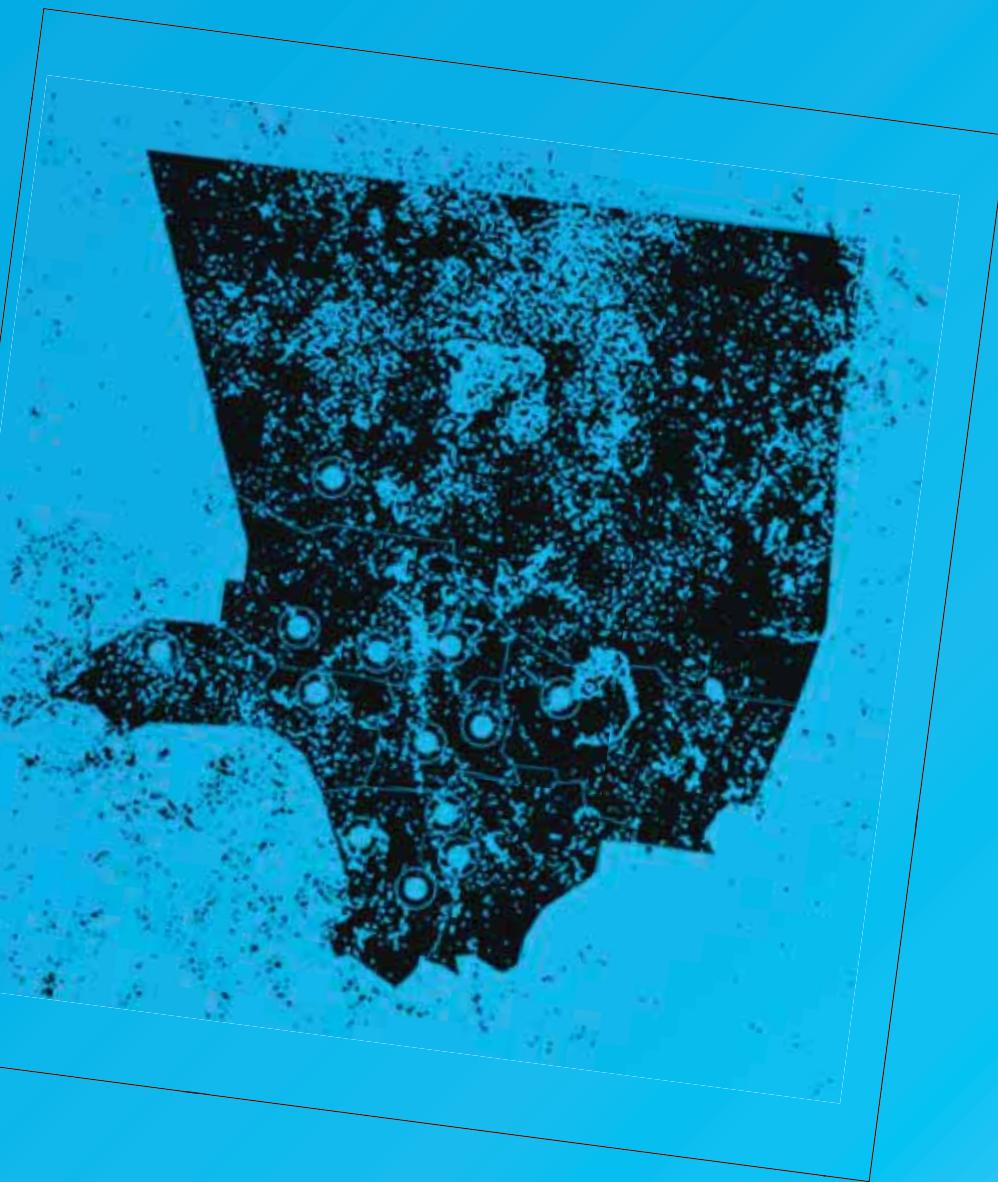




FIRST LAST MILE

STRATEGIC PLAN

Case Study Sites



- Task 3.4 – Case Studies
- Task 3.4.1 - Select Case Studies
- Task 3.4.2 Develop Research/Evaluation
- Task 3.4.3 - Case Study Analysis

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Executive Summary

Case study locations have been selected for 12 sites, covering a range of SCPF identified typologies, as well as a range of geographic, demographic and physical challenges that give a full view of the potential opportunities and constraints in need of addressing throughout the region.



Case Study Sites

Selection Methodology and Identification

In order to analyze questions germane to first last mile strategic planning, a number of case study locations have been selected; covering the range of Metro Countywide Sustainability Planning Policy identified typologies, as well as a range of geographic, demographic and physical attributes. The intent is to use these case study sites as “testing grounds” and as such the stops are intended to represent as best as possible an accurate sample of the entire Los Angeles County transit network. Opportunities and constraints found within the geographic regions of the selected sites, should be representative of conditions found throughout the system.

The process of site selection began with the development of a methodology to classify the numerous transit stops within Los Angeles County. There are about 15,000 transit stops in Los Angeles County, the vast majority being local bus stops. For the purposes of this analysis, priority was given to stops that are defined by dedicated infrastructure (stations), complemented with local bus stops if necessary. A brief description of the methodology utilized to propose the initial list of Case Study Sites is outlined in the paragraphs below.

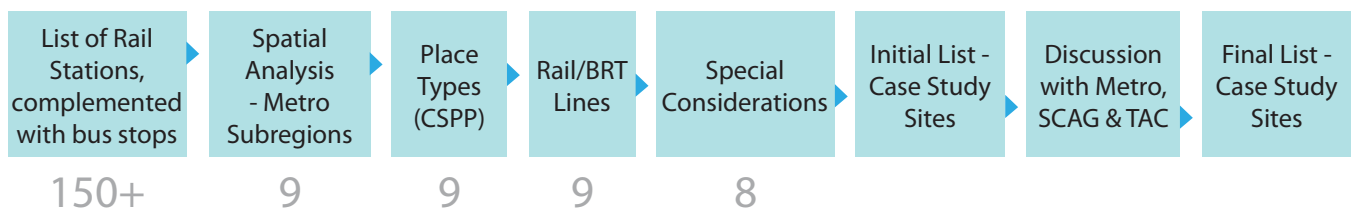
The work initiated with a compilation of all Metrolink and Metro heavy rail, Metro light rail, Metro BRT and Metro rapid stops in Los Angeles County. Regional diversity was considered by dividing the full list by Metro Subregion, with the intent to assure representation from each geographic area. The Metro Countywide Sustainability Planning Policy (CSPP) place types were added to each station to ensure the consideration of a variety of areas with respect to residential density and employment centrality. Characteristics regarding these stations were added to allow further station classification, and these special considerations include:

- High transit density node/multi-modal hub
- Terminus Station (Yes or No)
- Type (Street level, elevated, underground)
- Presence of Park-and-Ride
- Adjacent or within Freeway ROW
- Next to or within a regional destination
- Existing or Future station
- Adjacent to or on the border or multiple jurisdictions

These incremental filters allowed the design and planning team to prepare a list of proposed sites that offer a broad and representative picture of the interface between Metro’s mass transit system and its associated urban/sub-urban contextual fabric.

Exhibit 1 illustrates the general structure of the site selection methodology.

Exhibit 1 – Site Selection Methodology



The station classification regarding Subregion and place type is illustrated in Exhibit 2. The background color is relative to the place type, the font color denotes the Metro Subregion and the line is identified after the station name.

Exhibit 2 – Station Classification

	LOW CENTRALITY	MEDIUM CENTRALITY	HIGH CENTRALITY		
LOW RESIDENTIAL DENSITY	Santa Clarita (ML) V. Gr. / Acton (ML) Palmdale (ML) Roscoe (O) Nordhoff (O) Sylmar/ S.Fernando (ML) Sun Valley (ML) Industry (ML)	Via Princessa (ML) Sun Valley (ML) Sierra Madre Villa (GL) South Pasadena (GL) Covina (ML) Baldwin Park (ML) Industry (ML)	Civic Center (R/P) Expo Park/USC (E) Spring/1st (Silver) Filmore (GL) Douglas (G) El Segundo (G) Mariposa (G)		
MEDIUM RESIDENTIAL DENSITY	Lancaster (ML) Palmdale (ML) Roscoe (O) Nordhoff (O) Sylmar/ S.Fernando (ML) Northridge (ML) Reseda (O) Tampa (O) Chatsworth (O/ML) Sun Valley (ML) Industry (ML)	Harbor Fwy/I-105 (Silver) Avalon (G) Crenshaw (G) Harbor Fwy (G) Vermont/Athens (G) 103rd /Watts (B) Compton (B) Firestone (B) Long Beach (G) Norwalk (G) Willowbrook (B/G) Woodman (O)	Sepulveda (O) Woodley (O) Balboa (O) Sun Valley (ML) Valley College (O) El Monte Station (Silver/ML) Cal State LA (Silver/ML) Allen (GL) Industry (ML) Southwest Mus. (GL)	Aviation/LAX (G) Redondo Beach (G) Rosecrans/I-110 (Silver) Harbor GGTC (Silver) Artesia (B) Commerce (ML) Lakewood (G) Montebello/Commerce (ML) Norwalk/ Santa Fe Springs (ML) Slauson (B) Willow (B) Atlantic (GL) East LA/C. Center (GL) Indiana (GL)	Maravilla (GL) Expo/Crenshaw (E) Expo/Western (E) Farmdale (E) La Cienega/ Jefferson (E) Glendale (ML) Downtown Burbank (ML) Burbank/B.HopeAirport (ML)
HIGH RESIDENTIAL DENSITY	Newhall (ML)	N.Hollywood (R/O) Van Nuys (O/ML) Laurel Canyon (O) Sherman Way (O) Manchester/I-110 (Silver) Del Amo (B) P. Coast Hwy (B) Wardlow (B) Highland Park (GL)	Hawthorne / Lennox (G) 1st Street (B) 5th Street (B) Anaheim (B) Florence (B) Pacific (B) Transit Mall (B) Culver City (E) 4th St/ Colorado (E)* Del Mar (GL) Lake (GL) Memorial Park (GL) De Soto (O) Canoga (O) Warner Center (O) Pierce College (O) Universal City (R) Downtown Burbank (ML) Burbank/ B.Hope Airport (ML)	7th Street / Metro Ctr (B/R/P/E) 23rd Street (E) Chinatown (GL) Expo / La Brea (E) Expo / Vermont (E) Grand (B) Heritage Square (GL) Hollywood / Highland (R) Hollywood / Vine (R) Hollywood / Western (R) Jefferson / USC (E) Lincoln / Cypress (GL) L. Tokyo/ A. District (GL) Mariachi Plaza (GL) Pershing Sq. (R/P) Pico (B/E/SC) Pico / Aliso (GL) San Pedro (B) Soto (GL) Union Station (R/P/GL/ML) Vermont / Beverly (R) Vermont / S. Monica (R) Vermont / Sunset (R) Vernon (B) Washington (B) Westlake / MacArthur Pk (R/P) Wilshire / Normandie (P) Wilshire / Vermont (R/P) Wilshire / Western (P)	Silver Line Stations LA Co. & USC Med. Ctr El Monte Busway & Alameda/ U. Station 1st St. & Hill St. Grand Av. & 3rd St. (SB) Olive St. & Kosciuszko Way (NB) Flower St. & 5th St. (SB) Olive St. & 5th St. Flower St. & 7th St. (SB) Figueroa St. & 7th St. (NB) Flower St. & Olympic Blvd. (SB) Figueroa St. & Olympic Blvd. (NB) Figueroa St. & Pico Blvd. Figueroa St./ Washington Blvd. 23rd St. & Flower St. (SB) HOV Roadway & Adams Blvd (NB) Flower St. & Adams Blvd. (SB) 37th Street/USC Slauson/I-110

Subregion Arroyo Verdugo Cities (3) Central Los Angeles (56) Gateway Cities (22) North Los Angeles County (6) Las Virgenes / Malibu (0) San Fernando Valley (22) San Gabriel Valley (16) South Bay (15) Westside Cities (2)	Transit Line (ML) Metrolink (B) Blue Line (E) Expo Line (G) Green Line (GL) Gold Line (O) Orange Line (P) Purple Line (R) Red Line (Silver) Silver Line (NB) Northbound (SB) Southbound
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The proposed methodology yielded fourteen sites for further discussion, summarized in Exhibit 3.

Exhibit 3 – Case Study Sites Proposed for Discussion

	LOW CENTRALITY	MEDIUM CENTRALITY	HIGH CENTRALITY	
LOW RESIDENTIAL DENSITY	Las Virgenes/Malibu • Agoura Rd/ Liberty Canyon Rd (Bus 161) - SL - FWY	San Gabriel Valley • Sierra Madre Villa Station (GL) - MM - T - PnR - FWY - J	South Bay • Douglas (G) - PnR - EL	
MEDIUM RESIDENTIAL DENSITY	San Fernando Valley • Reseda (O) - SL - MM	San Gabriel Valley • El Monte Station (S) - MM - T - PnR - SL	Gateway Cities • Slauson (B) - EL	
HIGH RESIDENTIAL DENSITY	North Los Angeles County • Newhall (ML) - SL	San Fernando Valley • N. Hollywood (R/O) - MM - T - PnR - UG&SL OR Central Los Angeles • Highland Park (GL) - SL	Central Los Angeles • Hollywood/Highland (R) - UG - RD - MM	Central Los Angeles • Wilshire / Normandie (P) - UG Westside Cities • 4th St / Colorado Ave(E*) - FS - RD - T - SL OR Arroyo Verdugo Cities • Broadway/ Brand (Line 780 - Glendale) - SL OR Arroyo Verdugo Cities • Olive/S. Fernando (Line 794 - Burbank) - MM - FWY

Subregion

- Arroyo Verdugo Cities
- Central Los Angeles
- Gateway Cities
- North Los Angeles County
- Las Virgenes / Malibu
- San Fernando Valley
- San Gabriel Valley
- South Bay
- Westside Cities

Transit Line

- (ML) Metrolink
- (B) Blue Line
- (E) Expo Line
- (G) Green Line
- (GL) Gold Line
- (O) Orange Line
- (P) Purple Line
- (R) Red Line
- (Silver) Silver Line
- (NB) Northbound
- (SB) Southbound

Special Considerations

- (PnR) Park and Ride
- (T) Terminal
- Type of Station:
- (EL) Elevated
- (UG) Underground
- (SL) Street Level
- (MM) Serves more than one transit line/high number of stops in the immediate vicinity
- (FS) Future Station
- (RD) Regional Destination
- (J) Adjacent to, or on the border, or multiple jurisdictions

The sites proposed ensure representation of all lines and subregions, and include a mix of special considerations. The list was presented at the October 25th Technical Advisory Committee (TAC) meeting for discussion.

Feedback received from TAC members altered the proposed list. For example, the El Monte Transit Center was replaced with the Harbor Gateway Center, as the prior selected site is less representative of general conditions. The final site selection is illustrated in Exhibit 4, the sites are presented on an overall map illustrated in Exhibit 5, and a summary of key data is provided for each site selected in the following pages.

