepulveda Bl through the San Fernando Valley north to the Metrolink Van Nuys Station.
- > Uses Metrolink right-of-way to connect to the Metrolink Van Nuys Station.
- > Trains would operate every 4 minutes from the Metrolink Van Nuys Station to the Expo Line.
- > Station Locations:
 - Metrolink Van Nuys
 - Sepulveda Bl/Sherman Way
 - Orange Line/Sepulveda
 - Sepulveda Bl/Ventura Bl
 - UCLA Campus
 - Purple Line at Westwood/UCLA
 - Expo Line/Sepulveda or Bundy

Refined Concepts – Heavy Rail Transit



Sepulveda Transit Corridor Project (alignment options)

- Aerial
- Underground
- Transfer Station

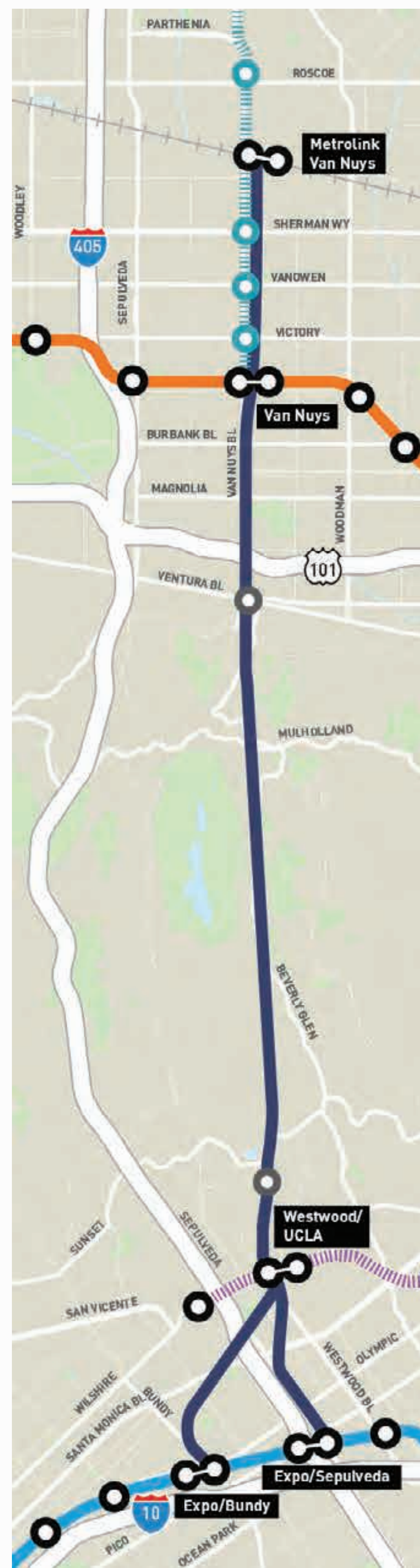
Existing Service

- Existing Metro Expo Line & Station
- Existing Metro Orange Line & Station
- Amtrak/MetroLink & Station

Pre-Construction

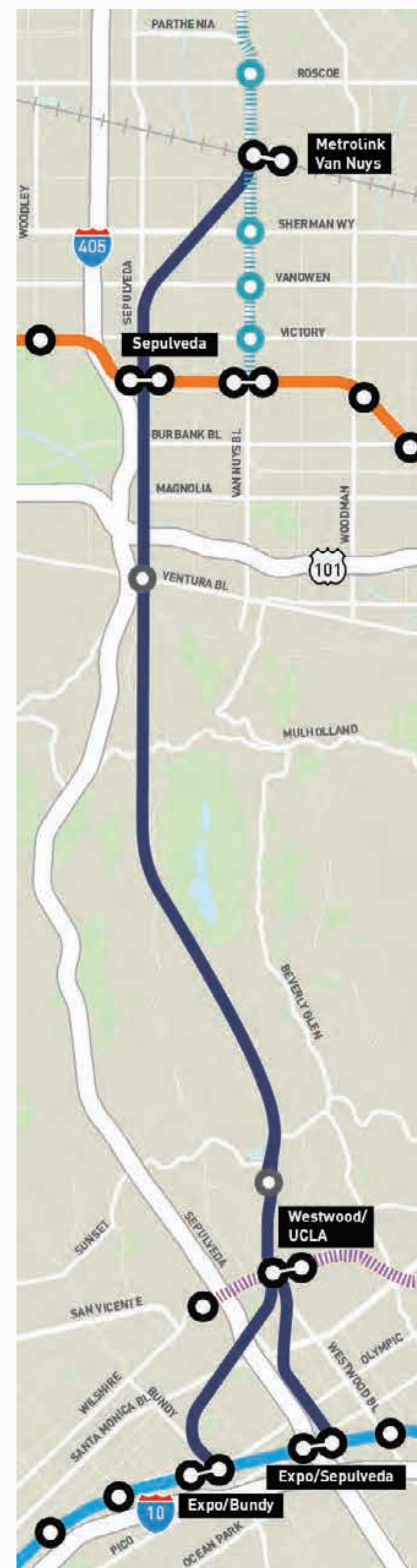
- Purple Line Extension & Station (Section 3)
- East San Fernando Valley Transit Corridor & Station

