SANDAG | Caltrans

CONCEPTUAL PLANNING FOR NEXT GEN *RAPID*
ROUTES 41, 471, AND 625

EXISTING CONDITIONS REPORT

DECEMBER 2022

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ABM	SANDAG Activity Based Model
BRT	Bus Rapid Transit
CMCP	Comprehensive Multimodal Corridor Plan
DT	Downtown
FV	Fashion Valley
GEN	Generation
HUD	Housing and Urban Development
ITS	Intelligent Transportation Systems
KM	Kearny Mesa
LAI	Location Affordability Index
ML	Managed Lane
MTS	San Diego Metropolitan Transit System
NB	Northbound
NCTD	North County Transit District
OS	Operating System
PDT	Project Development Team
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SDSU	San Diego State University
SB2S	South Bay to Sorrento
SR	State Route
SY	San Ysidro
TC	Transit Center
TOD	Transit Oriented Development
UC	University City
UC San Diego	University of California, San Diego
UTC	University Town Center
VA	Veterans Administration

1.0 Introduction

1.1 SANDAG Regional Plan and Next Gen *Rapid*

With the adoption of the 2021 Regional Plan, SANDAG is set to implement Next Gen *Rapid*: a system of faster, more reliable bus service that will reshape how travelers move throughout San Diego County. Though the Regional Plan identifies approximate route alignments and stop locations, additional analysis is needed to define service characteristics and identify transit-supportive improvements along Next Gen corridors. Doing so will position SANDAG, MTS, and NCTD to secure the funding needed to provide quality, reliable transit; maximize ridership by ensuring travel times that are competitive with automobiles; eliminate first- and last-mile barriers; serve basic needs, opportunities, and major destinations; and improve transit service while maximizing corridor passenger throughput.

1.2 Project Description

The Conceptual Planning for Next Gen Routes 41, 471, and 625 study (Study) will identify shovel-ready projects and a path to implementing bus rapid transit (BRT) service along *Rapid* Routes 41, 471, and 625, providing reliable, high-capacity transit service to diverse communities in San Diego, National City, Chula Vista, and Escondido.

Advanced planning of *Rapid* routes is a critical first step in providing the region's residents and visitors with more mobility options, better connectivity, and greater access to resources across the region. This study is the first step in conducting advanced planning for *Rapid* Routes 41, 471, and 625.

1.3 Purpose of this Report

This report summarizes relevant studies and planning documents, as well as existing conditions along each of the study corridors. The findings of this report will guide the development of a preliminary purpose and need statement for each corridor, as well as corridor goals and objectives and project needs.

1.4 Study Area Overview

The project evaluates potential BRT strategies in three separate study areas within the cities of San Diego, Chula Vista, National City, and Escondido. Each study area is described below and show in Figure 1 through Figure 3.

1.4.1 Rapid 41 Study Area

Rapid 41 is a planned conversion of existing local Route 41 service to rapid service. *Rapid* 41 currently runs from University City to Mission Valley primarily via Genesee Avenue, connecting the low-income communities in Clairemont Mesa and Linda Vista to the VA Medical Center, UTC mall, UC San Diego, and Fashion Valley mall. The route is also

approximately a half mile walk from San Diego Mesa College. This route is planned to be upgraded to a *Rapid* route with higher frequencies, longer service spans, faster travel times, and more amenities. It will connect to the Green Line trolley at Fashion Valley and the Blue Line trolley at UC San Diego and UTC.

1.4.2 Rapid 471 Study Area

Rapid 471 is a planned rapid service that will connect eastern Escondido, Escondido Transit Center, and Palomar Medical Center Escondido, providing the vulnerable communities along the route – seniors, low-income, and minorities – with an essential regional multimodal option to and from the SPRINTER light rail, and other *Rapid* and local bus routes at the Escondido Transit Center. It will connect the medical center, a major employment center, to high-frequency transit for the first time. The City of Escondido is planning a major Transit Oriented Development in the corridor with affordable housing options. Providing a connection to the Escondido Transit Center links current and future residents to more transportation options to access destinations around the region.

1.4.3 Rapid 625 Study Area

Rapid 625 is a planned rapid service that will serve the SDSU community, City Heights, National City, Chula Vista, and communities in between. It connects these communities to key destinations including the Green Line trolley at SDSU Transit Center, the Orange Line trolley in Southeast San Diego, and the Blue Line trolley in Chula Vista. The route will serve disadvantaged communities within the top 25 and top 50 percent CalEnviroScreen thresholds and connect these communities to quality-of-life spaces such as higher education facilities and job centers within the region.

Figure 1. Study Area – Rapid 41 Corridor

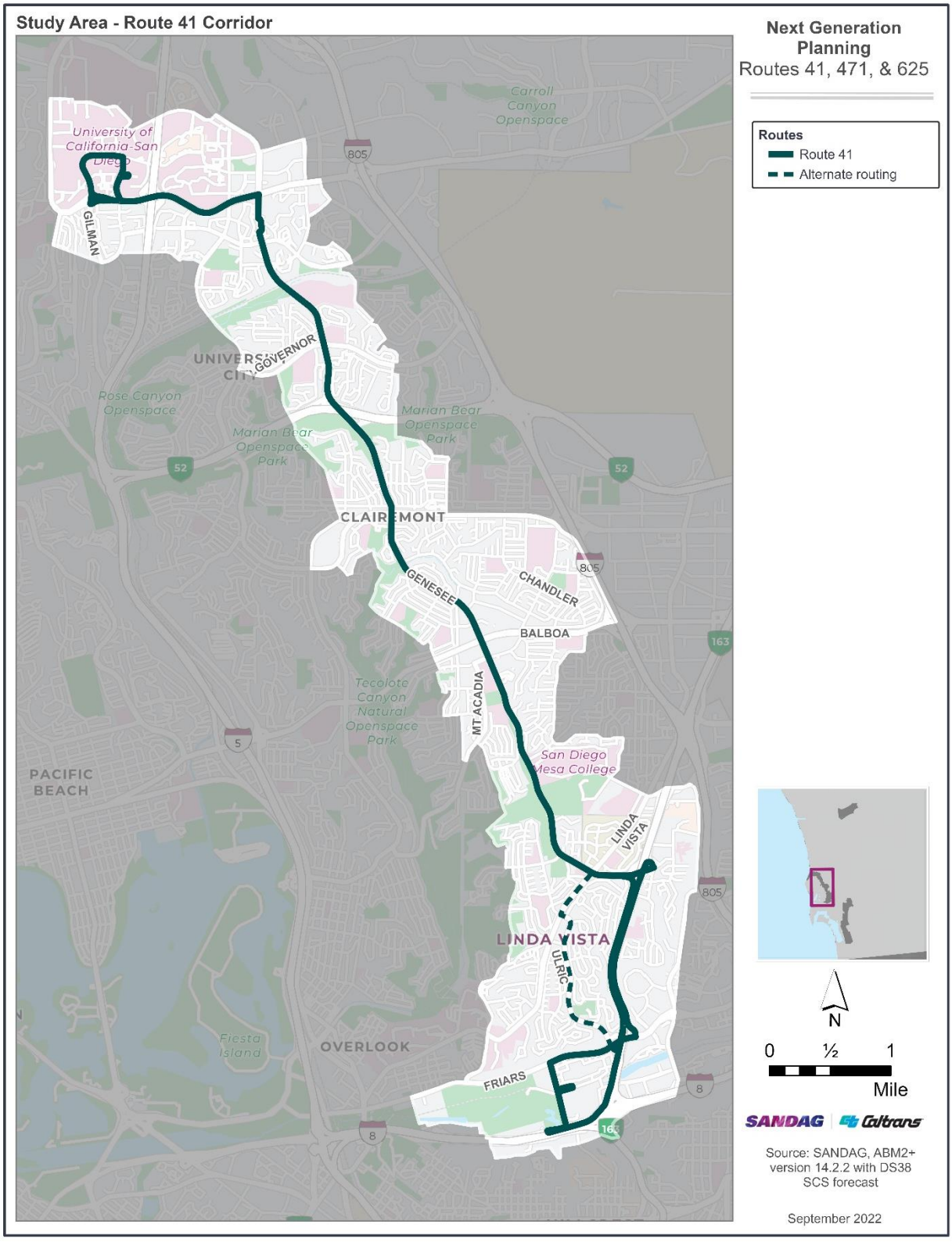


Figure 2. Study Area – Rapid 471 Corridor

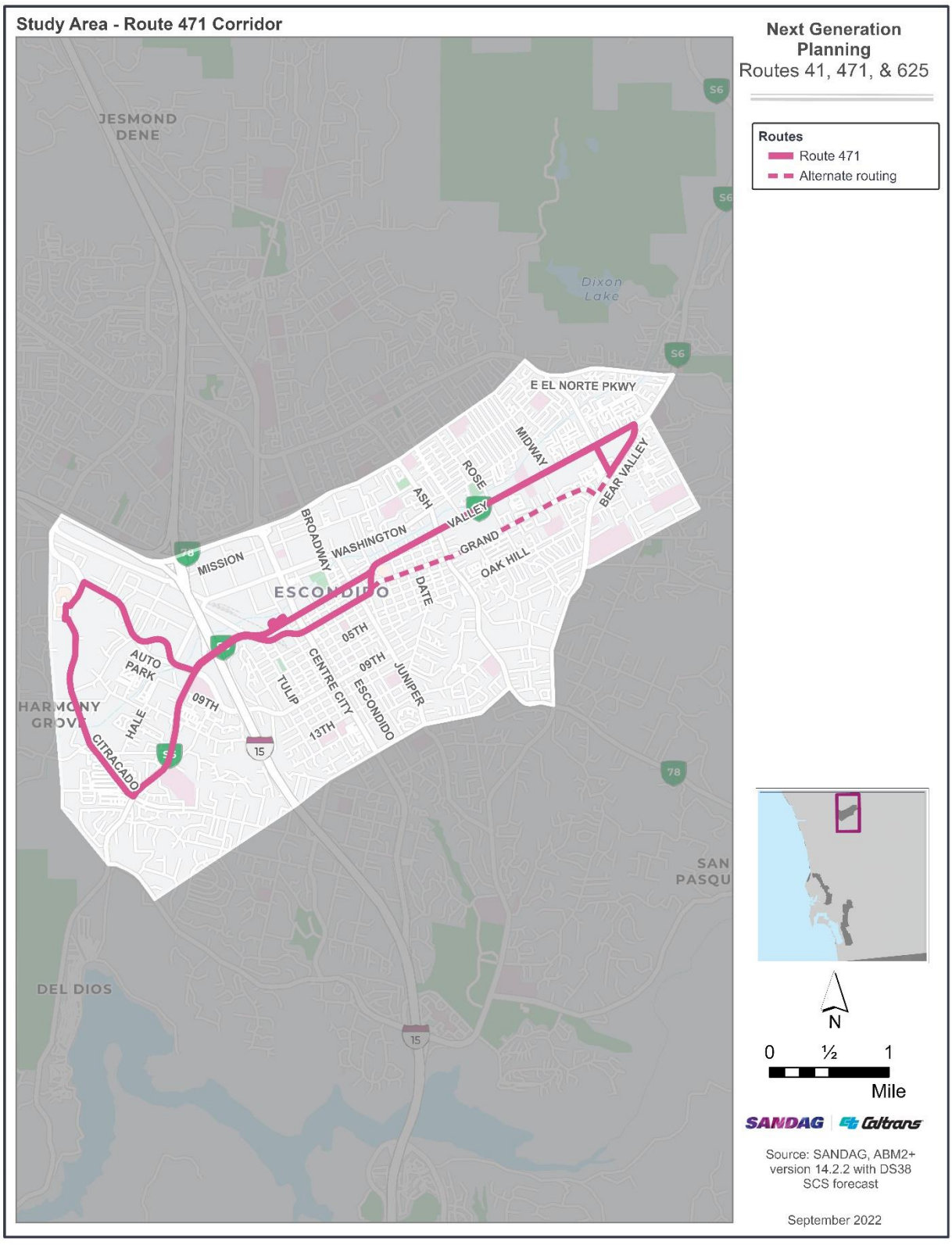


Figure 3. Study Area – *Rapid* 625 Corridor

2.0 Relevant Studies and Planning Documents

Planning documents and data were provided by the project team in coordination with the PDT. Documents were reviewed to identify key planning considerations and previously recommended mobility improvements in each corridor. A summary of documents reviewed is below. A table showing all documents reviewed is included in Appendix A.

2.1 Regional Planning Documents

SANDAG 2021 Regional Transportation Plan (RTP): Provides a long-term blueprint for the San Diego region, which is centered on the following key themes known as the 5 Big Moves: Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and Next OS.

Under Transit Leap, the Plan lists *Rapid* Routes 41, 471, and 625 as Next Gen *Rapid* Routes scheduled for implementation in 2035. As part of the Next OS move, the Plan calls for smart intersections: intersection safety and signal timing systems that prioritize transit.

South Bay to Sorrento (SB2S) Comprehensive Multimodal Corridor Plan (CMCP) (2022): Strives to create equitable and sustainable solutions for people living in the SB2S corridor, which roughly follows I-805 from the U.S.-Mexico border to Sorrento Valley.

The CMCP identifies a suite of multimodal improvement strategies, including transit, local roadway connections, mobility hubs, flexible fleets, technology and bicycle and pedestrian transportation connections. Both *Rapid* Routes 41 and 625, as well as queue jump lanes and transit signal prioritization along each route, are recommended for 2025 implementation as part of the Recommended Transportation Solution Set.

North County CMCP (2022): The North County CMCP identifies a series of multimodal improvements in several North County municipalities, including the City of Escondido. The CMCP identifies *Rapid* 471 for implementation in 2035.

2.2 Local Planning Documents

City of San Diego Climate Action Plan (2022): Endorses San Diego Metropolitan Transit System (MTS) Bus Rapid Transit expansion and improved signal coordination for increased efficiency and on-time performance as strategies for the San Diego Air Pollution Control District.

City of San Diego College Area Community Plan Update (2022): Identifies the following improvements in the *Rapid* 625 corridor:

- Bus Only lanes along El Cajon Boulevard between 54th Street and Montezuma Road
- Buffered bike lanes along Montezuma Road

- Bus Only lanes (During peak hours) along College Avenue between Montezuma Road and El Cajon Boulevard
- Bike Lanes along College Ave

City of San Diego University Community Plan Update (2022): Identifies the following improvements in the *Rapid* 41 corridor:

- Flexible (Flex) lanes along Genesee Av between I-5 and Nobel Dr
- Flex lanes along La Jolla Village Dr
- Transit priority measures along Genesee, including transit priority signal and/or adaptive signal timing along Nobel Dr

City of San Diego Clairemont Mesa Community Plan Update (2022): Identifies the following improvements in the *Rapid* 41 corridor:

- Genesee Avenue from SR-52 to Marlesta Dr: reserve one travel lane in each direction for repurposing into flexible (flex) lanes for transit and/or other congestion-reducing modes.
- Maintain existing bike lanes along Genesee where feasible; implement a shared bus/bike lane in constrained areas.
- Linda Vista Rd between Stalmer Street and Mesa College Drive: repurpose a travel lane and parking in each direction to accommodate one-way cycle tracks

City of Escondido East Valley Specific Plan (2021): Identifies the following improvements in the *Rapid* 471 corridor (within the Specific Plan Area):

- Valley Parkway from W. Valley Parkway to Harding Street: classified as a 4-lane major roadway with four travel lanes, controlled access, no parking, and raised/landscaped medians for added safety and efficiency in providing protected left turns at selected locations
- Grand Avenue from Date Street to San Pasqual Valley Road: 4-lane collector with four travel lanes, controlled access, and no parking, or restricted to, areas where turn pockets or continuous turn lanes are provided.
- Class II bike lanes along Grand Avenue from Hickory Street to San Pasqual Valley Road

City of National City 24th Street Transit Oriented Development Overlay (2021): Identifies bicycle improvements on 16th St, 18th St, 24th St, 30th St, and Highland Avenue. Also identifies high ridership stops along Highland Avenue.

City of Chula Vista Active Transportation Plan (2020): Recommends several improvements to bicycle facilities in the *Rapid* 625 corridor. Key improvements include:

- Implementing a Class II bike lane along 4th Avenue from J Street to Main St
- Class I multi-use paths along F Street and H Street that intersect 3rd Avenue and 4th Ave

City of San Diego Mobility Action Plan (2019): Endorses ITS systems for higher transit efficiency and complete streets to improve mobility as part of the City of Villages initiative.

City of San Diego Mission Valley Community Plan (2019): Identifies upgrading *Rapid* 41 to *Rapid* service as a planned improvement.

UC San Diego Long Range Development Plan (2018): Identifies several new pedestrian connections that would improve access to the Gilman Transit Center.

City of San Diego Linda Vista Comprehensive Active Transportation Strategy (2016): Identifies the following improvements that along roads *Rapid* 41 may traverse:

- Linda Vista Road between Ulric Street to Fulton St: buffered bike lanes and lane width reductions
- Intersection of Genesee Avenue and Linda Vista Road: reconfigure the intersection to a multi-lane roundabout
- Genesee Avenue west of Linda Vista Road: buffered bike lanes
- Genesee Avenue east of Linda Vista Road: buffered bike lanes and crosswalk improvements
- Genesee Ave/Richland St: buffered bike lanes, lane width reductions, and crosswalk improvements

City of San Diego Encanto Neighborhoods Community Plan (2015): *Identifies the following improvements along roadways Rapid 625 may traverse:*

- Bicycle facility upgrades along Euclid Avenue, including:
  - SR-94 to Market St: buffered bike lanes
  - Market Street to Imperial Ave: Class II bike lanes
  - Imperial Avenue to Solola Ave: one-way cycle track
- Bicycle facility upgrades along 47th St, including:
  - SR-94 to Hartley St: one-way cycle track
  - Hartley Street to Cereza St: Class II bike lanes
  - Cereza Street to Logan Ave: one-way cycle track
  - Logan Avenue to Alpha St: buffered bike lanes
  - Alpha Street to I-805: Class II bike lanes

City of San Diego Bicycle Master Plan (2013): Identifies several bicycle improvements along roadways that Routes 41 and 625 may traverse, including:

- *Rapid* 41: La Jolla Village Dr, Friars Road, and Fashion Valley Road
- *Rapid* 625: College Avenue, Montezuma Road, 54th St, University Avenue, Euclid Avenue, Market St, Imperial Avenue, and Logan Ave

City of Chula Vista Palomar Gateway Specific Plan (2013): Identifies key principles that will guide the buildout of a TOD at the Palomar Street Station. Foremost, the Plan seeks

to balance all modes of transportation, giving equal importance to non-motorized and transit modes.

City of Escondido Downtown Specific Plan (2013): States that pedestrian connections to transit stations and stops should include features that enhance the transit experience and integrate with adjacent land uses.

City of Escondido General Plan (2012): Highlights *Rapid* 471 as a future transit route. It also identifies the Citracado Parkway extension that *Rapid* 471 may traverse.

City of Escondido Bicycle Master Plan (2012): Identifies bicycle improvements along Citracado Parkway, Auto Park Way, and Grand Avenue.

City of National City General Plan (2011): Identifies Highland Avenue as a TOD corridor.

City of National City Bicycle Master Plan (2010): Identifies Class II bike lane improvements along D Avenue, which is parallel to Highland Avenue and National City Boulevard. It also identifies Class II bike lanes and Class III bike route along several intersecting arterials.

City of San Diego Linda Vista Community Plan (1998): Identifies *Rapid* 41 as an existing local bus route. It also identifies bicycle improvements to be determined later along Ulric Street west of Linda Vista Road and along Genesee Avenue between Linda Vista Road and SR-163. Class II bike lanes have since been added along Genesee.

City of San Diego Mid-City Communities Community Plan (1998): Identifies the following transit-related goals:

- To provide accessible public transit service for all residents, employees, shoppers, and visitors to Mid-City.
- To provide a high level of public transit service along major corridors.
- To provide direct public transit access to major regional employment centers.

The Plan also recommends the expansion of express bus service in Mid-City, linking the population centers to major activity centers in San Diego.

The following documents were reviewed; however, no relevant improvements were identified:

- Chula Vista Urban Core Specific Plan (2017)
- Southeastern San Diego Community Plan (2015)

3.0 Corridor Conditions

This section summarizes existing and potential future conditions, as well as the current and potential future performance of the transportation system for the Next Gen *Rapid* Routes 41, 471, and 625 corridors. The information in this section will support refinement and validation of study issues, opportunities, goals, and objectives.

3.1 Rapid 41

3.1.1 Mobility

3.1.1.1 Existing Transit Services

In addition to *Rapid* 41, several other transit services exist in the *Rapid* 41 corridor. Transit services are primarily concentrated at the northern and southern ends of the corridor. In the north, numerous local, *Rapid*, and UC San Diego campus shuttle routes, as well as the Blue Line Trolley, provide service throughout the UC San Diego/University City area. Key transit hubs include the Gilman Transit Center on the UC San Diego campus and the UTC Transit Center. The COASTER commuter rail does pass through the corridor; however, no stations exist within it.

In the central portion, local bus routes connect to *Rapid* 41 along Genesee Avenue at the intersections of Nobel Dr, Clairemont Mesa Boulevard, and Balboa Avenue.

In the southern portion, several local, *Rapid*, and the Green Line Trolley provide service in Mission Valley and Linda Vista. Fashion Valley Transit Center is a key transit hub.

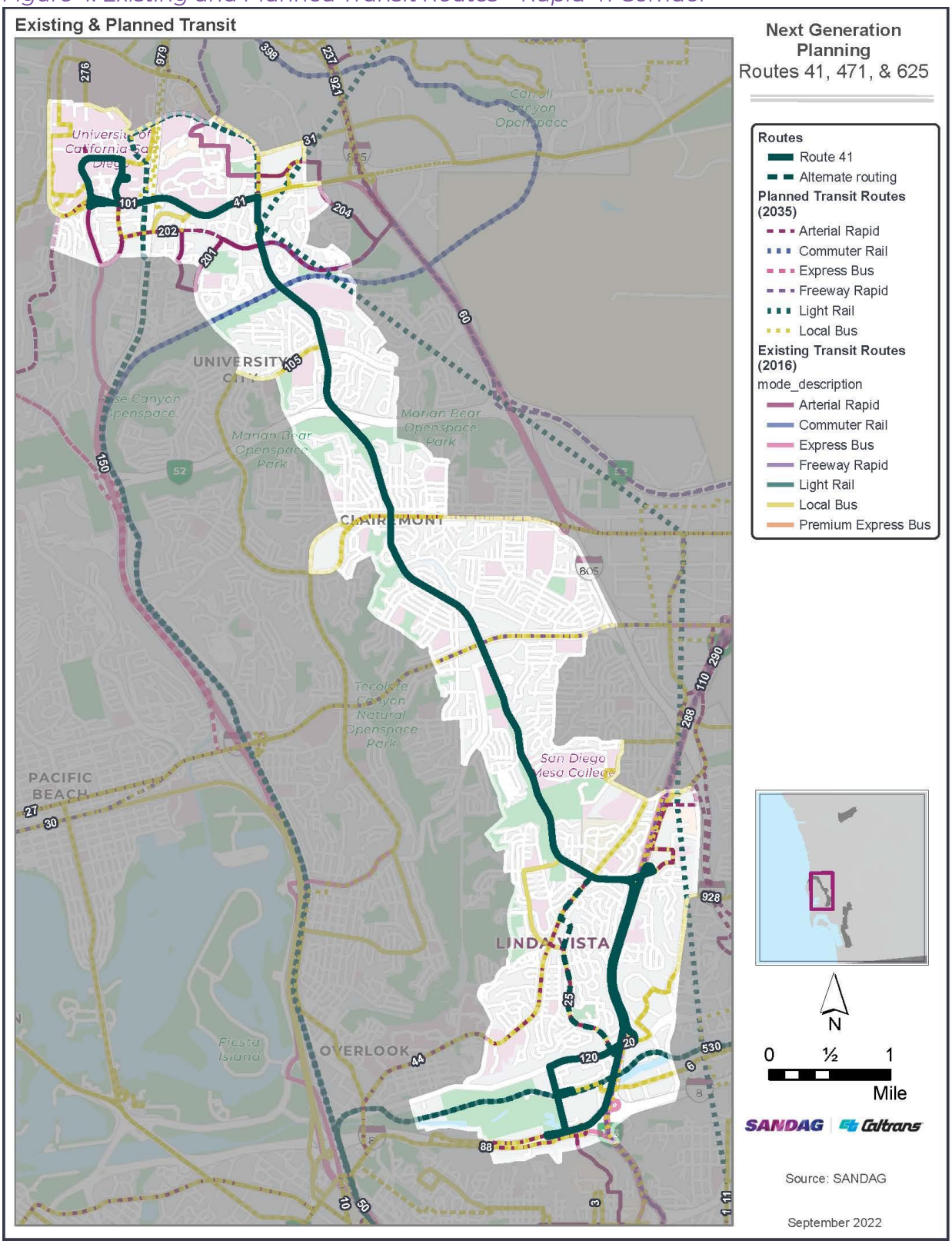
3.1.1.2 Planned Transit Services

The following notable service changes are planned in 2035:

- Routes 30 and 41 will have *Rapid* services overlaid
- The Purple Line commuter rail will provide service from South Bay to UTC
- Green Line Trolley service frequencies will improve to 7.5 minutes all day
- Blue Line Trolley service frequencies to UTC will improve to 7.5 minutes
- Bus service frequency improvements
- Expanded service hours for bus and light rail services
- MTS Route 60 will be discontinued

Existing and planned corridor routes are shown on Figure 4. A summary of existing transit routes, ridership, and operational characteristics in the *Rapid* 41 corridor is included in Appendix A.

Figure 4. Existing and Planned Transit Routes – Rapid 41 Corridor



3.1.1.3 Existing Roadways

Each of the roadways that *Rapid* 41 either currently operates on or could traverse is described below. Maps showing typical existing roadway congestion are included in Appendix B.[1]

Genesee Avenue

Genesee Avenue varies between two and six lanes and roadway width varies between 50 and 130 feet. The median is both raised and striped. In the University City community, it is a 6-lane major arterial between Regents Road and Nobel Drive. South of Nobel Drive, it is a 4-lane major arterial before widening to a 6-lane prime arterial between Radcliffe Lane and SR-52. From SR-52 south to Derrick Drive it is a 4-lane major arterial. It widens to a 6-lane prime arterial from Derrick Drive to Mount Edna Drive, before narrowing to a 5-lane major arterial south to Mount Alifan Drive, then transitioning to a 4-lane major arterial. It narrows to a 2-lane major arterial between Marlesta Drive and Osler Street. It is a 4-lane arterial from Osler Street to SR-163.

La Jolla Village Drive

La Jolla Village Drive is a 6-lane prime arterial between Expedition Way and Villa La Jolla Drive, then widens to a 7-lane prime arterial between Villa La Jolla Drive and I-5. East of I-5, it functions as a 6-lane prime arterial with a raised median. The roadway width varies between 105 and 125 feet.

Gilman Drive

Gilman Drive is a 4-lane major arterial with a raised median. The roadway width varies between 70 and 100 feet.

Villa La Jolla Drive

Villa La Jolla is a 2-lane major arterial with a striped median north of the VA Medical Center entrance and a 4-lane major arterial with a raised median south to La Jolla Village Drive. The roadway width varies between 30 and 70 feet.

Ulric Street

Ulric Street varies between a 2-lane major arterial with a two-way left turn lane to a 3-lane major arterial with a striped median near Friars Road. The roadway width varies between 60 and 70 feet.

Linda Vista Road

Linda Vista Road is a 4-lane major arterial with a two-way left turn lane south of Ulric Street and a raised median north to Genesee Avenue. The roadway width varies between 80 and 85 feet.

[1] https://www.google.com/maps

Friars Road

Friars Road is a 6-lane prime arterial with a raised median from Fashion Valley Road to just west of the SR-163 interchange, where it widens to a 7-lane prime arterial until the SR-163 overpass. At this point it narrows to a 6-lane prime arterial and then narrows again to a 5-lane prime arterial between the SR-163 overpass and the SR-163 NB ramps. It has a raised median west of Ulric Street and a striped median east of Ulric. The roadway width varies between 90 and 130 feet.

Fashion Valley Road

Fashion Valley Road is a 4-lane major arterial with a striped median between Friars Road and Camino Del Rio North. The roadway width varies between 50 and 70 feet.

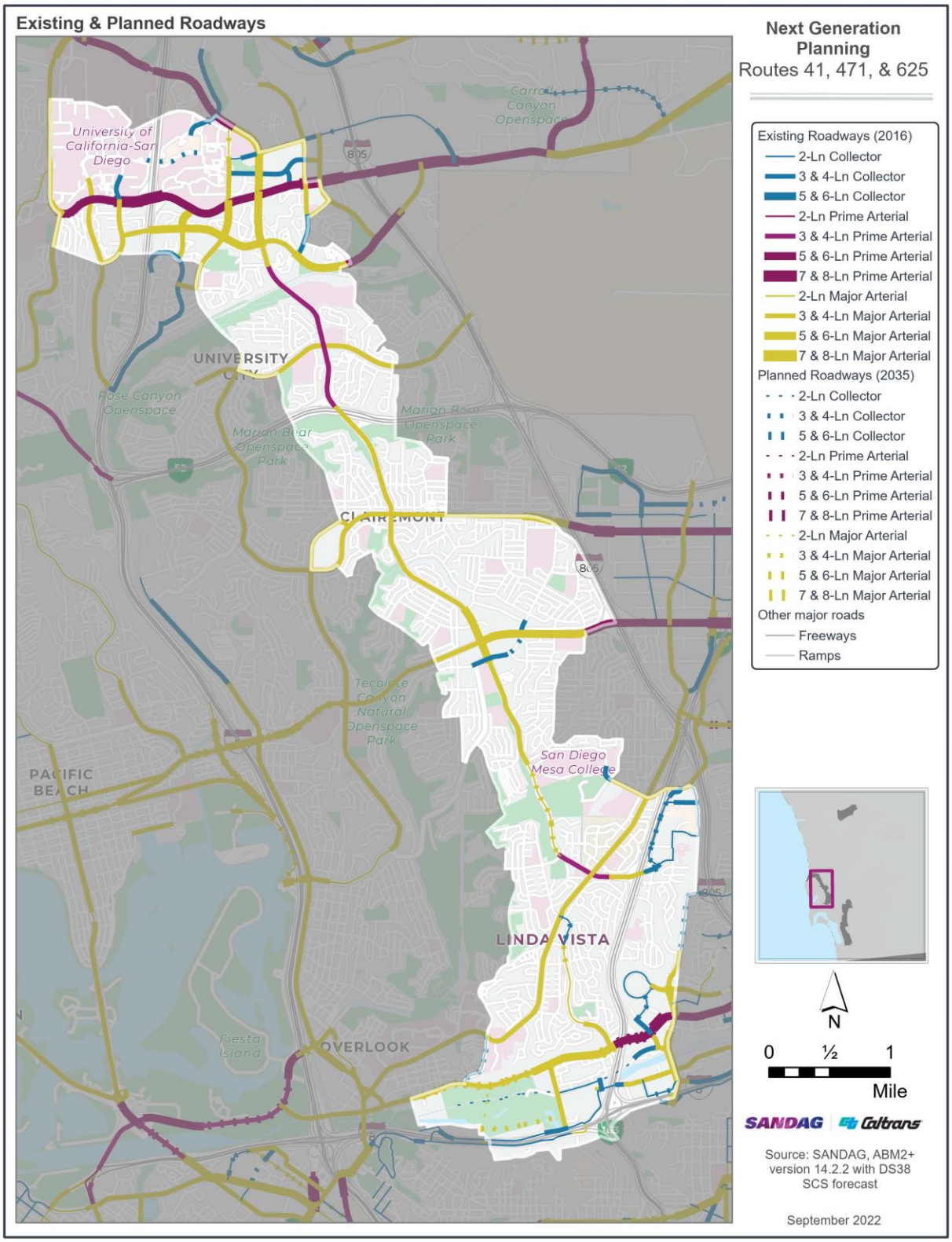
State Route 163

State Route 163 (SR-163) is a 9-lane freeway between Friars Road and Genesee Avenue, with five general purpose lanes in the northbound direction and four general purpose lanes in the southbound direction. The freeway width is approximately 150 feet.

3.1.1.4 Planned Roadways

By 2035, the 2021 Regional Plan states that SR-163 from I-8 to I-805 – including the portion between Friars Road and Genesee Avenue – will be converted from 8 freeway (F) to 6F+2 managed lanes (ML). The specific configuration between Friars Road and Genesee Avenue will be determined during future studies for this managed lanes project.

Figure 5. Existing and Planned Roadways – Rapid 41 Corridor



3.1.1.5 Existing Mobility Hubs/Flexible Fleets

Mobility Hubs are places of connectivity where different travel options – walking, biking, transit, and shared mobility – come together. They provide an integrated suite of mobility services, amenities, and supporting technologies to better connect high-frequency transit to an individual's origin or destination. A mobility hub can span one, two, or a few miles to provide on-demand travel choice for short trips around a community.[2]

In the *Rapid* 41 corridor, different travel options exist at Fashion Valley Transit Center (TC), UTC TC, and Gilman TC. Micromobility services exist at the following locations:

- Several micromobility companies like BiRoad, Link, Lime and Spin provide scooter share services within the City of San Diego.[3]
- UC San Diego partners with SPIN to provide shared electric bike and scooter pilot program on campus. Approximately 120 bikes and 480 scooters are available in key campus locations. A SPIN GeoZone Parking area is located near the Gilman TC at Gilman Dr/Myers Dr.[4]

3.1.1.6 Planned Mobility Hubs/Flexible Fleets

The northern portion of the study area is in the University Community Mobility Hub that is included in the SB2S CMCP. The Mid-Coast Mobility Hub Strategy also identified hubs at the Nobel Drive, UTC, Executive Drive, UC San Diego Health La Jolla, and VA Medical Center stations. The southern portion of the study area is in the Mission Valley Mobility Hub that is included in the SB2S CMCP. The characteristics of these hubs will be defined in coordination with local jurisdictions and could include enhanced accommodations for bicycle, pedestrian, transit, drone, electric vehicle, carshare, and carpool services, such as upgraded infrastructure, technology solutions and other service amenities.

3.1.1.7 Existing Active Transportation Facilities

In the University City area, several Class I multi-use paths exist, primarily on the UC San Diego campus west of I-5. Class II bike lanes and Class III bike routes exist on several roadways on the UC San Diego campus and within the UTC area. A Class II bike lane exists along Genesee Avenue from Regents Road to SR-163 and along roadways that intersect Genesee Avenue, including Nobel Drive, Clairemont Mesa Boulevard, and Balboa Avenue.

Class II bike lanes exist in Linda Vista along Linda Vista Dr and Ulric Street. In Mission Valley, cyclists can access Fashion Valley TC via the San Diego River Bikeway multi-use path. A Class IV bikeway exists on Friars Road west of Fashion Valley but does not provide direct bike access to the transit center.

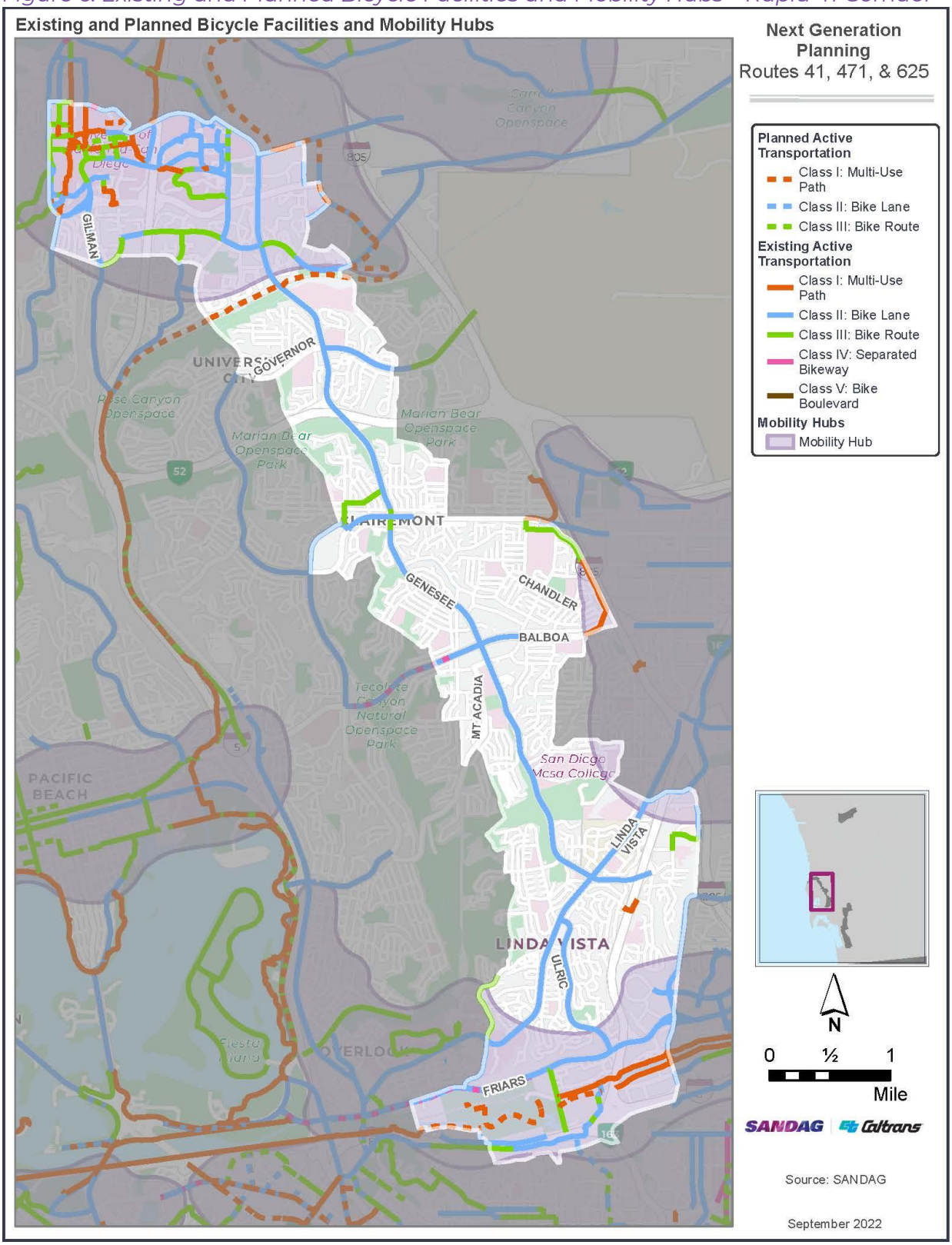
[2] https://www.sdforward.com/mobility-planning/mobilityhubs
[3] https://www.sandiego.gov/bicycling/bicycle-and-scooter-sharing/company-contacts
[4] https://transportation.ucsd.edu/campus/shared.html

3.1.1.8 Planned Active Transportation Facilities

Numerous active transportation improvements are planned along the *Rapid* 41 corridor. Key improvements include:

- A Class I multi-use path in Rose Canyon
- Upgrading the existing Class II bike lane along Balboa Avenue to a Class IV cycle track
- Several Class I multi-use paths in the new Riverwalk development west of Fashion Valley TC
- New Class II bike lanes along Friars Road west of Fashion Valley Road

Figure 6. Existing and Planned Bicycle Facilities and Mobility Hubs – Rapid 41 Corridor



3.1.2 Demographics

The following summarizes existing and forecasted demographic conditions in the *Rapid* 41 corridor. Anticipated changes in demographic conditions are shown in Figure 8 through Figure 13 and summarized in Table 1.

3.1.2.1 Population

Existing population along the *Rapid* 41 corridor is concentrated in the University City community, primarily on the UC San Diego campus and along La Jolla Village Dr east of I-5. Higher concentrations of people live in Linda Vista and Mission Valley near Fashion Valley Mall, as well as in Clairemont along Genesee Avenue. In 2035, the largest population growth is expected in the University and in Mission Valley. The number of Low-income residents is expected to increase by nearly 23 percent. Minority and senior residents are expected to increase by 36 percent and 56 percent, respectively.