Exhibit 4 – Case Study Sites

	LOW CENTRALITY	MEDIUM CENTRALITY	HIGH CENTRALITY
LOW RESIDENTIAL DENSITY	Las Virgenes/Malibu • Agoura Rd/ Liberty Canyon Rd (Bus 161) - SL - FWY	San Gabriel Valley • Sierra Madre Villa Station (GL) - MM - T - PnR - FWY - J	South Bay • Douglas (G) - PnR - EL
MEDIUM RESIDENTIAL DENSITY	San Fernando Valley • Reseda (O) - SL - MM	Gateway Cities • Compton (B) - PnR - SL South Bay/Gateway Cities • 103rd/Watts (B) - PnR - SL	South Bay • Harbor GTC (Silver) - T - SL - MM - PnR - FWY
HIGH RESIDENTIAL DENSITY	North Los Angeles County • Newhall (ML) - SL - PnR	San Fernando Valley • N. Hollywood (R/O) - MM - T - PnR - UG&SL Central Los Angeles • Highland Park (GL) - SL	Central Los Angeles • Wilshire / Normandie (P) - UG Westside Cities • Wilshire/Westwood (Wilshire BRT/P) - FS - RD - SL - MM Arroyo Verdugo Cities • Olive/S. Fernando (Line 794 - Burbank) - MM - FWY

Subregion

- Arroyo Verdugo Cities
- Central Los Angeles
- Gateway Cities
- North Los Angeles County
- Las Virgenes / Malibu
- San Fernando Valley
- San Gabriel Valley
- South Bay
- Westside Cities

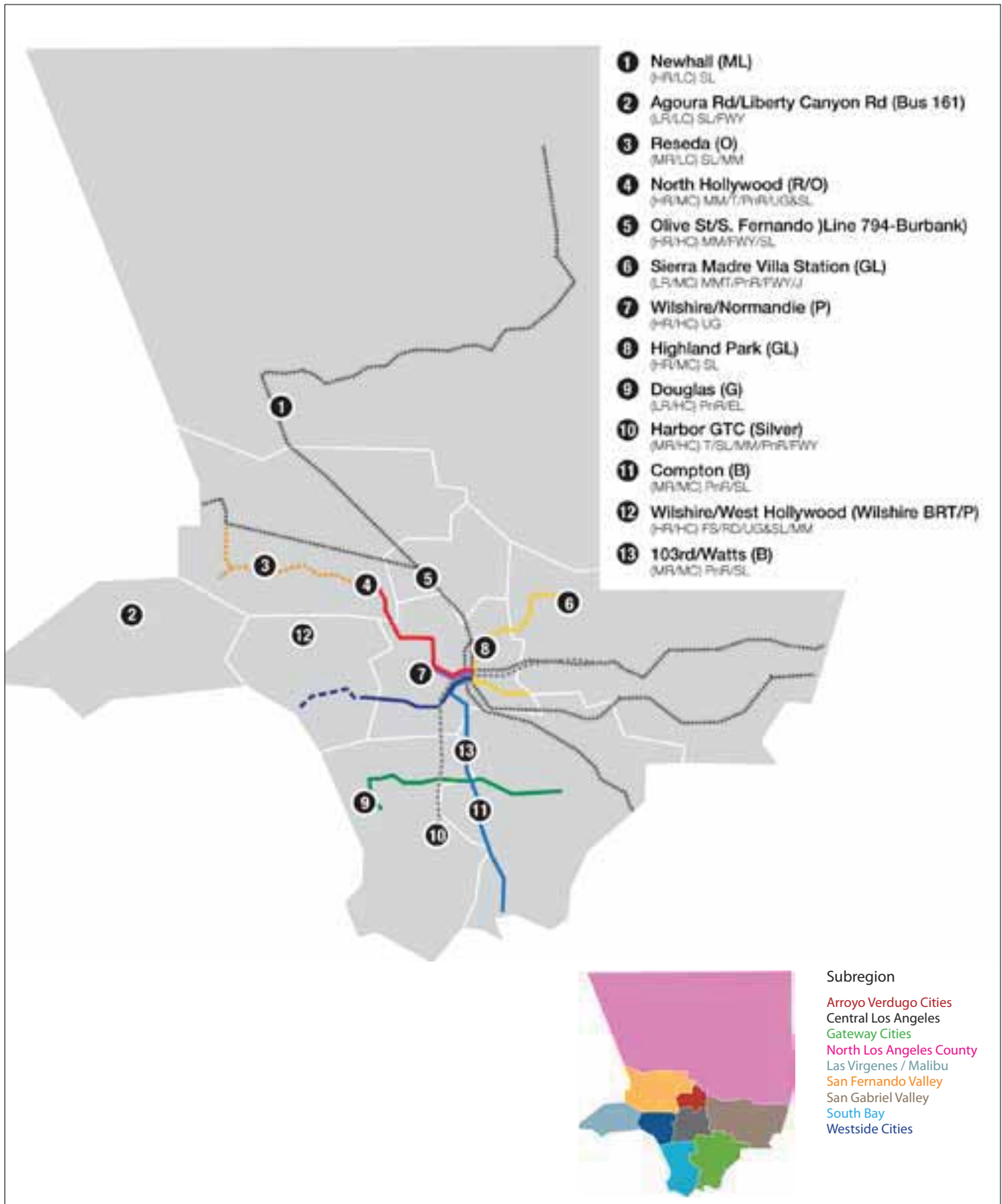
Transit Line

- (ML) Metrolink
- (B) Blue Line
- (E) Expo Line
- (G) Green Line
- (GL) Gold Line
- (O) Orange Line
- (P) Purple Line
- (R) Red Line
- (Silver) Silver Line
- (NB) Northbound
- (SB) Southbound

Special Considerations

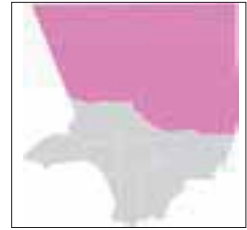
- (PnR) Park and Ride
- (T) Terminal
- Type of Station:
- (EL) Elevated
- (UG) Underground
- (SL) Street Level
- (MM) Serves more than one transit line/high number of stops in the immediate vicinity
- (FS) Future Station
- (RD) Regional Destination
- (J) Adjacent to, or on the border, or multiple jurisdictions

Exhibit 5 – Case Study Sites - Map



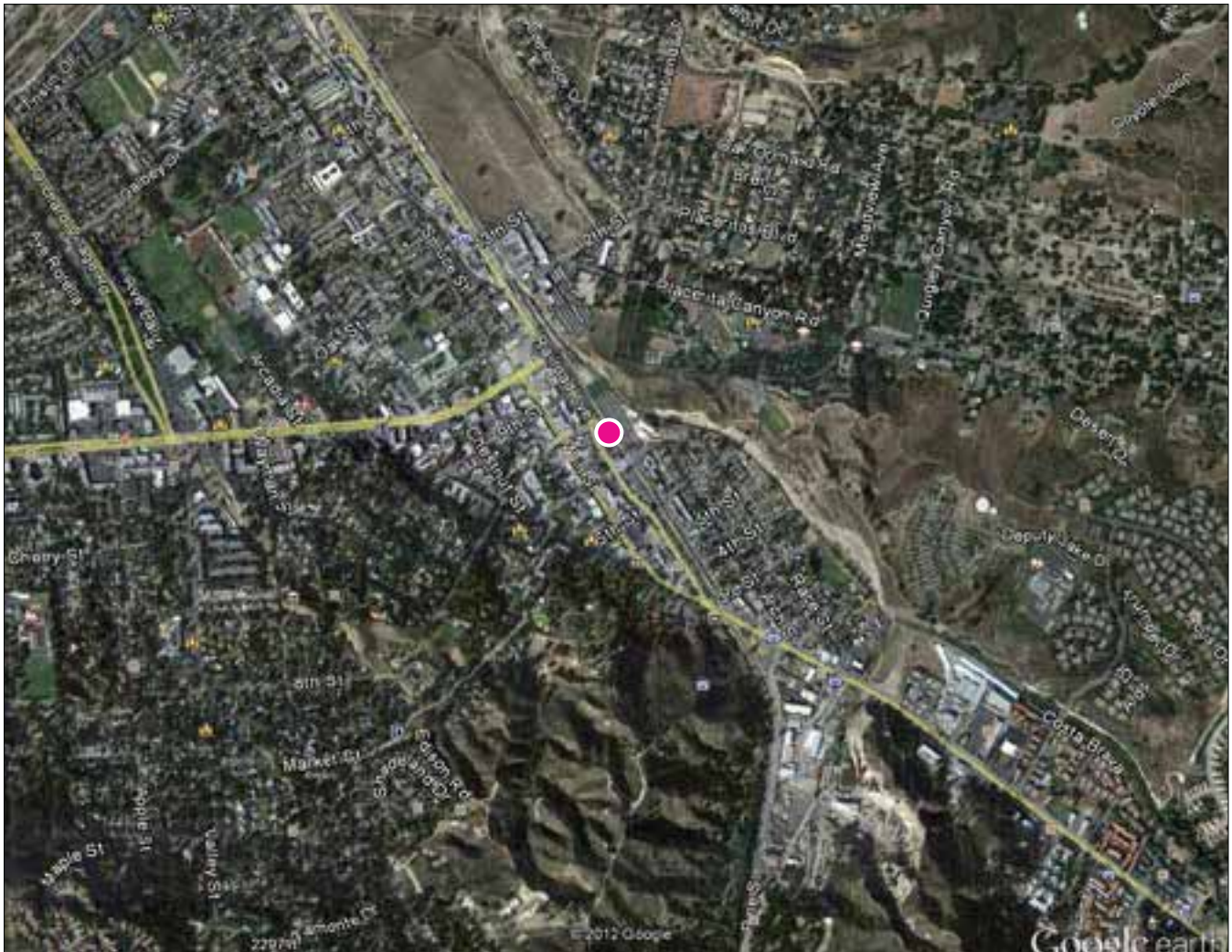
SITE 1: Newhall Metrolink Station

CSPP Place Type: High Residential/Low Centrality
 Metro Subregion: **North Los Angeles County**
 City: Santa Clarita
 Special Considerations: SL



CHARACTERISTICS

- Metrolink - Heavy Rail
- Street level, low ridership corridor
- Connection to Local Santa Clarita Transit, Commuter Express Lines and Amtrak California Thruway Bus
- 3 parking lots, over 300 spaces (150 park and ride spaces – Metrolink riders only)
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 14,290
 - From 1 to 2 miles: 26,150
 - From 2 to 3 miles: 21,820



SITE 2: Agoura Rd/Liberty Canyon Rd Bus Stop - Line 161

CSPP Place Type: Low Residential/Low Centrality
Metro Subregion: Las Virgenes/Malibu
City: Agoura Hills
Special Considerations: SL/FWY



CHARACTERISTICS

- Metro Local Bus
- Connection to Commuter Express
- Street level, low ridership
- Adjacent to freeway
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 15,780
 - From 1 to 2 miles: 7,070
 - From 2 to 3 miles: 3,620



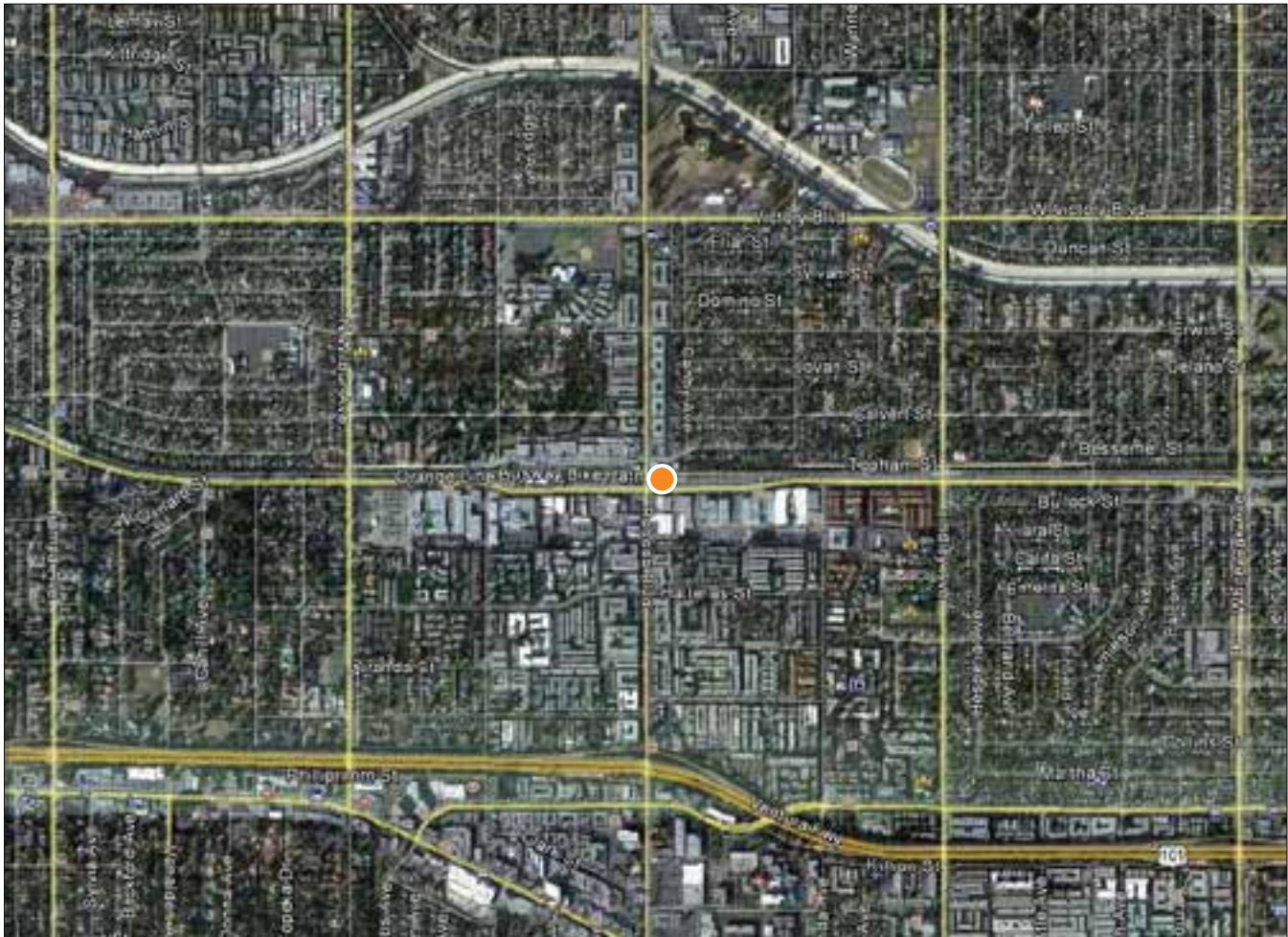
SITE 3: Reseda Orange Line Station

CSPP Place Type: Medium Residential/Low Centrality
 Metro Subregion: **San Fernando Valley**
 City: Los Angeles
 Special Considerations: SL/MM



CHARACTERISTICS

- BRT
- Street level station, high corridor ridership
- Proximity to freeway and block sizes are barriers
- Connection to Metro Local and Metro Rapid
- 522 park and ride spaces
- Orange Line Bike Path adjacent to station
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 34,990
 - From 1 to 2 miles: 69,300
 - From 2 to 3 miles: 87,860



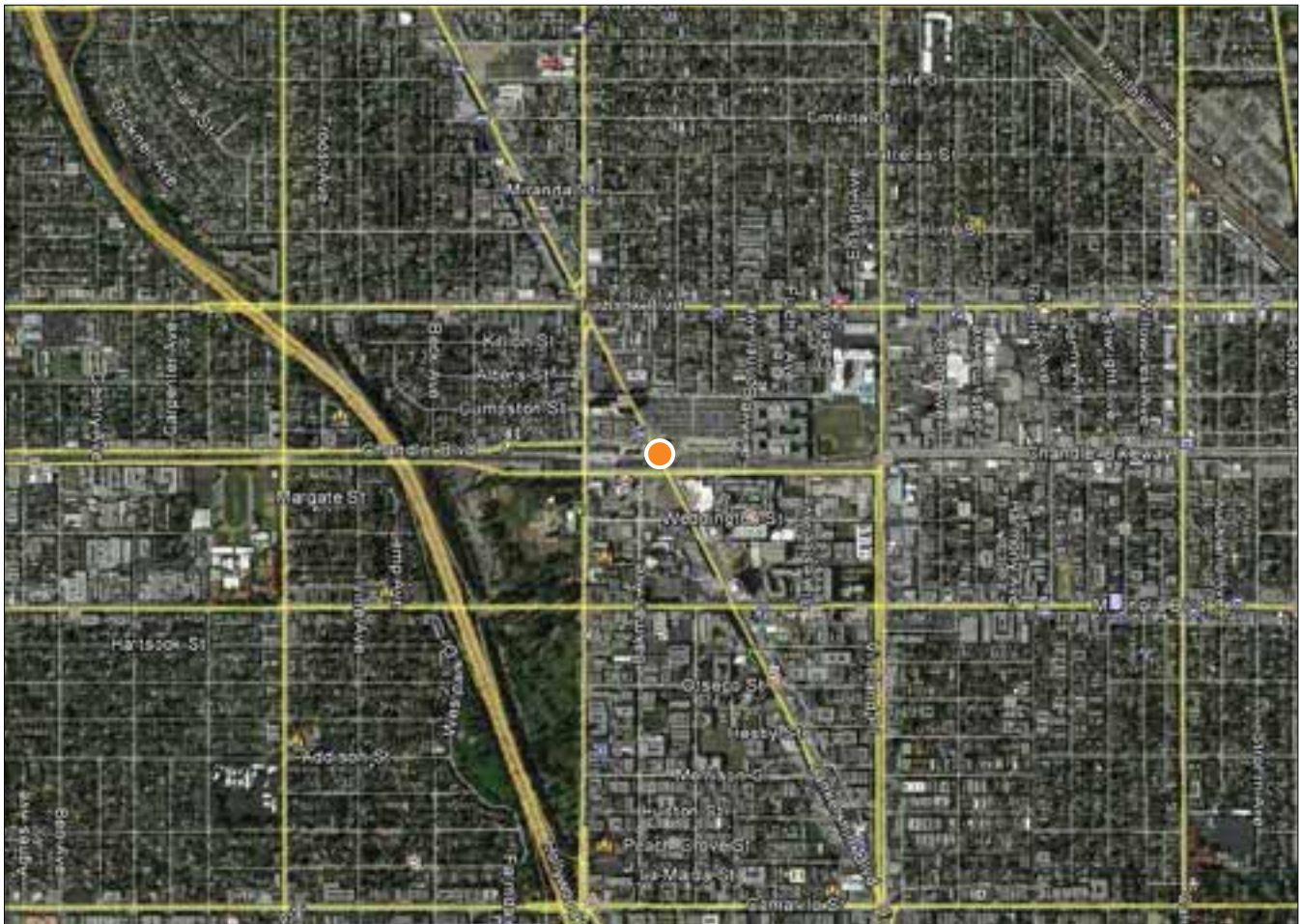
SITE 4: North Hollywood Red Line/Orange Line Station

CSPP Place Type: High Residential/Medium Centrality
 Metro Subregion: **San Fernando Valley**
 City: Los Angeles
 Special Considerations: MM/T/PnR/UG&SL



CHARACTERISTICS

- BRT/Heavy Rail, connection of two major transit lines
- Underground and street level station, high corridor ridership
- Terminus station for Metro Orange Line (surface) and Metro Red Line (underground)
- Proximity to freeway is a barrier
- Connection to Metro Local, Santa Clarita Transit, Burbank Bus, LADOT Commuter Express
- 1904 park and ride spaces
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 44,810
 - From 1 to 2 miles: 98,600
 - From 2 to 3 miles: 109,800