HRT 1



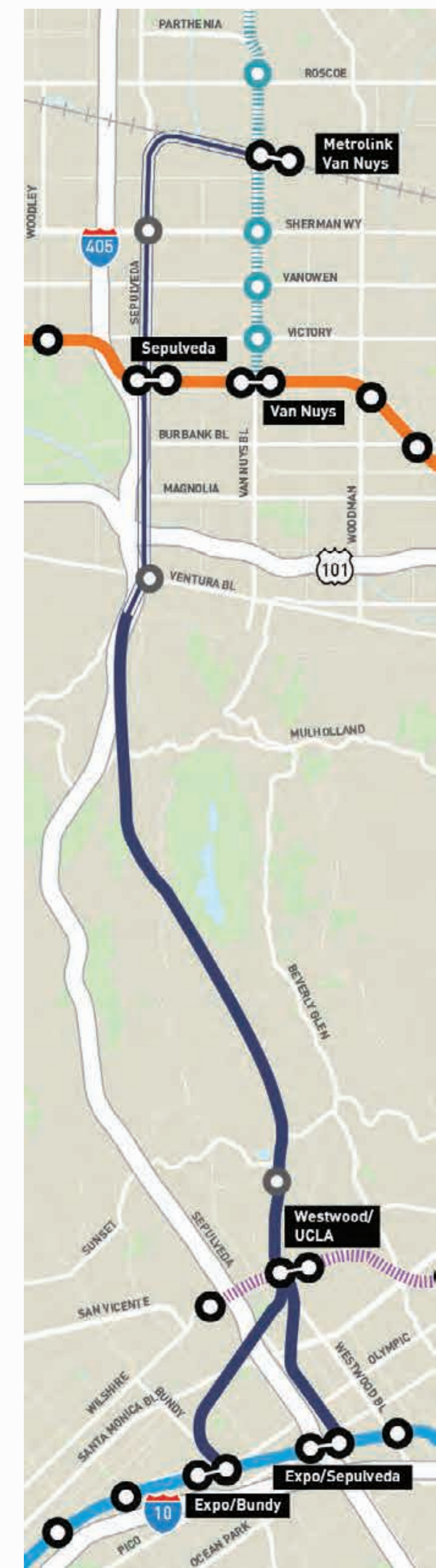
- > Sepulveda Transit Corridor would extend in a tunnel under Van Nuys Bl to the Metrolink Van Nuys Station.
- > Station Locations:
 - Metrolink Van Nuys
 - Orange Line/Van Nuys
 - Van Nuys Bl/Ventura Bl
 - UCLA Campus
 - Purple Line at Westwood/UCLA
 - Expo Line/Sepulveda or Expo/Bundy

HRT 2



- > Sepulveda Transit Corridor would extend in a tunnel to the MetroLink Van Nuys Station.
- > Station Locations:
 - MetroLink Van Nuys
 - Orange Line/Sepulveda
 - Sepulveda Bl/Ventura Bl
 - UCLA Campus
 - Purple Line at Westwood/UCLA
 - Expo Line/Sepulveda or Expo/Bundy