3.1.2.2 Jobs

Employment in the *Rapid* 41 corridor is primarily located on the UC San Diego campus, throughout UTC, at Mesa College, Sharp Metro Campus, and near Fashion Valley Mall. Smaller clusters of jobs also exist east at commercial retail centers along Genesee Avenue. In 2035, the number of jobs is anticipated to increase by approximately 13 percent, primarily in University City and Mission Valley.

3.1.2.3 Housing Units

Housing in the *Rapid* 41 corridor is concentrated in the University City/UTC area, on the UC San Diego campus, as well as in Linda Vista and Mission Valley near the Fashion Valley TC. There is a notable amount of housing in Clairemont, however it is less dense than in the aforementioned areas. The number of housing units is expected to increase by over 24 percent by 2035. The largest number of units is anticipated in University City/UTC and Mission Valley.

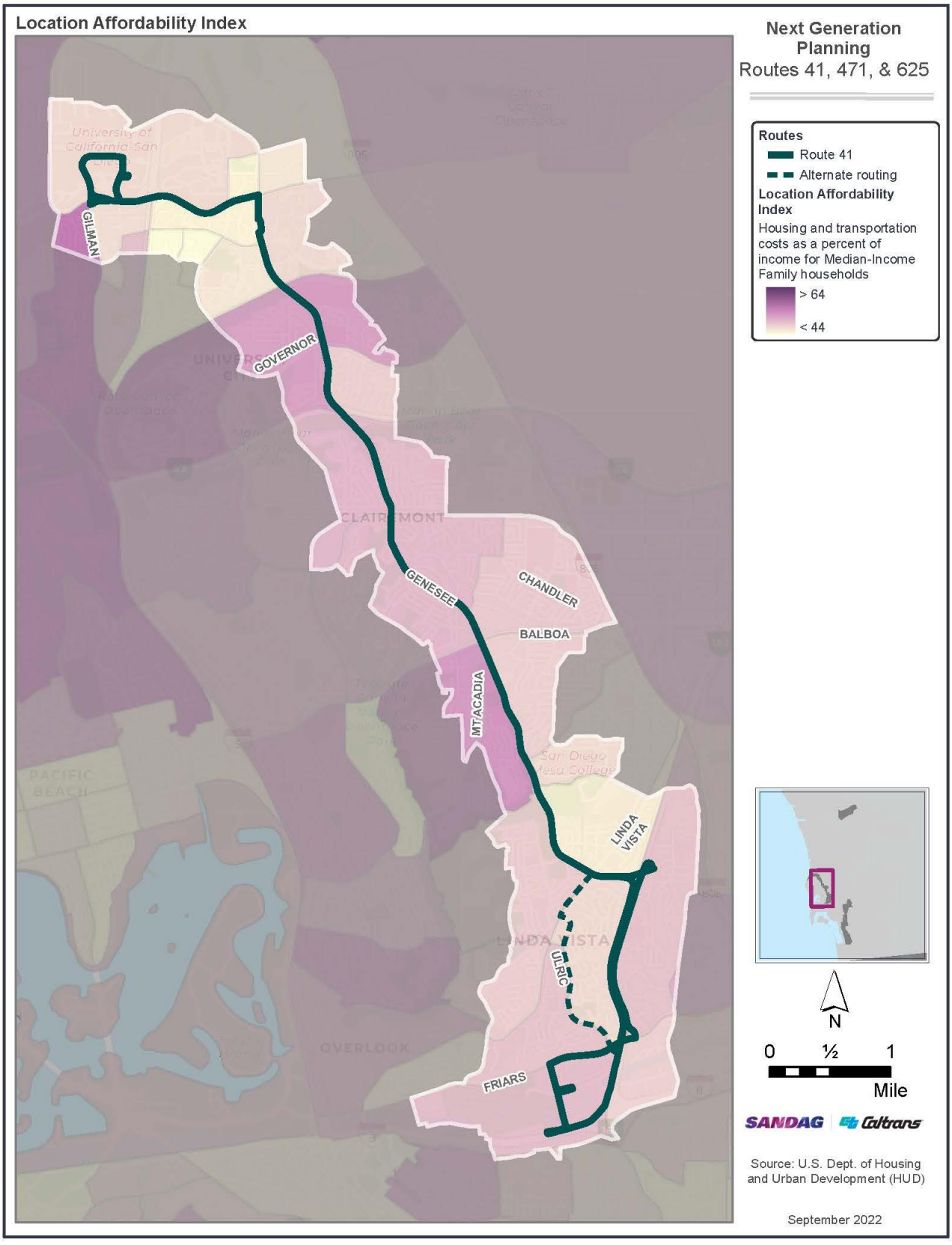
Table 1. Population, Social Equity Focus Populations, Jobs, and Housing Units – Rapid 41 Corridor

Demographic	2016	2035	% Change
Total Population	94,555	116,017	+18%
Low-Income	21,639	28,063	+23%
Minority	38,160	60,043	+36%
Senior	4,676	10,525	+56%
Jobs	70,332	81,157	+13%
Housing Units	37,168	48,966	+24%

3.1.2.4 Location Affordability

Housing and transportation costs are typically the largest expenses for most households. The Location Affordability Index (LAI) is a dataset provided by HUD that incorporates housing and transportation costs as a percent of income for Median-Income Family households. The LAI for *Rapid* 41 is shown on Figure 7. As shown, housing and transportation costs are highest in Clairemont and southern University City.

Figure 7. Location Affordability Index – Rapid 41 Corridor



3.1.3 Other Transit Propensity Factors

Table 2 summarizes other factors that can influence transit propensity in the *Rapid* 41 corridor.

Table 2. Other Transit Propensity Factors – Rapid 41 Corridor

	2015-2019	County of San Diego	Difference (%)
Population Under Age 18[5]	16.3%	21.8%	-5.5%
Households with No Vehicle Available[6]	7.4%	5.5%	1.9%
Noninstitutionalized Population with a Disability[7]	9.2%	9.9%	-0.6%

[5] Block Groups
[6] Block Groups
[7] Census Tracts

Figure 8. Forecasted Population Change – Rapid 41 Corridor

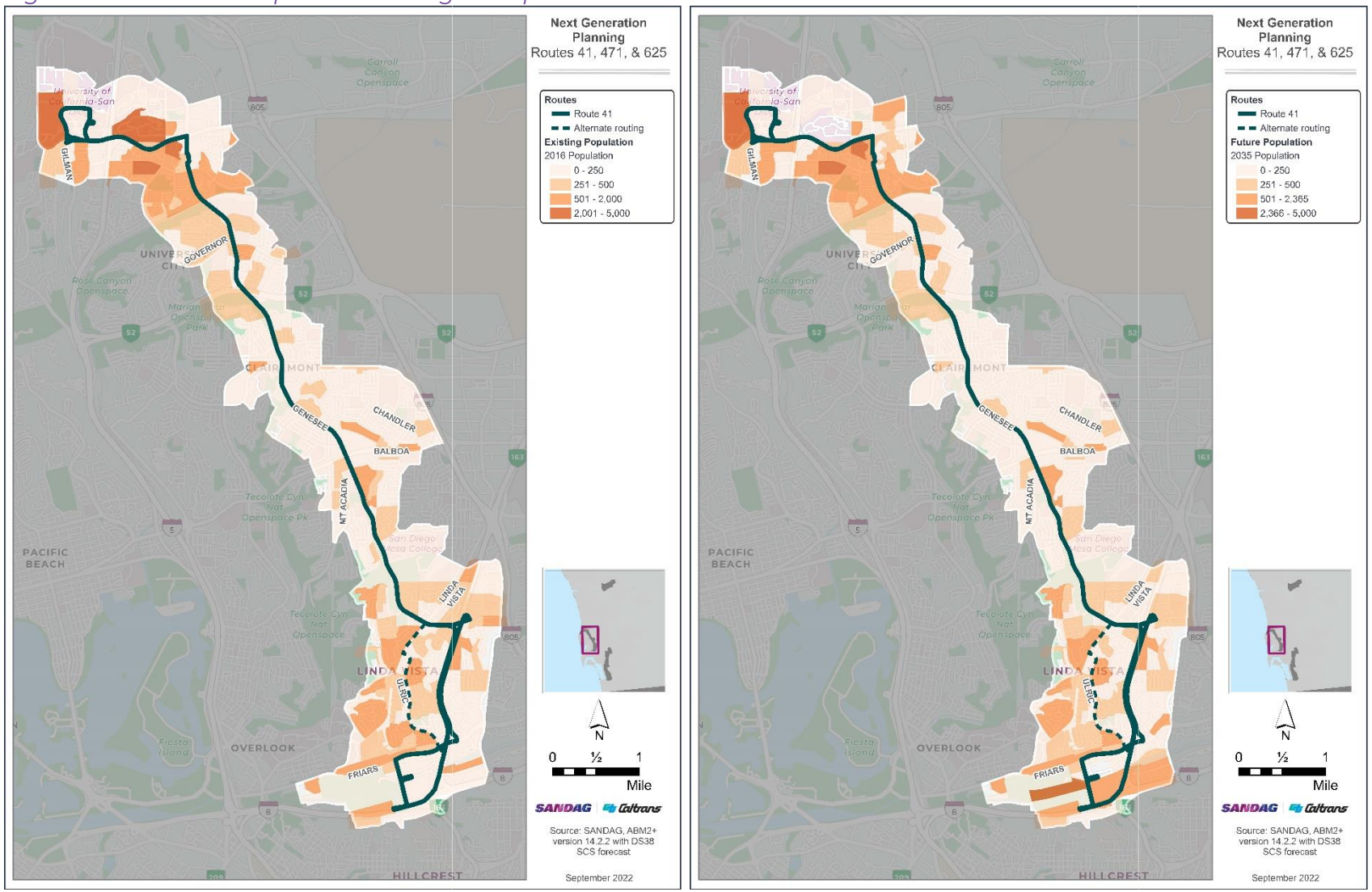


Figure 9. Forecasted Low-Income Population Change– Rapid 41 Corridor

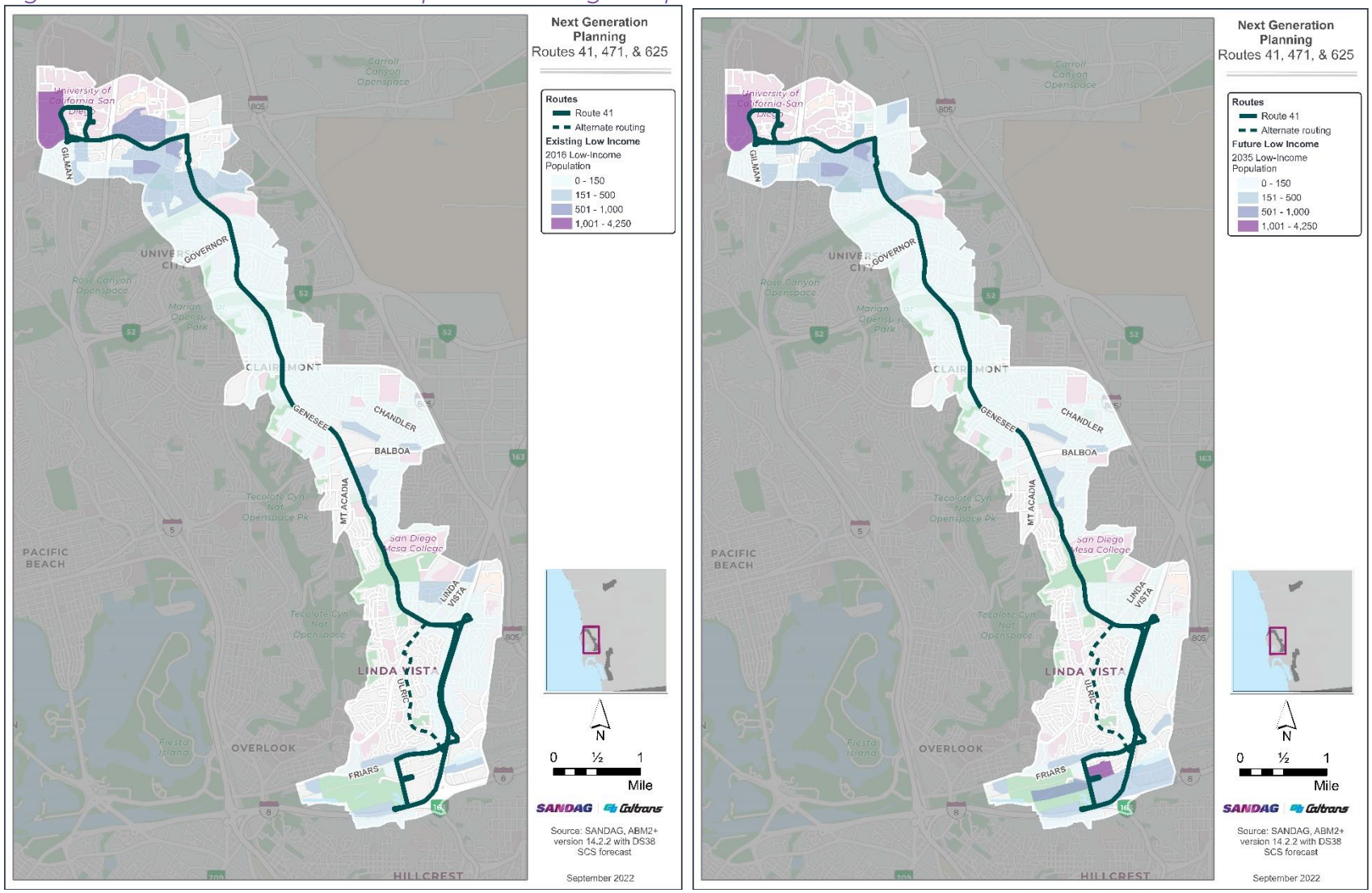
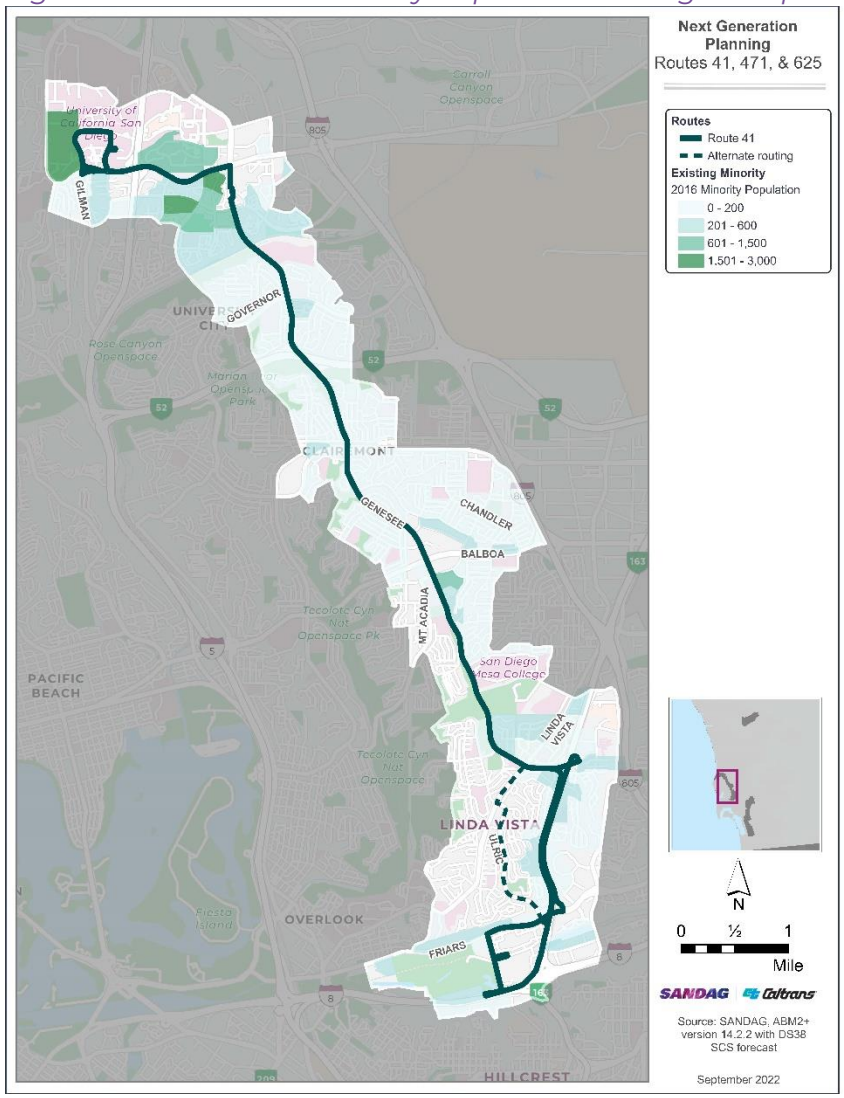


Figure 10. Forecasted Minority Population Change – Rapid 41 Corridor



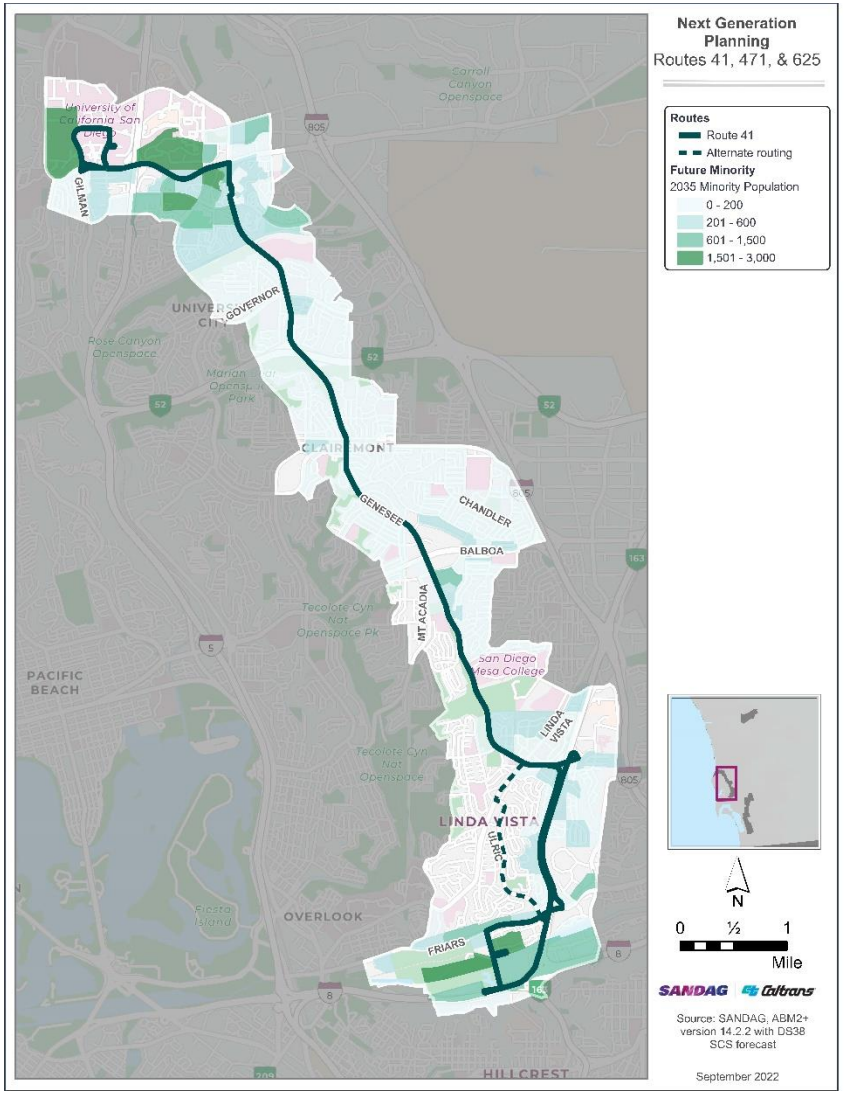
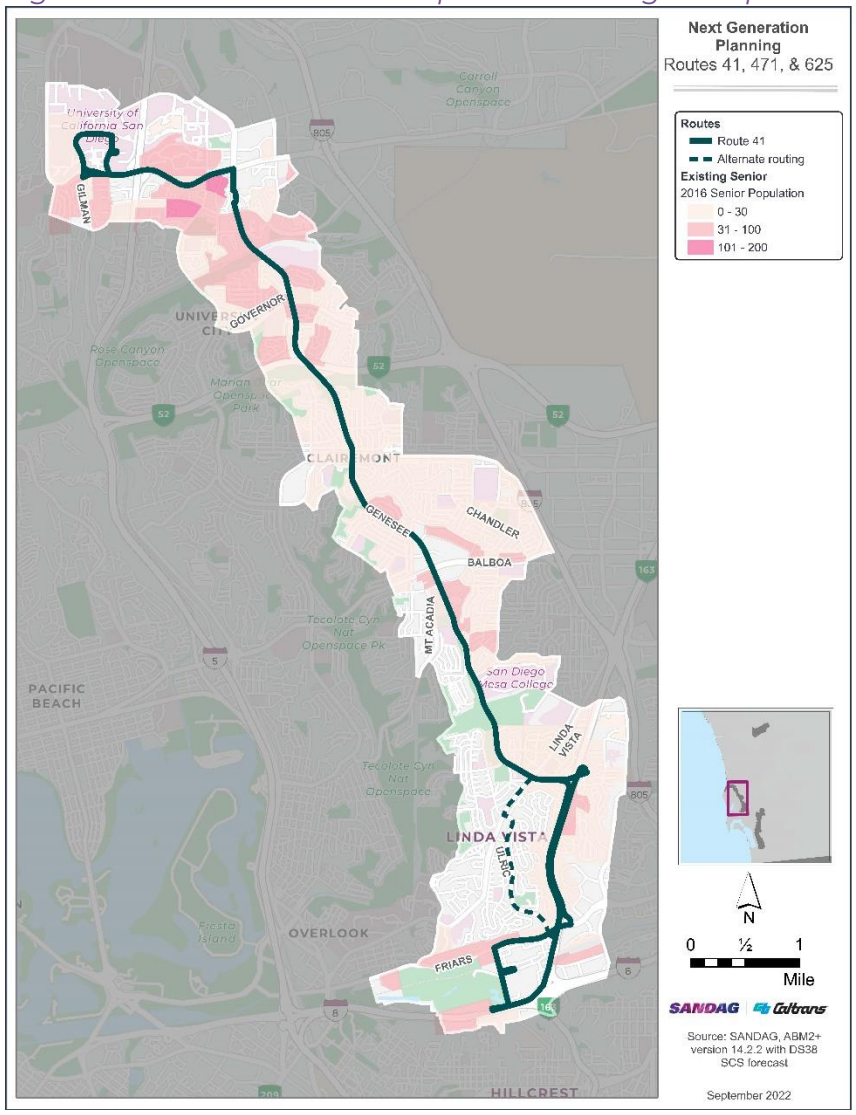


Figure 11. Forecasted Senior Population Change – Rapid 41 Corridor



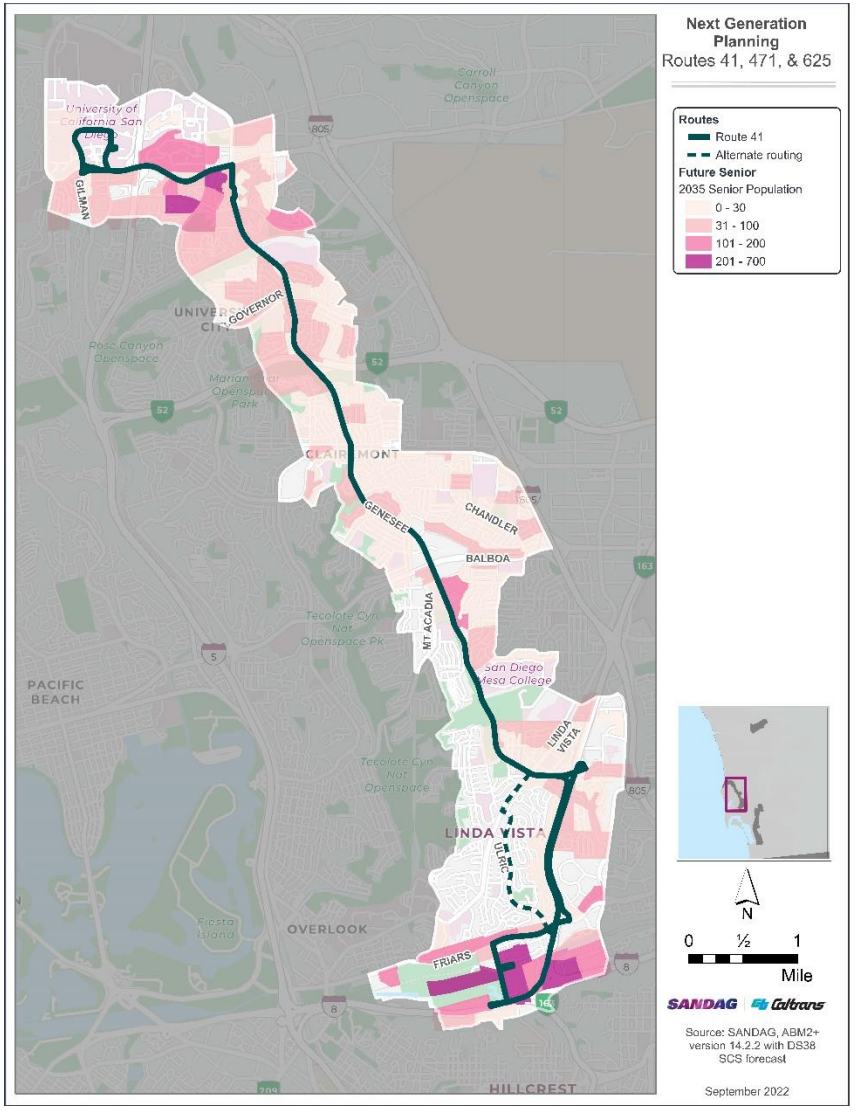


Figure 12. Forecasted Employment Change – Rapid 41 Corridor

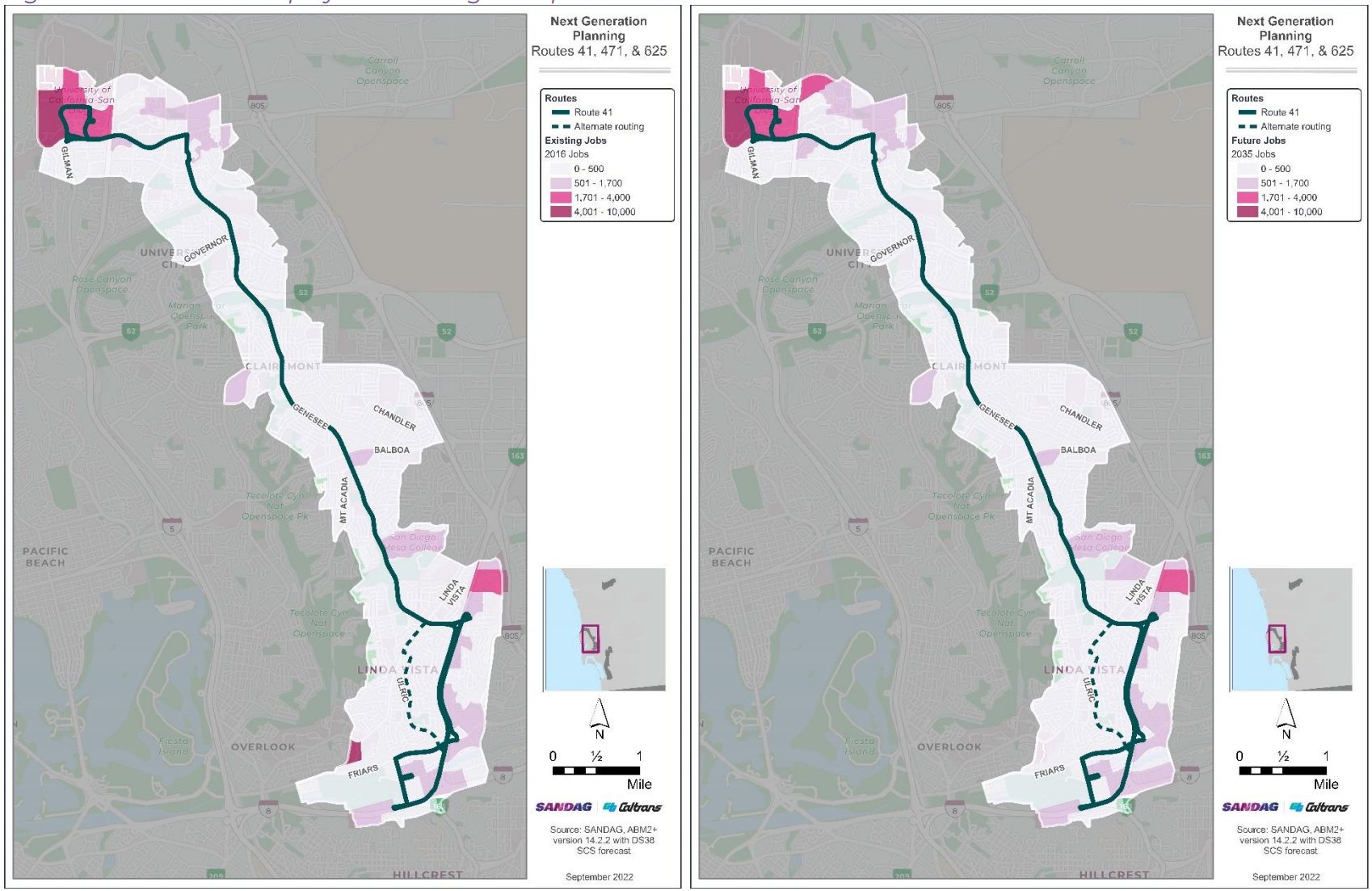
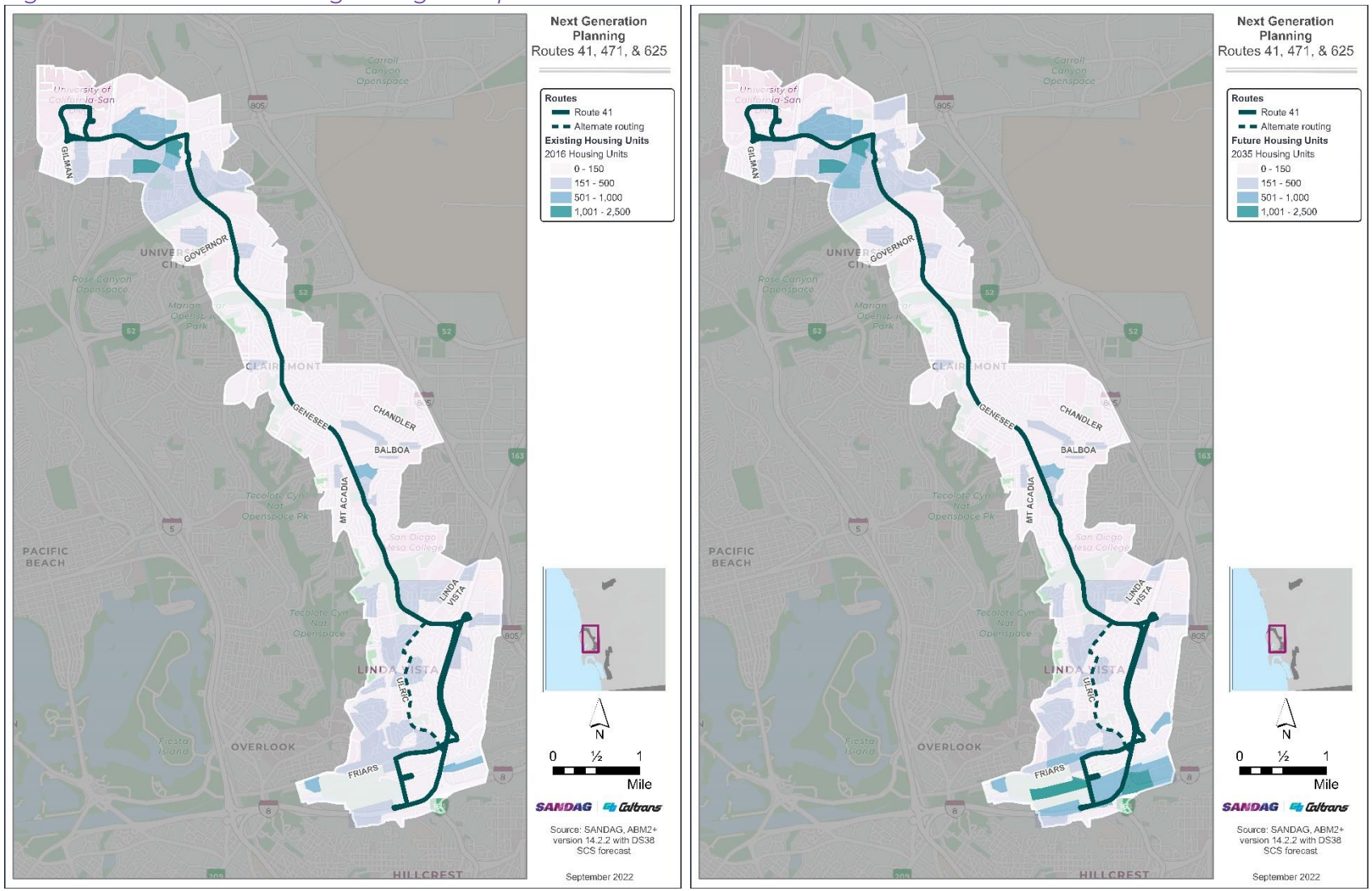


Figure 13. Forecasted Housing Change – Rapid 41 Corridor



3.1.4 Land Use, Key Activity Centers and Community Resources

3.1.4.1 Existing Land Use

Land use in the *Rapid* 41 corridor varies greatly along the route. In Mission Valley, the predominant land use is shopping center and commercial office, with Fashion Valley being one of the biggest retail centers in the region.

In Linda Vista, land use includes single- and multi-family residential, commercial, education, and recreation. East of SR-163, the Sharp Metro Campus – including Sharp Memorial and Mary Birch Hospitals – is one of the largest medical centers the region.

In Clairemont, land use primarily includes single-family residential, though more transit-supportive land uses like shopping centers, commercial, and multi-family residential uses exist along Genesee Avenue. Clairemont Town Square and Genesee Plaza are two key neighborhood commercial centers. Mesa College, located on the southern edge of Clairemont, is one of the largest community colleges in the region.

The University City community includes single- and multi-family residential, commercial, office, and education uses. The University Town Center (UTC) area is the largest employment center in the region. The University of California, San Diego (UC San Diego) is one of the largest educational institutions in the region. The Westfield UTC mall is one of the largest shopping centers in the region. There is also a substantial number of medical facilities around UC San Diego, including Jacobs Medical Center and Scripps Memorial Hospital.

3.1.4.2 2035 Land Use

The general land use pattern in the *Rapid* 41 corridor is forecasted to be similar in 2035, though land use intensities will generally increase. The following key changes are anticipated:

- In many areas, single-family housing is expected to convert to multi-family housing.
- The Riverwalk golf course will be converted to a mixed-use development adjacent to the existing Green Line trolley tracks.
- The existing commercial retail land use near the intersection of Linda Vista Road and Ulric Street will be converted to a mixed-use development.
- Clairemont Town Square will be converted to mixed-use
- University Towne Center will be converted to mixed-use
- Many commercial office uses in University City will be converted to mixed-use

Land use and key activity centers are shown on Figure 14 and Figure 15.

Figure 14. Existing and Planned Land Use – Rapid 41 Corridor

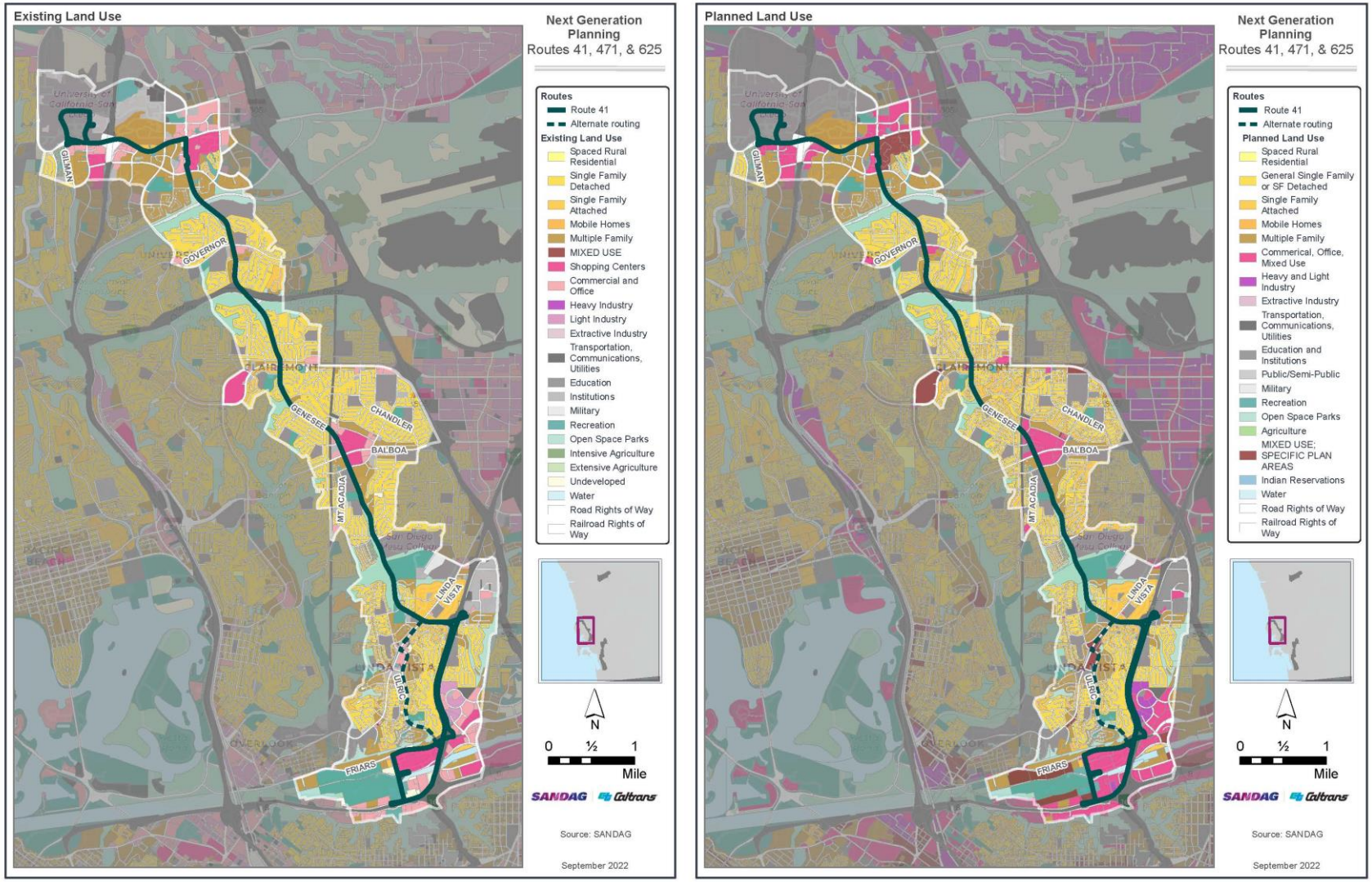
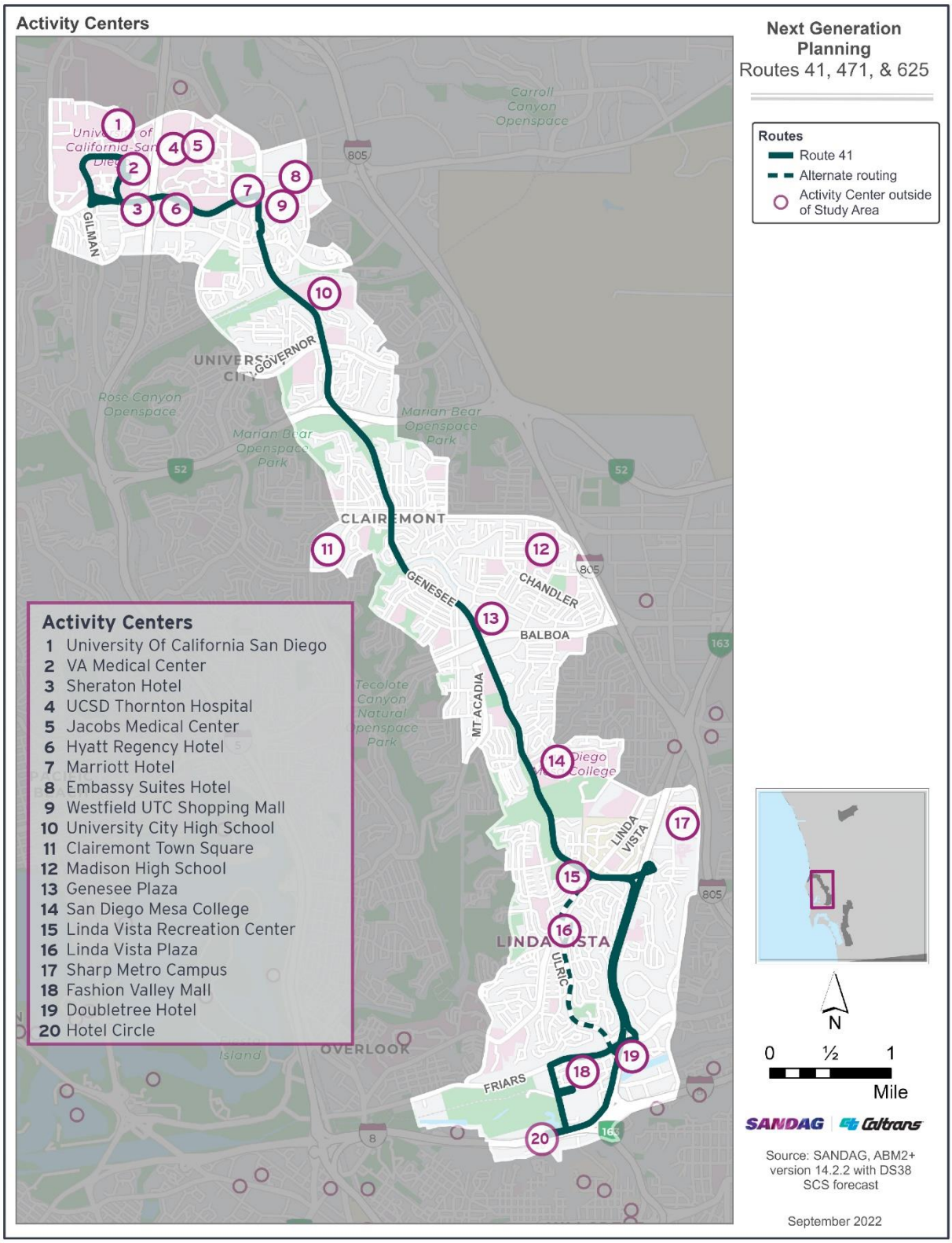


Figure 15. Key Activity Centers and Community Resources – Rapid 41 Corridor



3.1.5 Safety

3.1.5.1 Pedestrian Collisions

In the northern portion of the *Rapid* 41 corridor, pedestrian-involved collisions in the *Rapid* 41 corridor are most prevalent near the UC San Diego campus near Gilman TC and along roadways south of La Jolla Village Dr. In the central portion of the corridor, collisions are most prevalent along Clairemont Mesa Boulevard and near the commercial retail center at Genesee Ave/Balboa Avenue. In Linda Vista, collisions are most prevalent along Linda Vista Road between Genesee Avenue and Ulric Street. In Mission Valley, collisions are most prevalent east of SR-163.