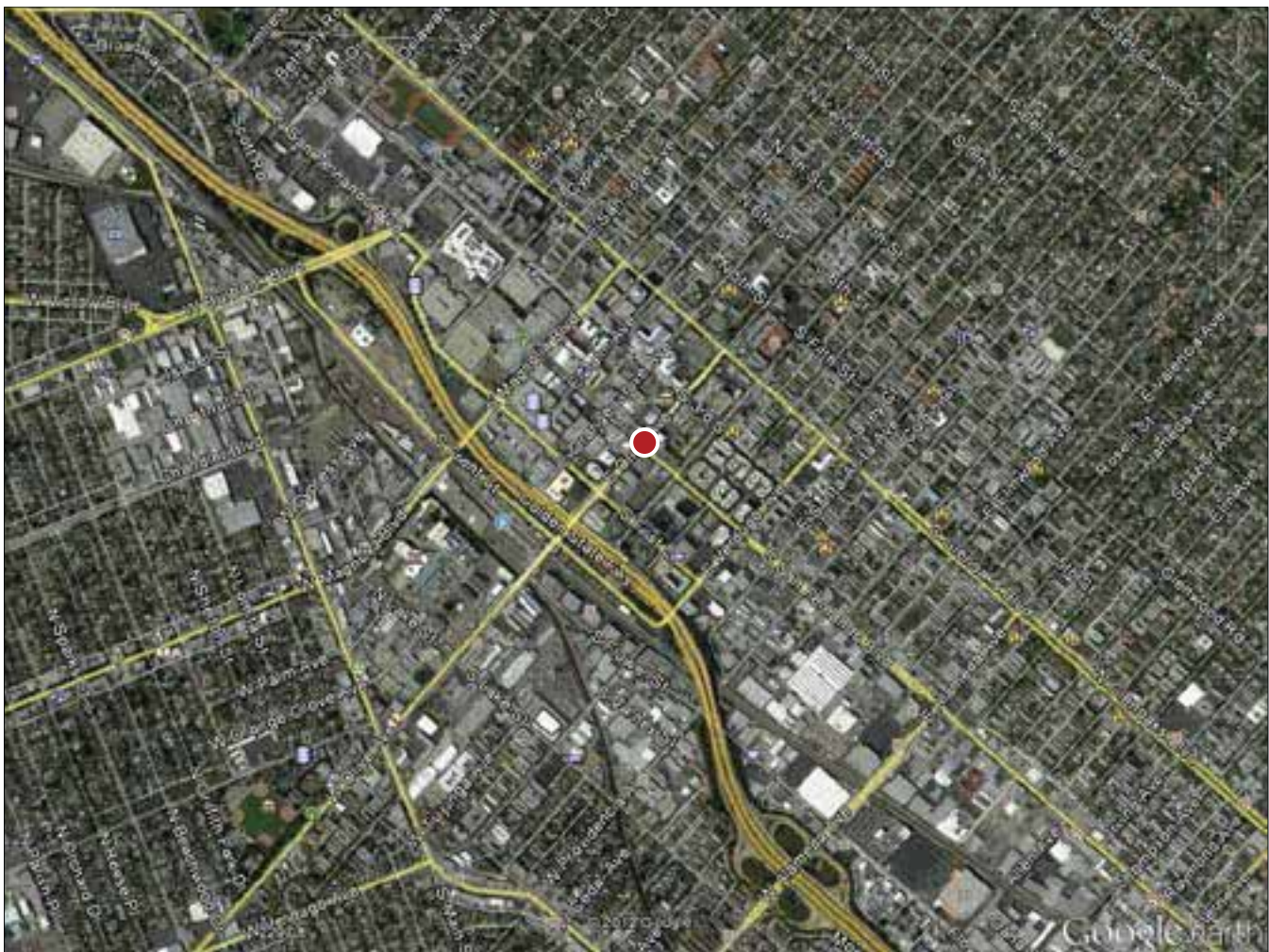
SITE 5: Olive Street/San Fernando Bus Line Stop - Line 794

CSPP Place Type: High Residential/High Centrality
 Metro Subregion: **Arroyo Verdugo Cities**
 City: Burbank
 Special Considerations: MM/FWY/SL



CHARACTERISTICS

- Rapid Bus
- Street level
- Proximity to I-5 is a barrier
- Connection to Metro Local bus lines
- Close proximity to Downtown Burbank Metrolink Station
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 37,700
 - From 1 to 2 miles: 58,200
 - From 2 to 3 miles: 54,300



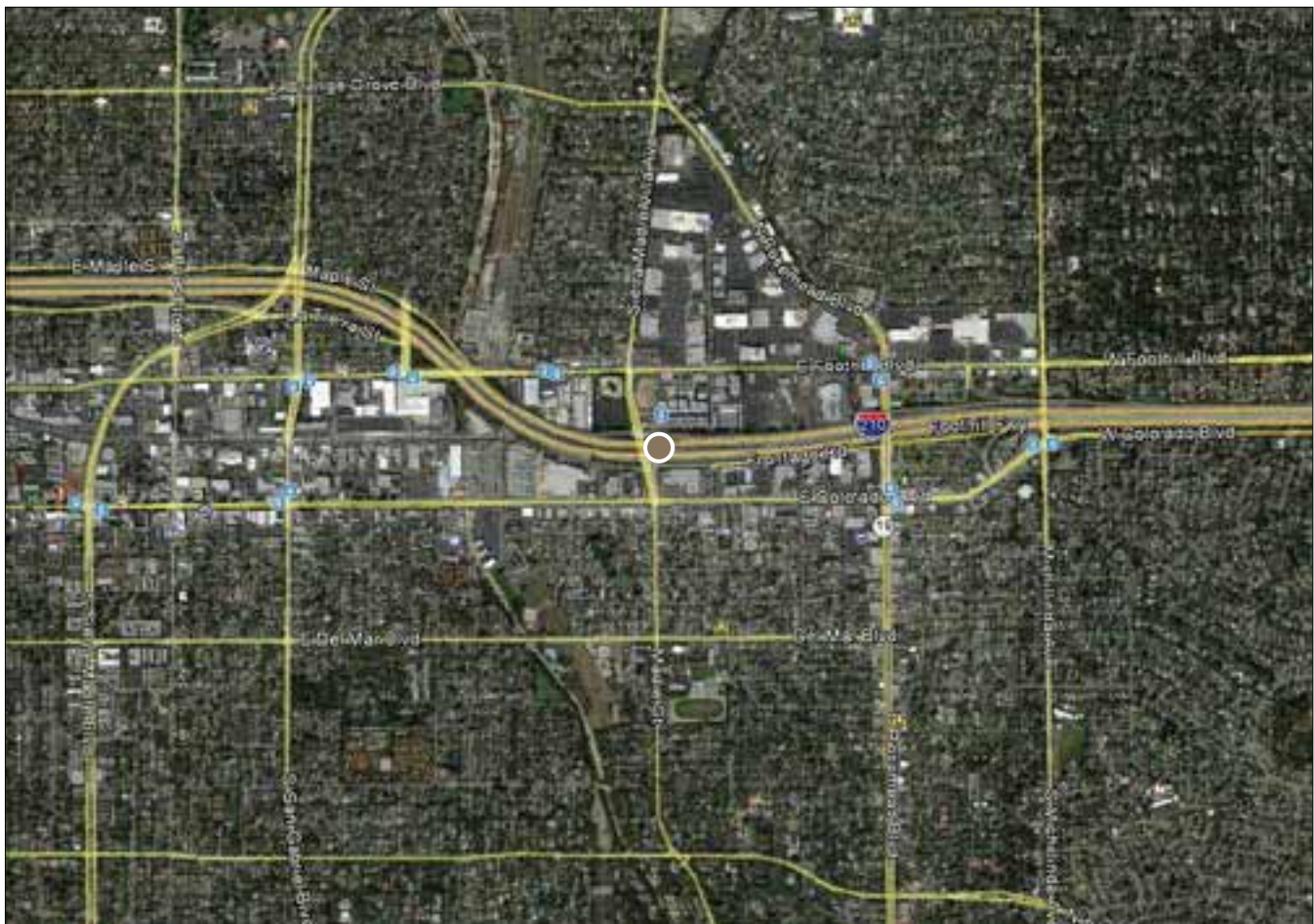
SITE 6: Sierra Madre Villa Gold Line Station

CSPP Place Type: Low Residential/Medium Centrality
 Metro Subregion: San Gabriel Valley
 City: Pasadena
 Special Considerations: MM/T/PnR/FWY/J



CHARACTERISTICS

- LRT
- Freeway-median station (210 Freeway)
- Elevated above Sierra Madre Villa Avenue, high corridor ridership
- Current terminus station for the Gold Line
- Connection to Metro Local, Metro Express, Foothill Transit, Pasadena ARTS and other city shuttle service
- 1026 parking spaces
- Adjacent to unincorporated LA County (East Pasadena)
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 13,720
 - From 1 to 2 miles: 57,000
 - From 2 to 3 miles: 80,000



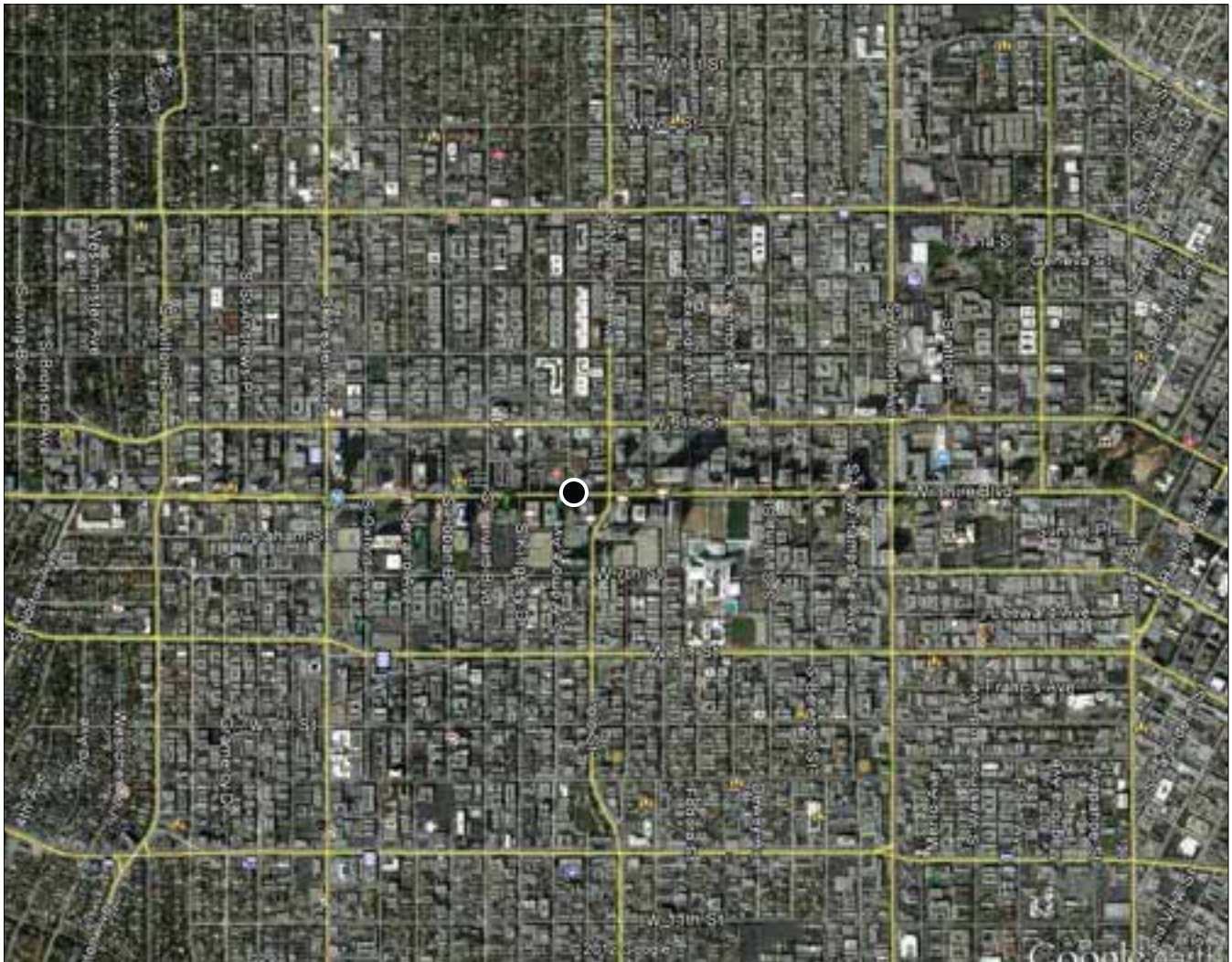
SITE 7: Wilshire/Normandie Purple Line Station

CSPP Place Type: High Residential/High Centrality
 Metro Subregion: Central Los Angeles
 City: Los Angeles
 Special Considerations: UG



CHARACTERISTICS

- Heavy rail
- Underground and street level station, low corridor ridership
- Connection to Metro Local, Metro Rapid and Foothill Transit
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 125,220
 - From 1 to 2 miles: 227,290
 - From 2 to 3 miles: 266,070



SITE 8: Highland Park Gold Line Station

CSPP Place Type: High Residential/Medium Centrality
 Metro Subregion: Central Los Angeles
 City: Los Angeles
 Special Considerations: SL



CHARACTERISTICS

- LRT
- Street level, high corridor ridership
- Proximity to freeway and block sizes are barriers
- Connection to Metro Local, LA DOT DASH
- 145 park and ride spaces
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 45,540
 - From 1 to 2 miles: 80,400
 - From 2 to 3 miles: 129,800



SITE 9: Douglas Green Line Station

CSPP Place Type: Low Residential/High Centrality
 Metro Subregion: Central Los Angeles
 City: El Segundo
 Special Considerations: EL/PnR



CHARACTERISTICS

- LRT
- Elevated
- Connection to Metro Local, Beach Cities Transit and Amtrak Thruway
- 30 park and ride spaces
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 8,150
 - From 1 to 2 miles: 72,750
 - From 2 to 3 miles: 152,540



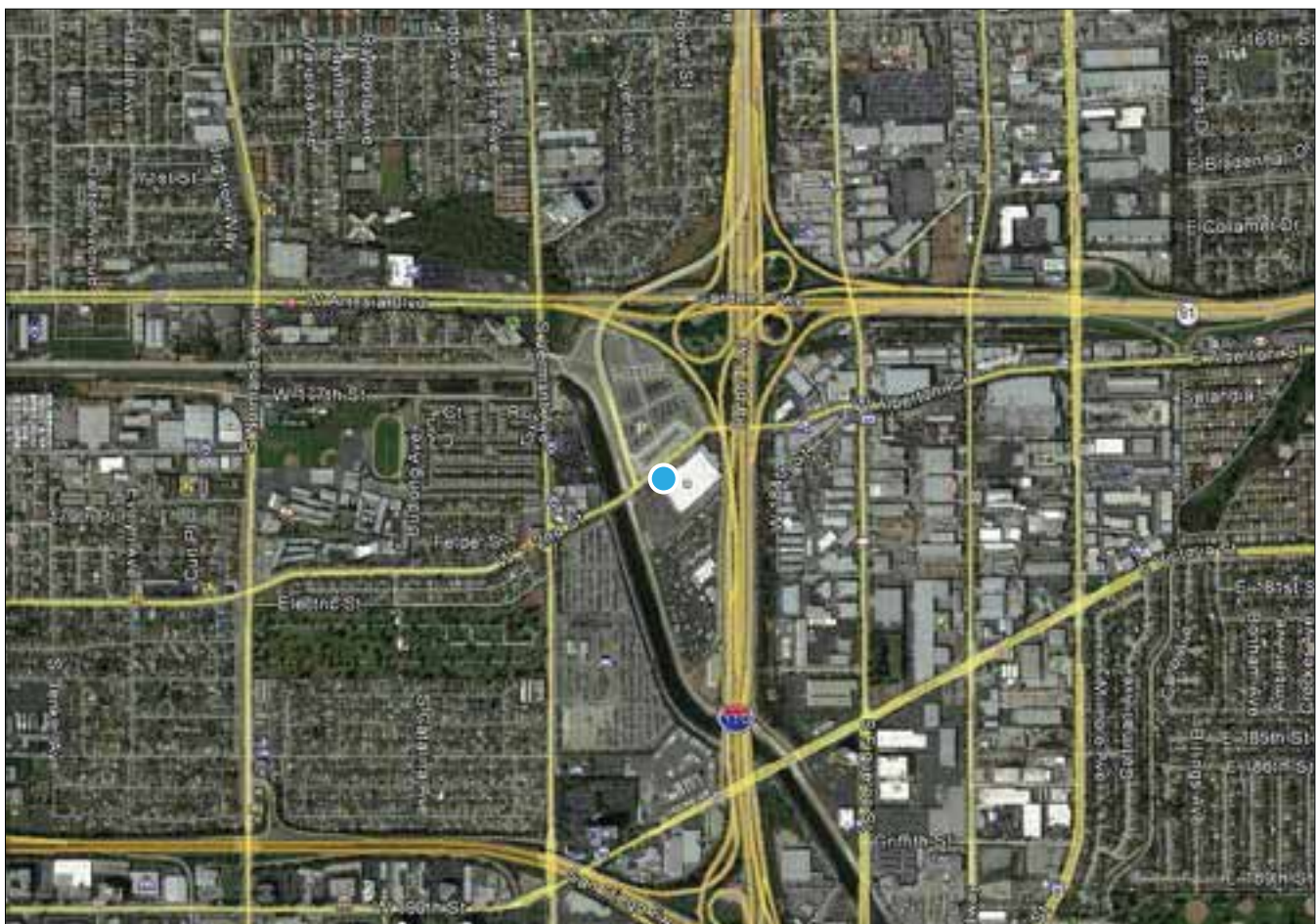
SITE 10: Harbor Gateway Transit Center (Artesia Transit Center) Silver Line Station