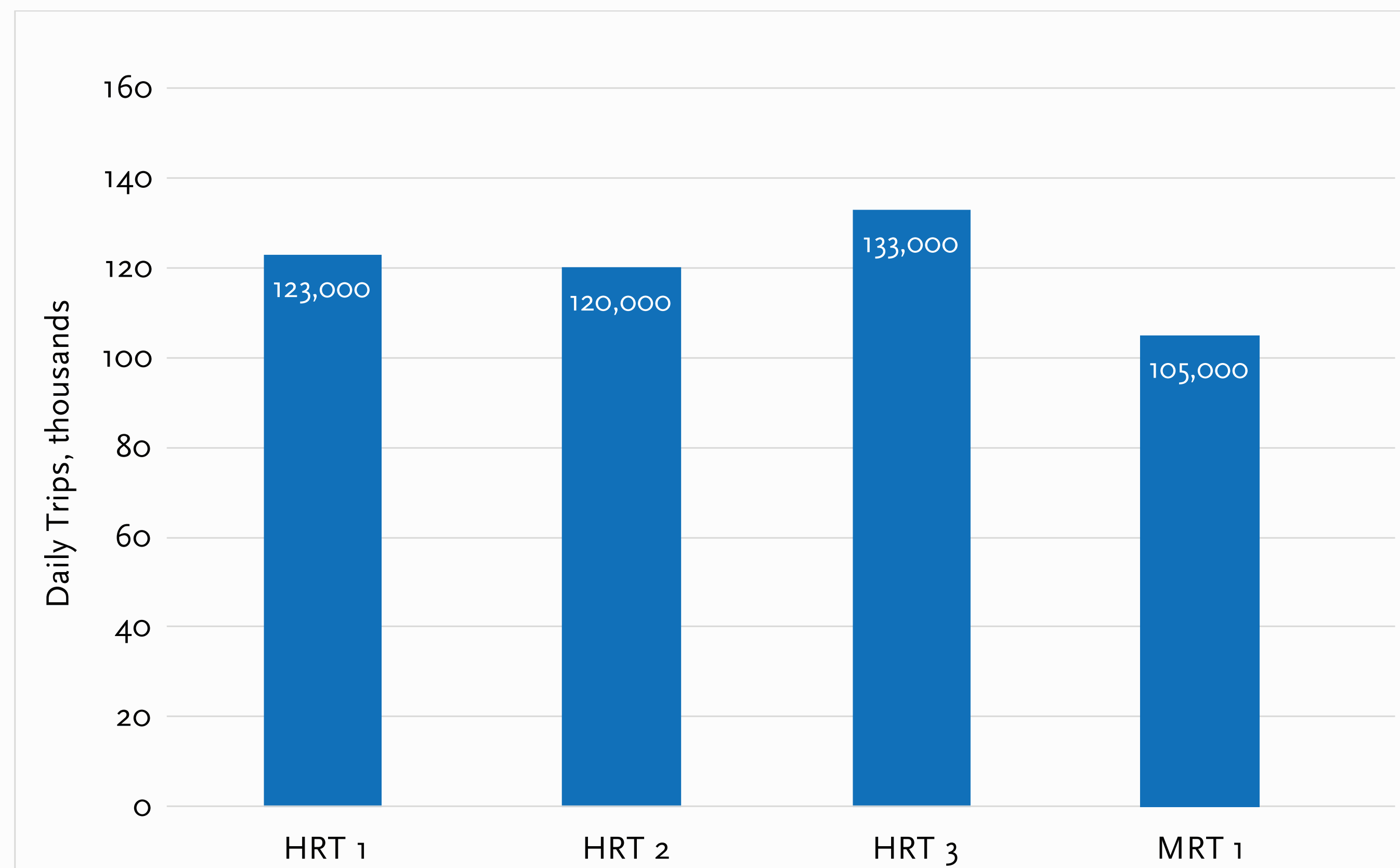
HRT 3



- > Sepulveda Transit Corridor would extend via an elevated structure above Sepulveda Bl and the MetroLink right-of-way to the MetroLink Van Nuys Station.
- > Station Locations:
 - MetroLink Van Nuys
 - Sepulveda Bl/Sherman Way
 - Orange Line/Sepulveda
 - UCLA Campus
 - Purple Line at Westwood/UCLA
 - Expo Line/Sepulveda or Expo/Bundy