Pedestrian collisions are shown in Figure 16.

3.1.5.2 Bicycle Collisions

In University City, bicycle-involved collisions are most prevalent near the intersection of La Jolla Village Dr/Gilman Dr, along La Jolla Village Dr, and along Genesee Avenue south of Rose Canyon. In Clairemont, collisions are most prevalent along Clairemont Mesa Boulevard and along Genesee Avenue south of Balboa Avenue. In Linda Vista, collisions occur most frequently along Linda Vista Road between Genesee Avenue and Tait Street. In Mission Valley, collisions occur most frequently east of SR-163.

Bicycle collisions are shown in Figure 17.

Figure 16. Pedestrian Collisions – Rapid 41 Corridor

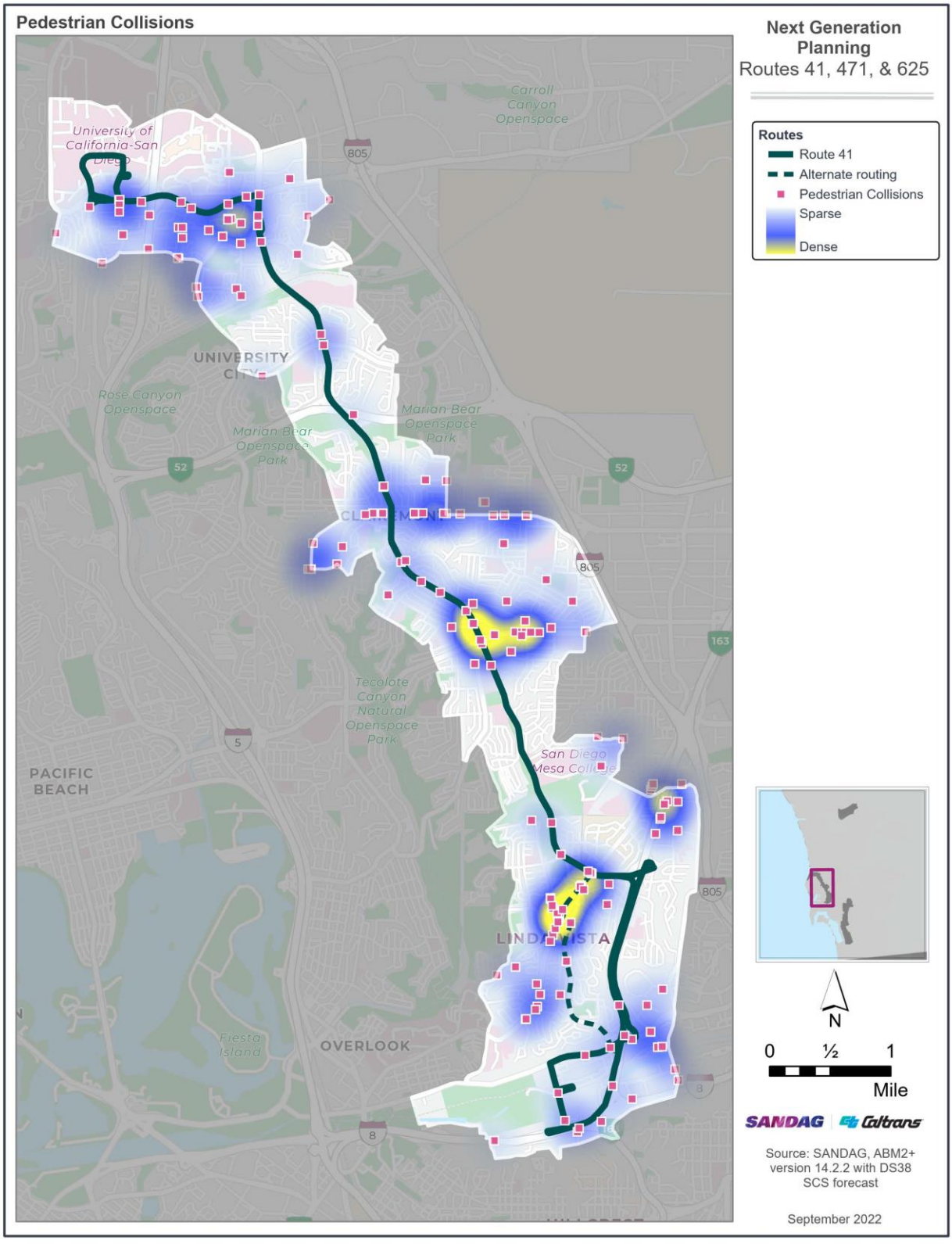
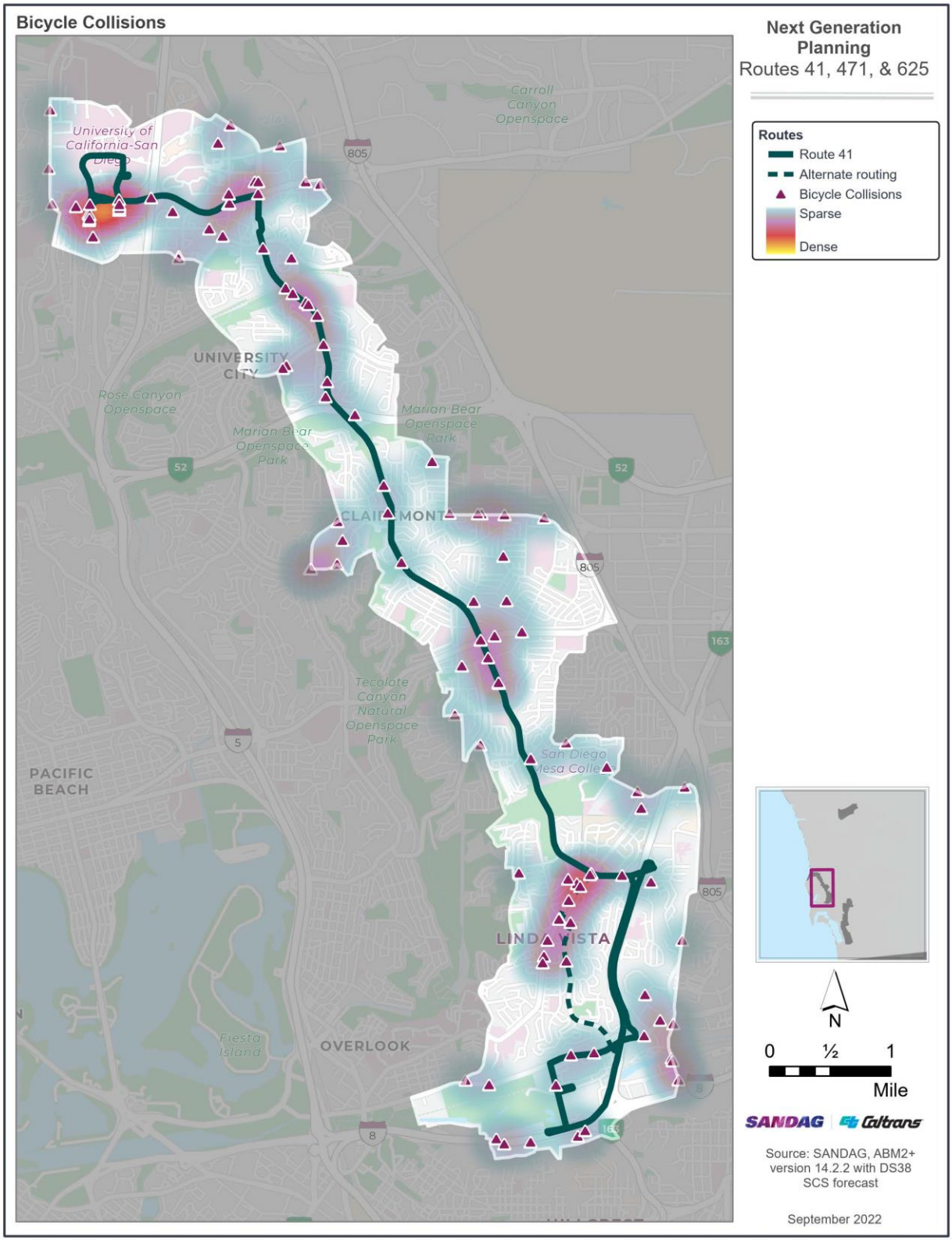


Figure 17. Bicycle Collisions – Rapid 41 Corridor


Bicycle Collisions
Next Generation Planning
Routes 41, 471, & 625
Routes
Route 41
Alternate routing
Bicycle Collisions
Sparse
Dense
University of California-San Diego
Carroll Canyon Openspace
805
UNIVERSITY CITY
Rose Canyon Openspace
Marian Bear Openspace Park
52
CLAIREMONT
163
Tecolote Canyon Natural Openspace Park
5
San Diego Mesa College
PACIFIC BEACH
LINDA VISTA
Fiesta Island
OVERLOOK
8
N
0 ½ 1
Mile
SANDAG Caltrans
Source: SANDAG, ABM2+ version 14.2.2 with DS38 SCS forecast
September 2022

3.2 Rapid 471

3.2.1 Mobility

3.2.1.1 Existing Transit Services

Several other transit services exist in the *Rapid* 471 corridor. Escondido Transit Center is the main transit hub in the city and is served by light rail, *Rapid*, *Rapid* Express, and local bus services. Transit services primarily consist of North County Transit District (NCTD) BREEZE buses providing east-west connectivity along Mission Avenue, Washington Avenue, Valley Parkway, and Grand Avenue within Escondido, and connecting to other cities. NCTD also operates the SPRINTER, which provides light rail service between Escondido and Oceanside, and *Rapid* 350 which provides service between Escondido Transit Center and the Del Lago Transit Center. MTS operates *Rapid* 235 and *Rapid* Express 280, which provide service between Escondido and Downtown San Diego via the managed lanes on I-15.

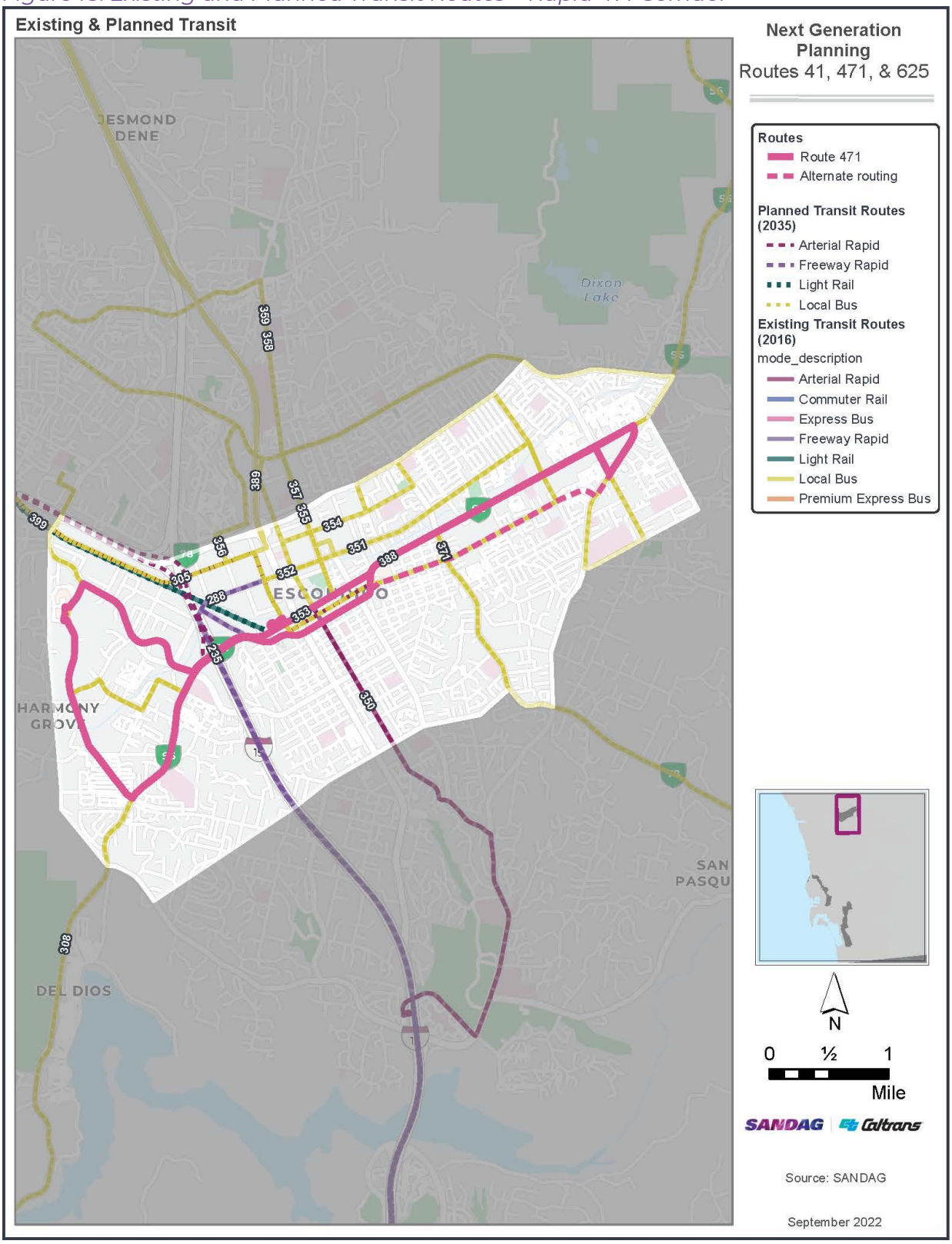
3.2.1.2 Planned Transit Services

The following notable service changes are planned in 2035:

- *Rapid* 471 will provide BRT service between Palomar Medical Center Escondido, Downtown Escondido, and East Escondido
- Service frequency improvements for bus and SPRINTER services
- Expanded service hours for bus and SPRINTER services

Existing and planned corridor routes are shown on Figure 18. A summary of existing transit routes, ridership, and operational characteristics in the *Rapid* 471 corridor is included in Appendix A.

Figure 18. Existing and Planned Transit Routes – Rapid 471 Corridor



3.2.1.3 Existing Roadways

Each of the roadways that *Rapid* 471 either currently operates on or could traverse is described below. Maps showing typical existing roadway congestion are included in Appendix B.[8]

Valley Parkway

Valley Parkway varies between four and six lanes. East of Midway Drive, the roadway is a 6-lane prime arterial with bi-directional traffic with a two-way-left turn lane. The roadway right-of-way east of Valley Boulevard varies between 60 and 130 feet. At Valley Boulevard, the roadway becomes West Valley Parkway. Between Valley Boulevard and Grand Avenue, it is a 3-to-4-lane, one-way roadway allowing westbound travel only. The one-way portion does not have a median. The roadway right-of-way east of Valley Boulevard varies between 60 and 65 feet. Between Grand Avenue and I-15 it is a 6-lane prime arterial with a raised median and a width of 130 feet.

From I-15 to Auto Park Way it is an 8-lane prime arterial with a raised median. The roadway right-of-way is approximately 115 feet. Between Auto Park Way and 11th Avenue it is a 6-lane major arterial with a raised median. The right-of-way is approximately 105 feet. From 11th Avenue to east of Citracado Parkway it is a 4-lane major arterial with a raised median and is approximately 80 feet wide.

Auto Park Way

From West Valley Parkway to Hale Avenue, the roadway is a 4-lane major arterial with bi-directional traffic and a raised median. The roadway right-of-way varies between 60 and 75 feet. Between Hale Avenue and Andreasen Drive, it is a 2-lane, one-way major arterial allowing westbound travel only. The roadway width is approximately 35 feet wide. Between Andreasen Drive and Citracado Parkway, it is a 2-lane major arterial with a two-way left turn lane. The roadway right-of-way varies between 60 and 75 feet wide.

Citracado Parkway

Citracado Parkway exists in two segments: from Auto Park Way to Andreasen Drive, and from Harmony Grove Village Parkway to West Valley Parkway. Between Auto Park Way and Andreasen Drive, it is a 4-lane major arterial with a raised median. The roadway right-of-way is 90 feet wide. From Harmony Grove Village Parkway to West Valley Parkway, it is a 2-lane major arterial with a substantially wide, raised median. The roadway right-of-way is approximately 85 feet wide.

Grand Avenue

From West Valley Parkway to Valley Boulevard/East 2nd Avenue, Grand Avenue is a 3-lane, one-way major roadway, a 2-lane major arterial with a raised median, and 4-lane major arterial with a raised median. The roadway right-of-way varies between 45 and 70 feet. From Valley Boulevard to Bear Valley Parkway, Grand Avenue varies between a 2-lane

[8] https://www.google.com/maps

major arterial with a striped median to a 4-lane major arterial with a striped median. The roadway right-of-way varies between 50 and 65 feet wide.

2nd Avenue

Between Grand Avenue and Centre City Parkway, 2nd Avenue is a 4-lane, one-way major arterial with no median. The roadway right-of-way is 50 feet wide. From Centre City Parkway to Valley Boulevard, 2nd Avenue is a 3-lane, one-way major arterial with no median. The roadway right-of-way is 65 feet wide.

Bear Valley Parkway

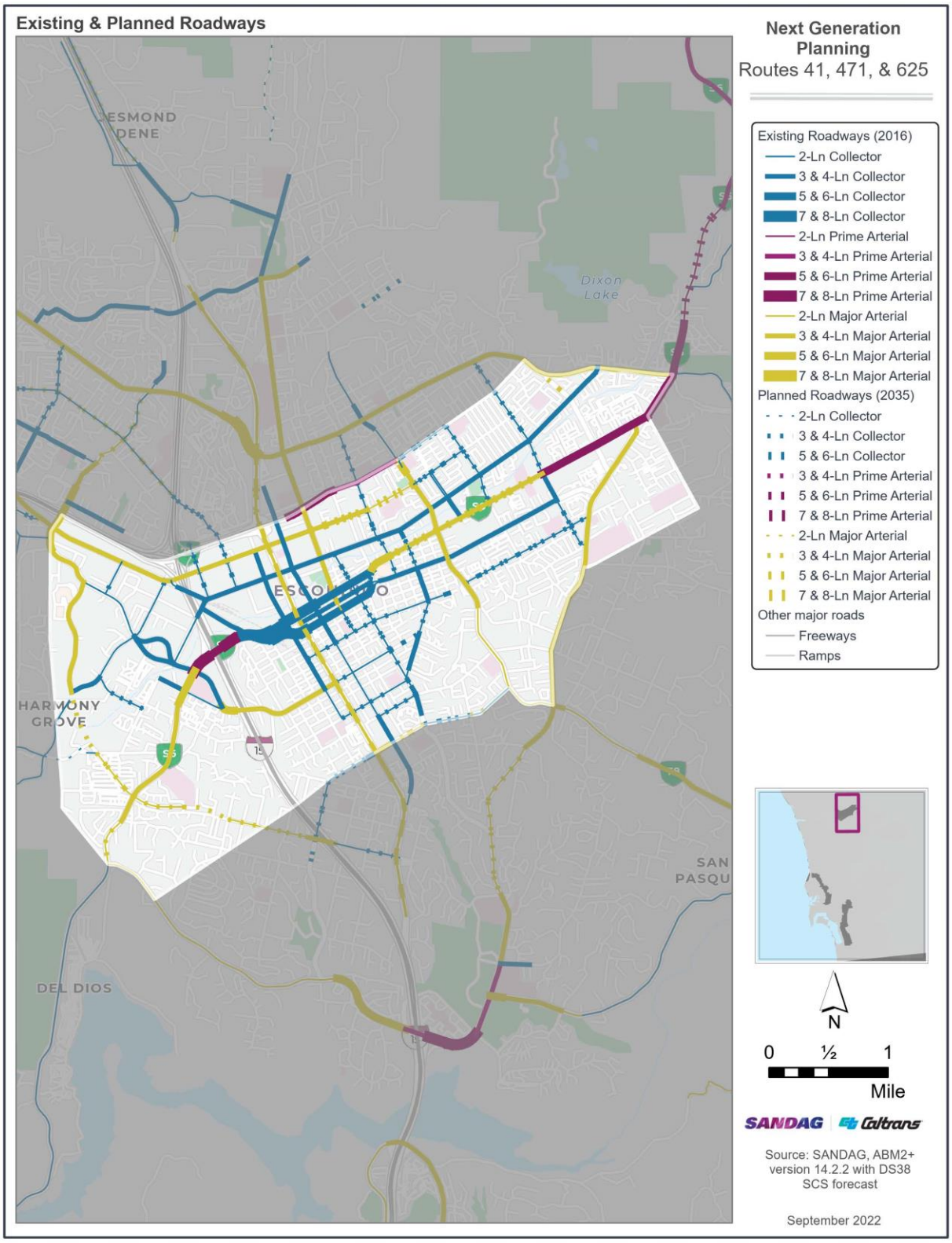
Between Grand Avenue and Valley Parkway, Bear Valley Parkway is a 4-lane major arterial with a raised median. The roadway right-of-way varies between 80 and 90 feet wide.

3.2.1.4 Planned Roadways

By 2035, the following roadway modifications are planned along routes that *Rapid* 41 might operate on:

- Valley Parkway from Valley Boulevard to Midway Drive: widened to six lanes
- Citracado from Harmony Grove Village Parkway to West Valley Parkway: widened to four lanes
- In 2024, Citracado Parkway will be connected between Andreasen Drive and Harmony Grove Village Parkway, creating one contiguous 4-lane major arterial from Auto Park Way to West Valley Parkway.

Figure 19. Existing and Planned Roadways – Rapid 471 Corridor



3.2.1.5 Existing Mobility Hubs/Flexible Fleets

In the *Rapid* 471 corridor, different travel options exist at Escondido TC. Shared micromobility services like scooters or e-bikes do not currently exist in the corridor.

3.2.1.6 Planned Mobility Hubs/Flexible Fleets

Most of the *Rapid* 471 corridor is in the Escondido Mobility Hub that is included in the 2021 Regional Plan and North County CMCP. The characteristics of this hub will be defined in coordination with local jurisdictions and could include enhanced accommodations for bicycle, pedestrian, transit, drone, electric vehicle, carshare, and carpool services, such as upgraded infrastructure, technology solutions and other service amenities.

3.2.1.7 Existing Active Transportation Facilities

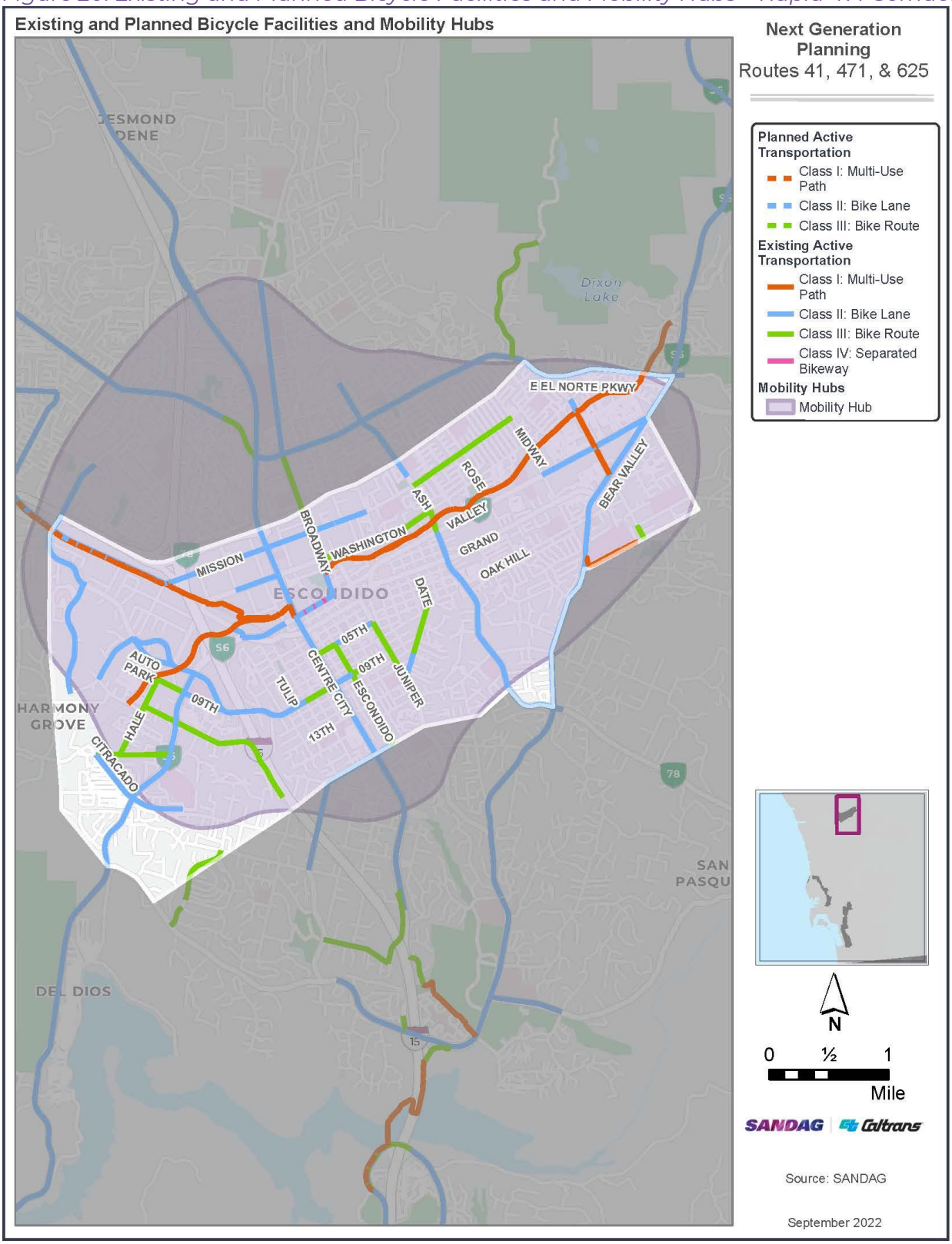
West of I-15, several Class I multi-use paths exist along Mission Road and the Escondido Creek Bike Path. Class II bike lanes also exist along Valley Parkway and Citracado Parkway, among others. East of I-15, The Escondido Creek Bike Path connects to Escondido TC and continues east roughly parallel to Valley Parkway. Class II bike lanes exist along several roadways that intersect Valley Parkway and Grand Avenue, including Centre City Parkway and N Broadway.

3.2.1.8 Planned Active Transportation Facilities

The following key active transportation improvements are planned along the *Rapid* 471 corridor:

- A Class II bike lane along San Pasqual Valley Road, which would intersect Valley Parkway and Grand Avenue.

Figure 20. Existing and Planned Bicycle Facilities and Mobility Hubs – Rapid 471 Corridor



3.2.2 Demographics

The following summarizes existing and forecasted demographic conditions in the *Rapid* 471 corridor. Anticipated changes in demographic conditions are shown in Figure 22 through Figure 27 and summarized in Table 3.

3.2.2.1 Population

Existing population along the *Rapid* 471 corridor is primarily concentrated north of Valley Parkway east of I-15 and along Grand Avenue east of San Pasqual Valley Road. In 2035, the largest population growth is expected north of Valley Parkway near Centre City Parkway. The number of Low-income residents is expected to increase nearly 10 percent. The number of minority and senior residents are expected to increase by 26 percent and 56 percent, respectively.

3.2.2.2 Jobs

Employment in the *Rapid* 471 corridor is primarily located west of I-15, along Auto Park Way and Citracado Parkway. Smaller clusters of jobs also exist east of I-15, mainly north of Washington Avenue. In 2035, the number of jobs is anticipated to increase by approximately 11 percent and is forecasted to increase in the same areas.

3.2.2.3 Housing Units

Housing in the *Rapid* 471 corridor is concentrated along Grand Avenue and north of Valley Parkway east of Broadway. The number of housing units is expected to increase by over 29 percent by 2035. The largest number of units is anticipated north of Valley Parkway near Centre City Parkway, which corresponds with anticipated population growth.

3.2.2.4 Location Affordability

Housing and transportation costs are typically the largest expenses for most households. The Location Affordability Index (LAI) is a dataset provided by HUD that incorporates housing and transportation costs as a percent of income for Median-Income Family households. The LAI for *Rapid* 471 is shown on Figure 21. As shown, housing and transportation costs are highest in the western and southeastern portions of the corridor.

Figure 21. Location Affordability Index – Rapid 471 Corridor

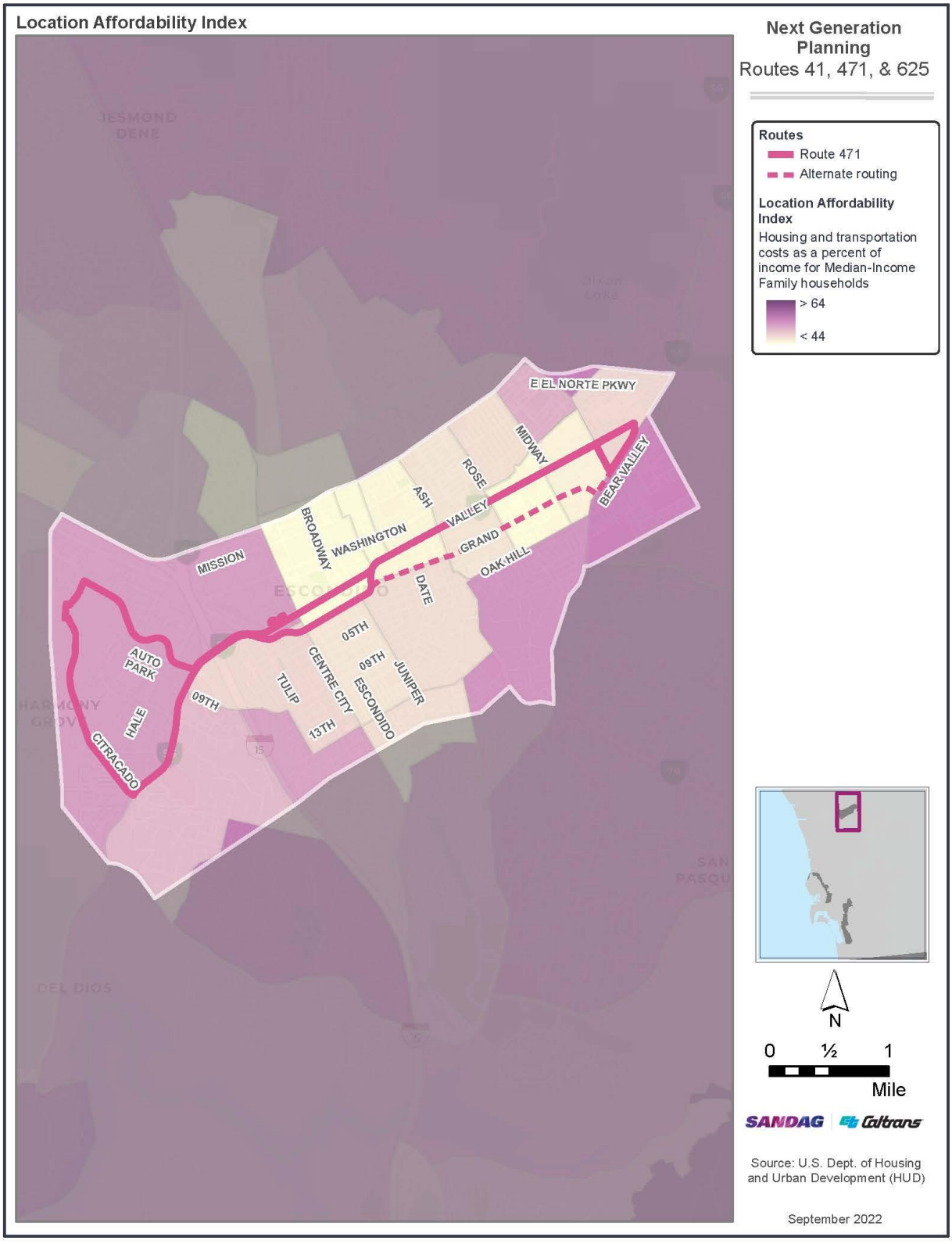


Table 3. Population, Social Equity Focus Populations, Jobs, and Housing Units – Rapid 471 Corridor

Demographic	2016	2035	% Change
Total Population	87,003	110,442	21%
Low-Income	41,173	44,985	8%
Minority	58,352	78,695	26%
Senior	4,110	9,392	56%
Jobs	44,882	50,212	11%
Housing Units	26,811	37,531	29%

3.2.3 Other Transit Propensity Factors

Table 4 summarizes other factors that can influence transit propensity in the *Rapid* 471 corridor.