CSPP Place Type: Medium Residential/High Centrality
 Metro Subregion: **South Bay**
 City: Los Angeles
 Special Considerations: SL/T/MM/PnR/FWY



CHARACTERISTICS

- Street level
- Terminus line
- Connection to Metro Express, Metro Local, Torrance, Carson and Gardena local lines
- 980 park and ride spaces
- Adjacent to freeway
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 14,980
 - From 1 to 2 miles: 49,860
 - From 2 to 3 miles: 110,160



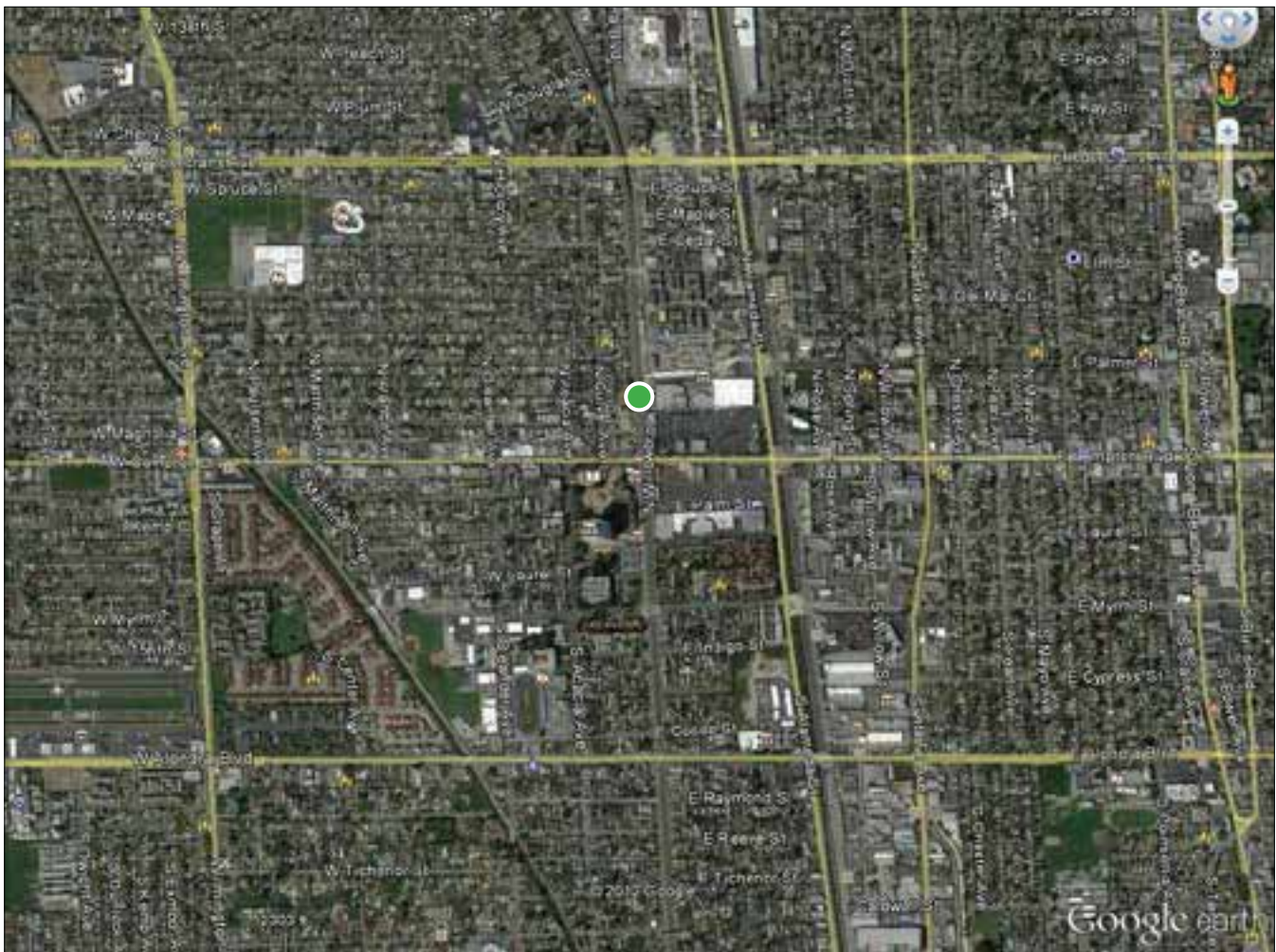
SITE 11: Compton Blue Line Station

CSPP Place Type: Medium Residential/Medium Centrality
 Metro Subregion: Gateway Cities
 City: Compton
 Special Considerations: SL/PnR



CHARACTERISTICS

- LRT
- Street level, moderate corridor ridership
- Proximity to MLK Transit Center
- Connections to Metro Local, Compton Renaissance, and Gardena Transit Service
- 196 park and ride spaces
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 43,529
 - From 1 to 2 miles: 104,431
 - From 2 to 3 miles: 132,333



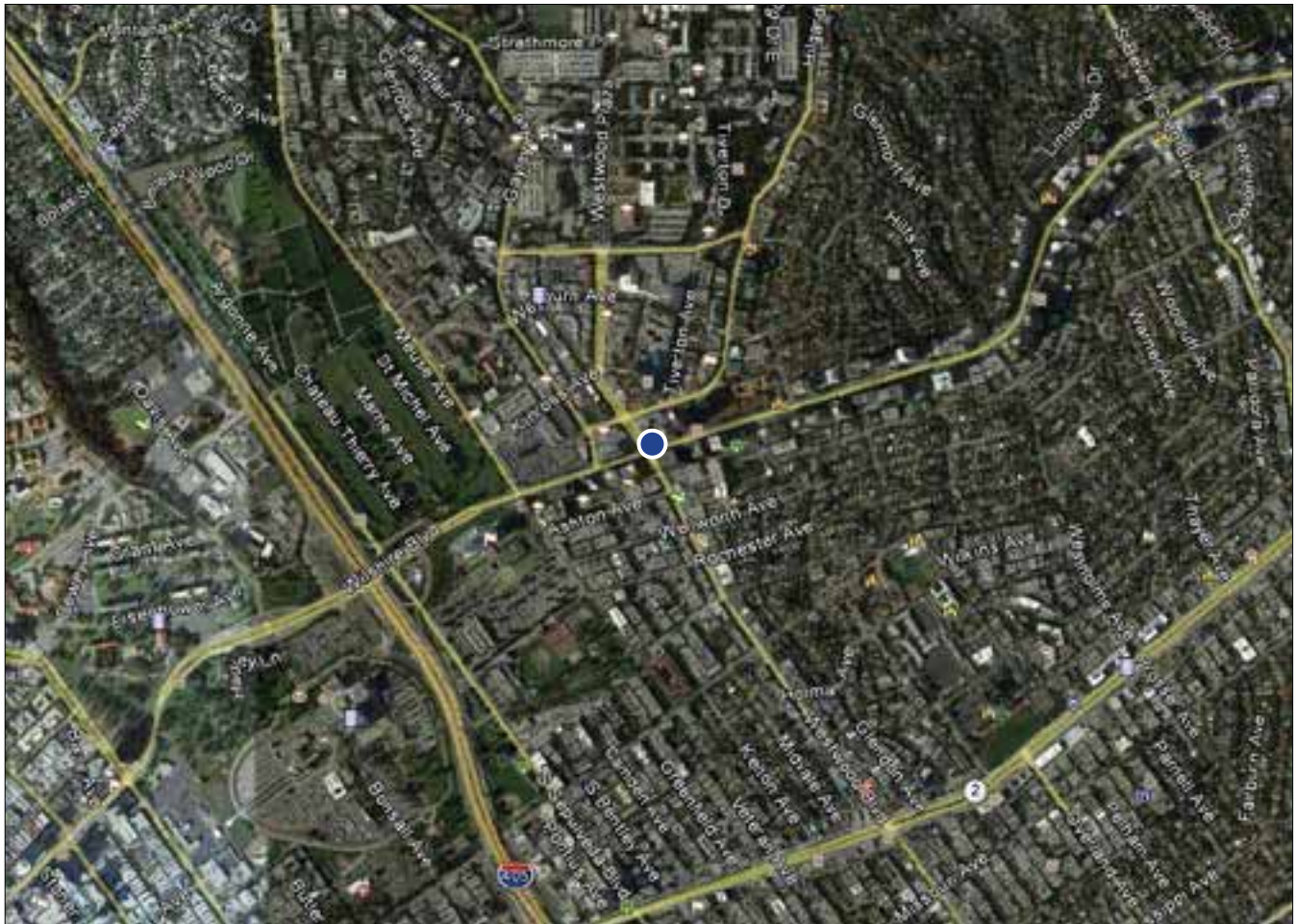
SITE 12: Wilshire/Westwood Wilshire BRT

CSPP Place Type: Medium Residential/Medium Centrality
 Metro Subregion: **Westside Cities**
 City: Los Angeles
 Special Considerations: MM/FS/RD/UG&SL



CHARACTERISTICS

- BRT/Heavy Rail
- Street level and underground station, moderate corridor ridership (projection)
- 405 Freeway within 0.5 mile
- Proximity to UCLA
- Future
- Connectivity to Local and Rapid lines
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 45,880
 - From 1 to 2 miles: 82,460
 - From 2 to 3 miles: 90,330



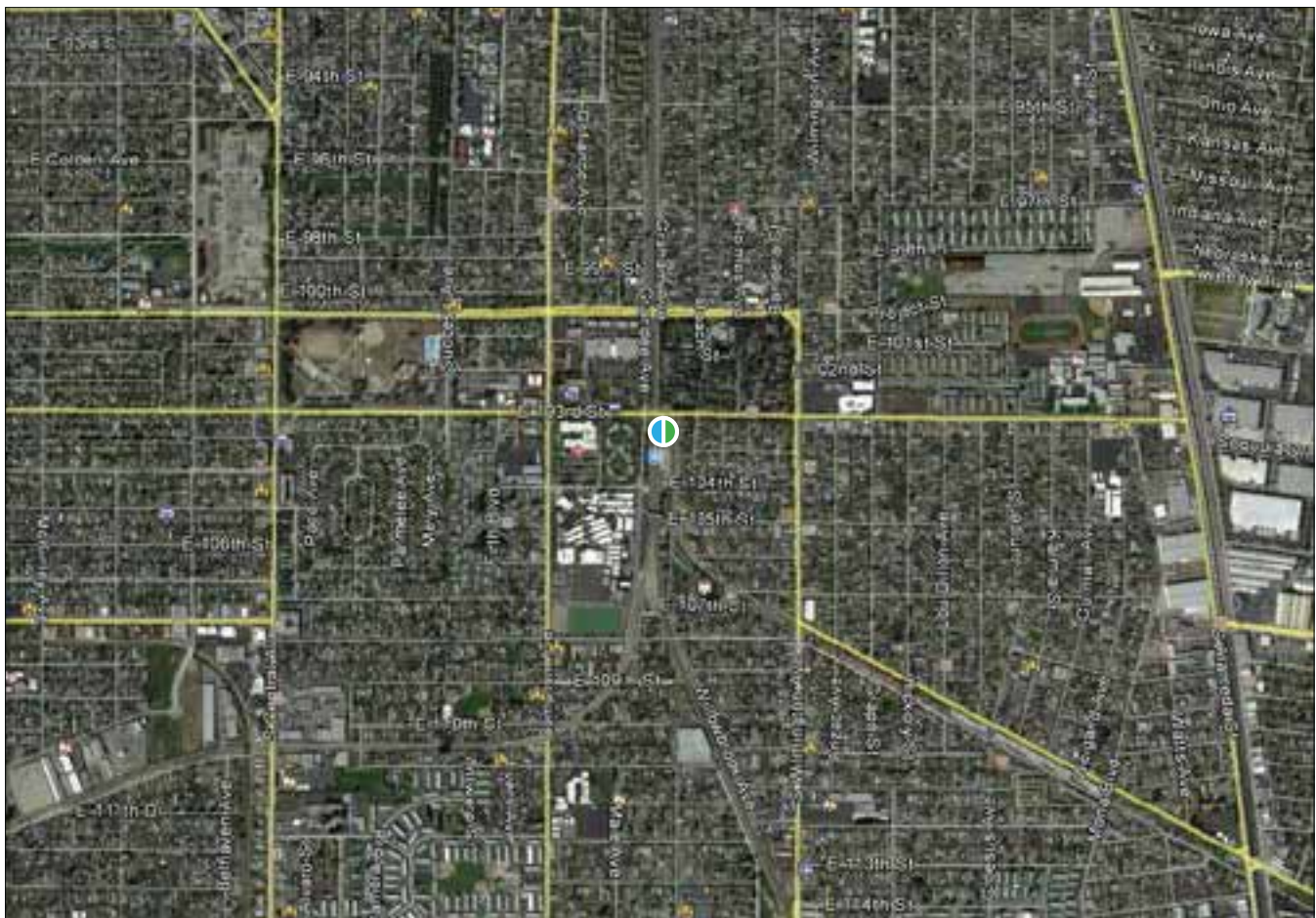
SITE 13: 103rd/Watts Blue Line Station

CSPP Place Type: Medium Residential/Medium Centrality
 Metro Subregion: **South Bay/ Gateway Cities**
 City: Los Angeles
 Special Considerations: SL/PnR



CHARACTERISTICS

- LRT
- Street level, moderate corridor ridership
- Next to/within railroad ROW
- Proximity to railroad and block sizes are barriers
- Nearby destinations: Watts Health Center, Greater El Monte Community Hospital
- Connections to Metro Local and LADOT DASH service
- 62 park and ride spaces
- Population in the vicinity of the station (2010 Census)
 - Within 1 mile: 52,560
 - From 1 to 2 miles: 146,380
 - From 2 to 3 miles: 258,290





Case Study Sites

Research and Analysis

To better understand the unique challenges of each station area chosen during the Site Selection Phase, each case study site selected was evaluated at both a “macro” and “micro” level. The intent of the preliminary station analysis was to perform an overall survey of conditions and characteristics of neighborhoods immediately surrounding the

selected station areas. This analysis involved mapping, compiling, and overlaying various layers of station-specific data that illuminated existing conditions within a ½-mile radius of the station area. The ½-mile radius has been defined as an average 10-minute walk for pedestrians, and serves as the primary catchment area for first/last mile transit

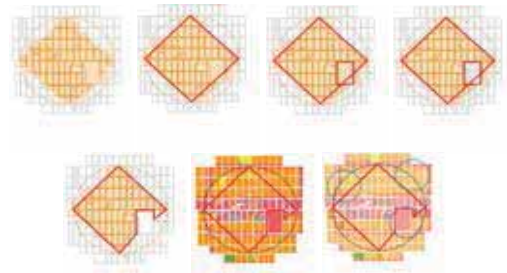
Station Analysis

1



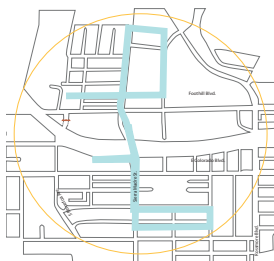
Overlay Maps

2



Walking Route

3



Identify Issues

4

Site Visit (Station Survey)



Design Guidelines Toolbox



6

5

1. Preliminary Station Analysis

The following access-related station area characteristics were analyzed at the 1/2-mile radius:



Points of Interest

The Points of Interest map highlights key sites located within the 1/2-mile radius of the station and infers logical routes between the station area and these interest points. Analyzing these routes better defined potential transit users. Key points of interest included schools, event centers, public institutions, parks, and any other local attractions to the transit catchment area.



Street Grid

The Street Grid map illuminates the street and block network surrounding station areas. This grid shows areas that lack connectivity, logical pathways, and/or create obstacles for site navigation. The map also doubles as a base map for the station analysis that follows.



Pedestrian Shed

The Pedestrian Shed map graphically displays the level of pedestrian accessibility for each station area. With the transit station as a starting point, all 1/2-mile routes based on the street grid were mapped and then consolidated into a larger catchment shape. The pedestrian shed begins to call out limitations to access as a result of each station's unique street grid. A diamond shaped pedestrian shed is ideal (as it provides the most extensive connections for non-vehicular travelers).



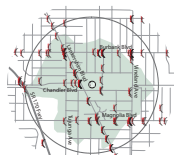
High Vehicular Speeds

The High Vehicular Speeds map shows potential areas that would cause safety concerns for pedestrians and bicyclists. Speeds that average higher than 35 mph are shown.



Key Transit Access Corridors

Key Transit Access Corridors are graphic depictions of Metro's Origin/Destination study. These maps graphically represent the logical pedestrian routes frequently utilized by transit users.



Collision Severity and Location

The Collision Severity and Location map begins to show key intersections where high rates of pedestrian and bicycle collisions exist.



Land Use Map

The Land Use Map depicts concentrations of land use within each 1/2-mile radius. The land use map highlights the types and characteristics of users that are able to comfortably access the locations surrounding the station.



Bicycle Connections

All infrastructure dedicated to bicycles in the roadway are shown in the Bicycle Connections map. This generally includes: existing bike lanes, sharrows, separated bike facilities, bike ‘friendly streets (in some areas where cities have defined this as a category), future bike routes, etc.