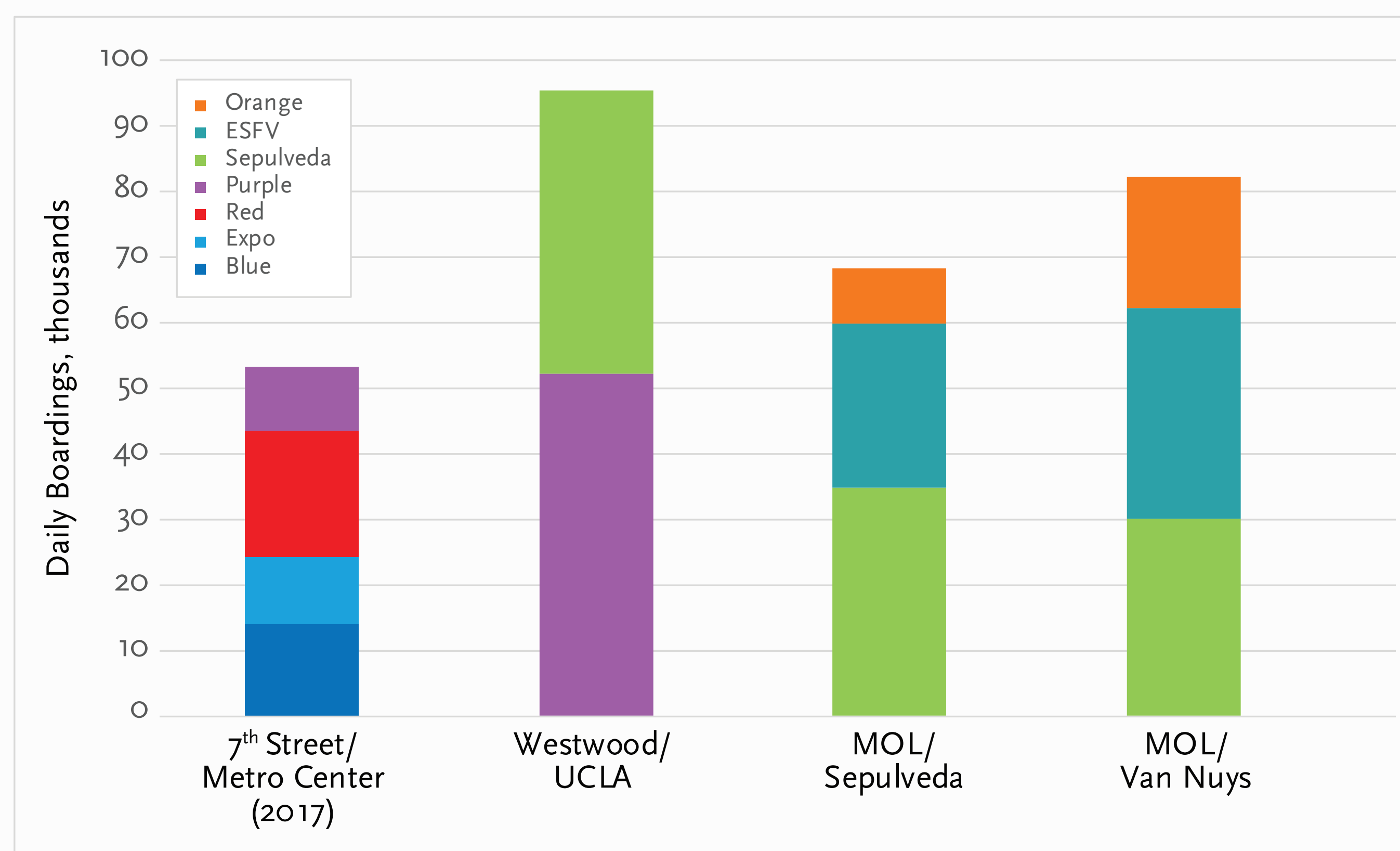
Ridership and Travel Times

Sepulveda Transit Corridor Project trips (2042)



- > HRT 3 has the highest forecast ridership.
- > MRT 1 has the lowest ridership, primarily as a result of its lower speeds.

Daily boardings at major transfer stations



- > Westwood/UCLA is forecast to become the highest ridership transfer station in the Metro Rail system.
- > Orange Line/Van Nuys and Sepulveda stations would have boardings greater than 7th Street/Metro Center does today.

Travel time from Metrolink Van Nuys to Expo Line



- > Sepulveda Transit Corridor HRT concepts would be faster than driving between the Orange Line and Expo Line.
- > Monorail/rubber tire concepts would be faster than driving between the Orange Line and Expo Line in most driving scenarios.

Evaluation of Refined Concepts

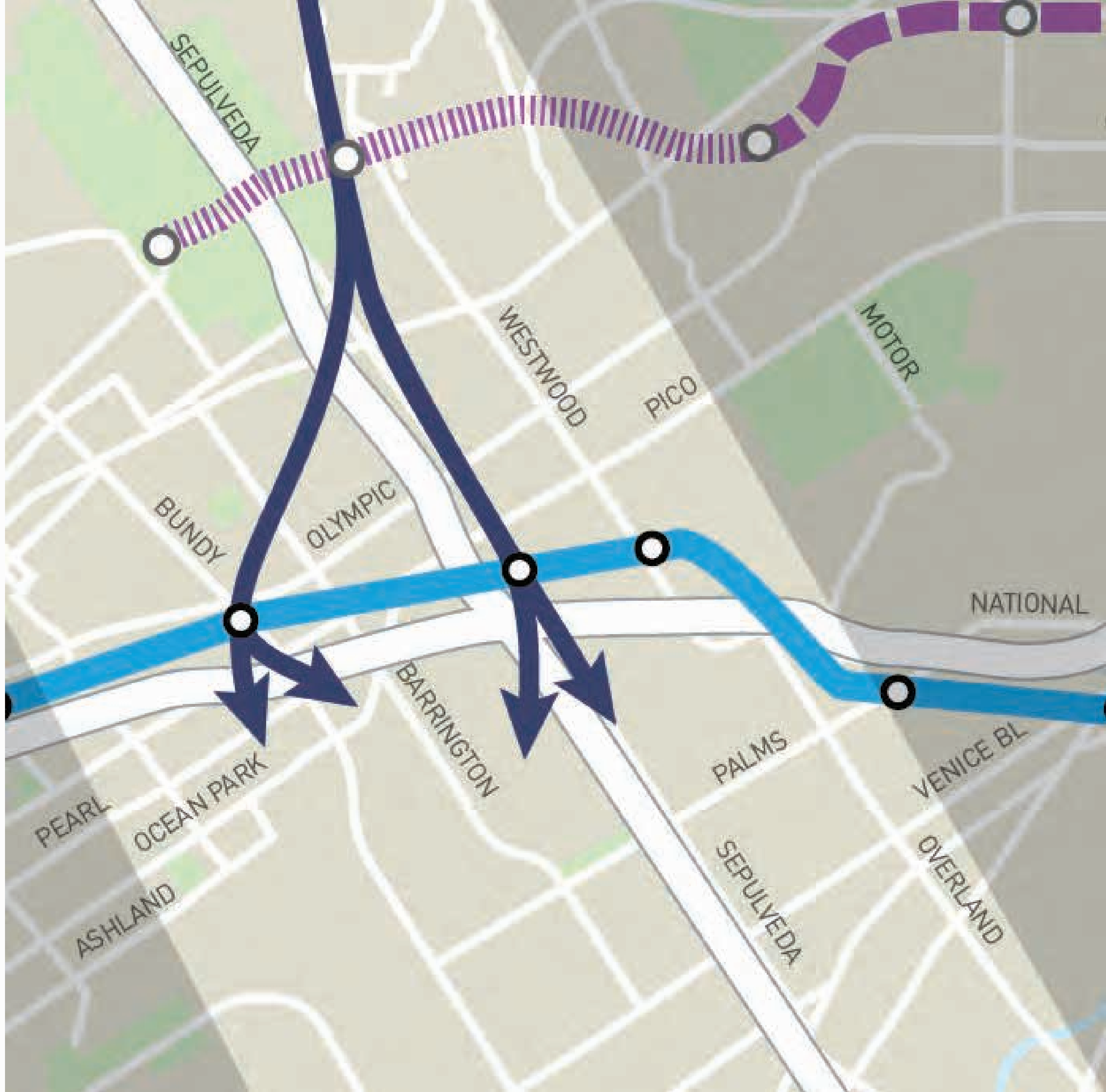
	HRT 1	HRT 2	HRT 3	MRT 1
Ridership (daily)	123,000	120,000	133,000	105,000
Travel time (Metrolink to Expo Line, minutes)	15	16	18	26
Connectivity				
Reliability				
Capacity				
Protect natural environment				
Minimize potential visual impacts				
Minimize potential noise impacts				
Minimize potential construction impacts				
Minimize potential property impacts				