Table 4. Other Transit Propensity Factors – Rapid 471 Corridor

	2015-2019	County of San Diego average	Difference (%)
Population Under Age 18	26.4%	21.8%	4.6%
Households with No Vehicle Available	7.9%	5.5%	2.4%
Noninstitutionalized Population with a Disability	10.4%	9.9%	0.5%

Figure 22. Forecasted Population Change – Rapid 471 Corridor

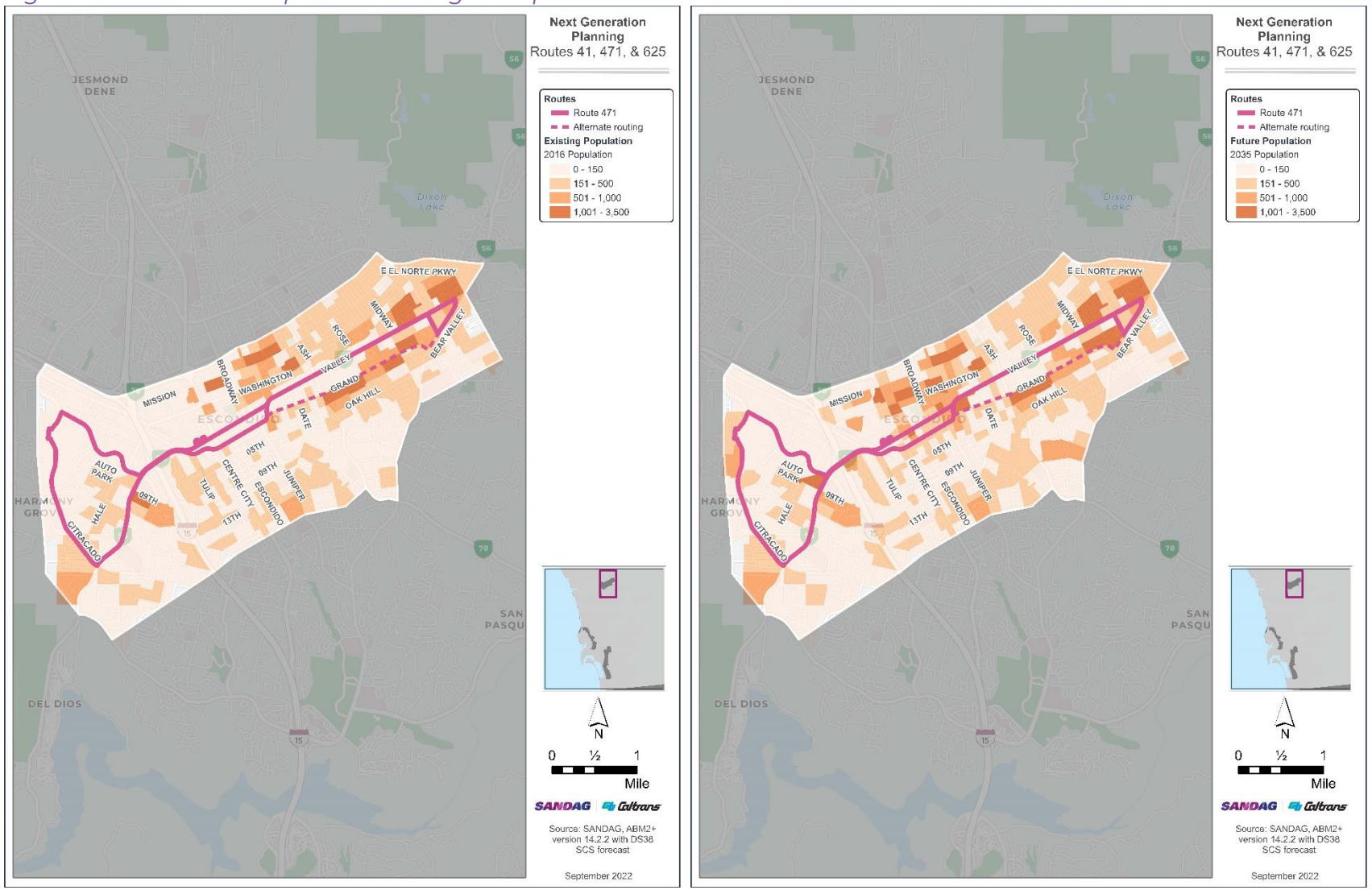


Figure 23. Forecasted Low-Income Population Change – Rapid 471 Corridor

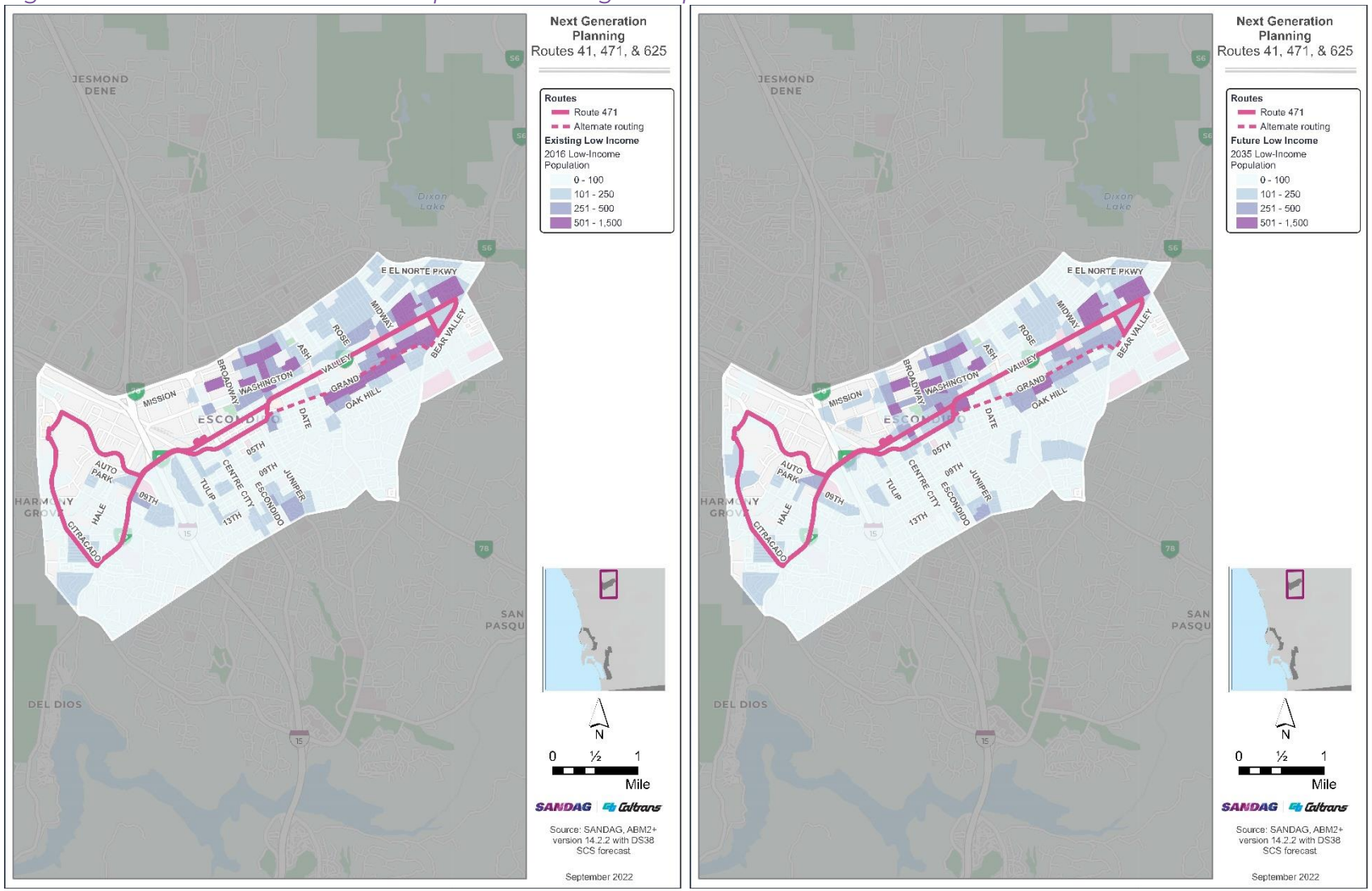
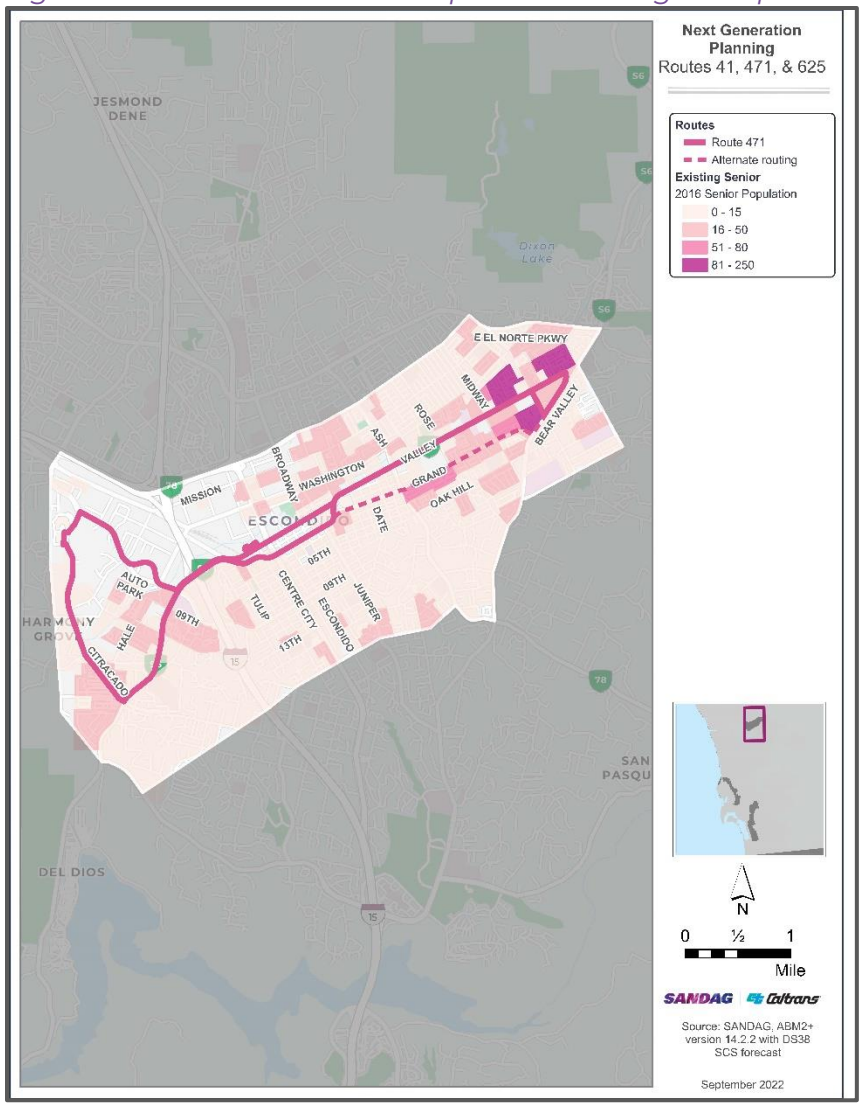


Figure 24. Forecasted Minority Population Change – Rapid 471 Corridor

Figure 25. Forecasted Senior Population Change – Rapid 471 Corridor



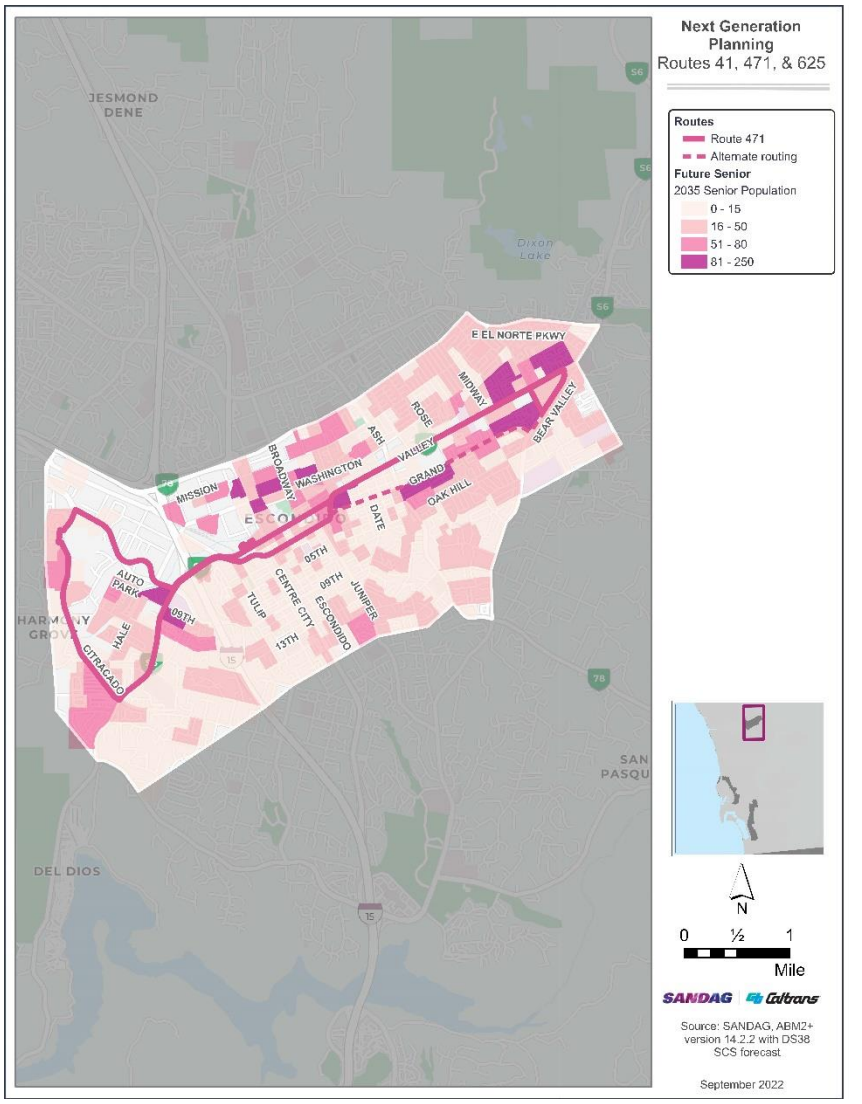


Figure 26. Forecasted Employment Change – Rapid 471 Corridor

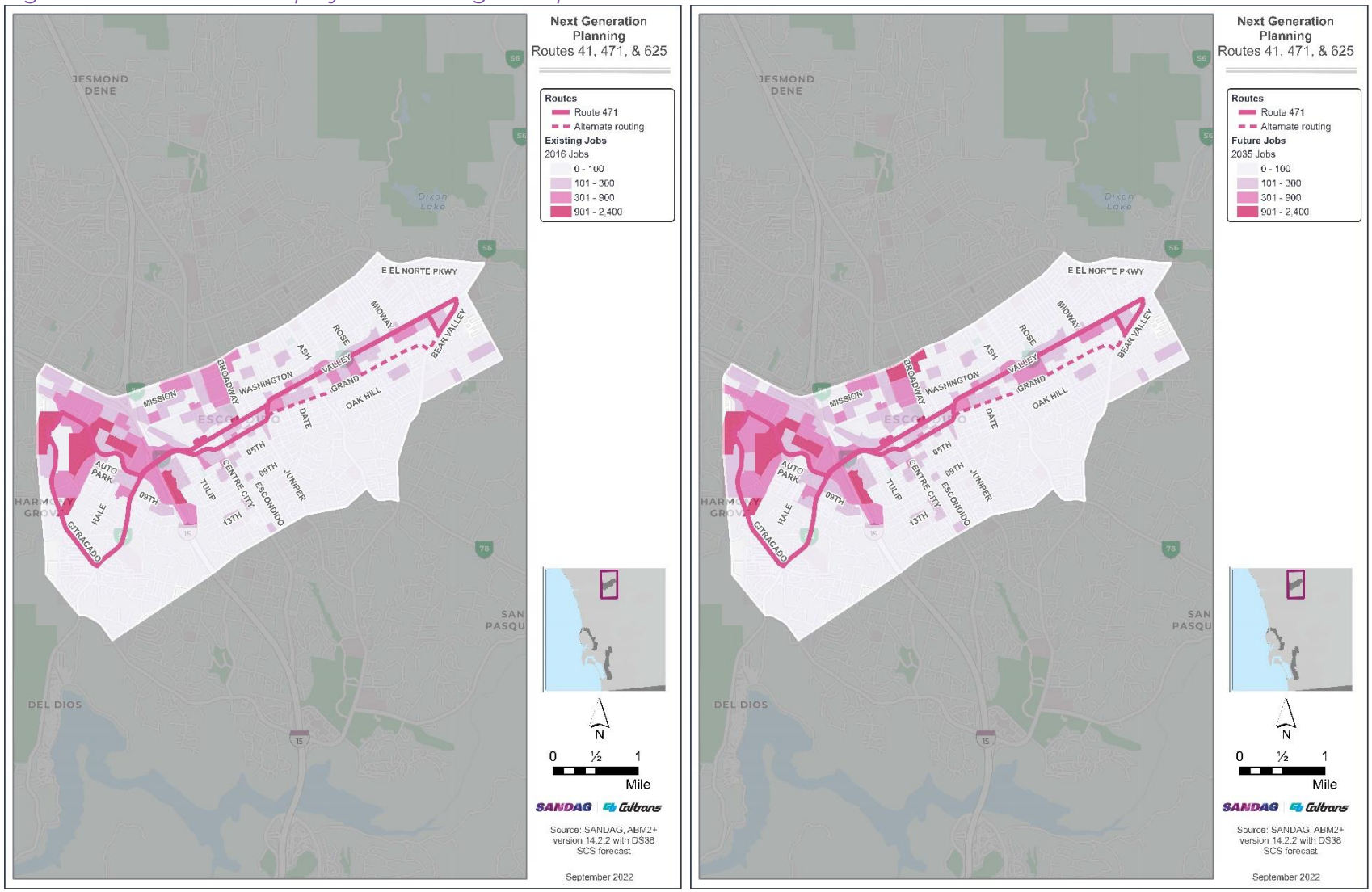
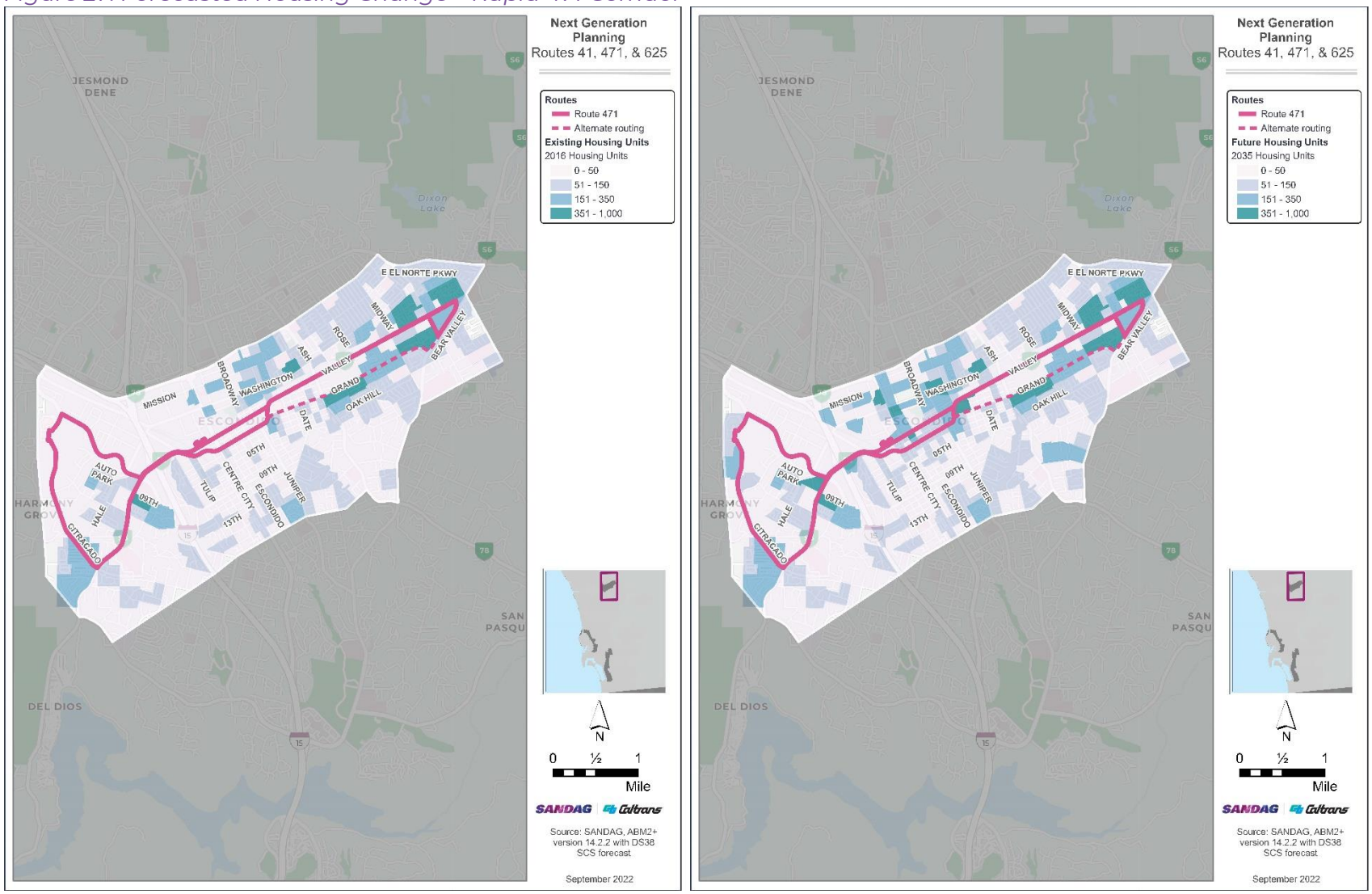


Figure 27. Forecasted Housing Change – Rapid 471 Corridor



3.2.4 Land Use, Key Activity Centers and Community Resources

3.2.4.1 Existing Land Use

Land use in the *Rapid* 471 corridor varies greatly. West of I-15 along Auto Park Way, land use is predominantly industrial, with some commercial retail and multi-family residential uses. South of Valley Parkway, land use is predominantly single-family and rural residential, with some multi-family residential closer to I-15. Multi-family residential is more prevalent near the intersection of Citracado Parkway/Valley Parkway. Palomar Medical Center Escondido is one of the largest medical centers in North County and a key activity center west of I-15.

East of I-15 and north of Valley Parkway, land use is predominantly commercial, mixed-use, and industrial. Along Valley Parkway and Grand Avenue in Downtown Escondido, land use is mostly mixed-use and commercial retail. Moving east, the areas north and south of Valley Parkway and Grand Avenue are mostly single-family residential, with some multi-family residential uses closer to Valley Boulevard/Grand Avenue. Towards the eastern end of the corridor there are several commercial and office uses along Valley Parkway near Bear Valley Parkway. The Central Escondido commercial area, Escondido Public Library, Escondido Charter High School, and Palomar College – Escondido Campus are all key destinations east of I-15.

3.2.4.2 2035 Land Use

The land use pattern in the *Rapid* 471 corridor is forecasted to be similar in 2035, though intensities increase in some areas. Land use intensification is generally concentrated along Valley Parkway. The following key changes are anticipated:

- In some areas, single-family housing is expected to convert to multi-family housing.
- The industrial land use near Auto Park Way and Citracado Parkway will be converted to a both light and heavy industrial use.
- Commercial office uses east of I-15 and north and south of Valley Parkway will be converted to mixed-use
- Some open space east of I-15 will be converted to single-family residential

Land use and key activity centers are shown on Figure 28 and Figure 29.

Figure 28. Existing and Planned Land Use – Rapid 471 Corridor

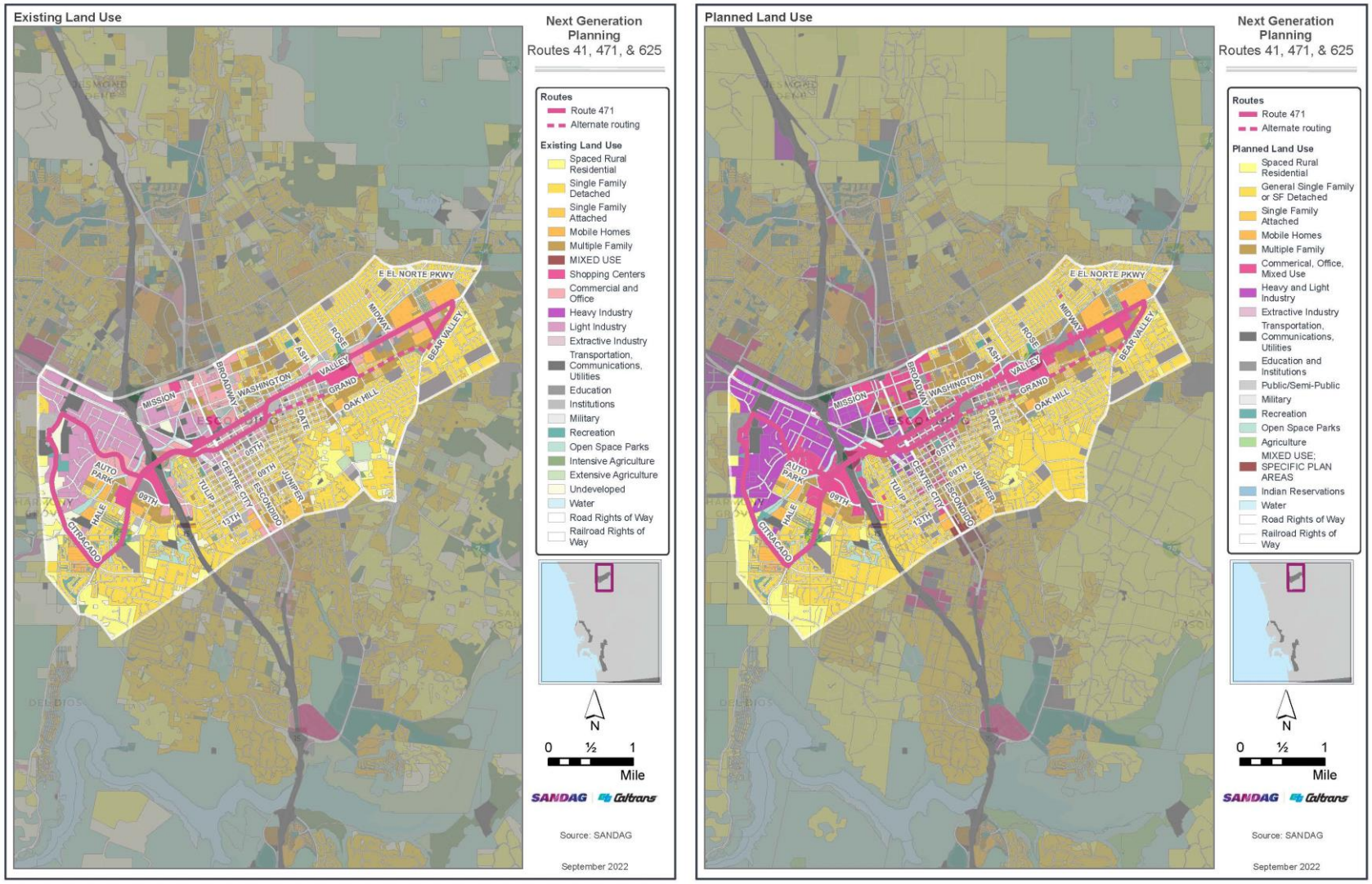
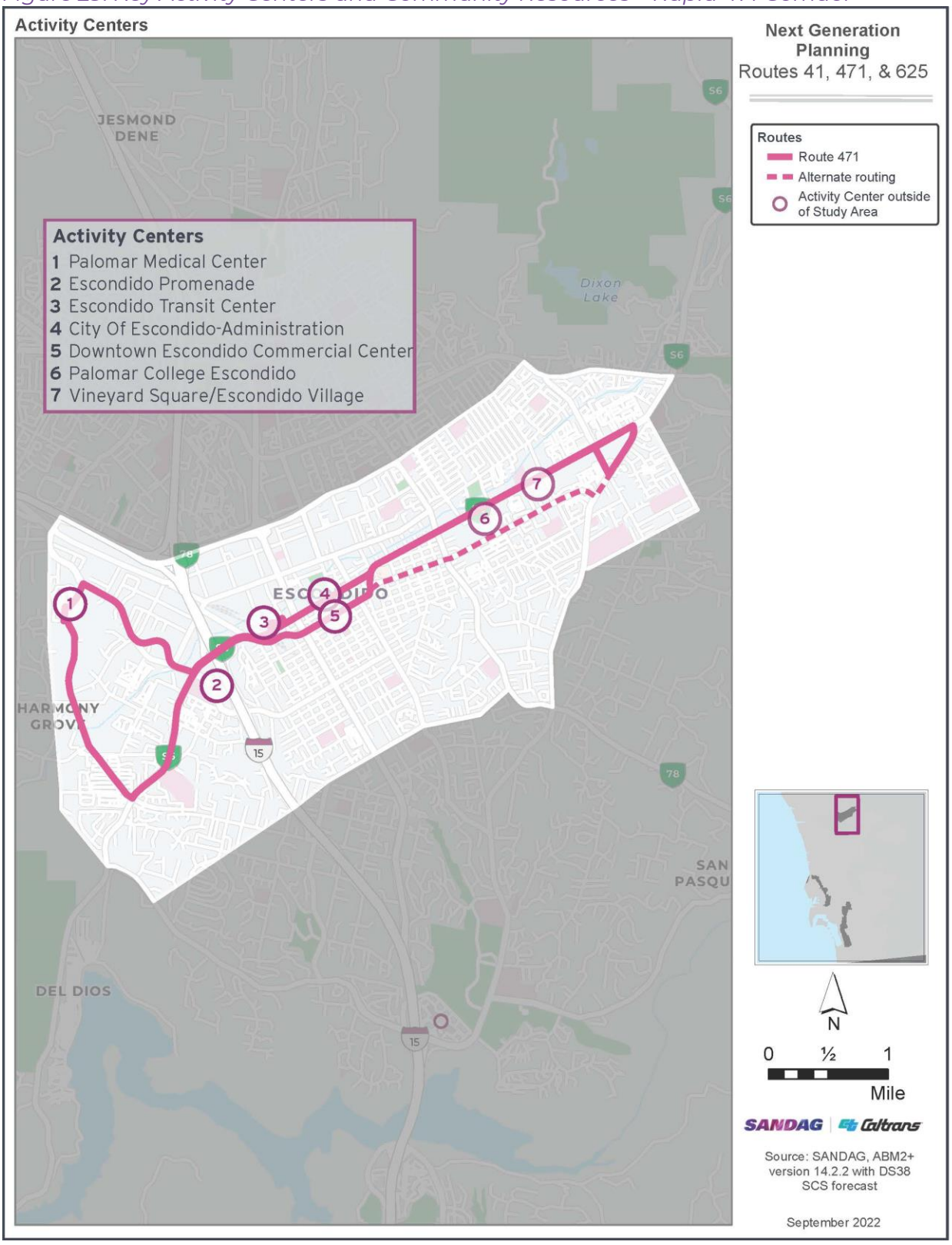


Figure 29. Key Activity Centers and Community Resources – Rapid 471 Corridor



3.2.5 Safety

3.2.5.1 Pedestrian Collisions

Pedestrian-involved collisions in the *Rapid* 471 corridor are most prevalent along Centre City Parkway and N Broadway, north of Valley Parkway, and along Washington between Centre City Parkway and N Broadway. It should be noted that sidewalks do not exist along most of Centre City Parkway in the corridor. Pedestrian-involved collisions are also high along Valley Parkway between Fig Street and Ash Street and near the intersection of Valley Parkway/Midway Dr. Pedestrian-involved collisions are less frequent west of I-15; however, this is likely due to generally lower levels of pedestrian activity as the land use and roadway network in this area are less pedestrian friendly.

Pedestrian collisions are shown in Figure 30.

3.2.5.2 Bicycle Collisions

Bicycle-involved collisions are most prevalent in the area bound by Centre City Parkway, N Broadway, Mission Avenue, and Grand Avenue. High numbers of collisions also exist along Mission Avenue, Valley Parkway, Grand Avenue, and both Escondido Boulevard and Centre City Parkway south of Grand Avenue. Bicycle-involved collisions are less frequent west of I-15; however, this is likely due to generally lower levels of cyclist activity as the land use and roadway network in this area are less pedestrian friendly.

Bicycle collisions are shown in Figure 31.

Figure 30. Pedestrian Collisions – Rapid 471 Corridor

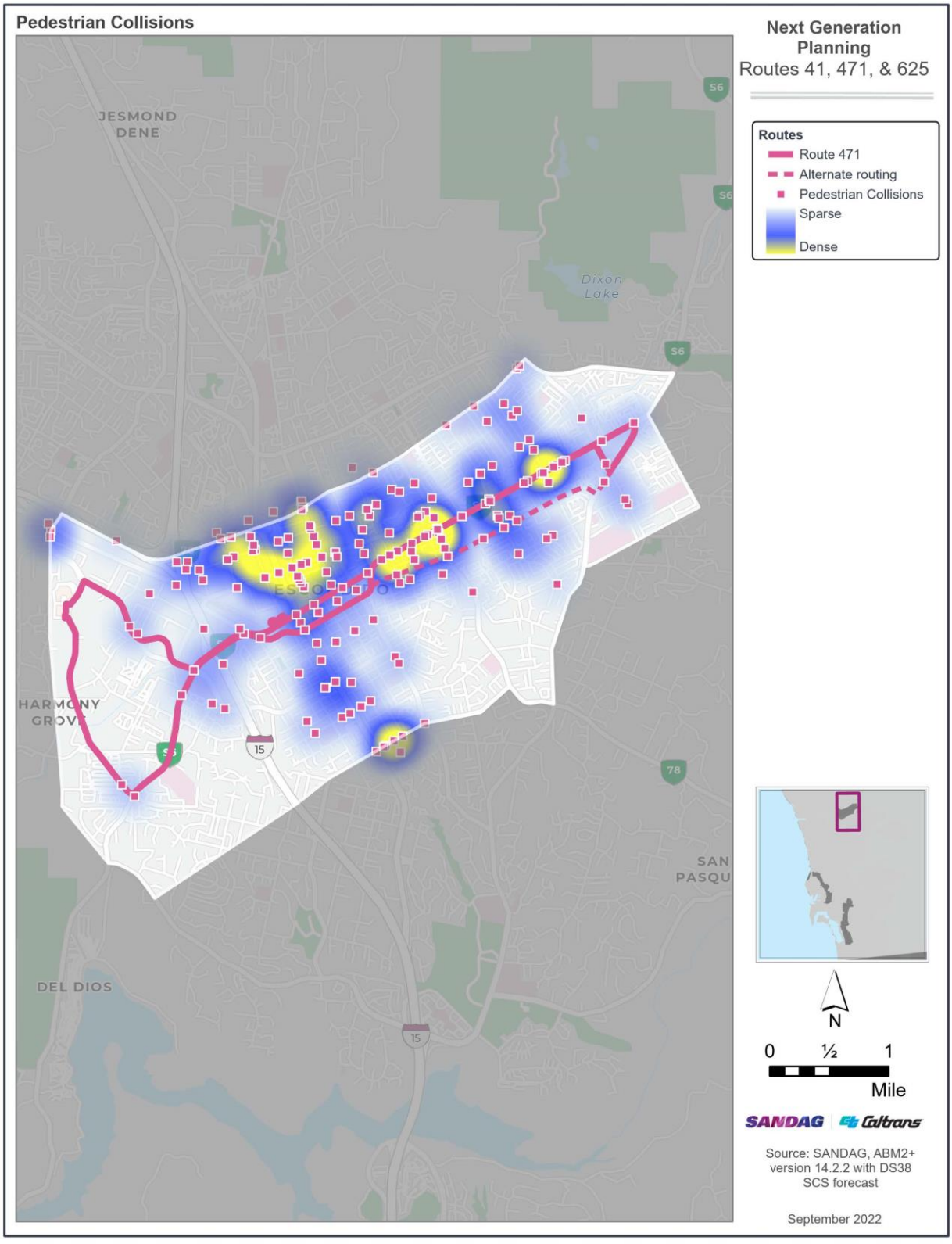
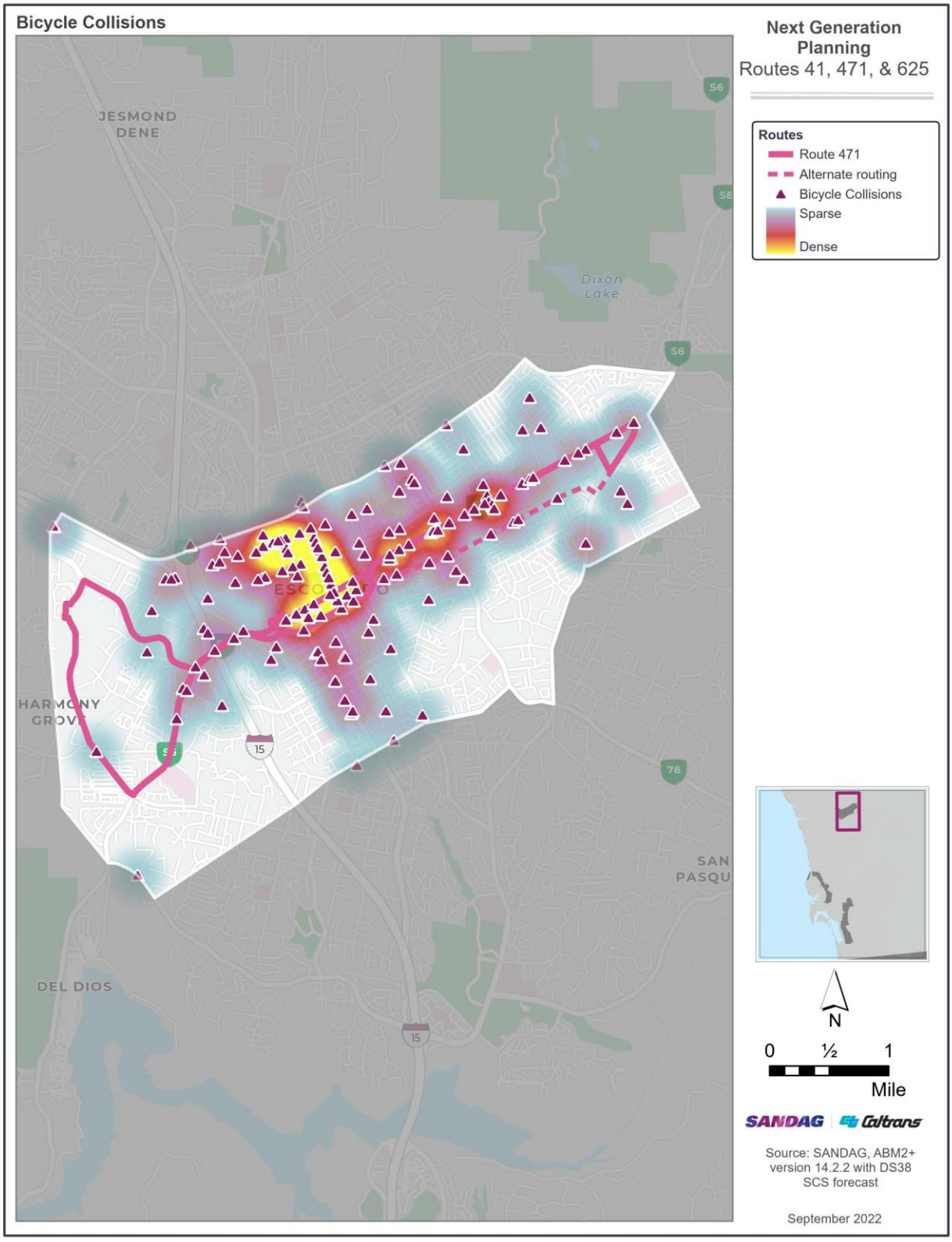


Figure 31. Bicycle Collisions – Rapid 471 Corridor



3.3 Rapid 625

3.3.1 Mobility

3.3.1.1 Existing Transit Services

Numerous transit services exist in the *Rapid* 625 corridor. North of SR-94, several local and *Rapid* buses operate along major arterial corridors, including Montezuma Road, El Cajon Boulevard, University Avenue, 54th St, and Fairmount Avenue. The San Diego State University Transit Center is a major hub where passengers can access several bus routes as well as the Green Line Trolley.

Between SR-94 and SR-54, several local buses provide primarily east-west services across communities within the City of San Diego as well as National City. The Orange Line Trolley provides light rail service at the 47th Street and Euclid Avenue Stations. MTS *Rapid* 225 provides *Rapid* services between Otay Mesa and Downtown San Diego along I-805; however, it does not stop in the corridor.

South of SR-54, local bus service is provided along Broadway, 4th Avenue, E St, F St, H St, Naples St, and Palomar Street. The Blue Line Trolley provides light rail service at several stations roughly paralleling I-5.

MTS Routes 955 and 929 operate along several roadways that *Rapid* 625 could traverse. Route 955 operates along 54th Street, Euclid Avenue, Market Street, 47th Street, and Highland Avenue. Route 929 operates along Highland Avenue, E Street, and 3rd Avenue.