Transit Connections

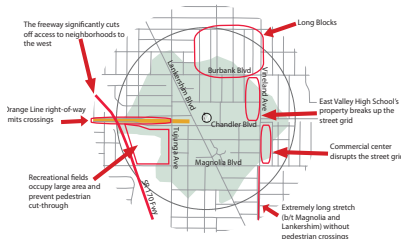
Using Metro data, routes of all transit modes are mapped within the 1/2-mile radius. This includes: all bus lines, light and heavy rail, and any other transit lines serving the station area.

Statistics

The following statistics were extracted from each station area to provide an overview of the site: average block length, intersection density, walk score, overlay zones, density, employment, and journey to work.

2. Access Barriers Overlay Map

After compiling the information collected during the macro-level station area analysis, the maps described above were overlaid to show potential areas of intervention. The overlays described below provided substantial information that informed on-the-ground analysis.



Overlay land use and pedestrian shed map

To begin, the station land use map was overlaid with the pedestrian shed map. Here, any holes that existed within the 1/2-mile radius that would provide a logical origin/destination user was highlighted. For example, where there were heavy residential land uses on an area of the map that did not connect to the 1/2 mile pedestrian shed, a note was made, and the area was highlighted.

Overlay land use and bike connections map

The second step was to overlay the station land use map with the bicycle connections map. Here, any holes that existed within the 1/2-mile radius that would provide a logical origin/destination user was highlighted. The holes shown in these maps accounted for any areas that were missing connections to potentially heavy usage by bike riders.

All highlighted areas were then synthesized. These maps informed the basis for routing the site visit.

3. Determine walking route

Pulling from all highlighted areas from the overlay maps described above, walking routes were drawn that addressed potential improvement areas. As such, the walking route directly responded to potential problems or opportunity areas seen in the macro-level analysis and allowed for a more detailed on-the-ground analysis.

4. Site Visit - Station Survey

The site visit offered the opportunity to begin micro-level analysis, and to begin to assess areas of intervention.

For station specific analysis, a set of evaluation criteria and questions were written to consider current and future access needs and opportunities at each representative station/stop area. These questions were written as a survey checklist form. Mainly qualitative, these checklists measured performance of each station/stop area. With the end goal of increasing transit ridership, urban design elements that are most important for rider comfort and system function were added to the survey tool.

The sample checklist (see Appendix) was prepared as a guide for on-the-ground analysis of each station area. While initially prepared for the case sites selected for the First/Last Mile, the format of the checklist is broad, and touches upon a range of issues faced by most station areas in the study region. As such, this checklist can be used to evaluate a wide range of stations in the area.

The checklist is designed to broadly assess: 1) safety elements, 2) aesthetics, and 3) accessibility within a station area. Each of these categories account for multi-modal experiences for all types of transit users. The results are keyed to a scoring tool that allows for comparison between stations. The scoring matrix below outlines the ranking system for each station area.

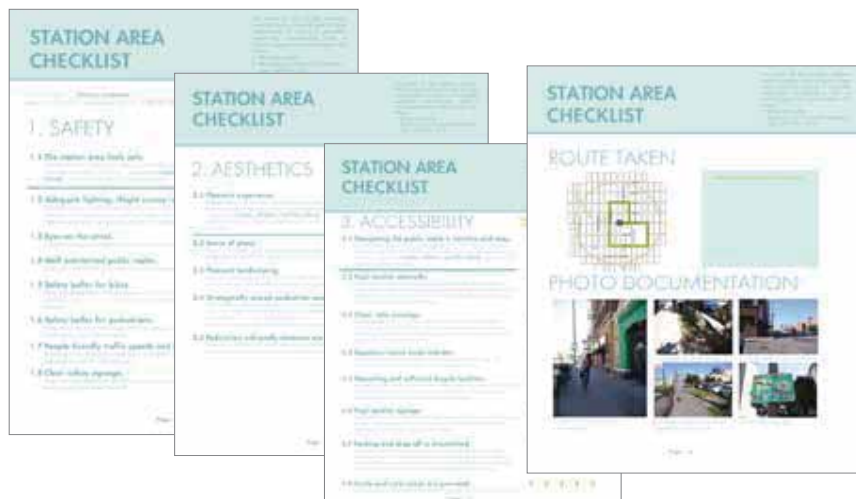
In addition to assessing the physical conditions of the environment, overall observations were also made that record how people move to and from the stations themselves. This analysis is supplemented by photo documentation, and an open-answer area for additional information gathered during the site visit.

Using this checklist, each station area has been visited, evaluated, and summarized in the pages that follow.

Scoring Matrix

1-1.99	Poor
2-2.99	Fair
3-3.99	Good
4-5	Excellent

Checklist (see Appendix)



5. Identify Issues

From each surveyed station area, key issues are then identified. The synthesized data for each station area is documented in the pages that follow.

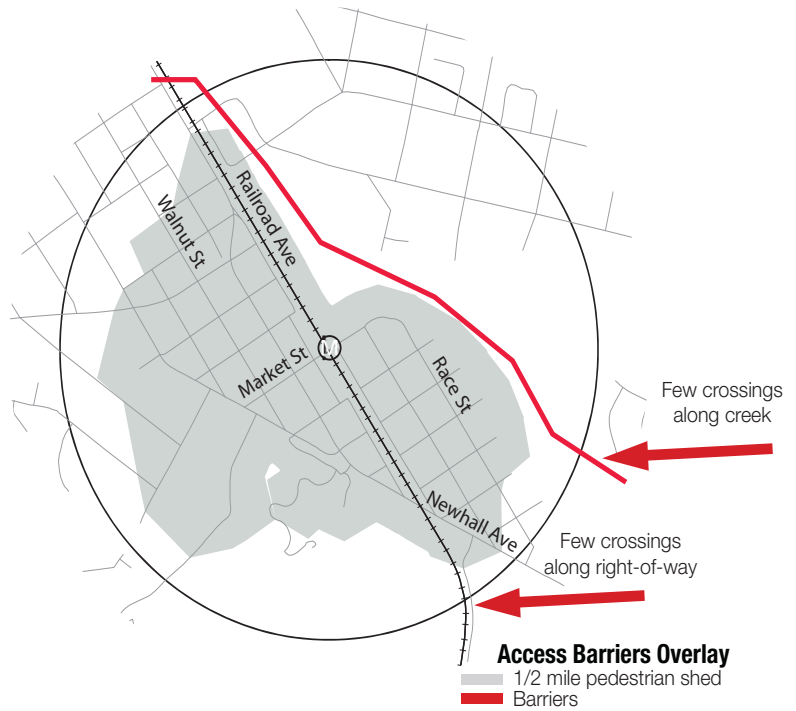
SITE 1: Newhall Metrolink Station

CSPP Place Type: **Cluster A; High Residential/Low Centrality**
 City: **Santa Clarita**
 Special Considerations: **SL**



Safety Rating: 3.33/5 (Good*)
 Aesthetics Rating: 3.4/5 (Good*)
 Accessibility Rating: 2.43/5 (Fair*)

*Based on Checklist Rating Matrix



Opportunities Observed at Newhall Metrolink Station

Main Street is the heart of Old Town Newhall and is one block west of the Metrolink station. Main Street has been beautifully re-constructed per the vision outlined in the Downtown Newhall Specific Plan. A wide range of pedestrian oriented treatments along Main Street have been built, including brick paving, wood decked boardwalks at corners, mid-block crossing, traffic calming, intersection bulb-outs, appropriately scaled landscaping and street furnishings. The improvements could extend one block east along Market Street to strengthen the pedestrian link to the Metrolink Station.

The station area is composed of three distinct 'neighborhood islands'. There is a tranquil community of single family dwellings to the southeast of the tracks bounded by the tracks to the north and west, Newhall Creek to the east, and Newhall Avenue to the south. Main Street itself is flanked by small apartment buildings and anchored by a new library. The third neighborhood island in the station area is to the north of Lyon Ave.

Issues Observed at Newhall Station

Safety

- Pedestrian safety concerns with regard to: traffic volumes, speeds and crossing times / distances along Railroad Ave., Lyons Ave., and Newhall Ave.

Aesthetics

- No issues to report

Accessibility

- Crossings across Railroad Avenue are limited
- Crossing at Market and Main Street has very long signal cycle time, and no pedestrian prioritization
- No accessible path for residents who live east of the tracks, or for pedestrians crossing to the south side of the street
- Long pedestrian crossing and short traffic signal cycle at Lyons Ave and Newhall intersection
- No pedestrian signage for Metrolink beyond the station site itself
- Bike facilities not observed

SITE 1: Newhall Metrolink Station

Points of Interest



INSTITUTIONS

- 1 Newhall DMV
- 2 Newhall Library
- 3 Senior Center
- 4 LA County Community Center

5 Santa Clarita Community Center

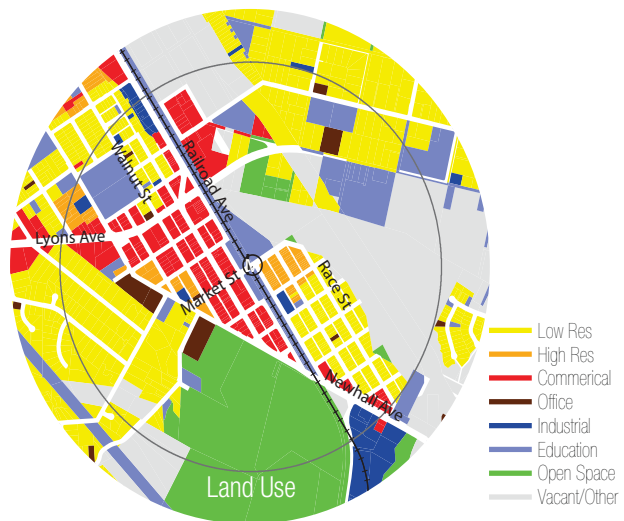
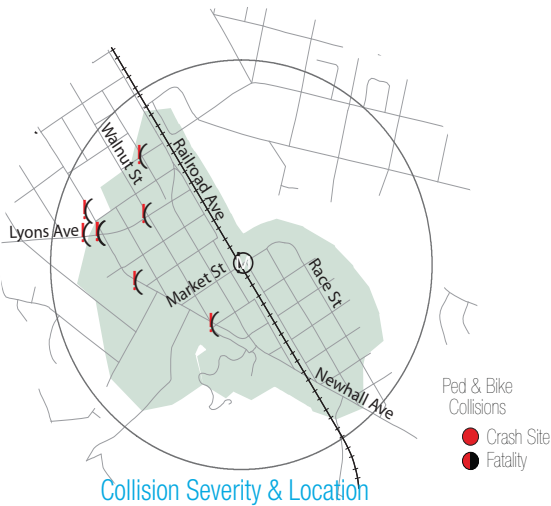
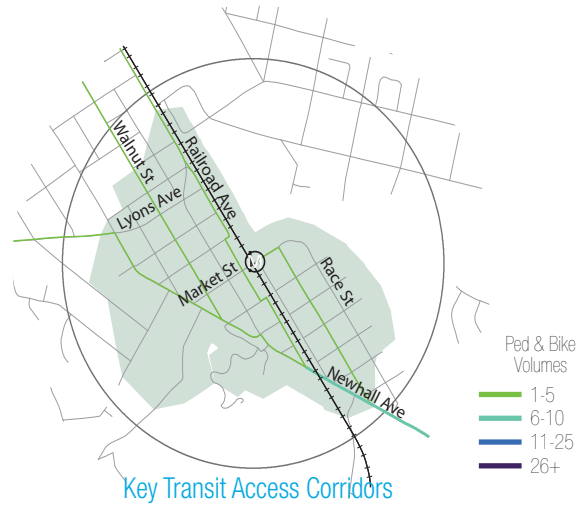
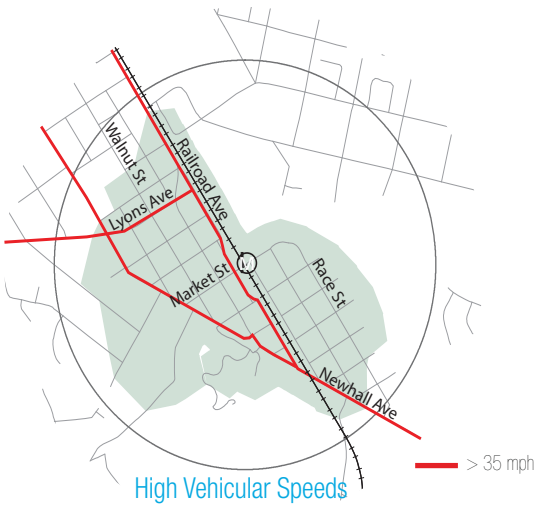
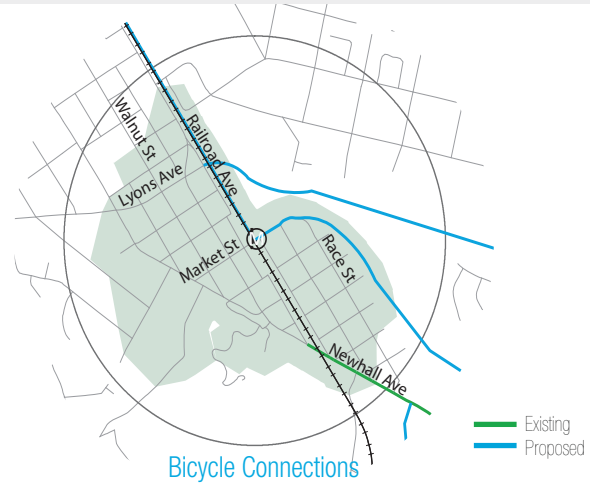
SCHOOLS

- 6 Newhall Elementary
- 7 Town & Country Farm School
- 8 The Master's College

PARKS

- 9 William S. Hart Park
- 10 Creekview Park

SITE 1: Newhall Metrolink Station











Walk Score: 78 / Overlay Zones: N/A / Density: 4,331 total population / Employment: 3.65 jobs per acre / Journey to Work: 23.2% take transit/bike/walk to work



SITE 1: Newhall Metrolink Station

LA Metro First-Last Mile Strategic Plan Newhall Metrolink Station
Transit and Bicycle Network

KEY TRANSIT LINES
 Metrolink

BICYCLE FACILITIES

Existing	Proposed
 Bike Path	 Bike Path
 Bike Lane	 Bike Lane
 Bike Route	 Bike Route
 Cycletrack	 Cycletrack

 3-Mile Buffer
 Major Destination

0 1.5 3 Miles

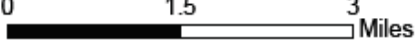
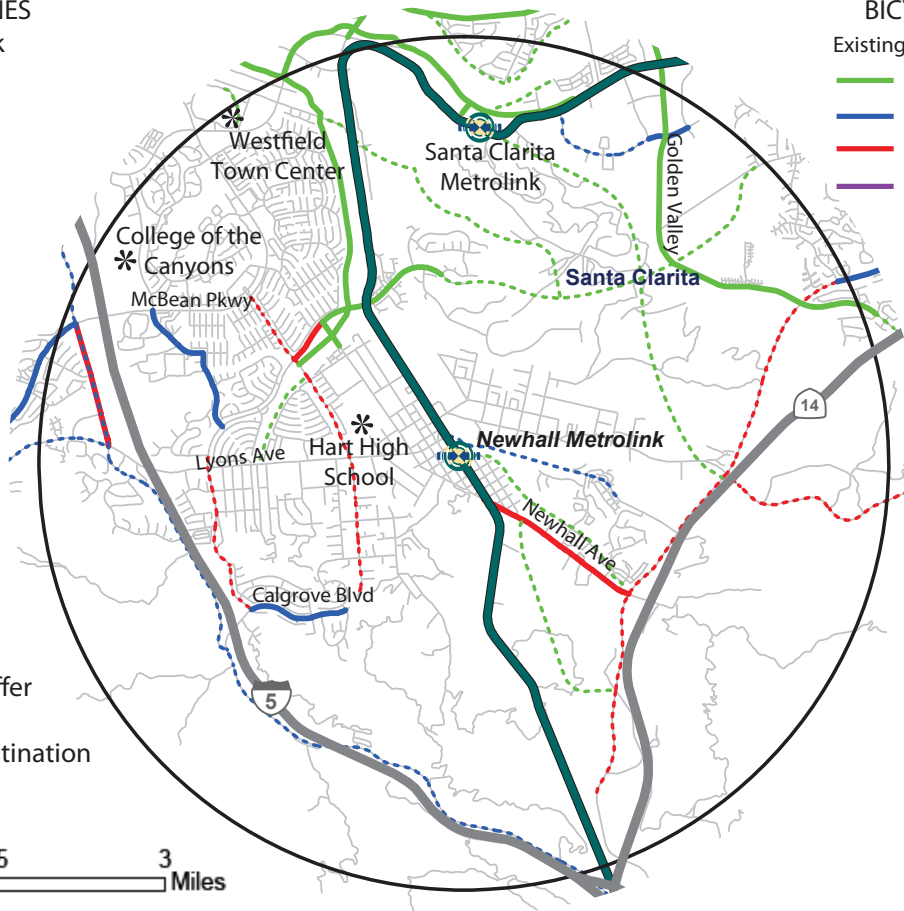



PHOTO DOCUMENTATION

*Photos are keyed to checklist (see Appendix)