Westside-LAX Goals

Preserve extensions from Expo Line to LAX



Terminate at Airport Metro Connector 96th Street Transit Station



Use existing transportation corridors



Connect major activity centers



Westside-LAX – Sepulveda/I-405 Concepts

HRT



MRT



Sepulveda Transit Corridor Project (alignment options)

- Aerial
- Underground
- Transfer Station

Existing Service

- Existing Metro Expo Line & Station
- Existing Metro Green Line & Station

Under Construction

- Crenshaw/LAX Transit Project & Station
- Purple Line Extension & Station (Section 3)

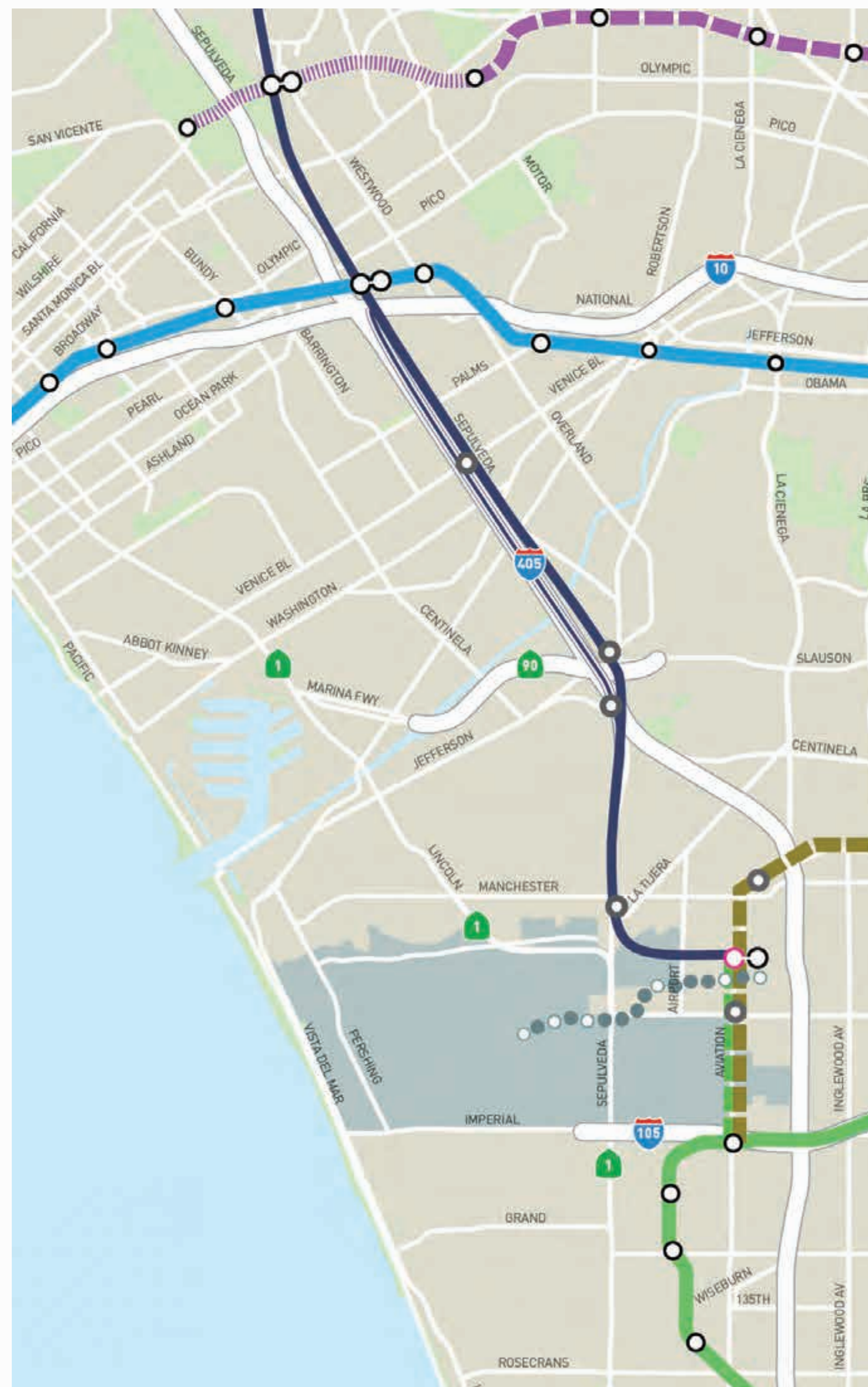
Pre-Construction

- Purple Line Extension & Station (Section 3)
- Airport Metro Connector 96th Street Transit Station