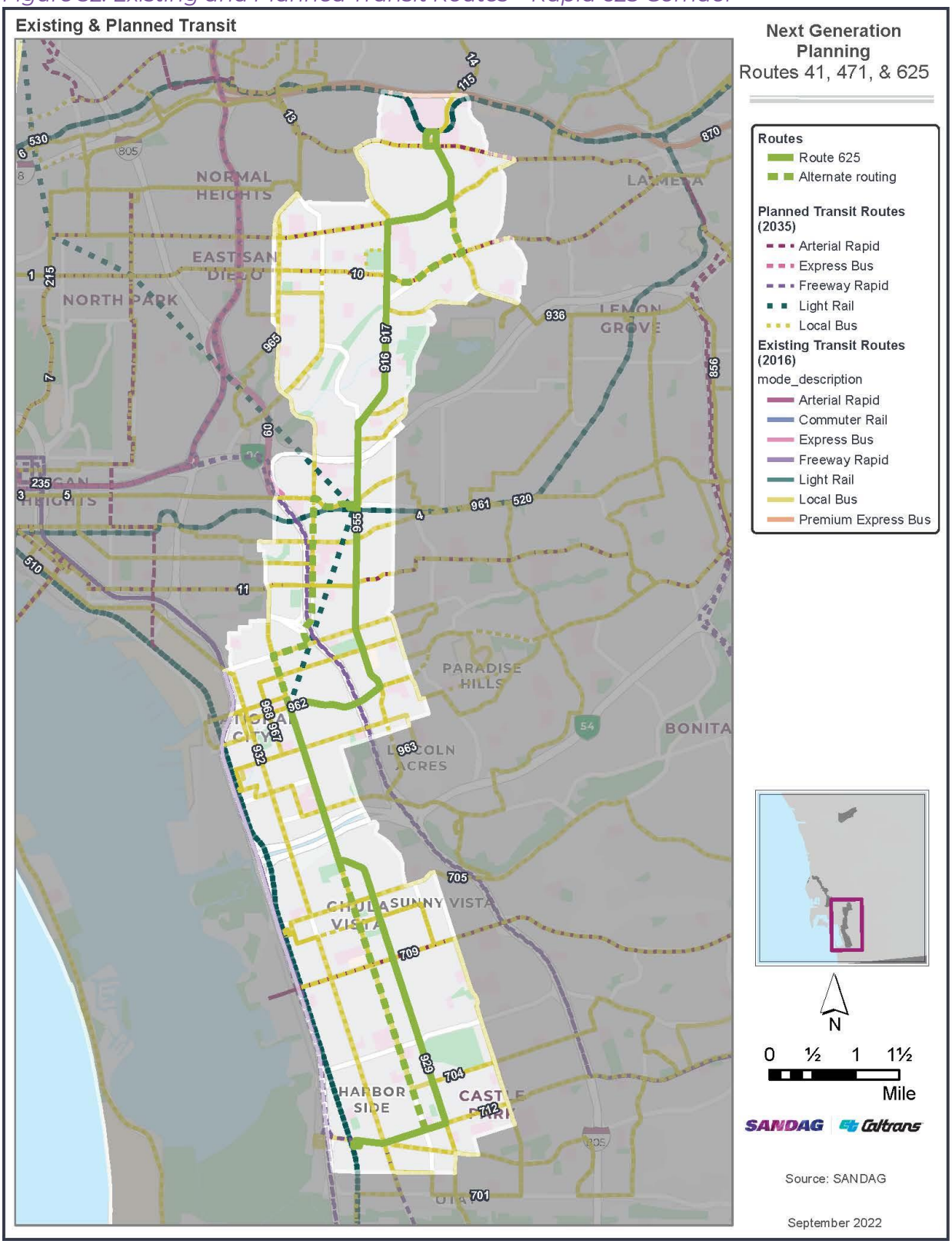
3.3.1.2 Planned Transit Services

The following notable service changes are planned in 2035:

- *Rapid* 625 will provide BRT service between San Diego State University and the Palomar Street Trolley station.
- Route 10 is planned to be converted to *Rapid* service
- *Rapid* 640 will provide BRT service between San Ysidro Transit Center and the Central Mobility Hub; however, it will not stop in the corridor
- *Rapid* 709 will provide BRT service between H Street TC and Otay Ranch TC
- The Purple Line commuter rail will provide service from South Bay to UTC
- Bus service frequency improvements
- Expanded service hours for bus and light rail services
- MTS Route 60 will be discontinued

Existing and planned corridor routes are shown on Figure 32. A summary of existing transit routes, ridership, and operational characteristics in the *Rapid* 625 corridor is included in Appendix A.

Figure 32. Existing and Planned Transit Routes – Rapid 625 Corridor



3.3.1.3 Existing Roadways

Each of the roadways that *Rapid* 625 could traverse is described below. Maps showing typical existing roadway congestion are included in Appendix B.[9]

College Avenue

Between the SDSU TC exit and Montezuma Road, College Avenue is a 4-lane major with a raised median. The roadway right-of-way is approximately 75 feet. Between Montezuma Avenue and University Avenue, it is a 4-lane arterial with both a two-way left turn lane and striped median. The roadway right-of-way varies between 60 and 80 feet.

Montezuma Road

Montezuma Road is a 4-lane prime arterial with a striped median between Campanile Drive and College Avenue. The roadway right-of-way is approximately 80 feet.

El Cajon Boulevard

El Cajon Boulevard is a 4-lane prime arterial with a striped median between College Avenue and 54th Street. The roadway right-of-way varies between 60 and 80 feet.

University Avenue

University Avenue is a 4-lane prime arterial with a striped median from 54th Street to Chollas Parkway. The roadway right-of-way varies between 65 and 75 feet. From Chollas Parkway to College Avenue, University Avenue is a 5-lane prime arterial with a raised median. The roadway right-of-way is approximately 100 feet wide.

54th Street/Euclid Avenue

54th Street is a 4-lane major arterial with both a raised and striped median from El Cajon Boulevard to its merge with Euclid Avenue, just north of Federal Boulevard. Along this segment, the right of way varies from 65 to 90 feet. Just north of Federal Boulevard, the roadway becomes Euclid Avenue. From this point to Plaza Boulevard in National City, Euclid Avenue is mostly a 4-lane major arterial with both a raised and striped median and width that varies between 60 and 80 feet. Between Guymon Street and Market Street and from Solola Street to Division Street, it is a 3-lane major arterial with a raised median.

Market Street

Between Euclid Avenue and 47th Street, Market Street is a 4-lane major arterial with a raised median. The roadway right-of-way varies between 60 and 75 feet.

47th Street

Between Market Street and Imperial Avenue, 47th Street is 2-lane major arterial with a two-way left-turn lane and a width of 50 to 60 feet. From Imperial Avenue to Logan Avenue, it is 2-lane major arterial with both a striped median and a two-way left-turn lane. The right-of-way is between 60 and 65 feet wide.

[9] https://www.google.com/maps

Division Street

Between 47th Street and Euclid Avenue, Division Street is 3-lane major arterial with a two-way left-turn lane. The roadway width is between 60 and 65 feet wide.

Plaza Boulevard

Plaza Boulevard is a 5-lane major arterial with a two-way left turn lane between Highland Avenue and N Avenue. The roadway width is between 60 to 75 feet wide. From N Avenue to I-805 it is a 6-lane prime arterial with a two-way left turn lane. The roadway width is between 75 to 80 feet wide. From I-805 to 12th Street it is a 5-lane prime arterial with a two-way left turn lane before narrowing to a 4-lane major arterial with a two-way left turn lane from 12th Street to Euclid Avenue. The roadway width from I-805 to Euclid Avenue is between 60 to 80 feet wide.

Highland Avenue/4th Avenue

From Division Street to 8th Street, Highland Avenue is a 2-lane major arterial with both raised and striped medians. The roadway width is between 60 and 65 feet wide. From 8th Street to SR-54, it is a 4-lane major arterial with a two-way left turn lane. The roadway width is between 60 and 65 feet wide. South of SR-54, the road changes to 4th Avenue. From SR-54 to C Street, it is a 6-lane major arterial with a striped median. The roadway width is between 80 and 95 feet wide. From C Street to Palomar Street, it is a 4-lane major arterial with both a two-way left turn lane and striped median. The roadway width is between 60 and 75 feet wide.

3rd Avenue

From 4th Avenue to E Street, 3rd Avenue is a 4-lane major arterial with a striped median. The roadway width is between 60 and 65 feet wide. From E Street to H Street, it is a 2-lane major arterial with both, a raised median, striped median, and two-way left turn lane. The roadway width is between 40 and 100 feet wide. From E Street to Palomar Street, it is a 4-lane major arterial with a two-way left turn lane. The roadway width is between 60 and 80 feet wide.

Palomar Street

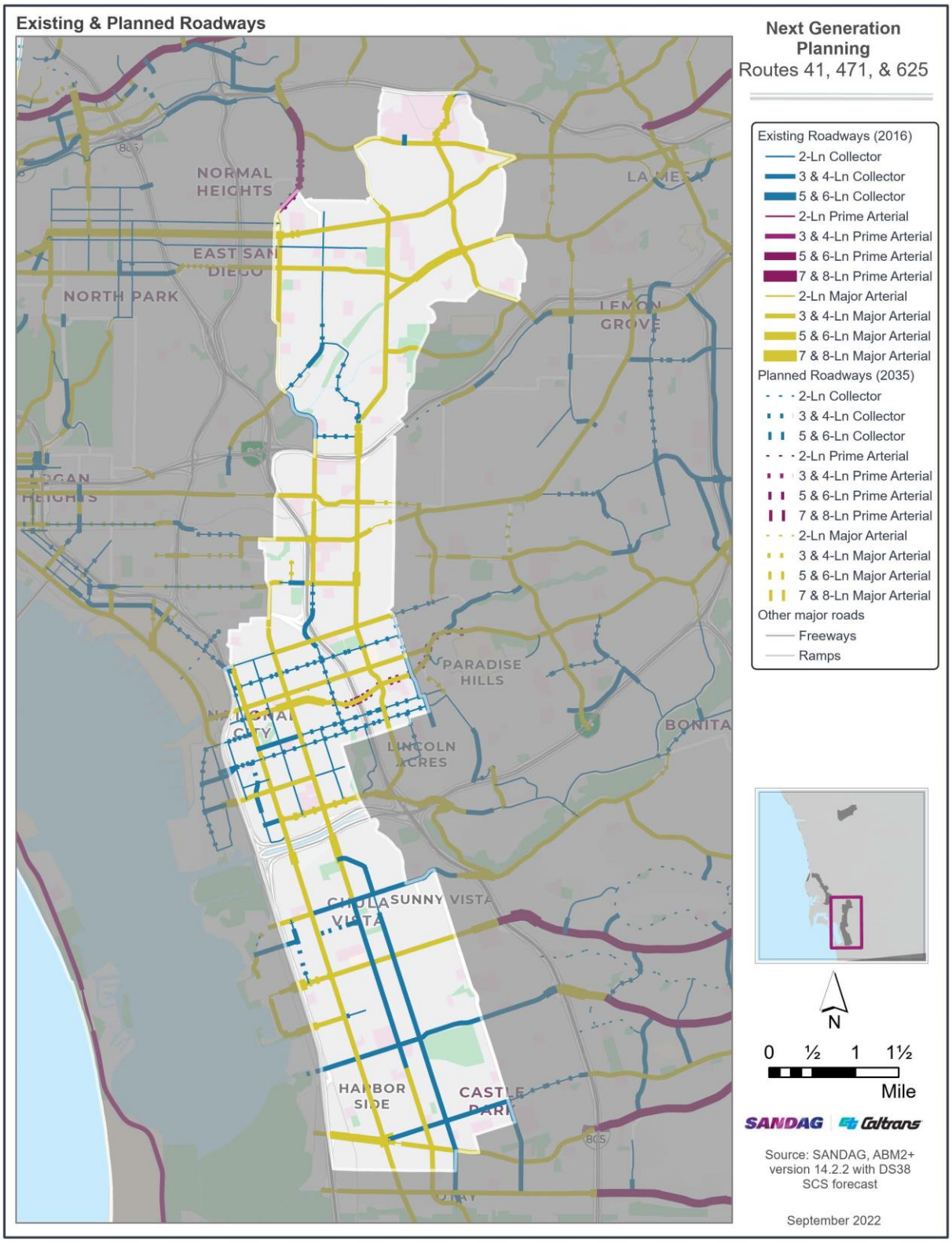
From the Palomar Street Station to Broadway, Palomar Street is a 6-lane major arterial with a raised median. The roadway width is between 90 and 100 feet wide. From Broadway to 4th Avenue, it is a 4-lane major arterial with a two-way left turn lane. The roadway width is between 60 and 65 feet wide.

3.3.1.4 Planned Roadways

By 2035, the following roadway modifications are planned along routes that *Rapid* 41 might operate on:

- College Ave from Alvarado Rd to Montezuma Ave: widened to six lanes

Figure 33. Existing and Planned Roadways – Rapid 625 Corridor



3.3.1.5 Existing Mobility Hubs/Flexible Fleets

In the *Rapid* 625 corridor, different travel options exist at SDSU TC, Euclid TC, 47th Street Station, and Palomar Street Station. The following is known about micromobility services in the corridor:

- Micromobility companies like Bird, Link, Lime, and Spin provide scooter share services within the Cities of San Diego and Chula Vista.[10,11]
- National City has not adopted regulatory framework for micromobility devices
- SDSU partners with Bird and Fly Rides San Diego[12] to offer e-scooter and e-bike services on-campus.

3.3.1.6 Planned Mobility Hubs/Flexible Fleets

The northern portion of the corridor is in the College Area Mobility Hub from the 2021 Regional Plan. The Southeast San Diego, National City, Downtown Chula Vista, and Southwest Chula Vista Mobility Hubs identified in the 2021 Regional Plan and SB2S CMCP are all in the *Rapid* 625 corridor. The characteristics of these hubs will be defined in coordination with local jurisdictions and could include enhanced accommodations for bicycle, pedestrian, transit, drone, electric vehicle, carshare, and carpool services, such as upgraded infrastructure, technology solutions and other service amenities.

3.3.1.7 Existing Active Transportation Facilities

A network of Class I multi-use paths exists on the SDSU campus. Class II bike lanes exist primarily on Montezuma Road, 54th St, and College Avenue south of El Cajon Boulevard. Bike facilities do not exist on El Cajon Boulevard or University Avenue.

Between SR-94 and SR-54, Class II bike lanes exist along 47th St, portions of Euclid Avenue, and Division St, as well as roadways that intersect the route *Rapid* 625 may traverse.

South of SR-54, 4th Street is a Class III bike route between C Street and J Street and Class II bike lanes exist south of J Street. Class II bike lanes and Class III bike routes exist on most arterials that intersect 3rd Street and 4th Street.

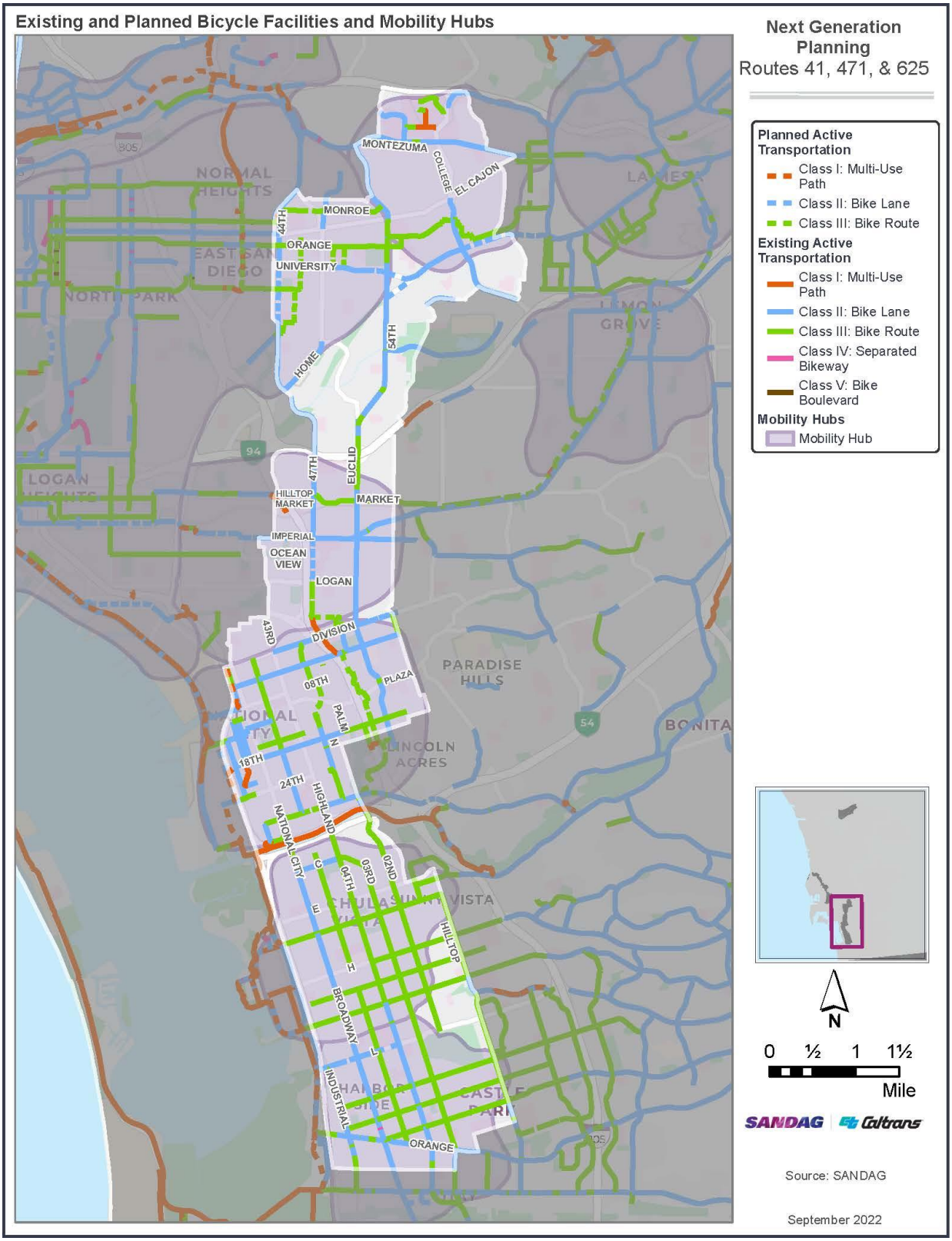
3.3.1.8 Planned Active Transportation Facilities

The following key active transportation improvements are planned along the *Rapid* 625 corridor:

- Class II bike lanes along Fairmount Avenue south of El Cajon Boulevard
- Class II bike lanes along University Avenue between 54th Street and College Ave
- Class II bike lanes along L Street between I-5 and 4th St

[10] https://www.sandiego.gov/bicycling/bicycle-and-scooter-sharing/company-contacts
[11] https://www.chulavistaca.gov/departments/engineering/shared-micro-mobility-device-program
[12] https://flyridesusa.com/collections/sdsu-electric-bike-ebike-alternative-means-of-transportation-go-greener

Figure 34. Existing and Planned Bicycle Facilities and Mobility Hubs – Rapid 625 Corridor



3.3.2 Demographics

The following summarizes existing and forecasted demographic conditions in the *Rapid* 625 corridor. Anticipated changes in demographic conditions are shown in Figure 36 through Figure 41 and summarized in Table 5.

3.3.2.1 Population

Existing population along the *Rapid* 625 corridor is concentrated near San Diego State University, in City Heights along El Cajon Boulevard, near the Euclid Trolley Station, and in the western portion of Chula Vista. In 2035, the largest population growth is expected in western Chula Vista. The number of Low-income residents is expected to have very little change. The number of minority and senior residents are expected to increase by 11 percent and 45 percent, respectively.

3.3.2.2 Jobs

Employment in the *Rapid* 625 corridor is primarily located at SDSU, along University Avenue near 54th St, and along 3rd Avenue, 4th Avenue, and Palomar Street in Chula Vista. Smaller clusters of jobs also exist along Euclid Avenue and Plaza Boulevard in National City. In 2035, the number of jobs is anticipated to increase by approximately 15 percent and is forecasted to increase in areas where employment is currently high.

3.3.2.3 Housing Units

Housing in the *Rapid* 625 corridor is concentrated near San Diego State University, along El Cajon Boulevard, near the Euclid Trolley Station, and in the western portion of Chula Vista, which corresponds with areas where population numbers are high. The number of housing units is expected to increase by over 15 percent by 2035, primarily in these areas and mostly in western Chula Vista and National City.

3.3.2.4 Location Affordability

Housing and transportation costs are typically the largest expenses for most households. The Location Affordability Index (LAI) is a dataset provided by HUD that incorporates housing and transportation costs as a percent of income for Median-Income Family households. The LAI for *Rapid* 625 is shown in Figure 35. As shown, housing and transportation costs are highest near SDSU, in several areas in Southeast San Diego, and in eastern National City and Chula Vista.

Figure 35. Location Affordability Index – Rapid 625 Corridor

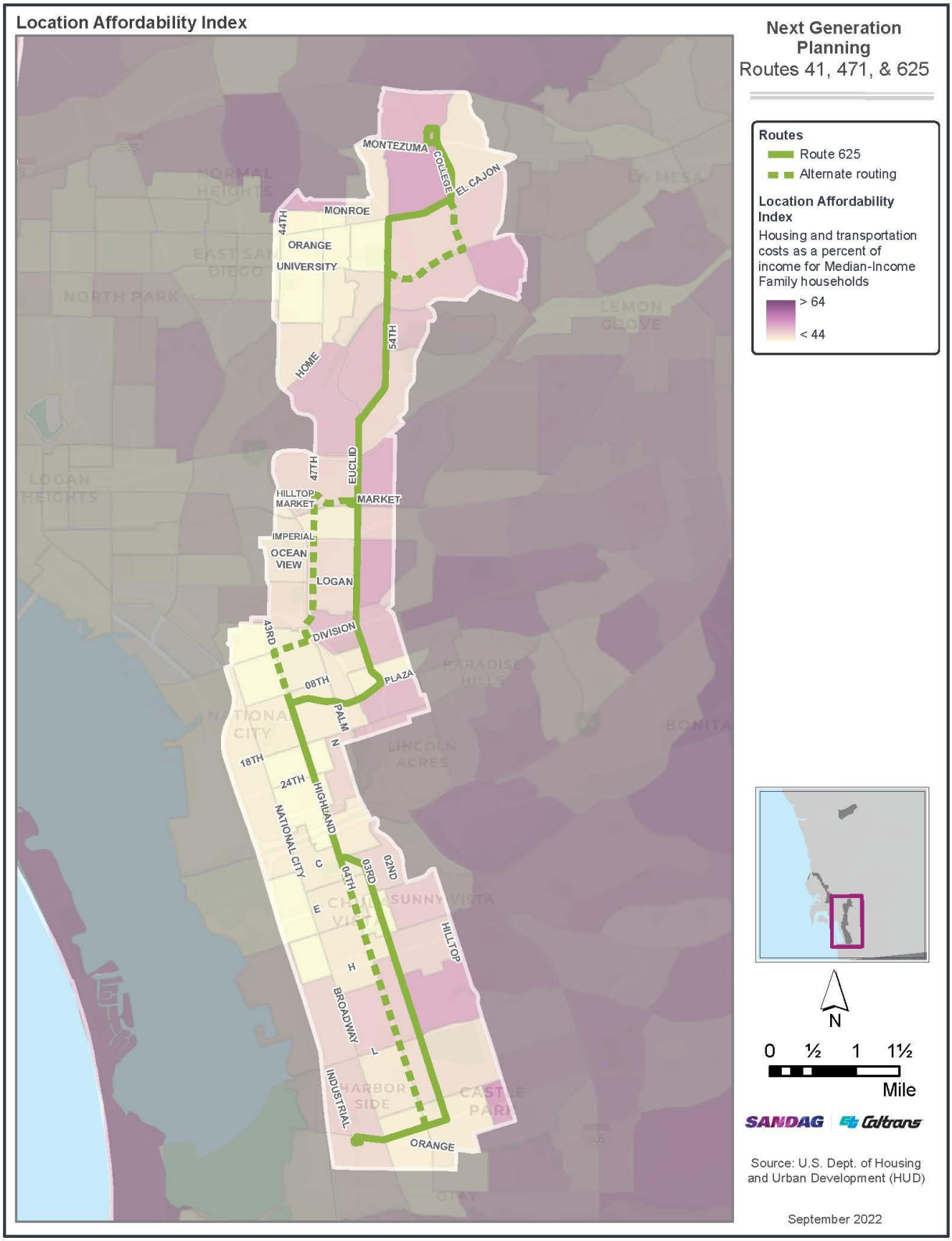


Table 5. Population, Social Equity Focus Populations, Jobs, and Housing Units – Rapid 625 Corridor

Demographic	2016	2035	% Change
Total Population	253,877	289,735	+12%
Low-Income	114,681	114,839	0%
Minority	183,608	205,900	+11%
Senior	10,002	18,145	+45%
Jobs	84,165	97,219	+13%
Housing Units	80,915	102,041	+21%

3.3.3 Other Transit Propensity Factors

Table 6 summarizes other factors that can influence transit propensity in the *Rapid* 625 corridor.

Table 6. Other Transit Propensity Factors – Rapid 625 Corridor

	2015-2019	County of San Diego average	Difference (%)
Population Under Age 18[13]	23.3%	21.8%	1.5%
Households with No Vehicle Available[14]	10.8%	5.5%	5.3%
Noninstitutionalized Population with a Disability[15]	11.0%	9.9%	1.2%