SITE 1: Newhall Metrolink Station



2.3 Vehicular-oriented residential neighborhood with limited pedestrian amenities



3.1 Pedestrian crossing at Railroad & Newhall Ave is not friendly



3.1 Discontinuous sidewalk along Newhall Ave. approaching Lyon Ave.



3.2 Non-accessible pedestrian path across tracks

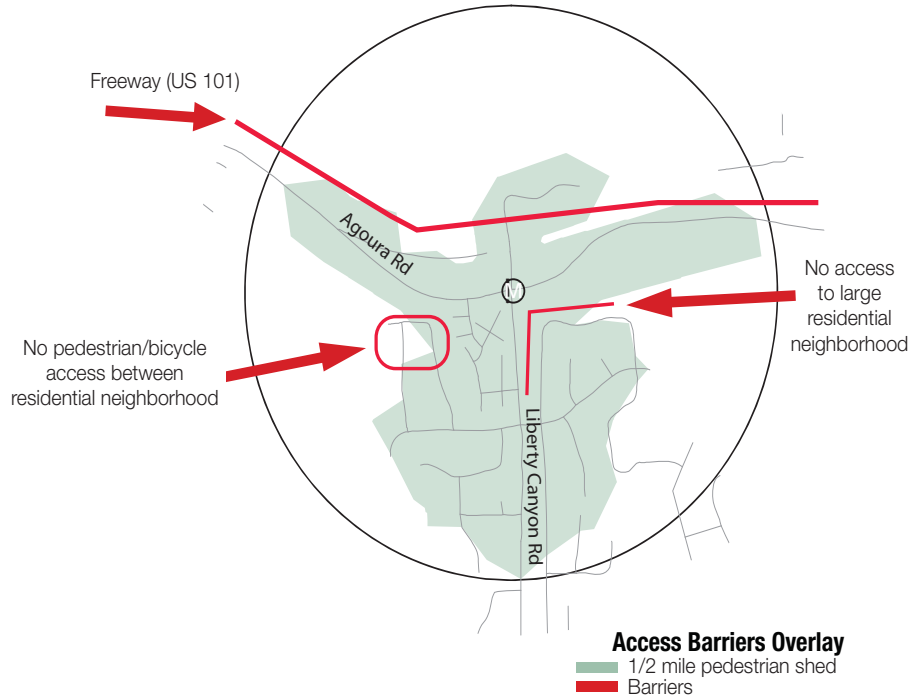
SITE 2: Agoura Rd/Liberty Canyon Rd Bus Stop - Line 161

CSPP Place Type: **Cluster B; Low Residential/Low Centrality**
 City: **Agoura Hills**
 Special Considerations: **SL/FWY**



Safety Rating: 3.86/5 (Good*)
 Aesthetics Rating: 3.6/5 (Good*)
 Accessibility Rating: 3.67/5 (Fair*)

*Based on Checklist Rating Matrix



Opportunities Observed at Agoura Rd/Liberty Canyon Rd Bus Stop

Metro Line 161 connects Thousand Oaks to Warner Center traveling primarily along the 101 corridor. The Agoura Rd/Liberty Canyon stop services a small pocket of residential development located to the south of the stop. The streets and walks are well-maintained and free of obstruction. Traffic speeds tend to be higher due to the open nature of the roads. There are some painted bike facilities and the streets are wide enough to provide plenty of safe manoeuvring space for bikes and pedestrians. The bus stop is provided with a bench and a sign post.

Issues Observed at Agoura Rd/Liberty Canyon Rd Bus Stop

- Safety
- Traffic speeds along Agoura Road are high, but in-line with the type of development in the area
- Aesthetics
- Station itself is lacking shade amenities
 - Station area is pleasant though uneventful
 - Auto-oriented
- Accessibility
- No issues to report

SITE 2: Agoura Rd/Liberty Canyon Rd Bus Stop - Line 161

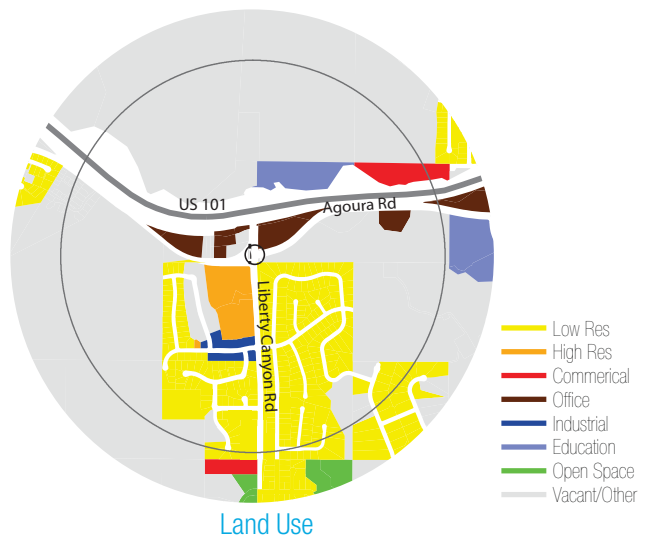
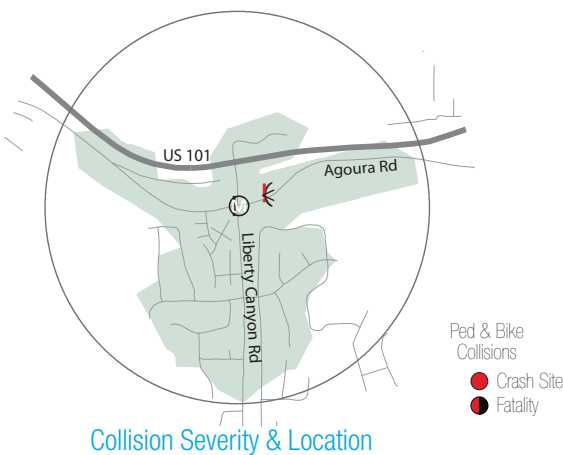
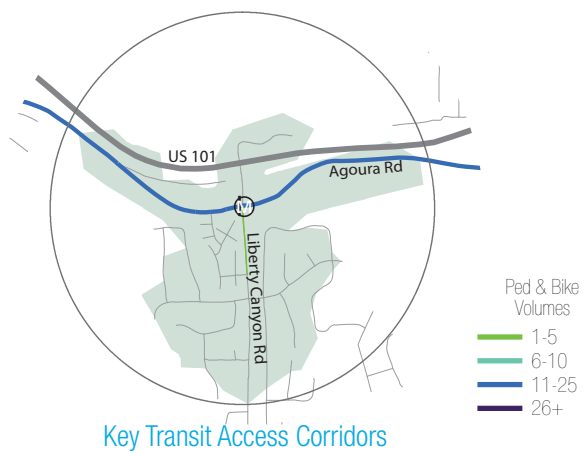
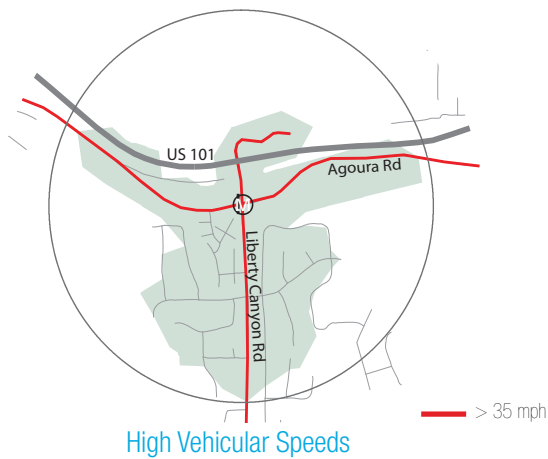
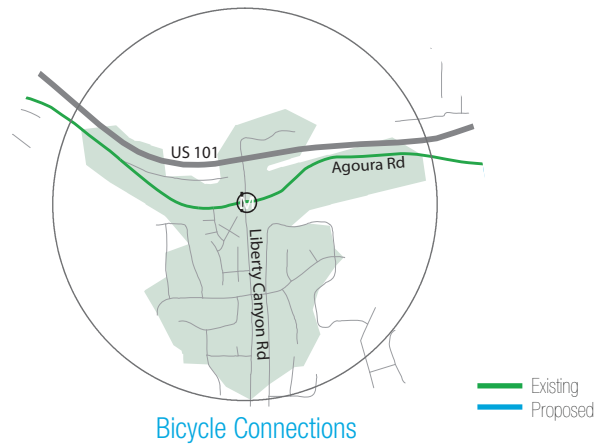
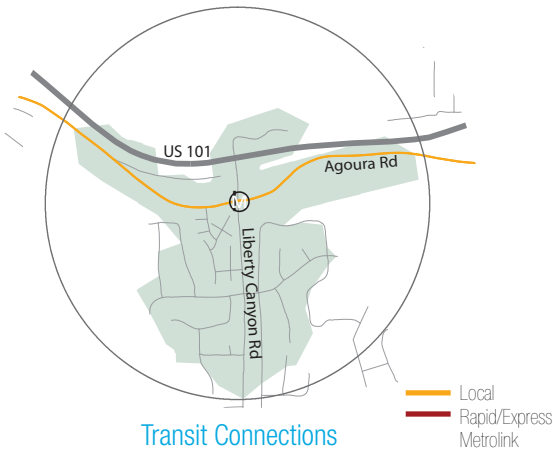
Points of Interest



SCHOOLS

- 1 Ilan Ramon Day School

SITE 2: Agoura Rd/Liberty Canyon Rd Bus Stop - Line 161











Walk Score: 26 / Overlay Zones: N/A / Density: N/A / Employment: N/A / Journey to Work: N/A

SITE 2: Agoura Road/Liberty Canyon Road Bus Stop

LA Metro First-Last Mile Strategic Plan Agoura Road/Liberty Canyon Road Bus Stop
Transit and Bicycle Network

KEY TRANSIT LINES
 Metro Route 161

BICYCLE FACILITIES

Existing	Proposed
 Bike Path	 Bike Path
 Bike Lane	 Bike Lane
 Bike Route	 Bike Route
 Cycletrack	 Cycletrack

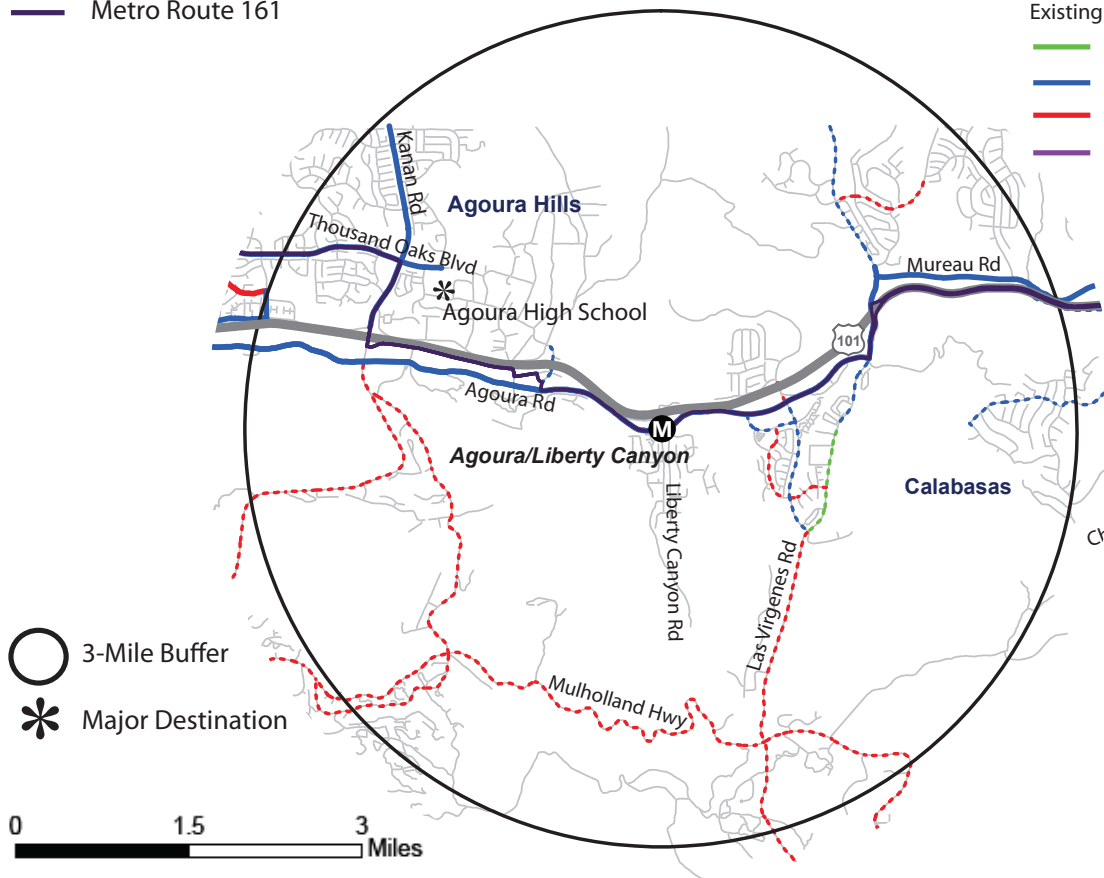


PHOTO DOCUMENTATION

*Photos are keyed to checklist (see Appendix)

SITE 2: Agoura Rd/Liberty Canyon Rd Bus Stop - Line 161



1.5/1.6 Lack of bus shelter, pedestrian amenities, large car-oriented superblocks with opportunity for speeding



1.6/2.3 Narrow pedestrian sidewalks, high traffic speed and lack of pedestrian amenities

SITE 3: Reseda Orange Line Station

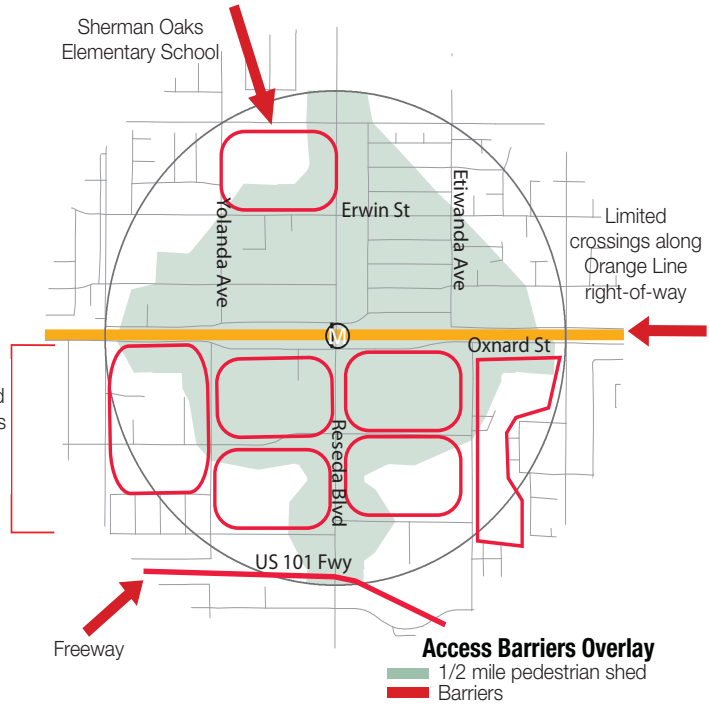
CSPP Place Type: **Cluster A; Medium Residential/Low Centrality**
 City: **Los Angeles**
 Special Considerations: **SL/MM**



Safety Rating: 2.14/5 (Fair*)
 Aesthetics Rating: 2.2/5 (Fair*)
 Accessibility Rating: 2.88/5 (Fair*)

*Based on Checklist Rating Matrix

Large commercial and housing developments limit pedestrian and bicycle routes



Opportunities Observed at Reseda Orange Line Station

Oxnard Street, to the south of the station, is characterized by small industrial uses, complete with a small strip mall, gas station, small industry-related uses, two larger institutional uses and a local landmark all within 1/4 mile of the Orange Line. The lots on the south side are very deep and bisected by service alleys. Some sites are actively used, others vacant.

There is steady pedestrian traffic to and from the Orange Line mostly north and south along Reseda primarily due to transfers to and from the local busses that service Reseda Blvd.

The Orange Line stop itself is serviced by large surface parking lots directly to the east and west of the Oxnard/Reseda intersection, and a dedicated bike path that runs along the tracks. Densely-populated residential areas exist to the north and south of the station, beyond the light industrial areas.