Los Angeles World Airports (LAWA)

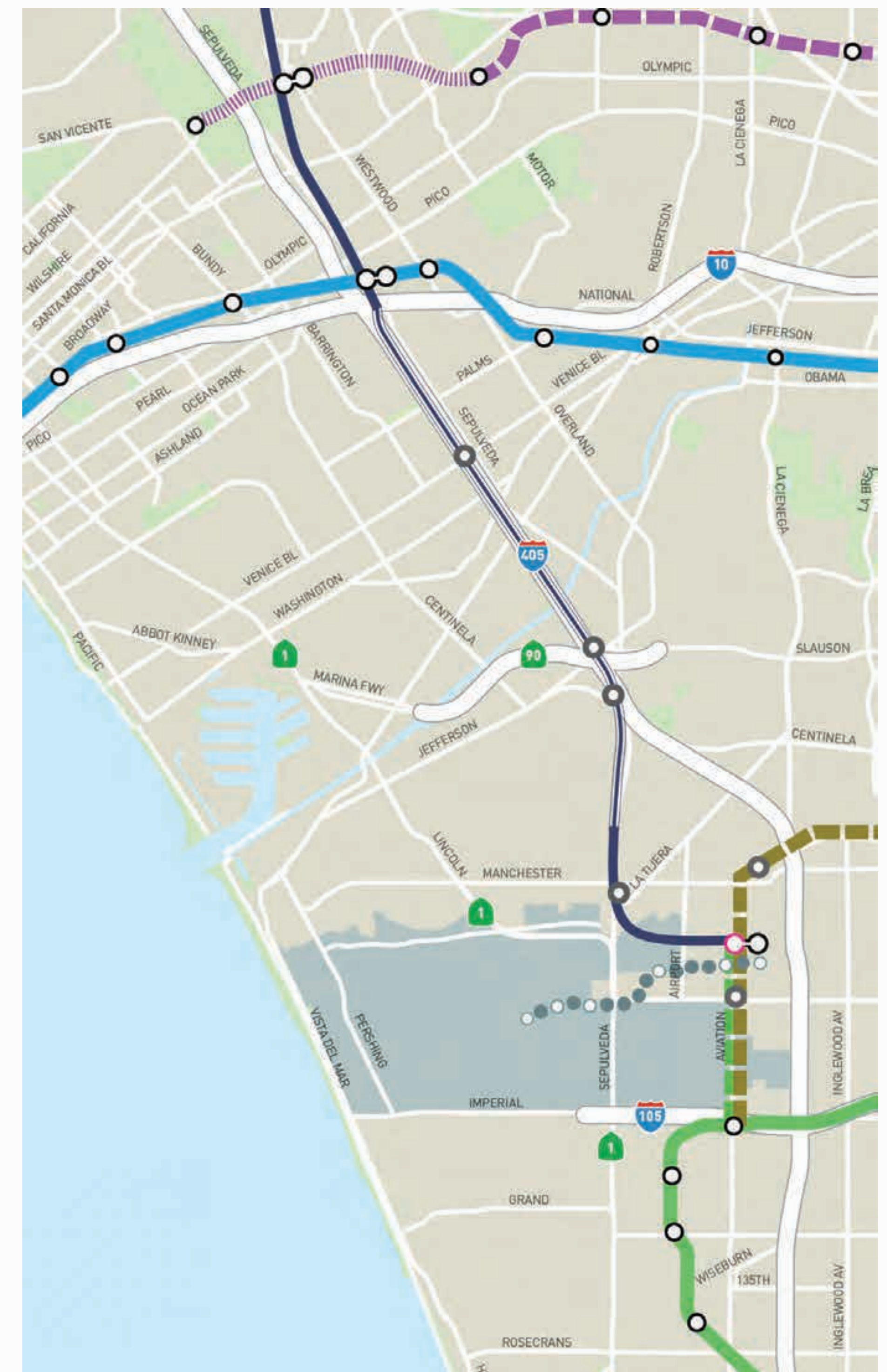
- LAX Automated People Mover (APM) & Station

HRT



- > I-405 corridor may allow for aerial alignment
- > Potential Station Locations:
 - Venice Bl or Washington Bl
 - Culver City Transit Center or Howard Hughes Center
 - Sepulveda Bl/Manchester Bl
 - Airport Metro Connector 96th Street Transit Station

MRT





- > Maximizes aerial alignment
- > Potential Station Locations:
 - Venice Bl or Washington Bl
 - Culver City Transit Center or Howard Hughes Center
 - Sepulveda Bl/Manchester Bl
 - Airport Metro Connector 96th Street Transit Station