[13] Block Groups
[14] Block Groups
[15] Census Tracts

Figure 36. Forecasted Population Change – Rapid 625 Corridor

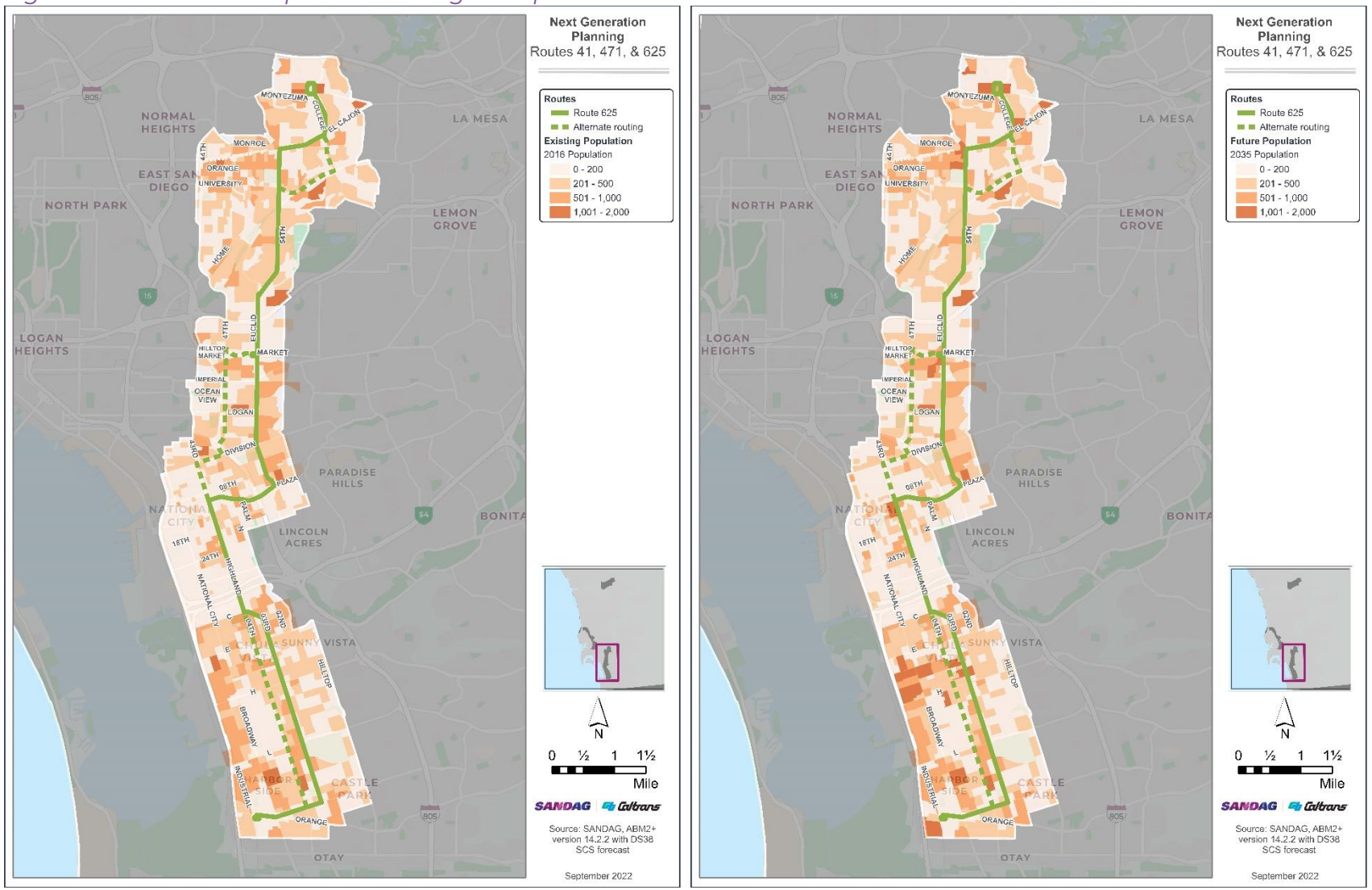


Figure 37. Forecasted Low-Income Population Change – Rapid 625 Corridor

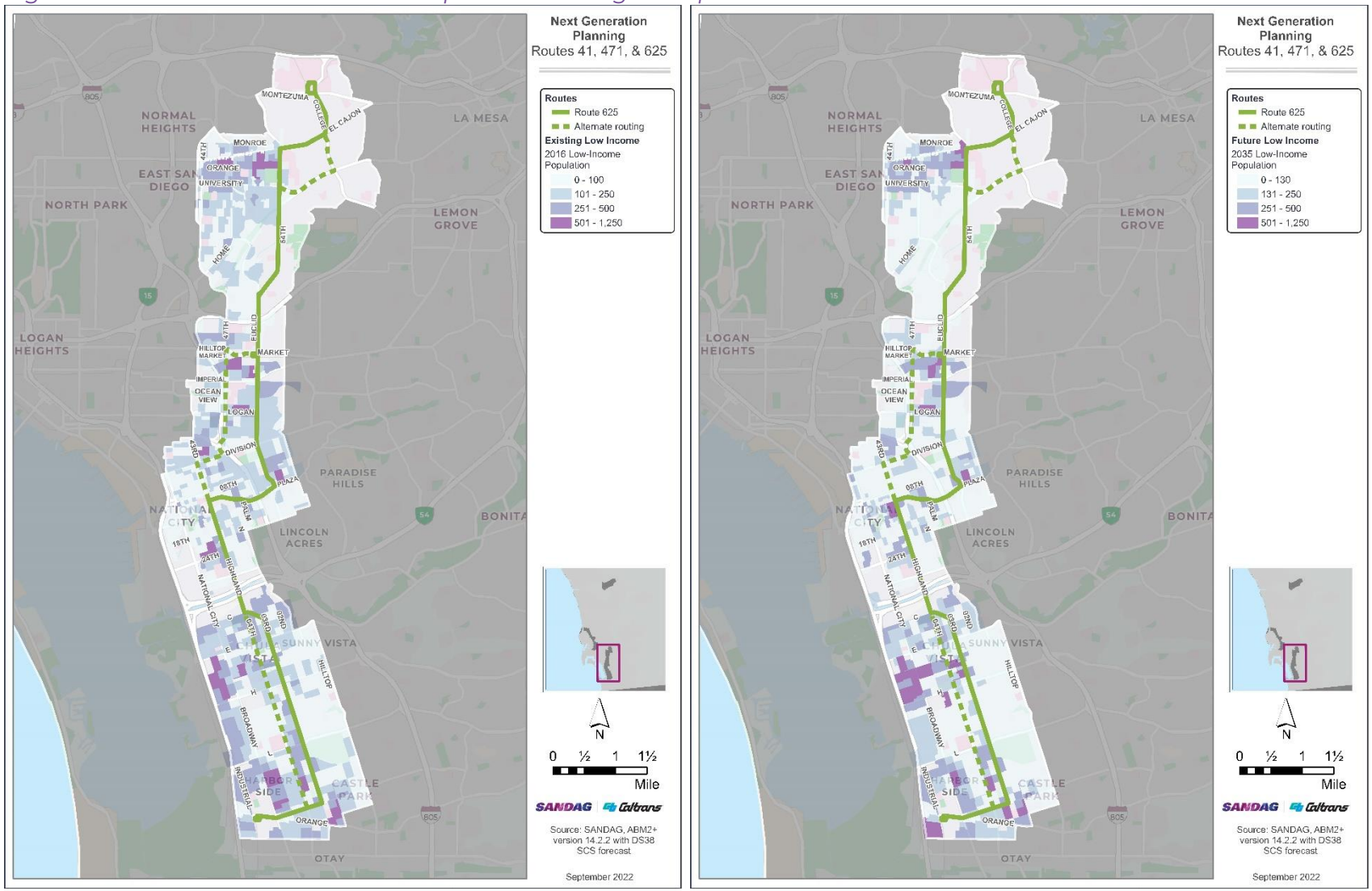


Figure 38. Forecasted Minority Population Change – Rapid 625 Corridor

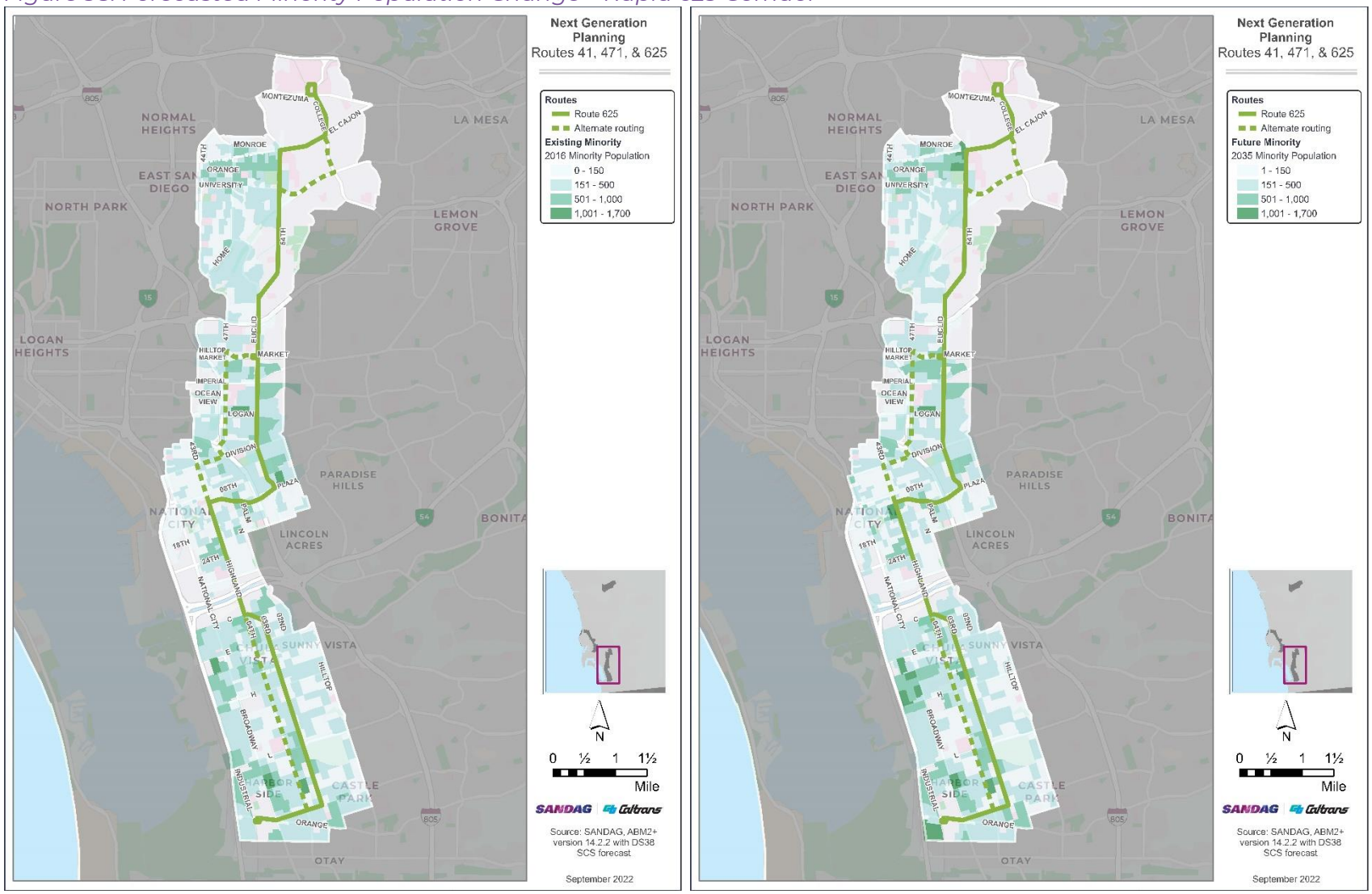


Figure 39. Forecasted Senior Population Change – Rapid 625 Corridor

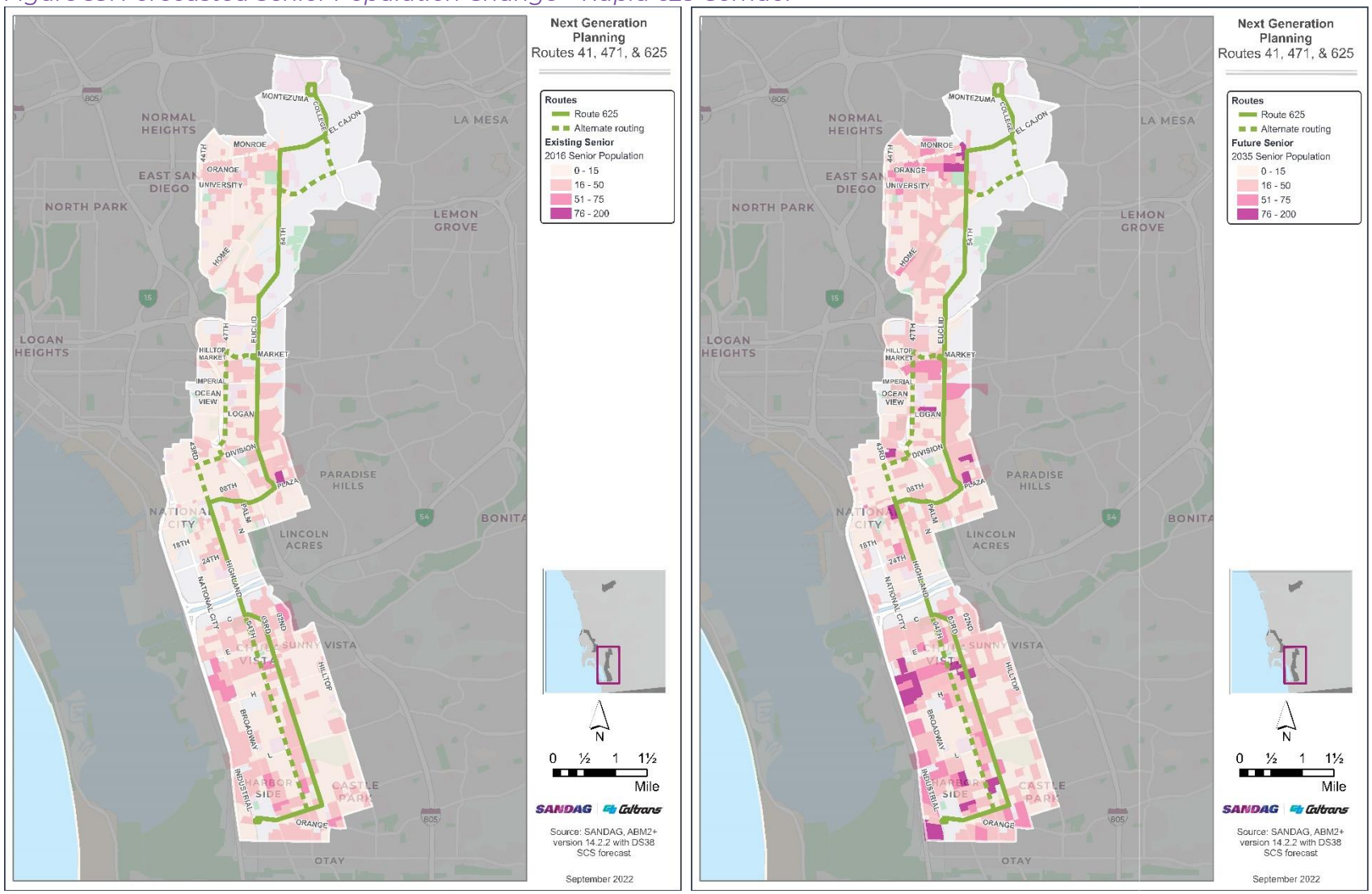


Figure 40. Forecasted Employment Change – Rapid 625 Corridor

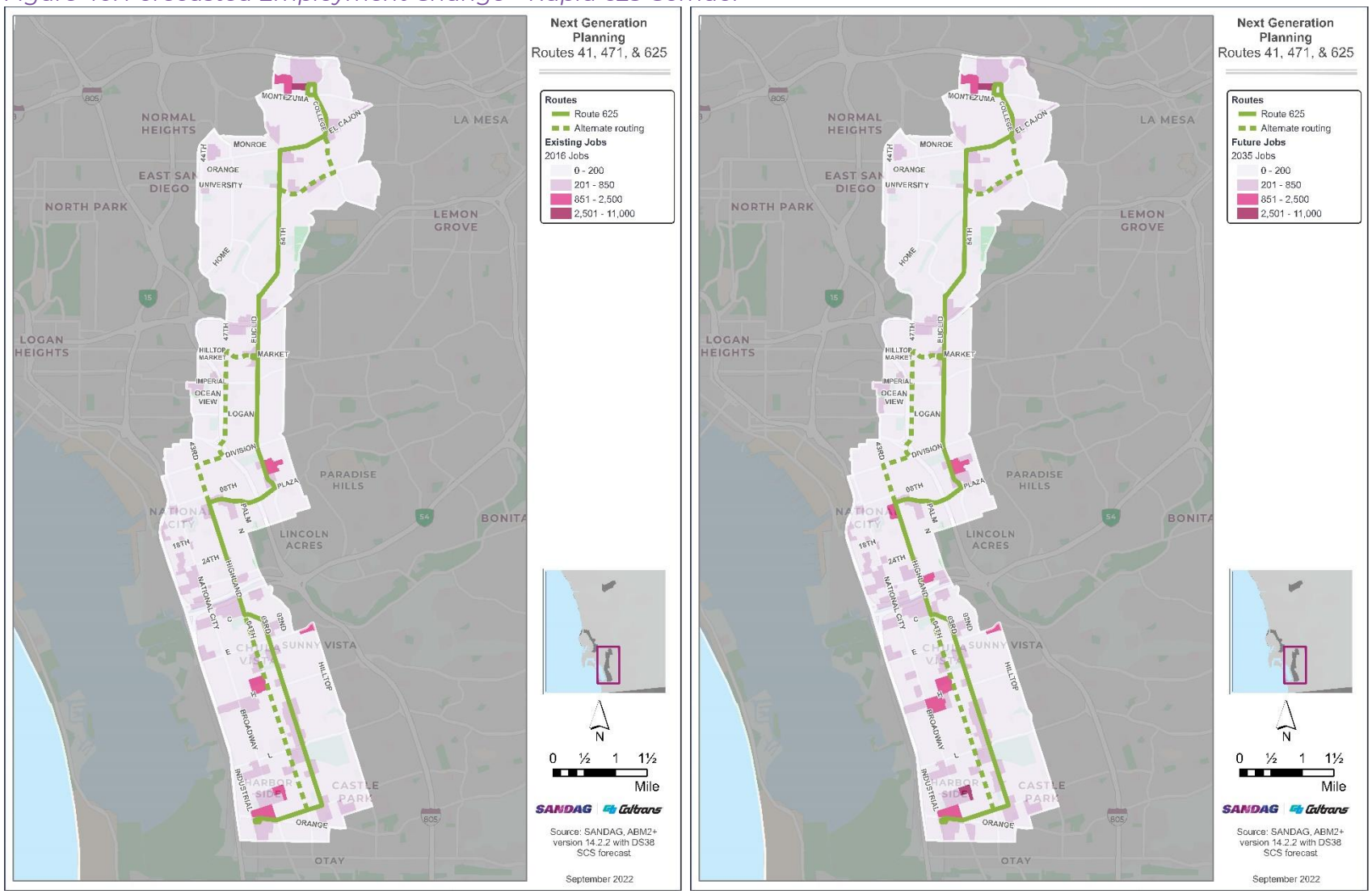
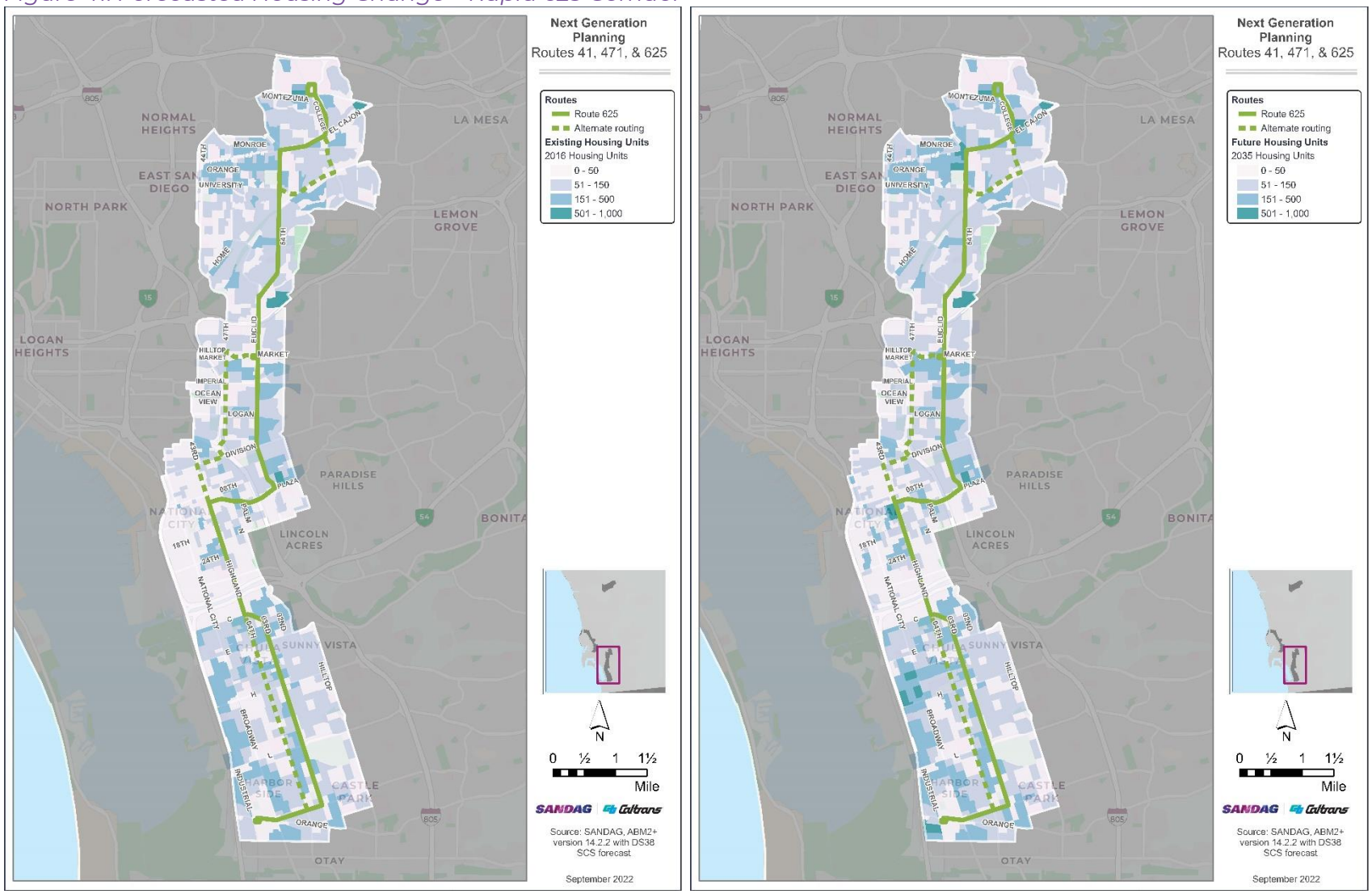


Figure 41. Forecasted Housing Change – Rapid 625 Corridor



3.3.4 Land Use, Key Activity Centers and Community Resources

3.3.4.1 Existing Land Use

Land use in the *Rapid* 625 corridor includes single- and multi-family residential, commercial and office, industrial, institutional, open space, and recreational uses.

North of SR-94, land use includes single- and multi-family residential, commercial and office, light industrial, and open space. Multi-family uses are most prevalent west of 54th Street. Commercial and retail uses are most prevalent along El Cajon Boulevard and University Avenue. San Diego State University is the largest educational institution in San Diego County and draws travelers from throughout the region. The Jacobs Center, Copley-Price YMCA, and City Heights Family Health Center are key community resources. Hoover High School and Crawford High School are both large educational destinations. Little Saigon and Little East Africa are major destinations.

Between SR-94 and SR-54, multi-family uses are most prevalent west of Euclid Avenue in the City of San Diego. In the City of National City, residential land use is most prevalent in the eastern portion of the city, whereas commercial and industrial uses are more abundant in western areas. Highland Avenue, National City Boulevard, and Plaza Boulevard are popular commercial corridors. Paradise Valley Hospital is a large medical center that draws trips from throughout the region. Gompers Preparatory Academy and Sweetwater High School are major educational destinations. City Hall in National City is a key destination.

South of SR-54 in the City of Chula Vista, single-family residential uses are most prevalent in the central and eastern portions of the corridor. Multi-family residential is more abundant in the northern and southern portions of the area, and along Broadway and 3rd Avenue. Broadway and 3rd Avenue are also the primary commercial corridors. Downtown Chula Vista (3rd Avenue & E St) is a key activity center. Chula Vista High School is a key educational facility. Chula Vista City Hall is a key destination.

3.3.4.2 2035 Land Use

Land in the *Rapid* 625 corridor is forecasted to be substantially denser in 2035. The following key changes are anticipated:

- In several areas north of SR-94, single-family housing is expected to convert to multi-family housing. Commercial uses along El Cajon Boulevard, University Avenue, and Euclid Avenue will be converted to mixed-use.
- In National City, commercial corridors along National City Boulevard, Highland Avenue, and 8th Street will be converted to mixed-use. Light industrial areas near National City/24th Street will be converted to light and heavy industrial uses.
- In Chula Vista, commercial corridors on Broadway, 3rd Avenue, and 4th Avenue will be converted to mixed-use. Single-family residential west of Broadway between E Street and H Street will be converted to multi-family.

Land use and key activity centers are shown on Figure 42 and Figure 43.

Figure 42. Existing and Planned Land Use – Rapid 625 Corridor

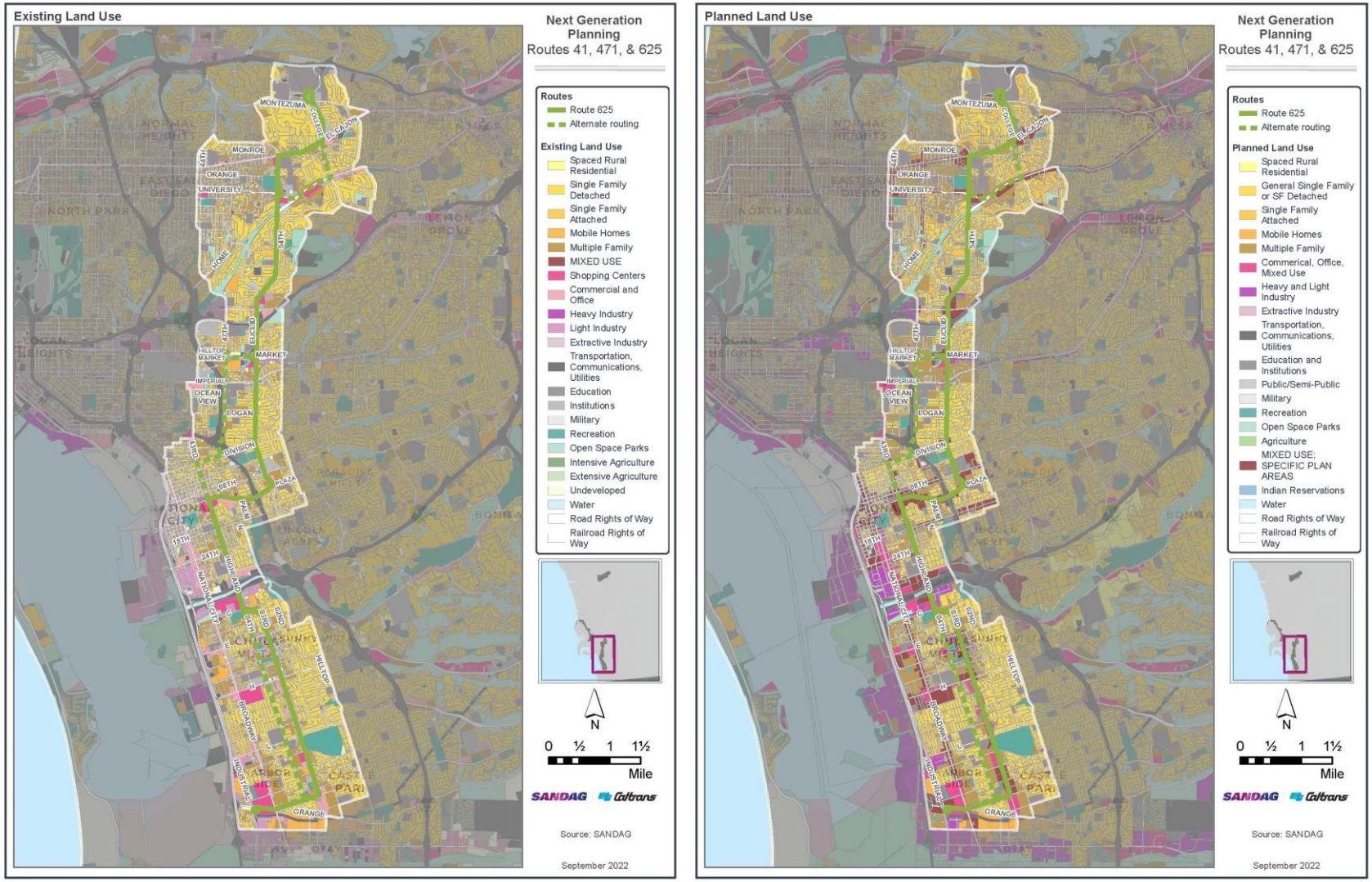
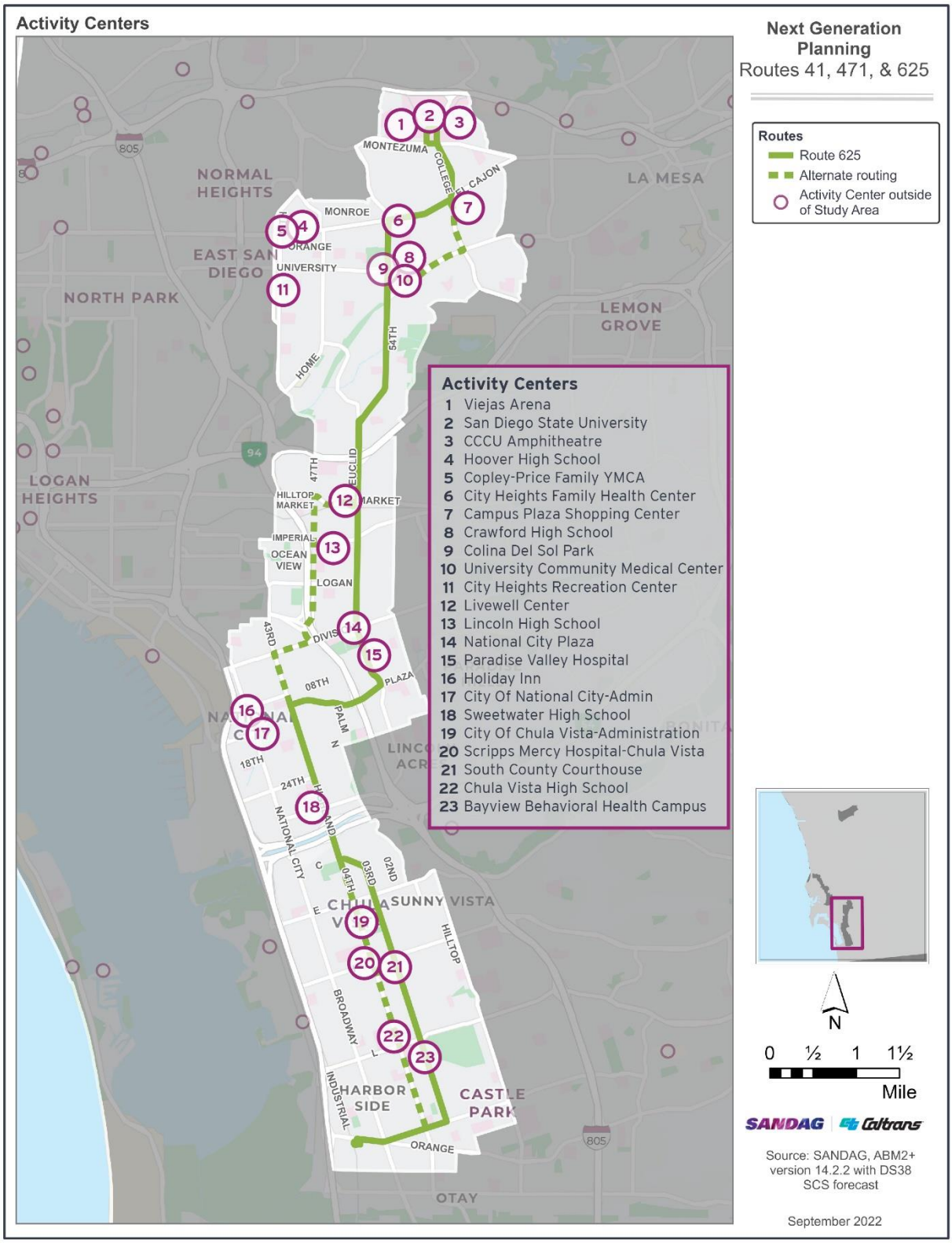


Figure 43. Key Activity Centers and Community Resources – Rapid 625 Corridor



3.3.5 Safety

High numbers of pedestrian- and bicycle-involved collisions were observed throughout the *Rapid* 625 corridor. This is likely because the corridor has the highest diversity of land use and the roadway networks that are more conducive to walking and biking.

3.3.5.1 Pedestrian Collisions

North of SR-94, pedestrian-involved collisions are most prevalent in Mid-City, in the area roughly bounded by El Cajon Boulevard, University Avenue, Fairmont Avenue, and 54th Street. High concentrations of collisions also exist along College Avenue near the intersections of Montezuma Road and El Cajon Boulevard. Between SR-94 and SR-54, collisions are most prevalent in the area roughly bounded by I-805, 47th St, Market St, and Logan Avenue, including near the Euclid Trolley Station. In National City, collisions are most frequent along Highland Avenue between Division Street and 24th Street. In Chula Vista, collisions are most prevalent in the area roughly bounded by I-5, 3rd Avenue, C St, and H Street. High concentrations also exist along 3rd Street and 4th Street and near the Palomar Street Station.

Pedestrian collisions are shown in Figure 44.

3.3.5.2 Bicycle Collisions

North of SR-94, bicycle-involved collisions are most prevalent in Mid-City, in the area roughly bounded by El Cajon Boulevard, University Avenue, Fairmont Avenue, and 54th Street. High concentrations of collisions also exist along Montezuma Road. Between SR-94 and SR-54, collisions are most prevalent along Market Street near Euclid Avenue, and along Euclid Avenue north and south of Market Street. In National City, collisions are most frequent in the area roughly bounded by Division St, 24th St, National City Boulevard, and Highland Avenue. In Chula Vista, collisions are most prevalent in the area roughly bounded by I-5, 3rd Avenue, E St, and H Street. High concentrations also exist along 3rd Street and 4th Street and near the Palomar Street Station.

Bicycle collisions are shown in Figure 45.

Figure 44. Pedestrian Collisions – Rapid 625 Corridor

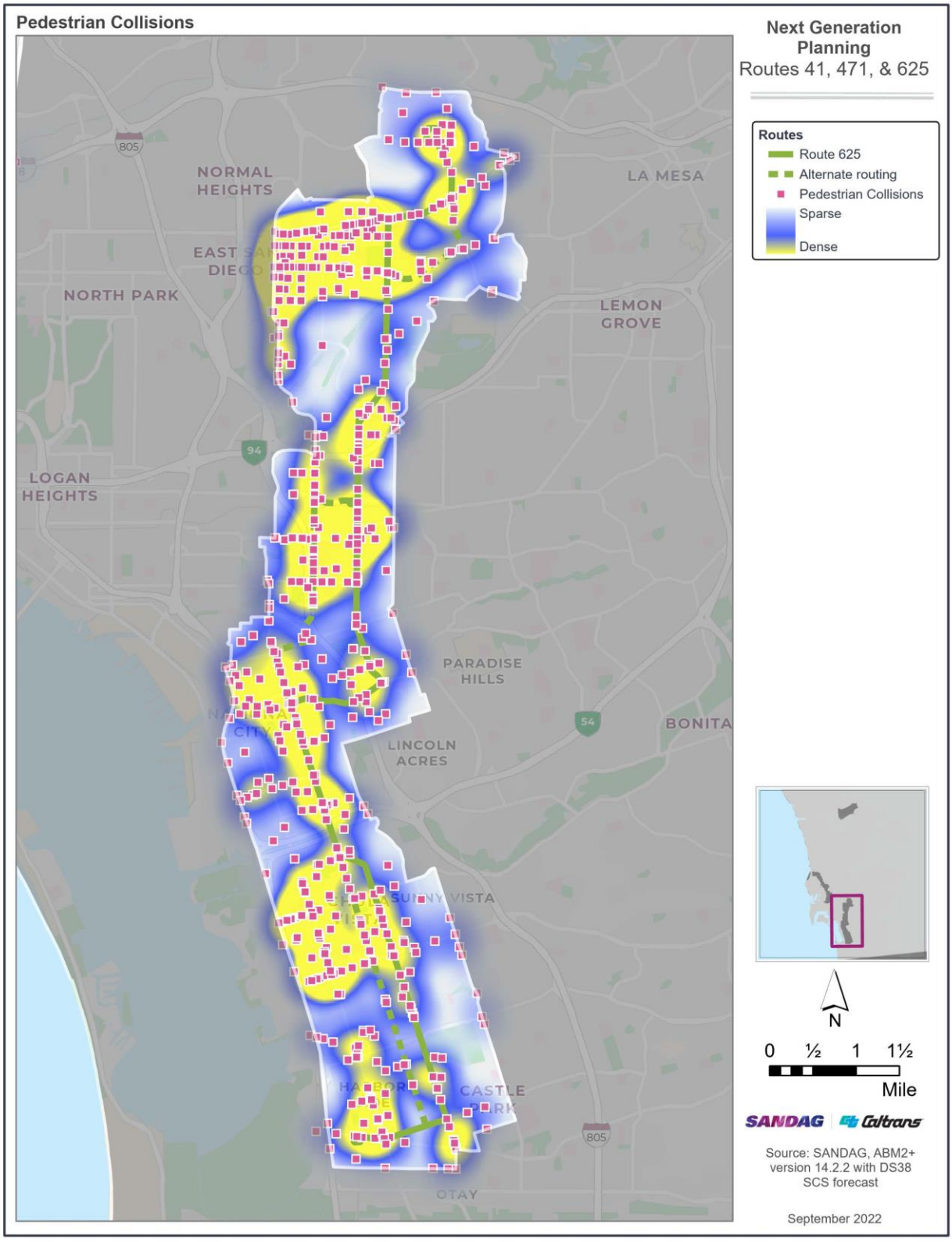
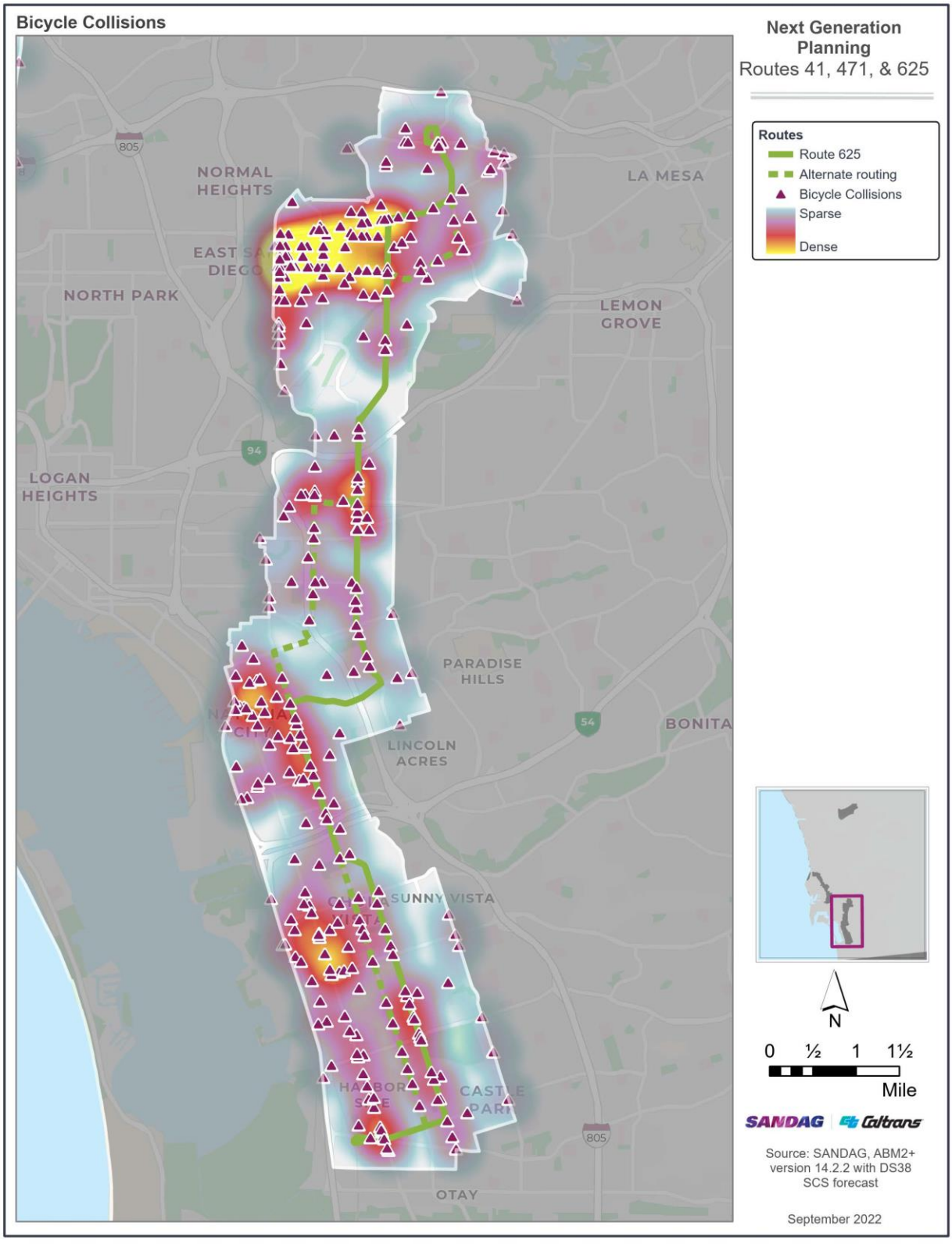


Figure 45. Bicycle Collisions – Rapid 625 Corridor



4.0 Travel Patterns and Markets

This section summarizes known travel patterns and markets in each of the study corridors.

4.1 Rapid 41

4.1.1 Travel Markets

Because *Rapid* 41 is currently in service as a local route, responses from SANDAG's 2015 Onboard Transit Passenger Survey were reviewed to determine travel markets. Input was also collected at a pop-up outreach event at the Linda Vista Farmer's Market in November 2022. Based on the responses provided, the following was revealed:

- Nearly 53% of respondents indicated their trip purpose was school-related, 39% of respondents indicated their fare type was a college pass, and nearly 65% of respondents indicated they are a student of some sort.
- Approximately 25% of respondents indicated their trip was work-related. This would include faculty/staff working at UC San Diego or Mesa College, people working in one of the commercial/retail centers along Genesee Avenue, Fashion Valley, or in the UTC area, the region's largest employment center.
- Nearly 95% of respondents walked to/from transit; nearly 90% of those walked for 10 minutes or less
- Over 50% of riders used Route 41 without transferring to another transit service. Another 42% transferred 1-2 times.
- Over 90% of pop-up outreach participants use routes other than current Route 41, with over 26% indicating they use Route 44 to make trips in the corridor.
- Approximately 20% of boardings happened in each of the AM and PM peak hours; nearly 15% of boardings occurred after 7PM.
- Over 30% of respondents do not own a vehicle and 63% indicated they could not use a vehicle to complete their trip.
- Over 30% of respondents do not work, nor were they seeking work. This is a relatively high number compared to other routes, likely due to high numbers of students using the route.

4.1.2 Travel Patterns

4.1.2.1 All Trip Patterns

SANDAG Activity Based Model (ABM) data was reviewed to determine which areas have high levels of trip activity. As shown, UC San Diego, UTC, commercial retail uses along Genesee Avenue, Mesa College, commercial retail along Linda Vista Road, Sharp Metro

Campus, and Fashion Valley Mall all have high levels of activity. A map showing SANDAG ABM person trips for the *Rapid* 41 corridor is included in Appendix C.

4.1.2.2 Work Trip Patterns

Based on existing land use, it can be inferred that most work-based trips are being made to UTC, UC San Diego, commercial retail uses along Genesee Avenue, Mesa College, Sharp Metro Campus, and Fashion Valley Mall.

4.1.2.3 Transit Travel Patterns

Passenger trip origins and destinations were also provided in the 2015 onboard survey, and pop-up outreach participants were asked to indicate which destinations they travel to via transit. As shown in Appendix C, there is strong demand to and from UC San Diego, UTC, commercial retail uses along Genesee Avenue, Mesa College, and Fashion Valley Mall. Approximately 75% of pop-up outreach participants use transit to travel to destinations in University City, Linda Vista, or Fashion Valley. These findings are consistent with SANDAG ABM data that shows high levels of trips made to and from these locations.

4.2 Rapid 471

4.2.1 Travel Markets

Because Routes 353 and 355/357 currently serve similar areas that *Rapid* 471 will, responses from SANDAG's 2015 Onboard Transit Passenger Survey were reviewed to determine travel markets. Input was also collected at a pop-up outreach event at Escondido Transit Center in November 2022. Based on the responses provided, the following was revealed:

- Over half (54%) of Route 353 respondents indicated their trip purpose was either school-or work-related. Between 47-60% of Route 355/357 respondents indicated their trip was school-related.
- All Route 353 respondents and over 97% of Route 355 respondents walked to/from transit. Approximately 12% of Route 357 respondents accessed transit via a wheelchair, and another 13% used a skateboard.
- Nearly 20% of Route 353 respondents walked between 10-20 minutes to access transit, whereas over 90% of Route 355/357 respondents traveled less than 10 minutes.
- Between 90-100% of respondents made zero or one transfer during their trip
- Approximately 20% of Route 355 respondents were students; over 45% of Route 355 respondents indicated they do not work, nor were they seeking work.
- Between 15-30% of respondents do not own a vehicle and between 68-77% indicated they could not use a vehicle to complete their trip.

- Between 40-50% of Route 355/357 riders were ages 16-17, compared to only 22% of route 353 respondents.
- Approximately 50% of pop-up outreach participants use Routes 305, 351, 352, or 354 to make trips in the corridor.

4.2.2 Travel Patterns

4.2.2.1 All Trip Patterns

SANDAG ABM data was reviewed to determine which areas have high levels of trip activity. As shown, the commercial/industrial area near Auto Park Way, Palomar Medical Center Escondido, and the commercial areas along Valley Parkway and Grand Avenue all have high levels of activity. A map showing SANDAG ABM person trips for the *Rapid* 471 corridor is included in Appendix C.

4.2.2.2 Work Trip Patterns

Based on existing land use, it can be inferred that most work-based trips are being made to commercial uses near Auto Park Way, Palomar Medical Center Escondido, and various commercial retail uses along West Valley Parkway.

4.2.2.3 Transit Travel Patterns

Passenger trip origins and destinations were also provided in the 2015 onboard survey, and as such were reviewed to determine potential travel patterns for *Rapid* 471. As shown in Appendix C, there is strong demand to and from commercial/industrial uses near Auto Park Way, commercial employment along La Terraza Boulevard, and various destinations along West Valley Parkway. Over 70% of pop-up outreach participants use transit to travel to destinations in these areas. These findings are consistent with SANDAG ABM data that shows high levels of trips made to and from these locations.

4.3 Rapid 625

4.3.1 Travel Markets

Because Routes 929 and 955 currently serve similar areas that *Rapid* 625 will, responses from SANDAG's 2015 Onboard Transit Passenger Survey were reviewed to determine travel markets. Responses from Route 929 riders are intended to identify travel markets for those traveling between National City and Chula Vista, whereas responses from Route 955 riders are intended to identify travel markets for people traveling between SDSU and National City. Input was also collected at a pop-up outreach event at 54th & El Cajon Boulevard in November 2022. Based on the responses provided, the following was revealed:

- Over 40% of people traveling on Route 929 were doing so for work-based purposes, and another 21% and 22% were traveling for school and recreation, respectively. Over 40% of Route 955 respondents were traveling for school, whereas only 25% were traveling for work.

- Over 95% of both Route 929 and 955 respondents walked to/from transit in 10 minutes or less
- Between 85-90% of both Route 929 and 955 respondents made zero or one transfer during their trip
- Between approximately 25-30% of respondents do not own a vehicle and between 83-87% indicated they could not use a vehicle to complete their trip.
- Over 40% of Route 955 riders were college students and a substantial number (45%) of riders were ages 16-17

4.3.2 Travel Patterns

4.3.2.1 All Trip Patterns

SANDAG ABM data was reviewed to determine which areas have high levels of trip activity. As shown, SDSU, commercial and mixed-use development along El Cajon Boulevard, University Avenue, and Euclid Avenue, Highland Avenue in National City, and Broadway and 4th Avenue in Chula Vista all have high levels of activity. A map showing SANDAG ABM person trips for the *Rapid* 625 corridor is included in Appendix C.

4.3.2.2 Work Trip Patterns

Based on existing land use, it can be inferred that most work-based trips are being made to major activity centers like SDSU, commercial retail along El Cajon Boulevard and University Avenue, and several schools.

4.3.2.3 Transit Travel Patterns

Passenger trip origins and destinations were also provided in the 2015 onboard survey, and as such were reviewed to determine potential travel patterns for *Rapid* 625. As shown in Appendix C, there is strong demand to and from commercial uses along National City Boulevard and Highland Avenue in National City, and along 4th Avenue in Chula Vista. As shown in Appendix C, there is also strong demand to SDSU and various commercial, educational, and recreational uses along 54th Street, Euclid Avenue, and 47th Street. Over 70% of pop-up outreach participants use transit to travel to destinations in these areas. These findings are consistent with SANDAG ABM data that shows high levels of trips made to and from these locations.

5.0 Key Findings and Next Steps

This document provides an overview of study area characteristics and mobility performance for existing and 2035 scenarios. Findings of this effort are described below.

5.1 Key Findings, Issues and Opportunities

5.1.1 General

The assessment revealed the following in all three study corridors:

- Population and employment growth is anticipated in areas that are near study routes but not immediately adjacent to them. Enhancing non-motorized access will be important for increasing ridership as nearby population increases.
- Providing reliable, high-quality transit service outside of peak travel periods will be important, as trips are made for various purposes aside from work-based.
- People making trips on existing transit services are typically accessing transit from short distances, within five to ten minutes. Enhancing first-and last-mile connectivity – whether via improved non-motorized connectivity or flexible fleet services – to areas beyond a 5- or 10-minute walkshed has the potential to increase ridership.
- Though numerous active transportation improvements are planned, gaps remain. Strategies that enhance bicycle and pedestrian access to Next Gen stations should be identified.
- Major roadways in each corridor experience congestion at various times of day, which affects speed and reliability for transit buses as well as other modes. As such, proposed Next Gen improvements should seek to enhance transit service while also maximizing total corridor passenger throughput.
- Routing Next Gen services along parallel arterials with less congestion should be considered, where practical, assuming key destinations and activity centers can still be adequately served.
- Roadway configurations vary along individual roadway segments, and at times change frequently in short distances. Corridor improvements will need to vary based on characteristics in the built environment.
- As low-income and senior populations are expected to increase, the provision of high-quality, reliable transit service will give residents, employees, and visitors an affordable alternative to automotive travel.

5.1.2 *Rapid* 41 Corridor

The assessment revealed the following in the *Rapid* 41 corridor:

- Most roadway congestion is near major signalized intersections, and conditions are likely to worsen as population and employment growth occurs. Strategies that prioritize bus movements through corridor intersections should be identified.
- High levels of bicycle- and pedestrian-involved collisions occurred along Genesee Avenue and major roadways connecting to Genesee, especially in areas with high bicycle and pedestrian activity.
- Most transit trips are one seat rides, which indicates most travel is from people living and making trips within the corridor
- A high percentage of boardings during peak hours and after 7PM indicates the service is used for both commute trips, as well as both work-based and non-work-based trips that occur outside typical commute times.
- A substantial number of trips are made by students, faculty, and staff traveling to/from University City High School, UC San Diego, and Mesa College.
- Due to high employment in University City/UTC, there is an opportunity to capture more work-based trips by improving transit travel times and non-motorized access.

5.1.3 *Rapid* 471 Corridor

The assessment revealed the following in the *Rapid* 471 corridor:

- Most roadway congestion occurs along Valley Parkway and Grand Avenue east of Centre City Parkway, both at intersections and in between them. Additional congestion occurs along West Valley Parkway between I-15 and Auto Park Way in the PM peak hour. Strategies to minimize travel time impacts along these segments should be explored.
- High levels of bike/ped collisions occurred along *Rapid* 471 roadways and key roadways connecting to West Valley Parkway and Grand Avenue. Improving safety for pedestrians and cyclists in these areas will increase ridership potential.
- A higher number of work- and other-based trips occur west of I-15, whereas a higher school-based trips occur east of I-15.

5.1.4 *Rapid* 625 Corridor

The assessment revealed the following in the *Rapid* 625 corridor:

- Roadway congestion is near major signalized intersections throughout the corridor. Longer stretches of congestion occur along University Avenue near 54th Street, Division Street, Highland Avenue, 3rd Avenue, 4th Avenue, and Palomar Street. Strategies that prioritize bus movements through corridor intersections and minimize travel time impacts along congested segments should be identified.

- High levels of bike/ped collisions occurred along *Rapid* 625 roadways and key intersecting roadways. Improving safety for pedestrians and cyclists in these areas has the potential to increase ridership.
- Trip purposes north of National City are balanced between work and other purposes. There is a high amount of high school and college students taking transit.
- There is strong demand between SDSU and points south.

5.2 Next Steps

In the next phase of this study, the project team will utilize the findings of this report to develop study goals, objectives, and evaluation criteria. These will be used to identify, evaluate, and prioritize site-specific BRT strategies and routing alternatives.