Issues Observed at Reseda Orange Line Station

Safety

- Traffic volumes and speeds along Reseda Blvd contribute to safety concerns for pedestrians
- Lack of crossings along Oxnard
- Vacant industrial parcels along Oxnard / lack of 'eyes-on-the-street'

Aesthetics

- Lack of visual interest, non-transparency, minimal entries
- Existing uses internal-facing, minimal street presence adjacent to Oxnard Street

Accessibility

- Lack of pedestrian crossings along Reseda
- Traffic calming required along Reseda and Oxnard in vicinity of station
- Large block lengths
- Lack of shade trees along sidewalks
- Very wide streets, difficult to cross, especially for slower pedestrian and universal access modes

SITE 3: Reseda Orange Line Station

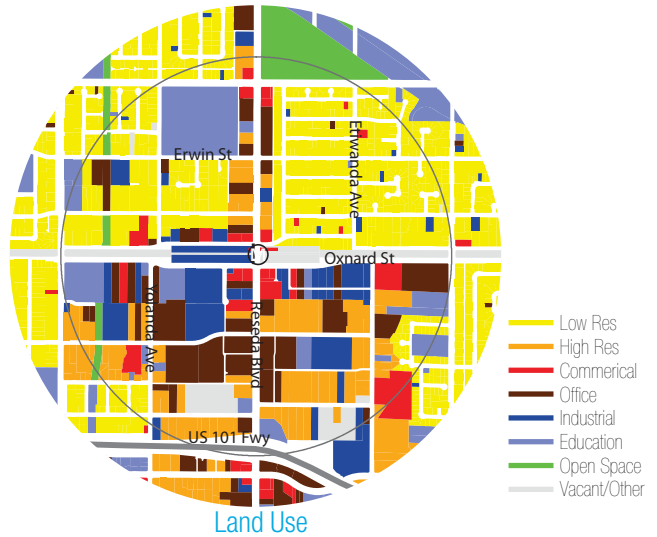
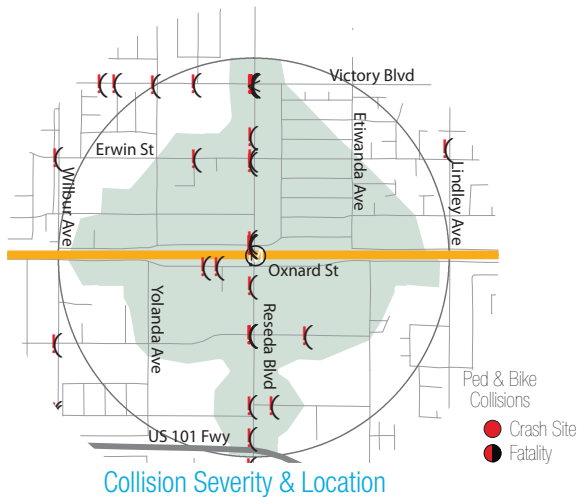
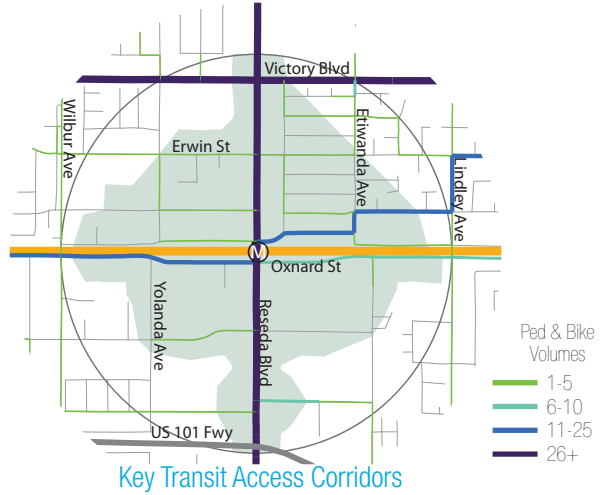
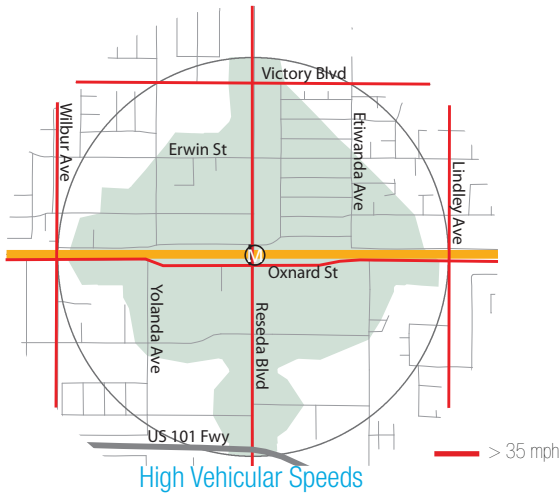
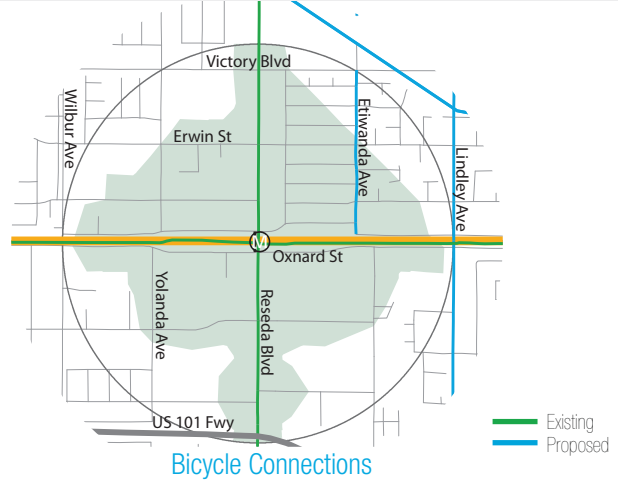
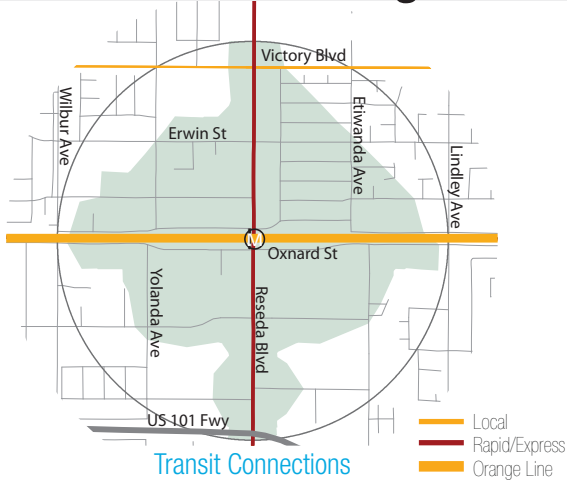
Points of Interest



SCHOOLS

- 1 Little Scholars Montessori
- 2 Columbia College Hollywood
- 3 Sherman Oaks Center for Enriched Studies
- 4 The Magic Years Nursery School
- 5 Lycee International De Los Angeles

SITE 3: Reseda Orange Line Station



Walk Score: 74 / Overlay Zones: N/A / Density: 13,038 total population / Employment: 4.59 jobs per acre / Journey to Work: 12.2% take transit/bike/walk to work

SITE 3: Reseda Orange Line Station

LA Metro First-Last Mile Strategic Plan Reseda Orange Line Station
Transit and Bicycle Network

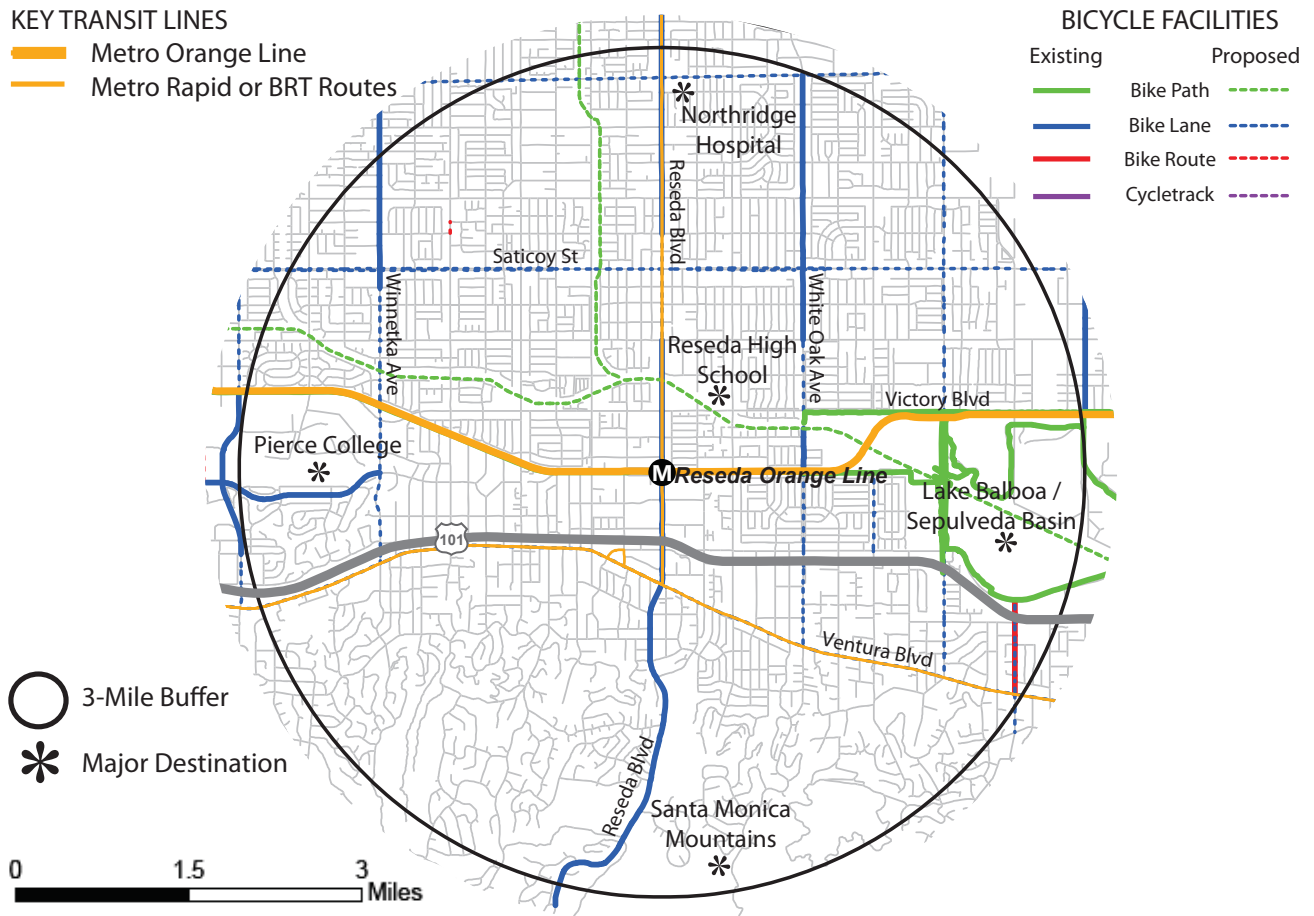


PHOTO DOCUMENTATION

*Photos are keyed to checklist (see Appendix)

SITE 3: Reseda Orange Line Station



1.7 Visual clutter, unclear signage



2.4 Alley and empty parking lot in center of large station area block



3.7 Orange Line multi-use trail without accessible ramp



3.8 Looking across Oxnard to fenced and underutilized Metro park-and-ride lot

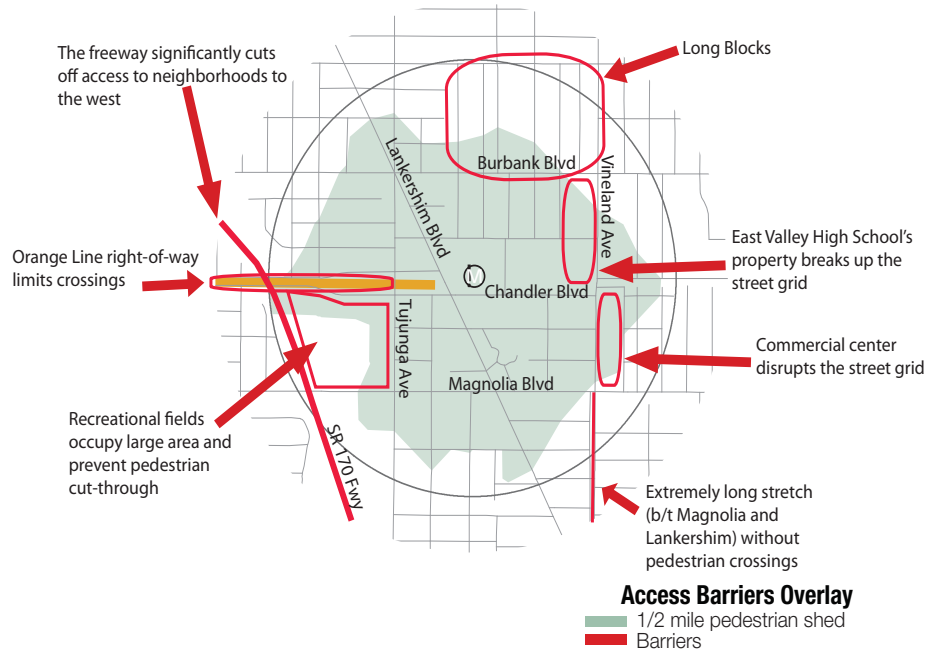
SITE 4: North Hollywood Red Line/Orange Line Station

CSPP Place Type: **Cluster C; High Residential/Medium Centrality**
 City: **Los Angeles**
 Special Considerations: **MM/T/PnR/UG&SL**



Safety Rating: 3.38/5 (Good*)
 Aesthetics Rating: 3/5 (Good*)
 Accessibility Rating: 2.75/5 (Fair*)

*Based on Checklist Rating Matrix



Opportunities Observed at Olive St/San Fernando Station

The North Hollywood Station serves as a critical connector for the Metro Red Line and the Orange Line Bus. The Red Line connects directly to a Downtown Los Angeles terminus, while the Orange Line Bus Terminal directly connects to easterly to Ventura. The station lies in the center of the North Hollywood (NoHo) Arts District.

Additionally, the site is adjacent to the Hollywood Art Institute campus, and a lively retail and housing district. With recent streetscape enhancements and the subject of a number of CRA/LA redevelopment projects, the North Hollywood Station serves a vast demographic and has significant catchment potential within the surrounding region. Also located within the 1/2 mile pedestrian shed is the NoHo Park, which has the potential to draw daily visitors. Currently, the park does not offer enough seating, and does not have a welcoming street-edge.

Issues Observed at Olive St/San Fernando Station

Safety

- Lack of separated bicycle infrastructure along main roads

Aesthetics

- Along secondary streets that connect residential neighborhoods to station, land uses and the site's block network create an unpleasant pedestrian environment (e.g. superblocks with minimal pedestrian crossings, and unfriendly/noisy land uses flanking the street)

Accessibility

- Orange and Red Lines stops face different directions and connections between the two are unclear
- Bicycle racks are completely full
- Park-and-ride is often full

SITE 4: North Hollywood Red Line/Orange Line Station

Points of Interest



INSTITUTIONS

- 1 NoHo Senior Citizen Valley Therapeutic Recreation
- 2 NoHo Regional Library
- 3 YMCA

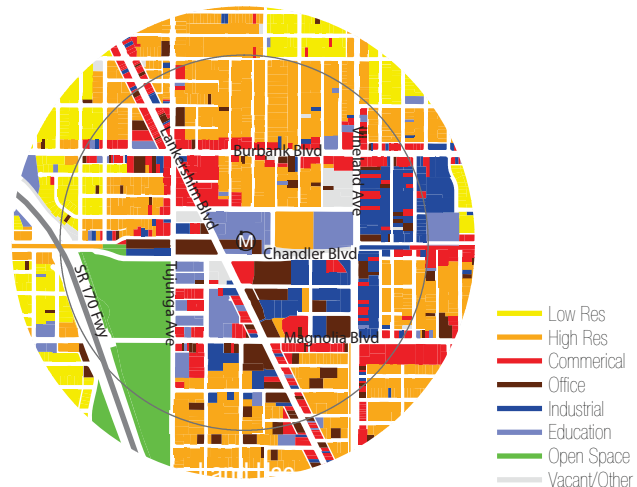
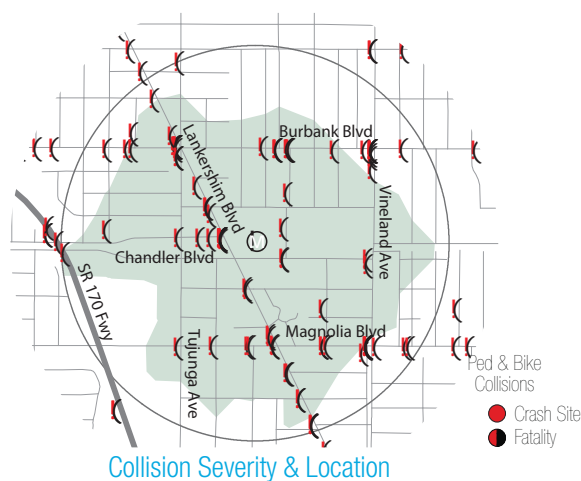
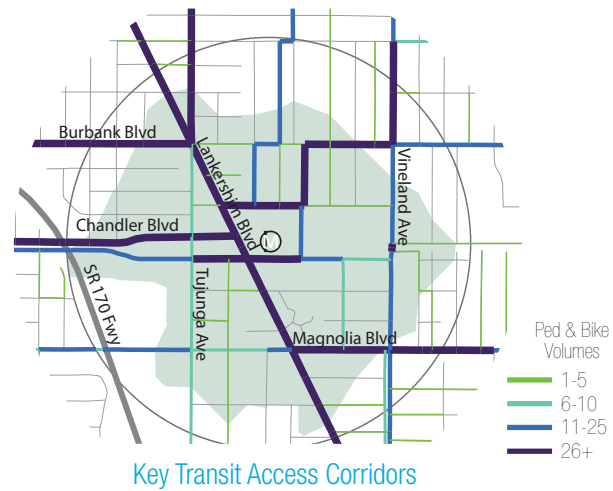
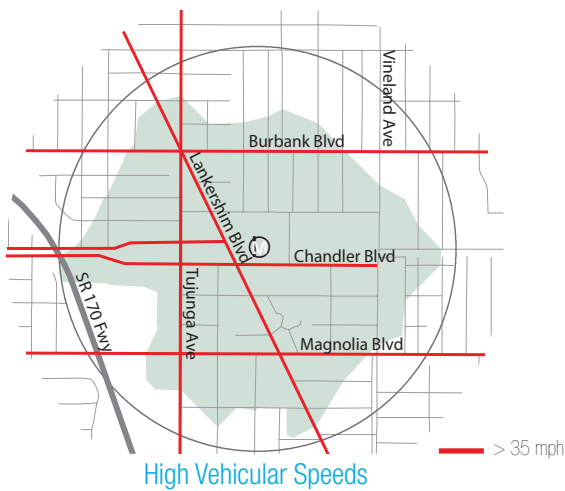
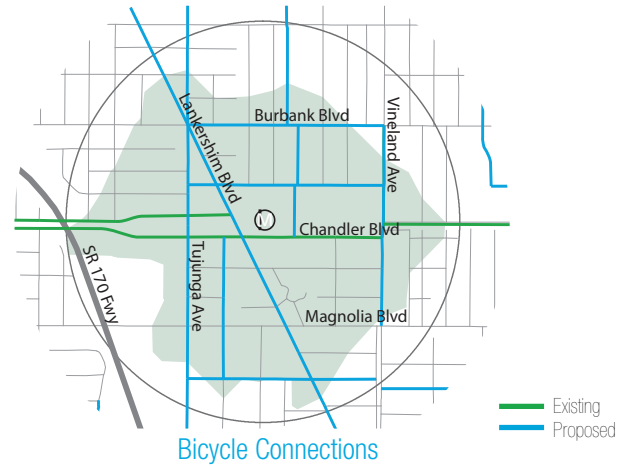
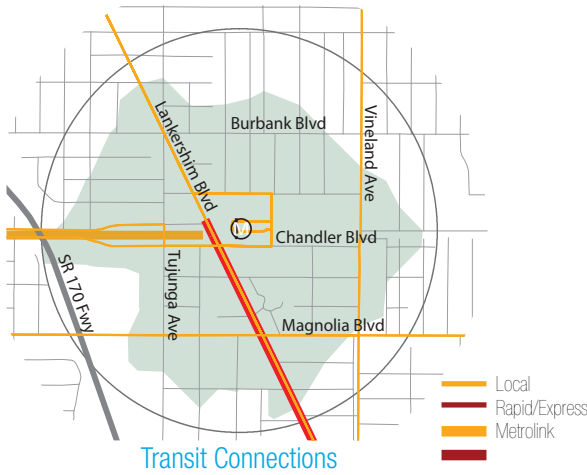
SCHOOLS