Westside-LAX – Centinela Concepts

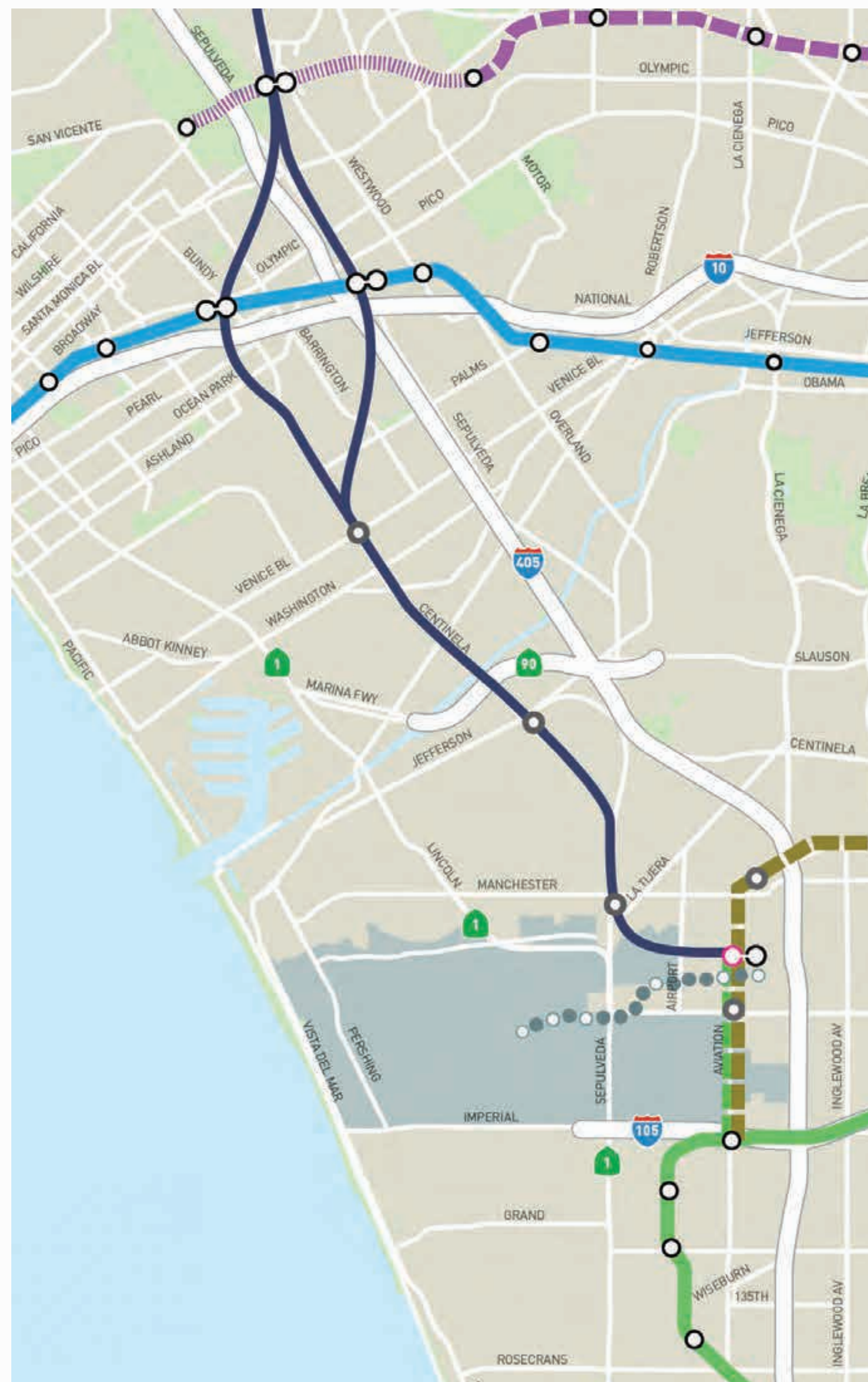
HRT



Sepulveda Transit Corridor Project (alignment options)