Appendix A. Transit Service Characteristics

Existing and Future Transit Services – Rapid 41 Corridor (weekday)

Route	Description	2019 Ridership (total)	Existing Headways (Peak/Off-peak)	Existing Span of Service	2035 Headways (Peak/Off-peak)	2035 Span of Service
6	North Park-Fashion Valley	1,164	15/15	6:30a–10:30p	7.5/7.5	6:30a–10:30p
20	Kearny Mesa to Rancho Bernardo	1,926	15/30	5a–10:30p	15/30	5a–10:30p
25	Fashion Valley to Kearny Mesa	293	60/60	6:30a–7p	60/60	6:30a–7p
27	Pacific Beach-Kearny Mesa Transit Center	1,084	30/30	5:30a–10p	15/10	5:30a–10p
30	Downtown-UTC/VA Medical Center	5,581	15/15	5a–12:30a	10/10	5a–12:30a
31	UTC-Mira Mesa	407	30/180	5:30a–8p	15/30	5:30a–8p
41	Fashion Valley-UC San Diego	4,431	15/15	5:30a–11:30p	10/15	5:30a–11:30p
44	Central Mobility Hub-Clairemont Square	3,764	15/15	4:30a–12a	10/15	4:30a–12a
50	Downtown to UTC	577	30/180	5:30a–7p	-	-
60	Euclid Transit Center - UTC	338	30/0	5a–8p	-	-
88	Central Mobility Hub-Fashion Valley	359	30/30	6a–9:30p	10/15	6a–9:30p

105	Central Mobility Hub-University City	1,160	30/30	5a-11p	10/10	4a-12a
110	Downtown to Mira Mesa	188	4 am trips, 4 pm trips	4:30a–12a	15/ -	4a–12a
120	Kearny Mesa to Downtown (DT) via Mission Valley/Fashion Valley (FV)	2,434	15 DT–FV 30 (FV–KM)	5a–11:30p	10/10	5a–11:30p
150	Downtown San Diego - UTC via Old Town	3,410	-	-	-	-
201	SuperLoop *Rapid*	5,174	10/10	6a–12a	10/10	6a–12a
202	SuperLoop *Rapid*	5,507	10/10	5:30a–10:30p	10/10	5:30a–10:30p
204	SuperLoop *Rapid*	329	30/10	6a–10p	10/10	5a–10:30p
276	UC San Diego Shuttle	-	15/15	6a–9p	15/15	6a–9p
280	Downtown San Diego-Escondido	532	30 Peak direction only	5a–9p	10/30	5a–9p
301	Oceanside to VA/UC San Diego/UTC via Highway 101	1,313	30/30	5a–11p	10/15	5a–11p
398	COASTER (Downtown San Diego to Oceanside)	4,649	30/30	4a–9:30p	15/15	4a-12a
510	Blue Line (San Ysidro to UTC)	57,917	7.5 SY–DT 15 (DT–UTC)	4:30a–1:30a	7.5/7.5	4:30a–1:30a
530	Green Line (Santee to Downtown)	31,043	15/15	4a–1a	7.5/7.5	4a–1a

921	Mira Mesa	982	30/30	5:30a–8p	15/30	5:30a–8p
928	Fashion Valley–Kearny Mesa	1,065	30/30	5a–10p	10/15	5a–10p

Existing and Future Transit Services – Rapid 471 Corridor (weekday)

Route	Description	2019 Ridership (total)	Existing Headways (Peak/Off-peak)	Existing Span of Service	2035 Headways (Peak/Off-peak)	2035 Span of Service
235	Escondido to Downtown San Diego via I-15	5,855	15/15	4:30a–12a	10/10	4:30a–12a
280	Downtown San Diego–Escondido	532	30 Peak direction only	5a–9p	10/30	5a–9p
471	Downtown Escondido to East Escondido	-	-	-	10/10	4a–12a
305	Escondido to Vista via Mission Road and S. Santa Fe Avenue	2,201	30/30	4a–11:30p	10/15	4a–11:30p
308	Solana Beach–Escondido via Del Dios Highway	244	60/60	5a–9:30p	6/60	5a–9:30p
350	Escondido *Rapid*	2,041	10 peak direction / 15	4:30a–11p	10/10	4:30a–11p
351	Escondido Circulator	917	20/20	5a–11p	15/15	5a–11p

352	Escondido Circulator	920	20/20	4a–10p	15/15	4a–10p
353	Escondido Transit Center–Nordahl Marketplace via Citracado Parkway	196	60/60	5:30a–8:30p	60/60	5:30a–8:30p
354	Orange Glen High School via Mission, Lincoln, and Citrus	690	30/30	5a–8:30p	10/15	5a–8:30p
355	El Norte Parkway and Valley Parkway–Counterclockwise	265	60/60	6a–8:30p	30/30	6a–8:30p
356	Morning View Drive, El Norte Parkway, and Escondido Boulevard	464	30/30	5a–9:30p	15/30	5a–9:30p
357	El Norte Parkway and Valley Parkway–Clockwise	272	60/60	6:30a–6p	30/30	4a-12a
358	N. Broadway, Country Club, and El Norte Parkway–Clockwise	-	120/120	6a–8:30p	30/30	6a–8:30p
359	N. Broadway, Country Club, and El Norte Parkway–Counterclockwise	114	120/120	5a–7:30p	30/30	5a–7:30p
388	Escondido to Pala	678	90/120	4:30a–10:30p	30/30	4:30a–10:30p

398	COASTER (Downtown San Diego to Oceanside)	4,649	30/30	4a–9:30p	15/15	4a-12a
399	SPRINTER (Oceanside to Escondido)	8,555	30/30	4a–9:30p	15/15	4a-2a

Existing and Future Transit Services – Rapid 625 Corridor (weekday)

Route	Description	2019 Ridership	Existing Headways (Peak/Off-peak)	Existing Span of Service	2035 Headways (Peak/Off-peak)	2035 Span of Service
1	Fashion Valley–La Mesa	4,140	15/15	5a-12a	10/10	4a-2a
3	UC San Diego Hospital–Euclid Transit Center	5,924	12/12	4:30a–12:30a	10/12	4a-2a
4	12th and Imperial Trolley–Lomita Village	2,455	30/30	5a–12a	10/15	4a–12a
5	Downtown San Diego-Euclid Transit Center	2,900	13/12	5a–11:30p	10/12	4a–12a
6	North Park-Fashion Valley	1,164	15/15	6:30a–10:30p	7.5/7.5	4a–12a
7	Downtown San Diego-University/College	6,831	10/10	4:30a–2a	7.5/10	4a–12a
10	Old Town-University/College	4,131	12/15	4:30a–12:30a	10/10	4a–12a
11	SDSU-Downtown San Diego	2,599	15/15	4:30a–11:00p	10/10	4a–12a
13	Kaiser Hospital-24th Street Transit Center	6,852	12/12	4:30a–12:30a	10/12	4a–12a
14	Grantville Trolley-Baltimore and Lake Murray	242	60/60	6a–7p	15/15	4a–12a

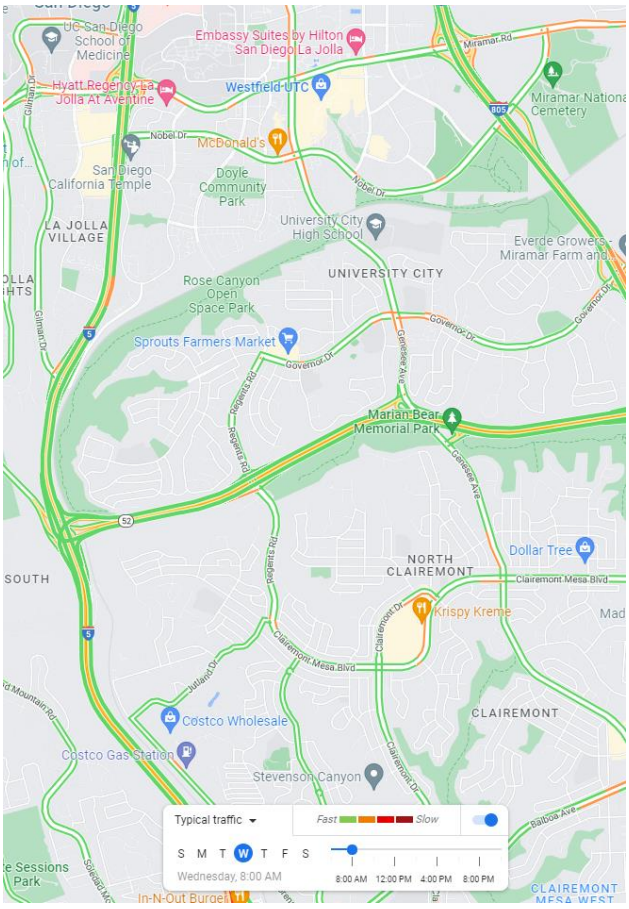
60	Euclid Transit Center - UTC	338	30/30	5a-8p	-	5a-7p
115	El Cajon Transit Center-SDSU Transit Center	1,175	30/30	6a–10:30p	10/15	4a–12a
215	SDSU-Downtown via El Cajon Boulevard	6,556	10/15	4:30a–2a	10/10	4a-12a
225	South Bay *Rapid*	-	15/30	4:30a–12a	10/10	4a-12a
235	Escondido to Downtown San Diego via I-15	5,855	15/15	4:30a–12a	10/10	4a–12a
510	Blue Line Trolley	57,917	7.5 SY–DT 15 (DT–UTC)	4:30a–1:30a	7.5/7.5	4a-2a
520	Orange Line Trolley	25,802	15/15	4:30a–1:30a	7.5/7.5	4a-2a
530	Green Line Trolley	31,043	15/15	4a–1a	7.5/7.5	4a-2a
625	SDSU to Palomar Station via East San Diego, Southeast San Diego, National City	-	-	-	10/10	4a-2a
701	H Street Transit Center–Palomar Street Transit Center via Hilltop Drive	2,225	15/15	5:30a–11p	10/10	4a–12a
704	E Street Transit Center–Palomar Transit Center	1,741	30/30	5:30a–10p	10/15	4a–12a
705	E Street Transit Center–Plaza Bonita	953	30/30	6a–10:30p	10/15	4a–12a

709	H Street Transit Center–Otay Ranch Town Center	3,655	15/15	5a–11p	10/15	4a–12a
712	Palomar Transit Center–Southwestern College	2,973	15/15	5a–10:30p	10/10	4a–12a
856	SDSU–Cuyamaca College	2,141	30/30	4:30a–11p	15/15	4a–12a
917	Oak Park–Emerald Hills Loop Counterclockwise	332	30–60/30	5a–10:30p	15/15	4a–12a
929	Iris Transit Center–12th and Imperial	7,524	12–15/13	4:30a–3a	10/13	4a–12a
932	Iris Transit Center–8th Street Transit Center	4,217	15/15	4:30a–12:30a	10/10	4a–12a
936	Spring Valley–SDSU	1,568	30/30	5a–10:30p	10/15	4a–12a
955	National City–SDSU	5,028	12-14/12	5a–10:30p	10/15	4a–12a
961	24th Street Transit Center–Encanto Trolley	2,190	15-30/15-30	5a–10:30p	10/15	4a–12a
962	8th Street Transit Center–Spring Valley	1,967	15/15	5a–11p	10/15	4a–12a
963	8th Street Transit Center–Paradise Hills	570	30/30	5:30a–10p	10/15	4a–12a
965	City Heights Circulator	223	35/35	5a–9p	15/15	4a–12a
967	24th Street Transit Center–Division and Ava	207	60/60	6a–8:30p	30/60	4a–12a

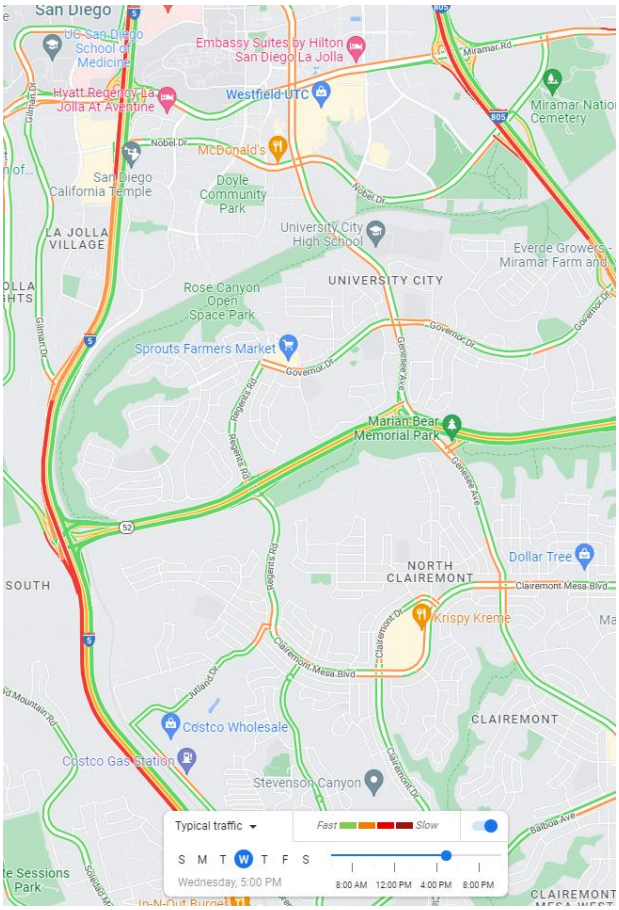
968	8th Street Transit Center–Plaza Bonita	218	60/60	5a–9p	30/60	4a–12a

Appendix B. Typical Roadway Congestion

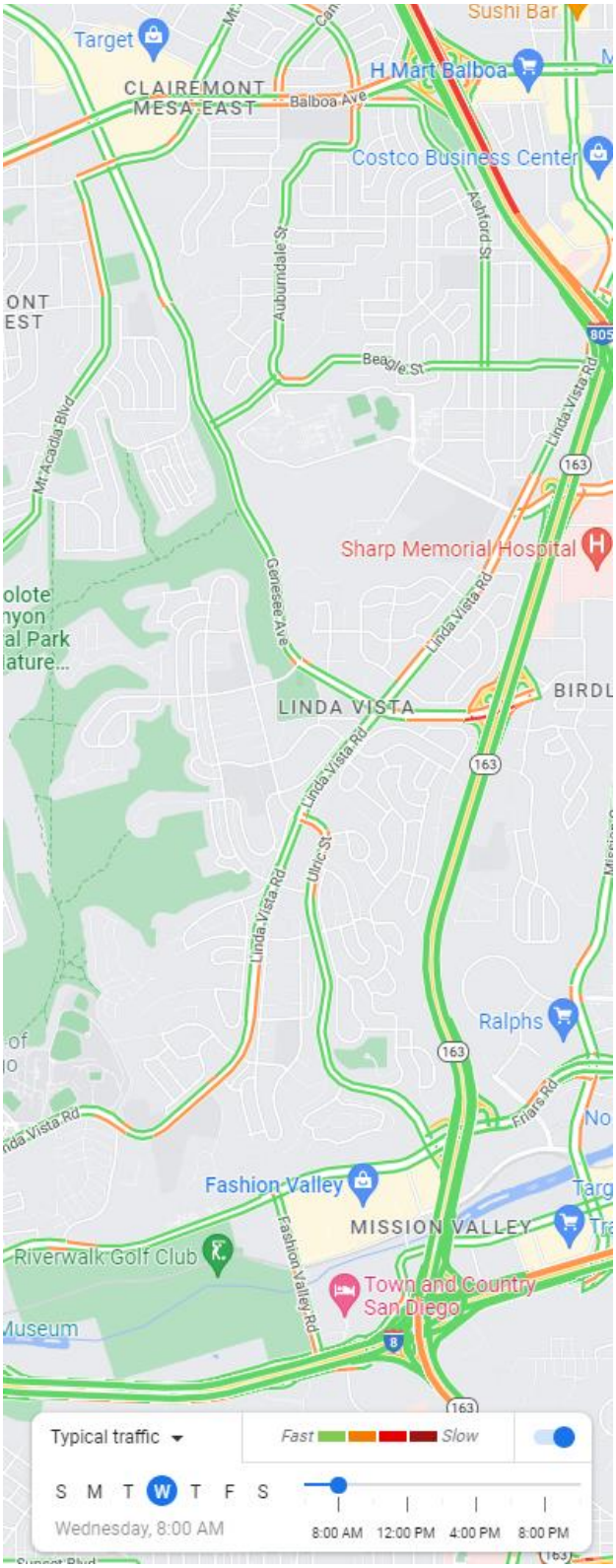
Rapid 41 Corridor (northern segment) – Typical Weekday AM Peak Hour Conditions



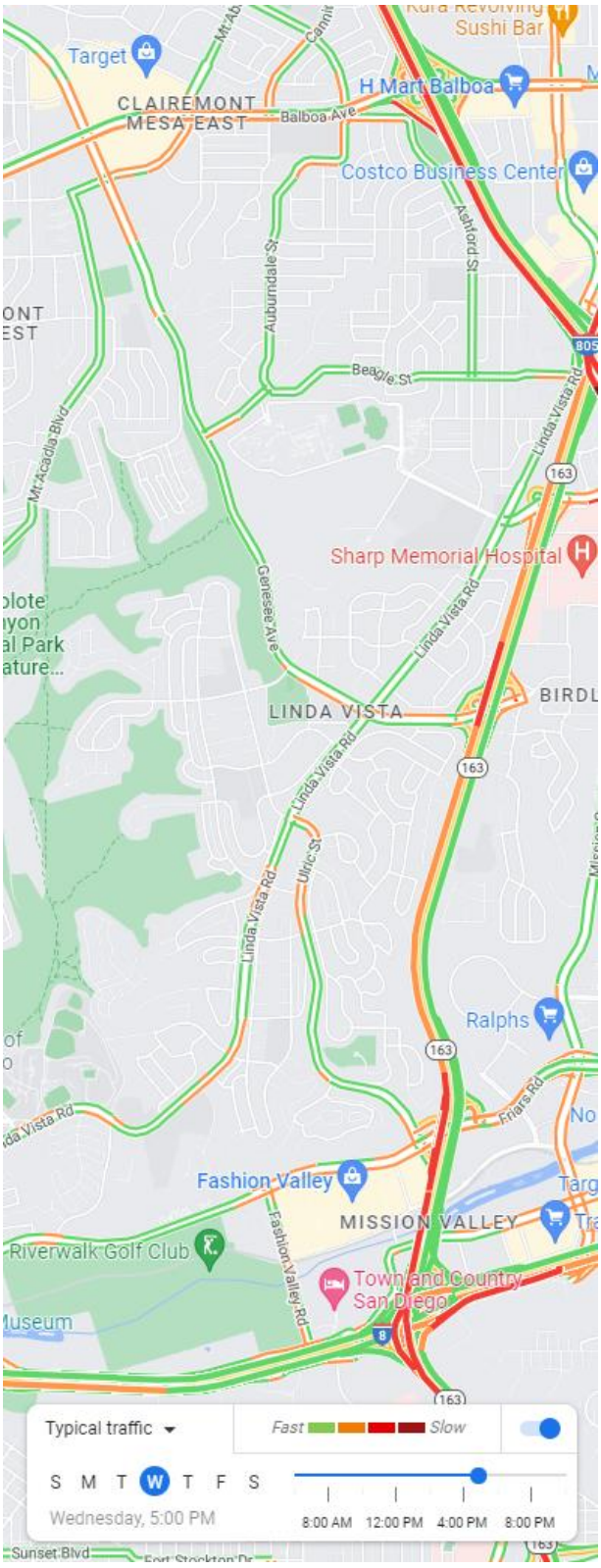
Rapid 41 Corridor (northern segment) – Typical Weekday PM Peak Hour Conditions



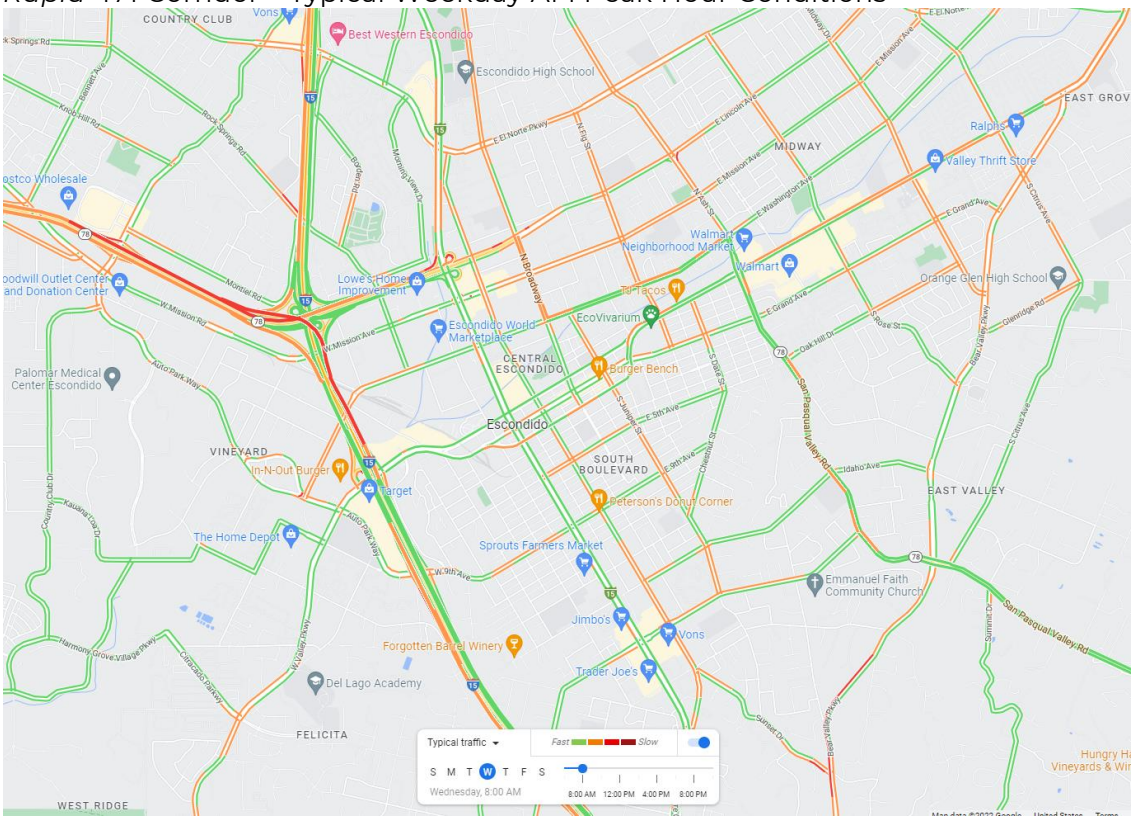
Rapid 41 Corridor (southern segment) – Typical Weekday AM Peak Hour Conditions



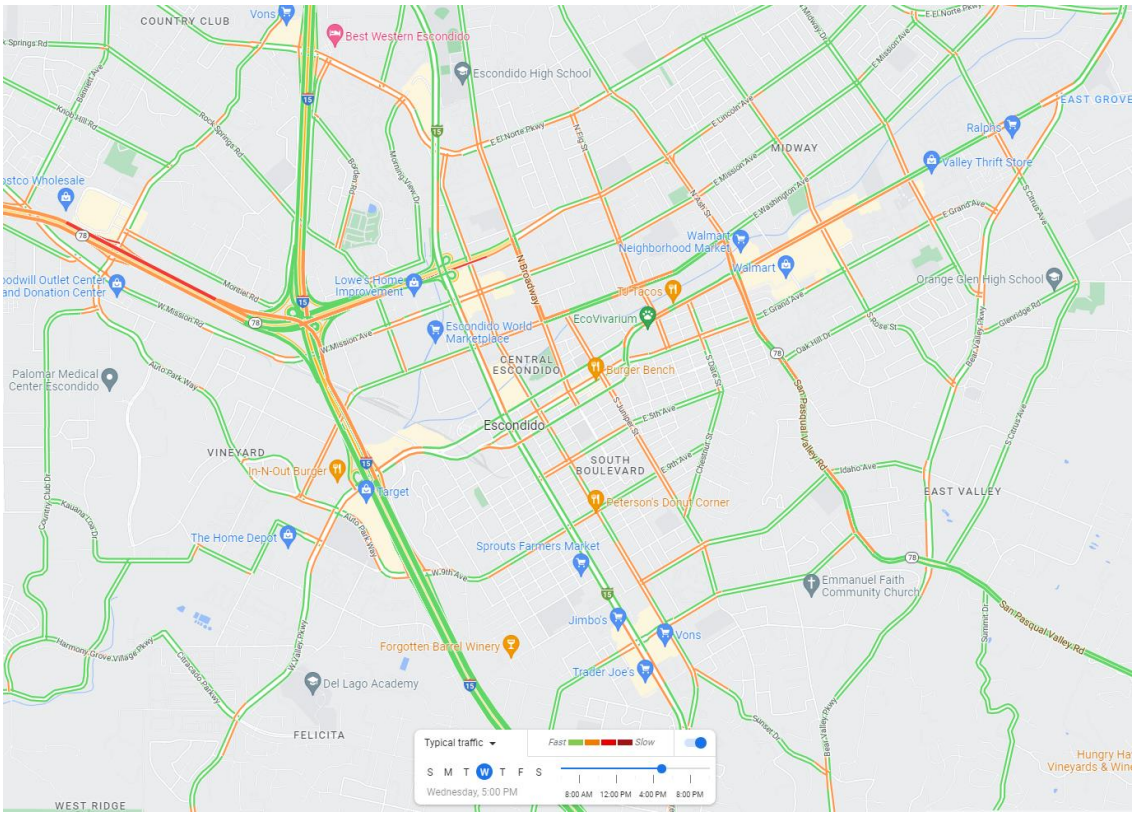
Rapid 41 Corridor (southern segment) – Typical Weekday PM Peak Hour Conditions



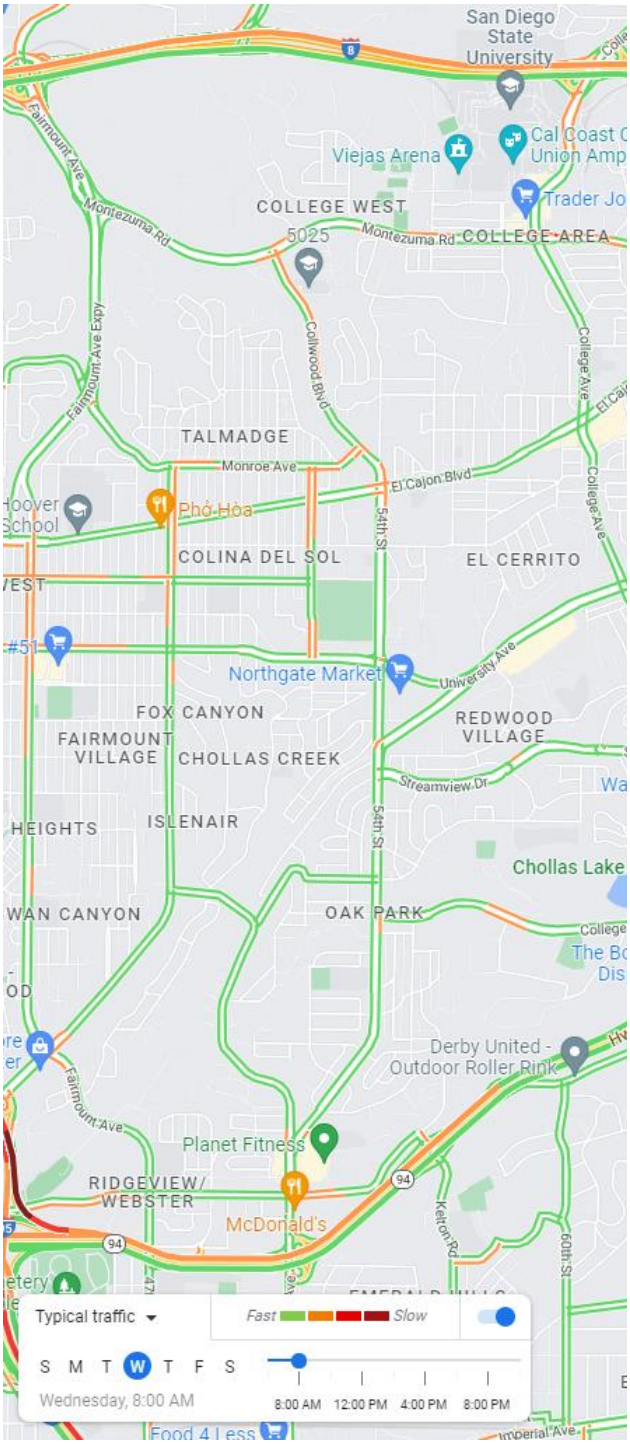
Rapid 471 Corridor – Typical Weekday AM Peak Hour Conditions



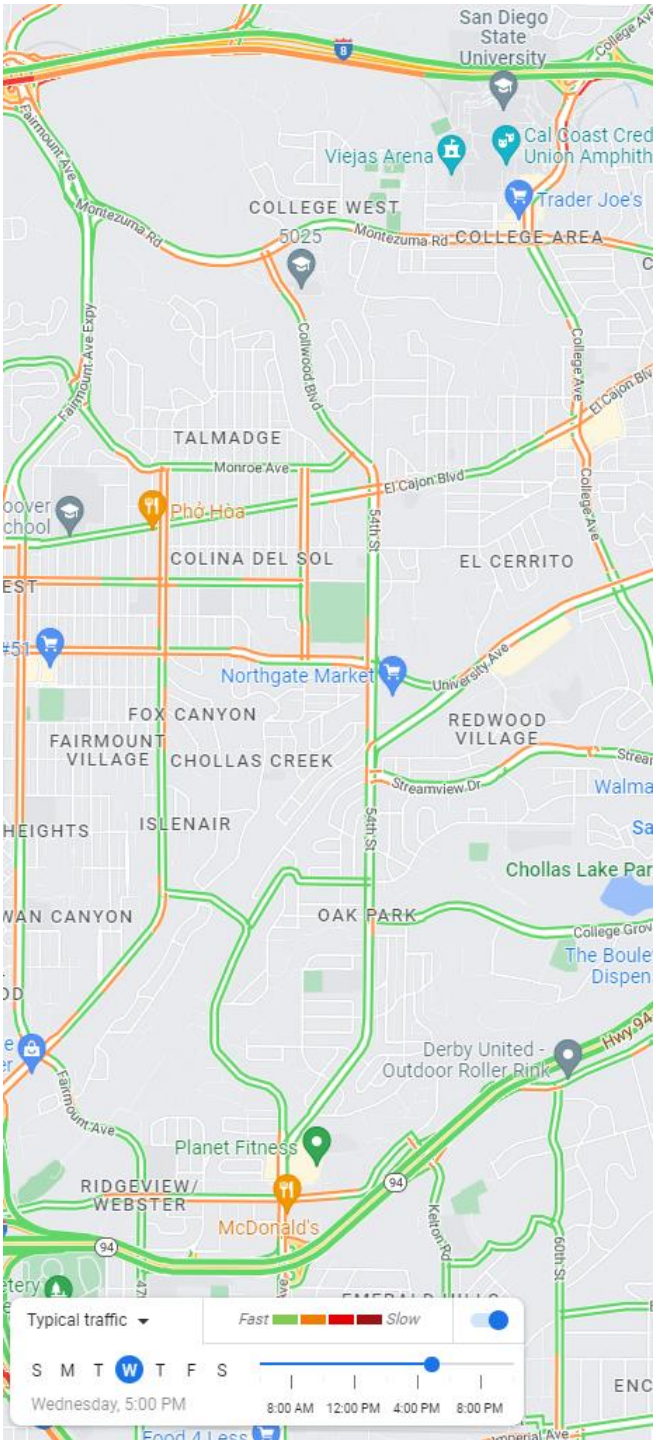
Rapid 471 Corridor – Typical Weekday PM Peak Hour Conditions



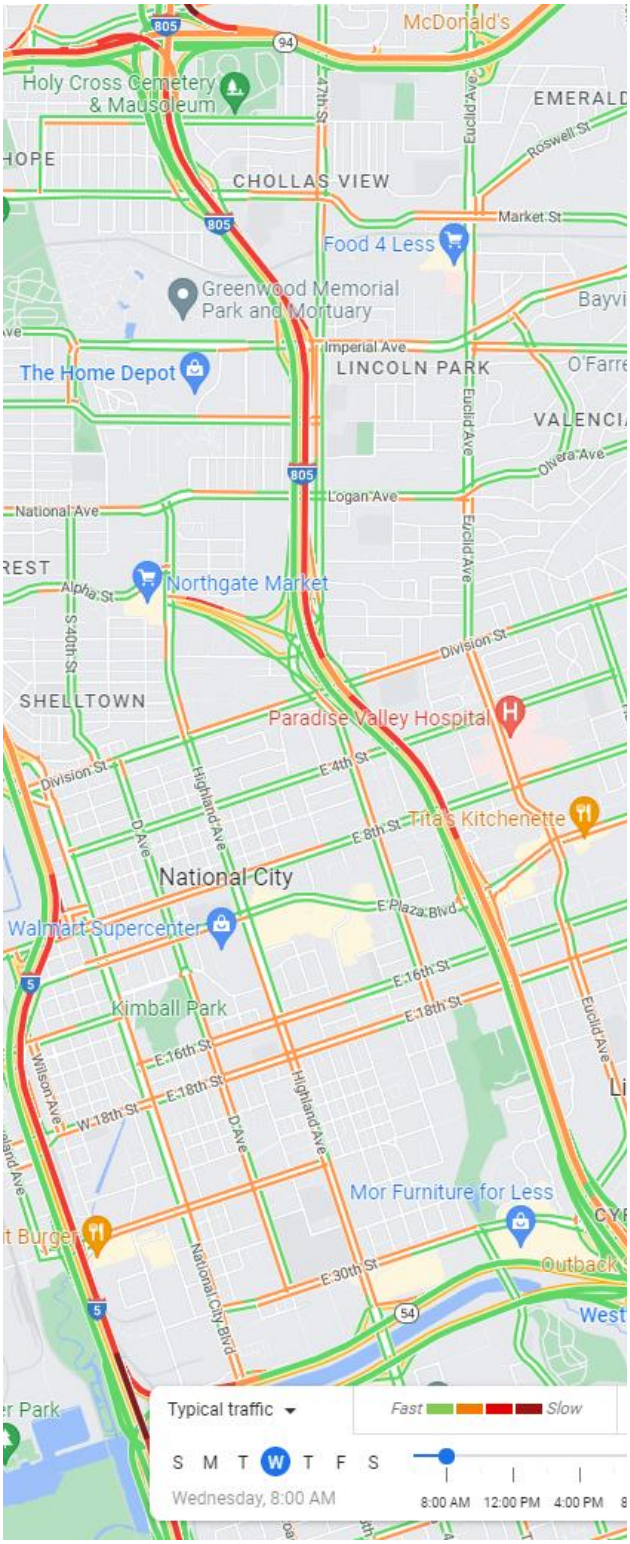
Rapid 625 Corridor (northern segment) – Typical Weekday AM Peak Hour Conditions



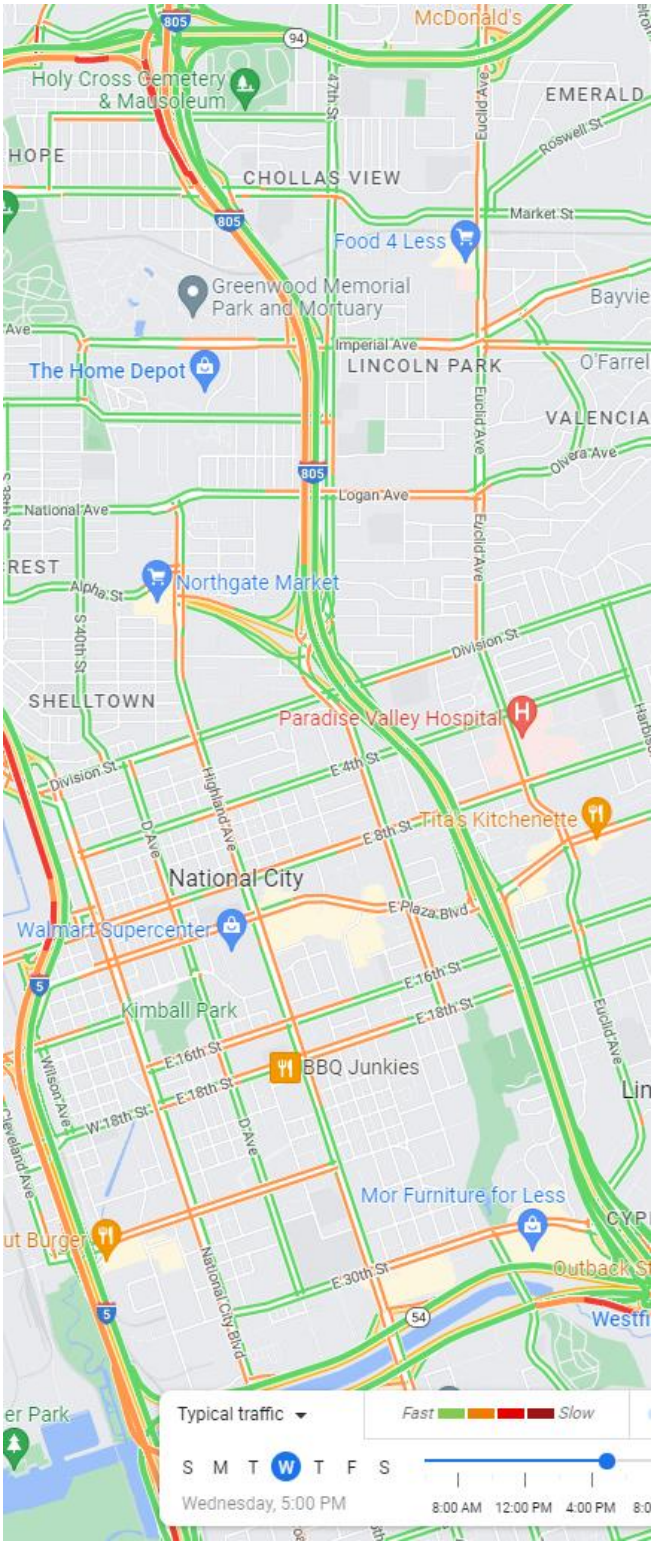
Rapid 625 Corridor (northern segment) – Typical Weekday PM Peak Hour Conditions



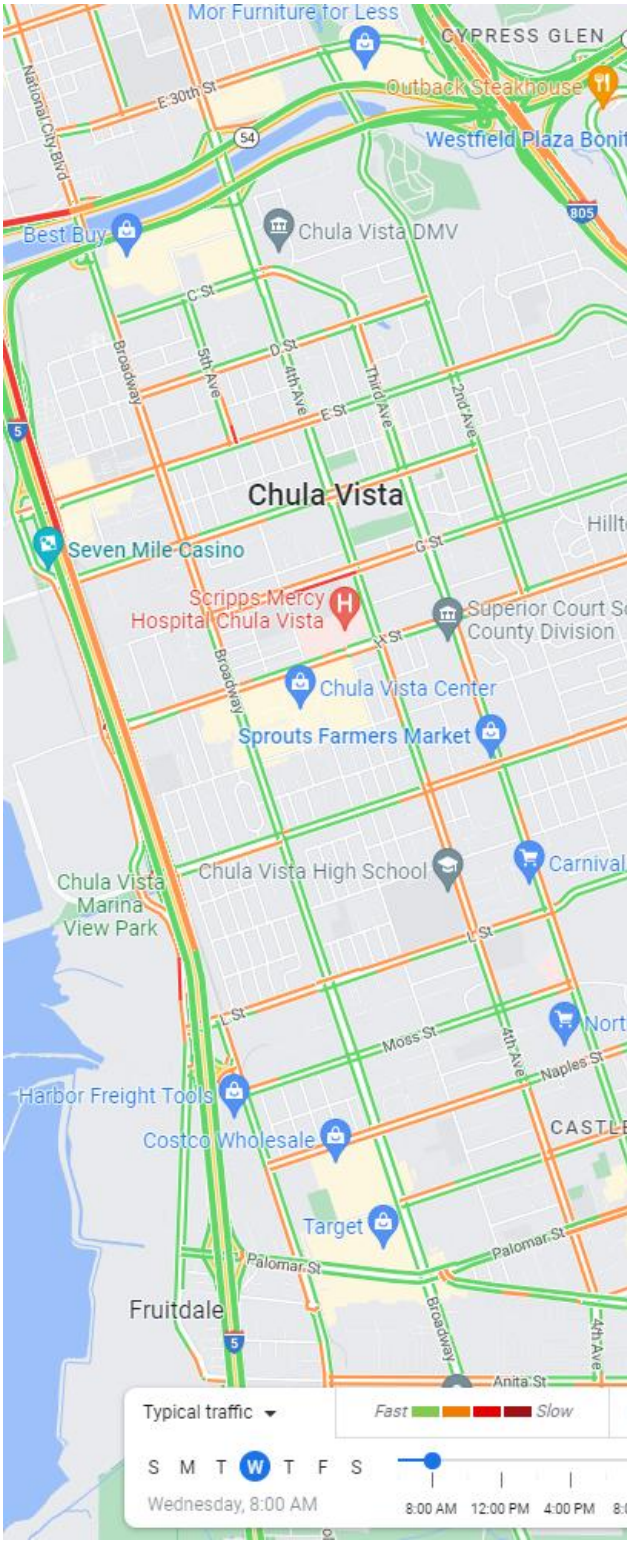
Rapid 625 Corridor (central segment) – Typical Weekday AM Peak Hour Conditions