- 4 Oakwood Secondary School
- 5 St. Pauls First Lutheran School
- 6 The Art Institute of California
- 7 East Valley High School

PARKS

- 8 NoHo Park

SITE 4: North Hollywood Red Line/Orange Line Station



Walk Score: 95 / Overlay Zones: "NoHo" Commerical Arts District / Density: 11,870 total population / Employment: 8.47 jobs per acre / Journey to Work: 14.7 take transit/bike/walk to work

SITE 4: North Hollywood Orang/Red Line Station

LA Metro First-Last Mile Strategic Plan North Hollywood Orange/Red Line Station
Transit and Bicycle Network

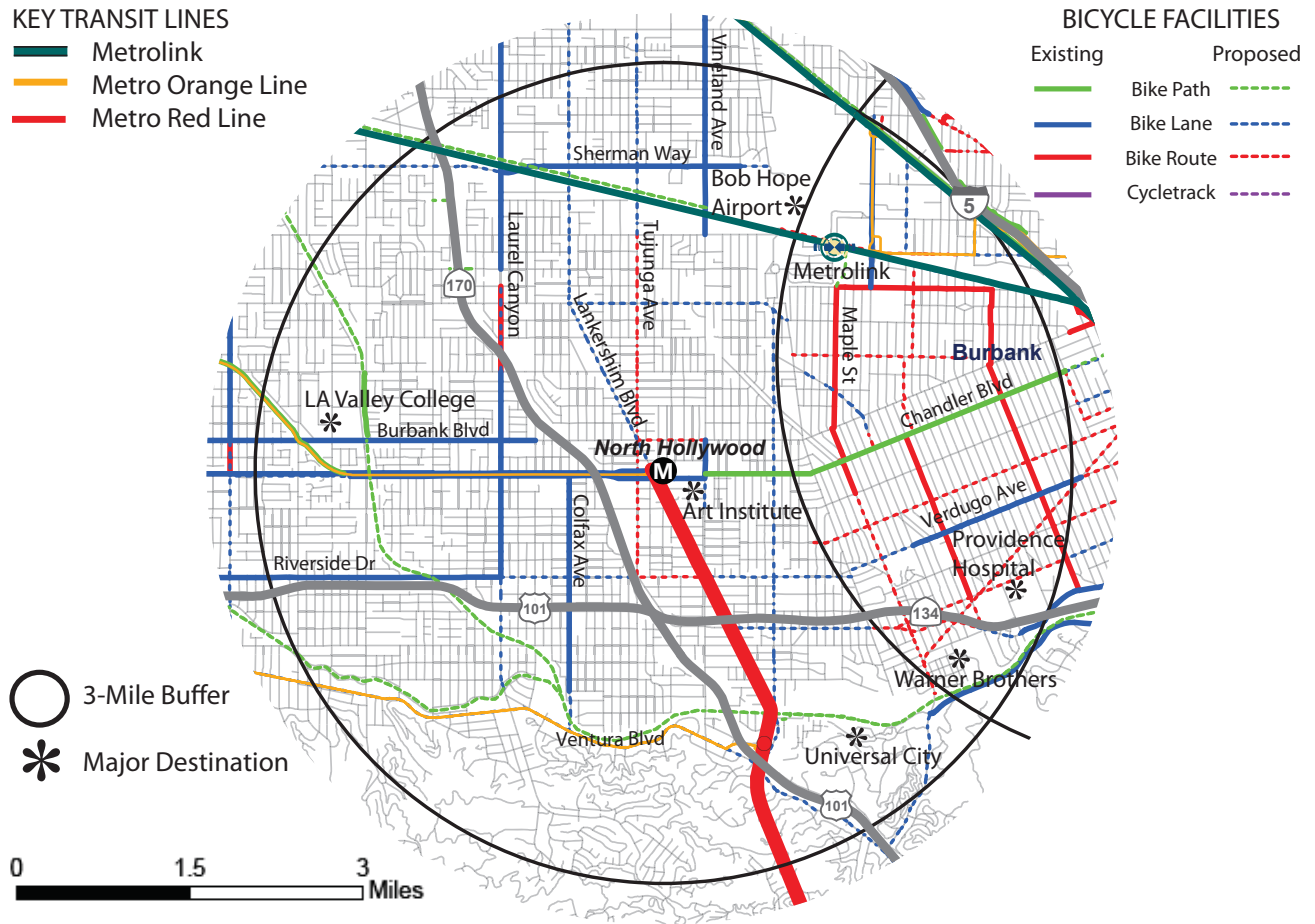


PHOTO DOCUMENTATION

*Photos are keyed to checklist (see Appendix)

SITE 4: North Hollywood Red Line/Orange Line Station



1.3 Lack of maintenance of public realm



3.2 Lack of crossings along superblocks



3.1 Inadequate sidewalks



3.1 Utilities in sidewalks



3.5 Graffiti on signage



3.7 Lack of curb cuts



3.8 Fenced parking is a barrier for community access

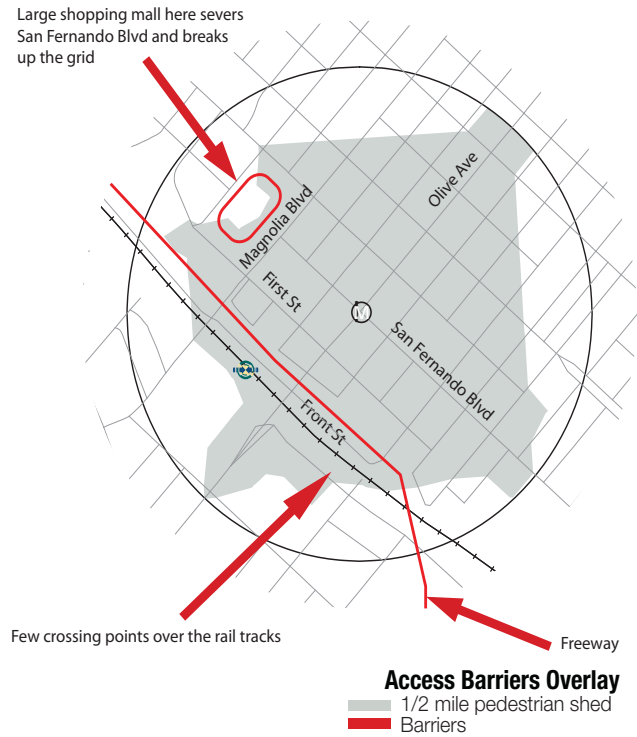
SITE 5: Olive Street/San Fernando Bus Line Stop - Line 794

CSPP Place Type: **Cluster D; High Residential/High Centrality**
 City: **Burbank**
 Special Considerations: **MM/FWY/SL**



Safety Rating: 3.25/5 (Good*)
 Aesthetics Rating: 3.6/5 (Good*)
 Accessibility Rating: 2.7/5 (Fair*)

*Based on Checklist Rating Matrix



Opportunities Observed at Olive St/San Fernando Station

Olive St/San Fernando is a unique station that serves more than one transit line. In addition to the Metro Bus Line 794 at the intersection of Olive St. and San Fernando Blvd., a regional Metrolink station lies just within the 1/2 mile accessible pedestrian shed. Connecting the bus line with the wider, Metrolink regional transit line provides a critical link to regional travelers, offering the opportunity to extend the first/last mile shed.

Streetscaping surrounding Metro Bus Line 794 incorporates a number of pedestrian amenities and services. Ample bike racks are provided, along with significant shade tree planting along heavily trafficked corridors. Highly visible crossings and wide sidewalks provide ample room for 794 riders when entering Downtown Burbank.

Issues Observed at Olive St/San Fernando Station

Safety

- Bikes are not separated from vehicles or provided a buffer
- Lack of clear safety signage

Aesthetics

- Vacant industrial parcels along Oxnard / lack of eyes-on-the-street

Accessibility

- Unclear transit mode transfer between Metrolink station and Bus Stop 794
- Limited and hard to read transit signage
- Pathways to Metrolink line the freeway, and are uninviting to pedestrians
- Lack of street lights along roads that connect transit modes
- Lack of bicycle infrastructure, special paving and/or street level amenities outside of downtown node

SITE 5: Olive Street/San Fernando Bus Line Stop - Line 794

Points of Interest



INSTITUTIONS

- 1 Burbank Water and Power
- 2 Burbank Town Center
- 3 Burbank City hall
- 4 Burbank Central Library

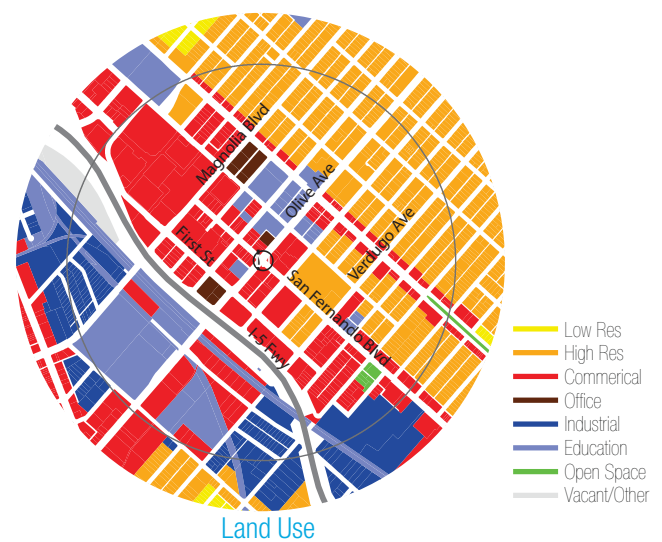
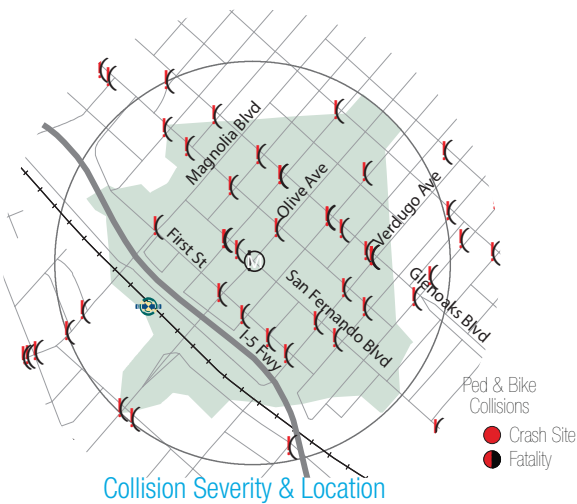
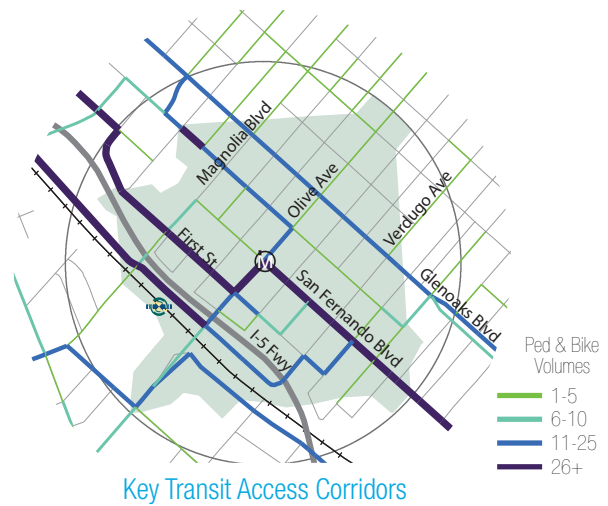
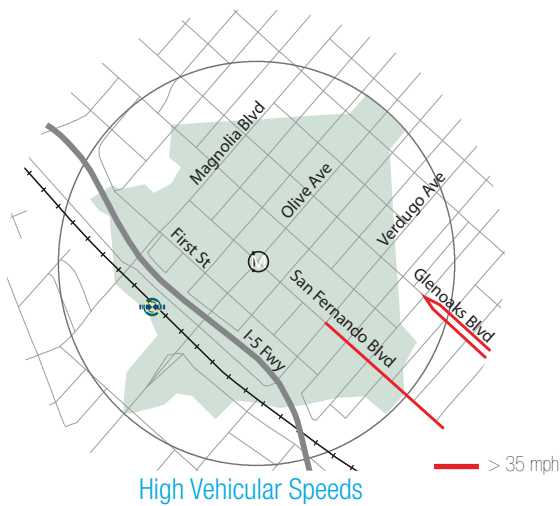
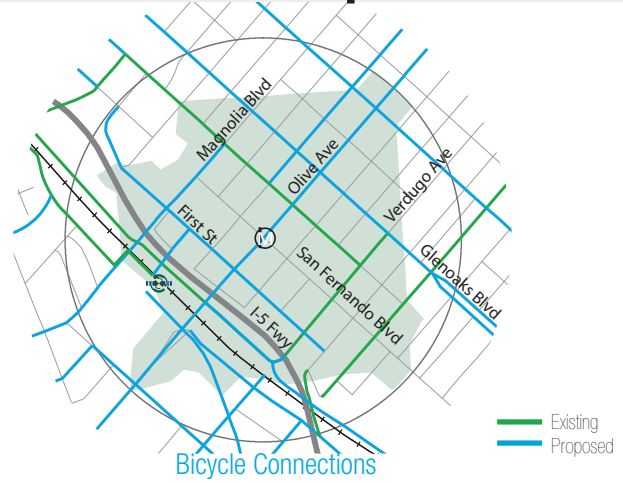
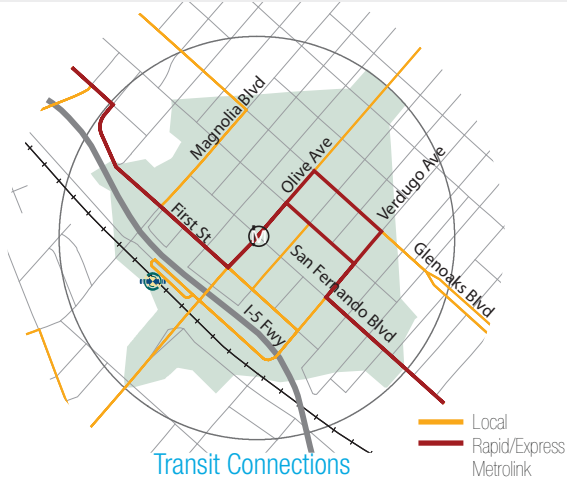
SCHOOLS

- 5 Inter Coast Colleges

PARKS

- 6 Robert R. Ovrom Park & Community Center

SITE 5: Olive Street/San Fernando Bus Line Stop - Line 794





Walk Score: 94 / Overlay Zones: N/A / Density: 4,845 total population/ Employment: 69.29 jobs per acre / Journey to Work: 14.4% take transit/bike/walk to work









SITE 5: Olive Street/San Fernando Blvd Bus Stop

LA Metro First-Last Mile Strategic Plan Olive Street/San Fernando Blvd Bus Stop
Transit and Bicycle Network

KEY TRANSIT LINES

-  Metrolink
-  Metro Rapid or BRT Routes

BICYCLE FACILITIES

- | Existing | Proposed |
|--|---|
|  Bike Path |  |
|  Bike Lane |  |
|  Bike Route |  |
|  Cycletrack |  |