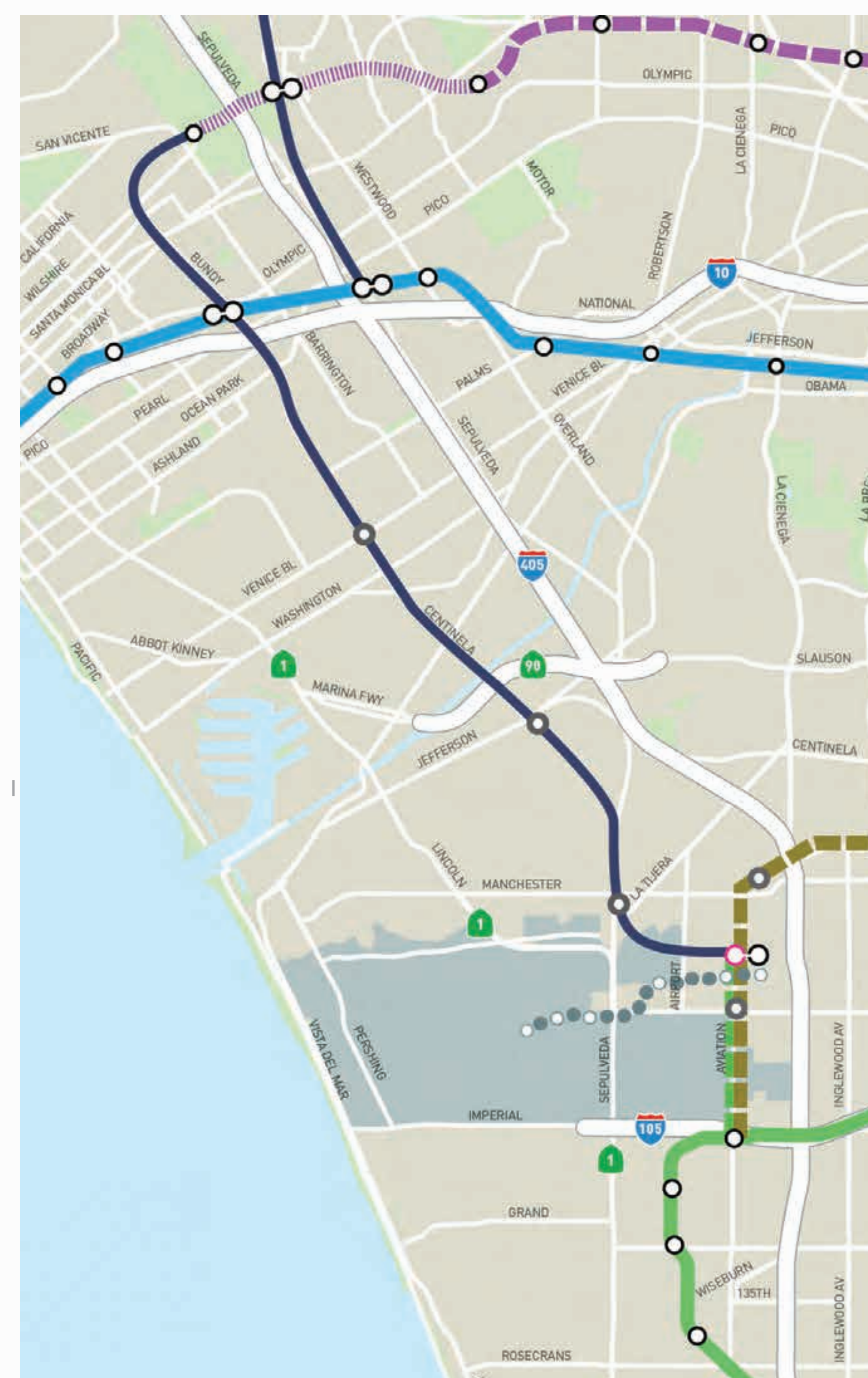
-  Underground
-  Transfer Station
- Existing Service**
-  Existing Metro Expo Line & Station
-  Existing Metro Green Line & Station
- Under Construction**
-  Crenshaw/LAX Transit Project & Station
-  Purple Line Extension & Station
- Pre-Construction**
-  Purple Line Extension & Station (Section 3)
-  Airport Metro Connector 96th Street Transit Station
- Los Angeles World Airports (LAWA)**
-  LAX Automated People Mover (APM) & Station

HRT



- > Could extend from Expo/Sepulveda or Bundy
- > Potential Station Locations:
 - Venice Bl or Washington Bl
 - Playa Vista
 - Sepulveda Bl/Manchester Bl
 - Airport Metro Connector 96th Street Transit Station

Purple Line Extension

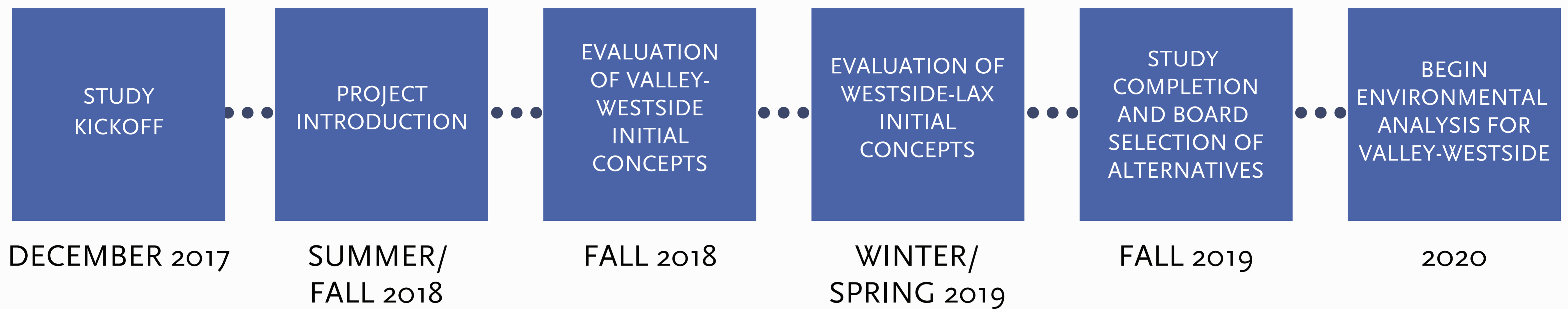


- > Southern extension of the Purple Line from its planned terminus at the Westwood/VA Station
- > Would connect to Expo/Bundy Station on the Expo Line and follow the Centinela corridor
- > Potential Station Locations:
 - Venice Bl or Washington Bl
 - Playa Vista
 - Sepulveda Bl/Manchester Bl
 - Airport Metro Connector 96th Street Transit Station



Share Your Feedback

Study Schedule



Contact Us



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SEPULVEDA TRANSIT CORRIDOR PROJECT