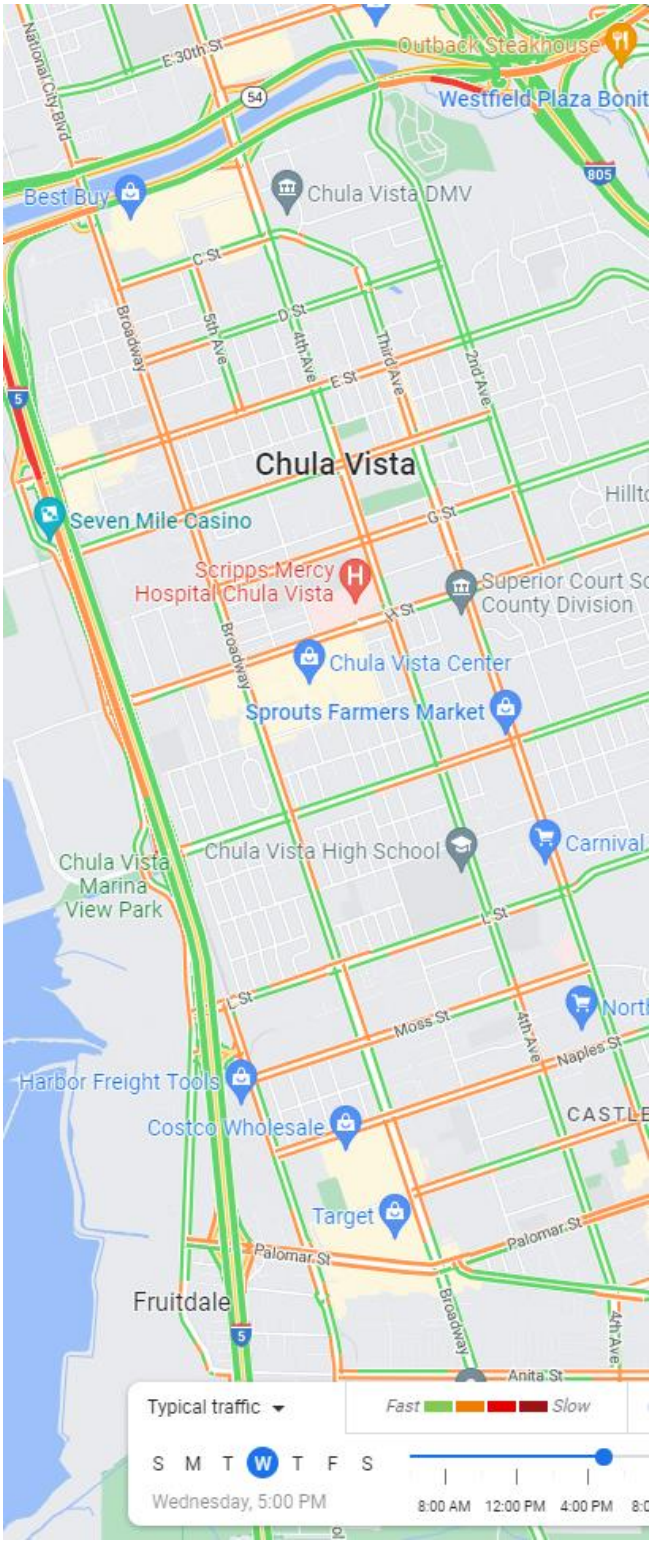
Rapid 625 Corridor (central segment) – Typical Weekday PM Peak Hour Conditions



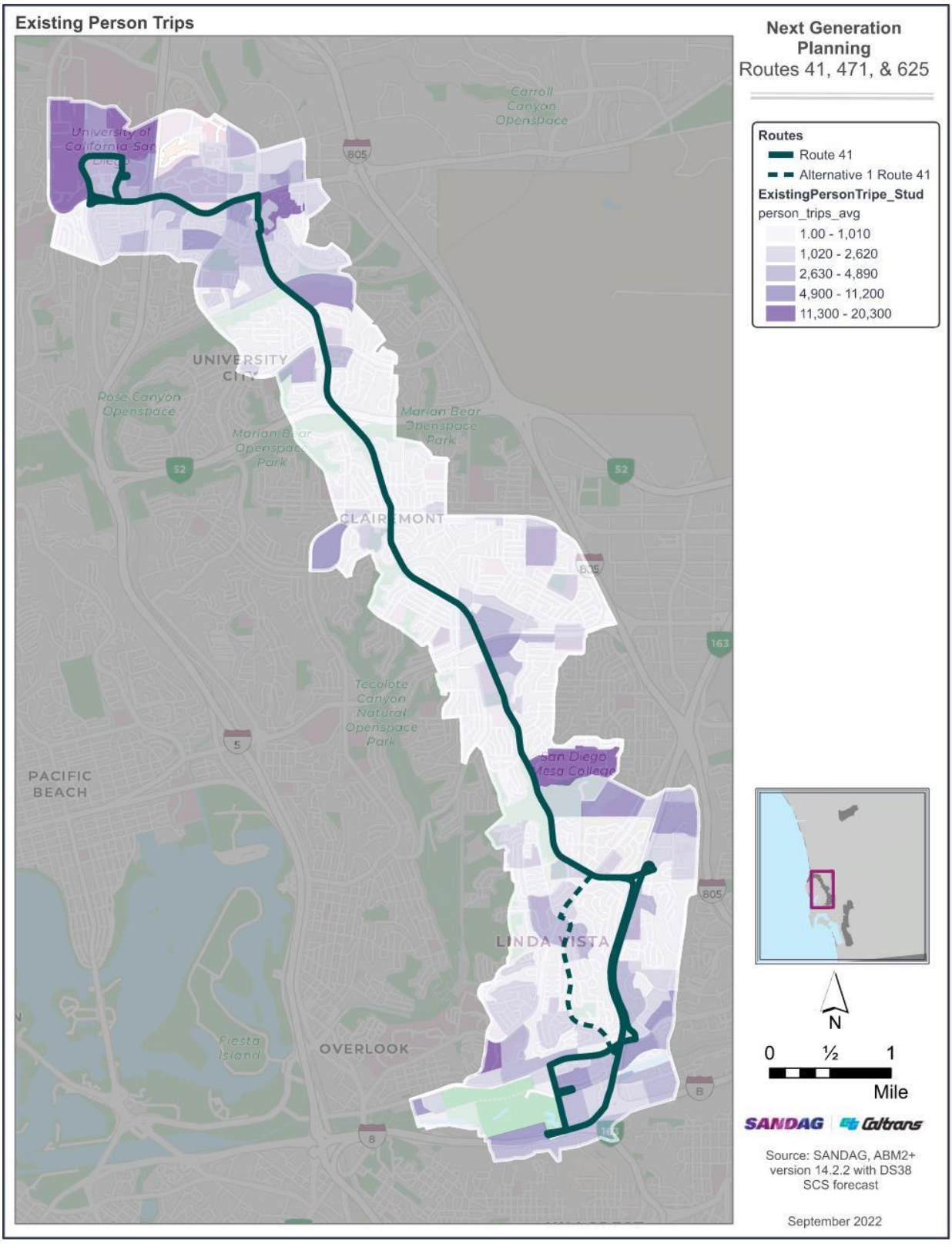
Rapid 625 Corridor (southern segment) – Typical Weekday AM Peak Hour Conditions

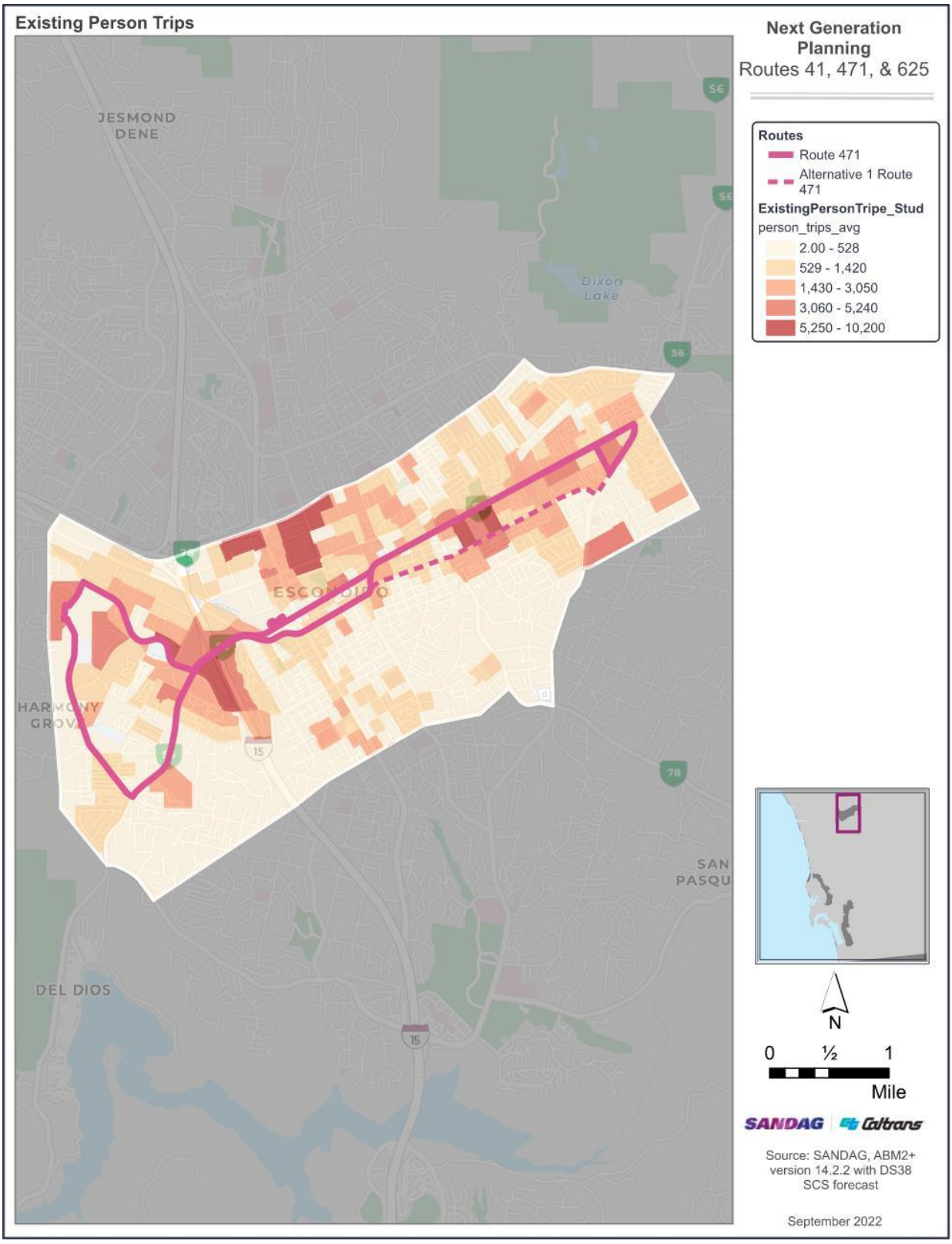


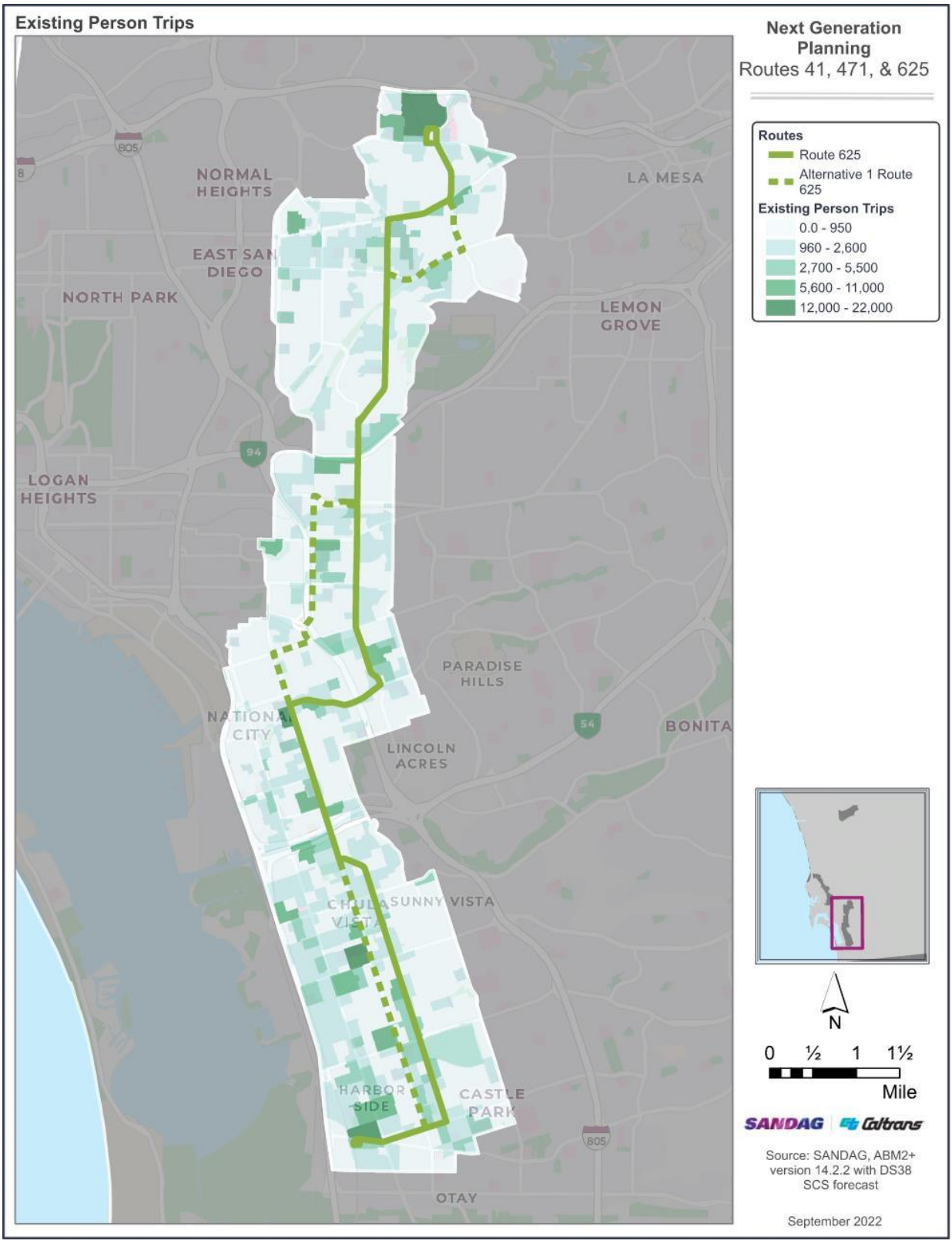
Rapid 625 Corridor (southern segment) – Typical Weekday PM Peak Hour Conditions

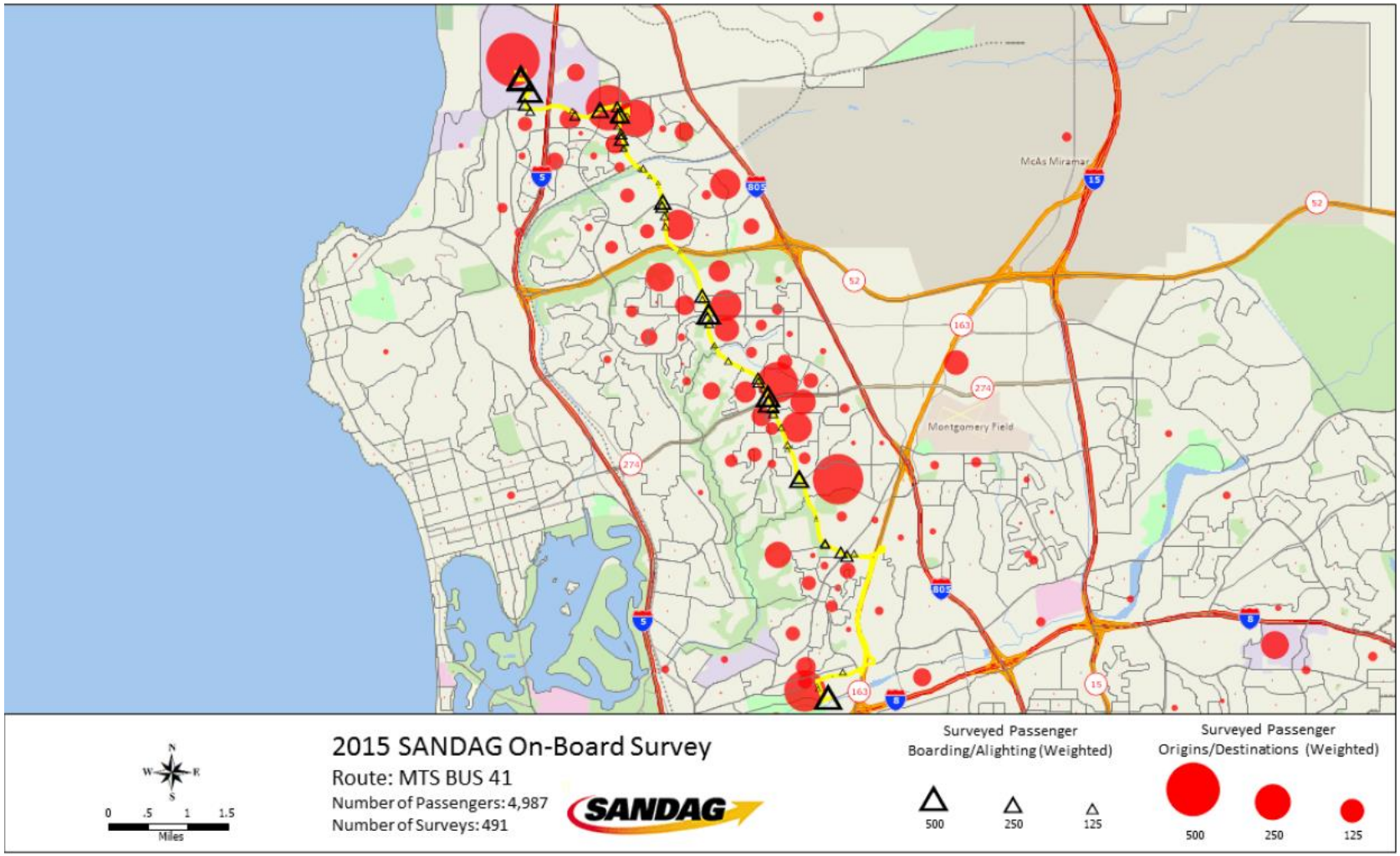


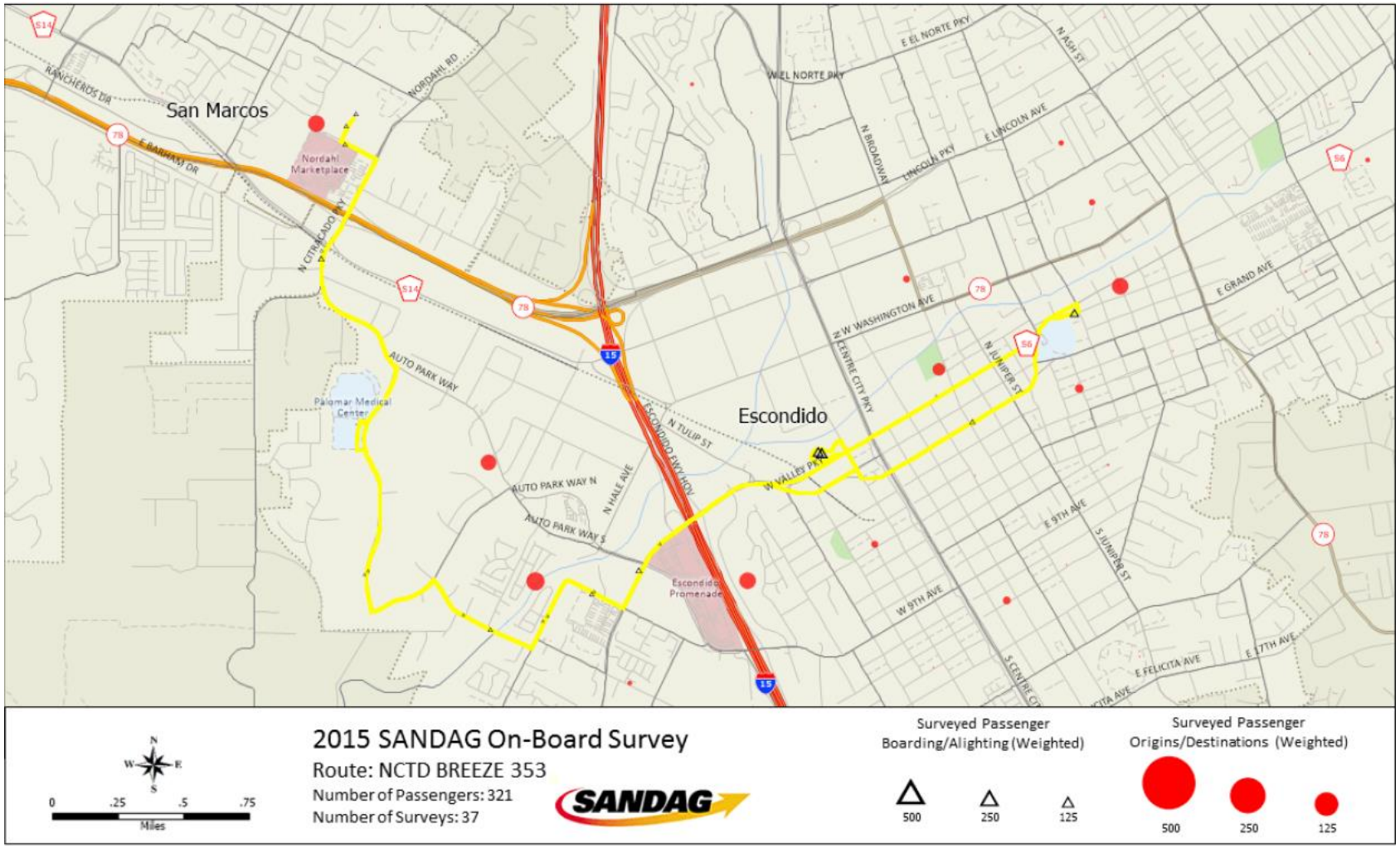
Appendix C. SANDAG Model and Onboard Survey Information

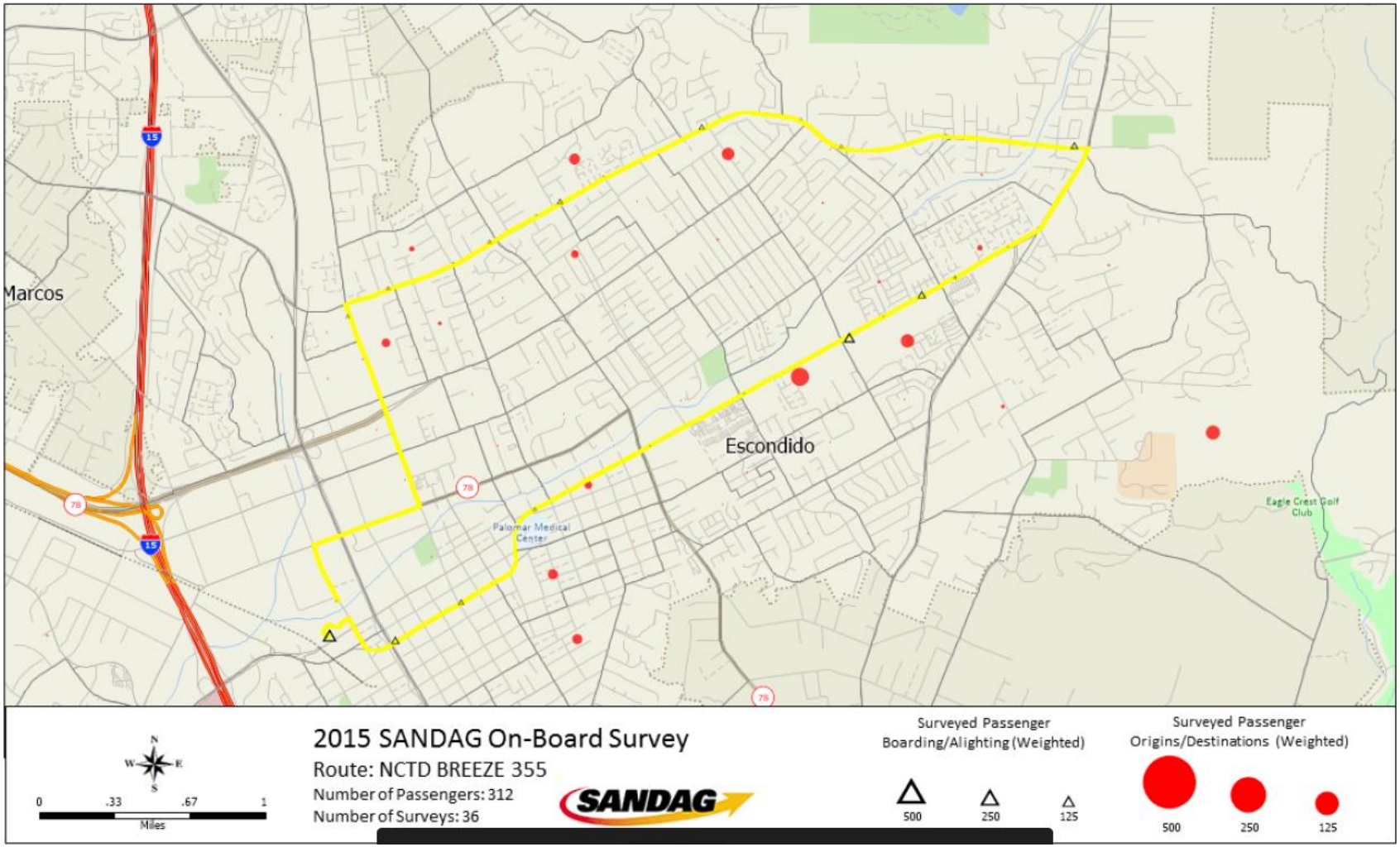

Existing Person Trips
Next Generation Planning
Routes 41, 471, & 625
Routes
Route 41
Alternative 1 Route 41
ExistingPersonTripe_Stud
person_trips_avg
1.00 - 1,010
1,020 - 2,620
2,630 - 4,890
4,900 - 11,200
11,300 - 20,300
Carroll Canyon Openspace
University of California San Diego
UNIVERSITY CITY
Rose Canyon Openspace
Marian Bear Openspace Park
CLAIREMONT
Tecolote Canyon Natural Openspace Park
San Diego Mesa College
PACIFIC BEACH
LINDA VISTA
Fiesta Island
OVERLOOK
805
52
163
5
8
N
0 ½ 1
Mile
SANDAG Caltrans
Source: SANDAG, ABM2+ version 14.2.2 with DS38 SCS forecast
September 2022

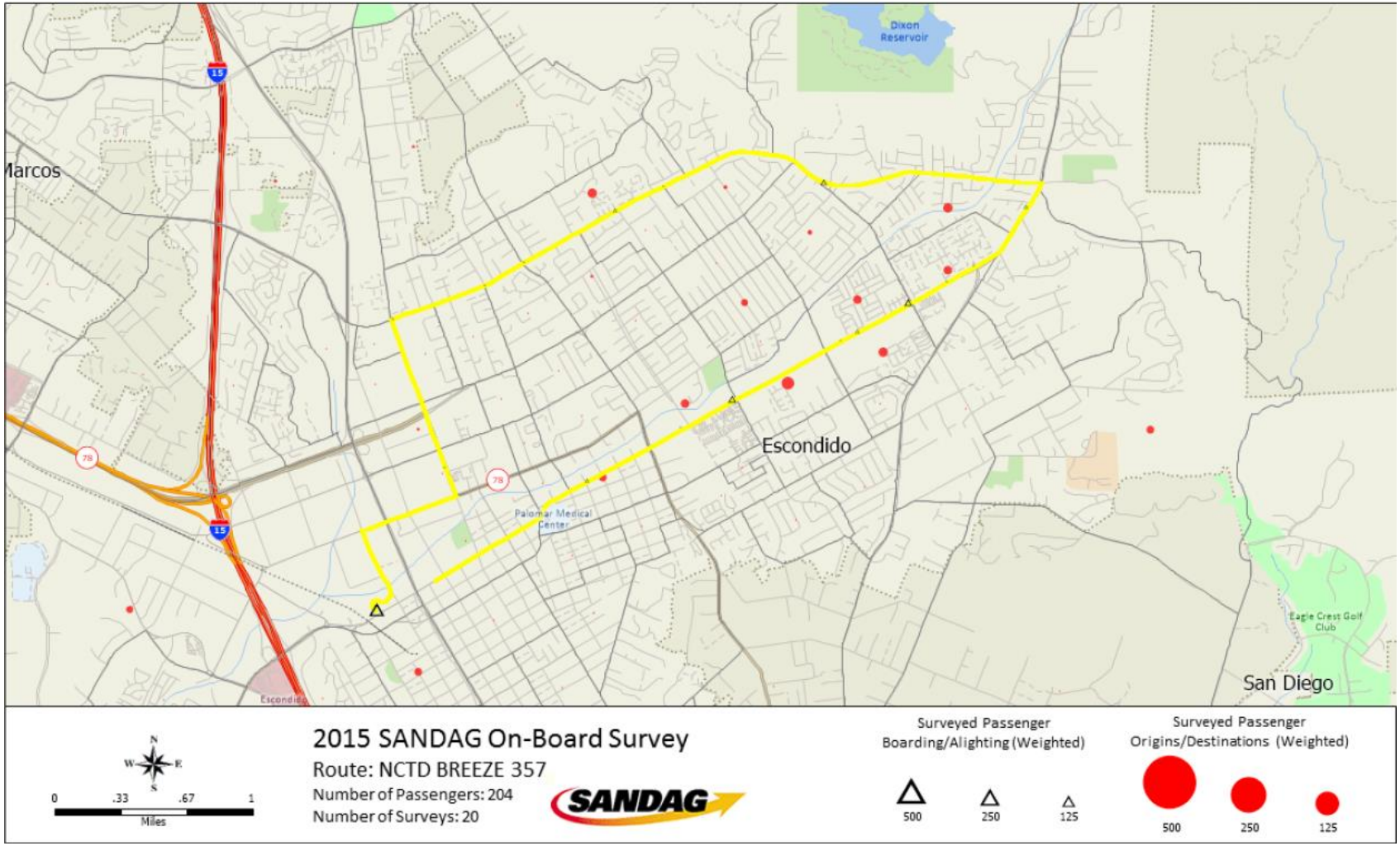

Existing Person Trips
Next Generation Planning
Routes 41, 471, & 625
Routes
Route 471
Alternative 1 Route 471
ExistingPersonTripe_Stud
person_trips_avg
2.00 - 528
529 - 1,420
1,430 - 3,050
3,060 - 5,240
5,250 - 10,200
JESMOND DENE
Dixon Lake
ESCONDIDO
HARMONY GROVE
SAN PASQU
DEL DIOS
N
0 ½ 1
Mile
SANDAG Caltrans
Source: SANDAG, ABM2+ version 14.2.2 with DS38 SCS forecast
September 2022

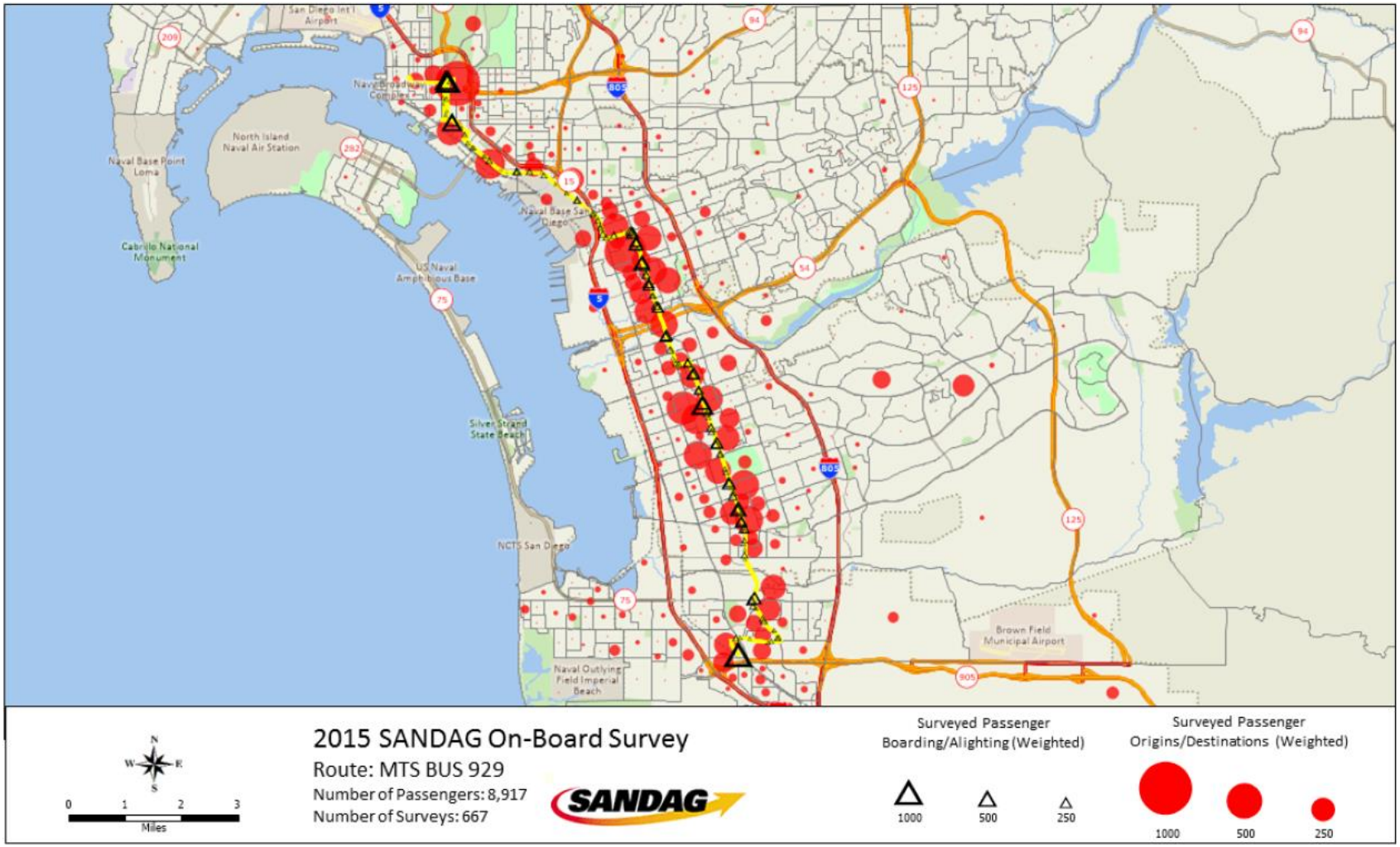

Existing Person Trips
Next Generation Planning
Routes 41, 471, & 625
Routes
Route 625
Alternative 1 Route 625
Existing Person Trips
0.0 - 950
960 - 2,600
2,700 - 5,500
5,600 - 11,000
12,000 - 22,000
NORMAL HEIGHTS
LA MESA
EAST SAN DIEGO
NORTH PARK
LEMON GROVE
LOGAN HEIGHTS
PARADISE HILLS
NATIONAL CITY
LINCOLN ACRES
BONITA
SUNNY VISTA
HARBOR SIDE
CASTLE PARK
OTAY
805
94
54
N
0 ½ 1 1½
Mile
SANDAG Caltrans
Source: SANDAG, ABM2+ version 14.2.2 with DS38 SCS forecast
September 2022

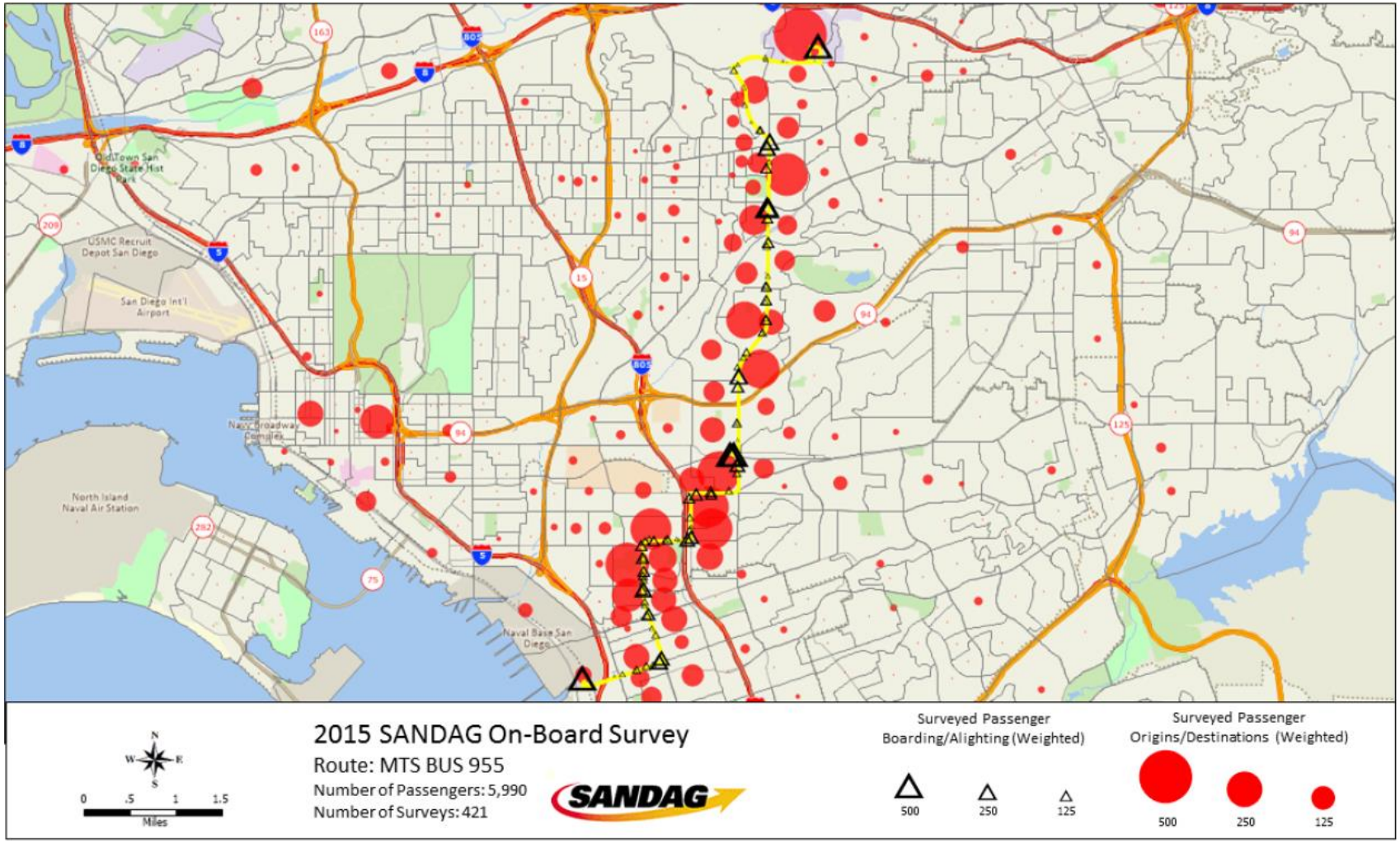

McAs Miramar
Montgomery Field
2015 SANDAG On-Board Survey
Route: MTS BUS 41
Number of Passengers: 4,987
Number of Surveys: 491
SANDAG
0 .5 1 1.5
Miles
Surveyed Passenger Boarding/Alighting (Weighted)
500
250
125
Surveyed Passenger Origins/Destinations (Weighted)
500
250
125


San Marcos
Escondido
Nordahl Marketplace
Palomar Medical Center
Escondido Promenade
RANCHEROS DR
E BARHAM DR
NORDAHL RD
N CITRACADO PKY
AUTO PARK WAY
AUTO PARK WAY N
AUTO PARK WAY S
N HALE AVE
ESCONDIDO FWY (I-15)
N TULIP ST
W VALLEY PKY
W EL NORTE PKY
E EL NORTE PKY
N ASH ST
N BROADWAY
LINCOLN PKY
E LINCOLN AVE
N CENTRE CITY PKY
W WASHINGTON AVE
E GRAND AVE
N JUNIPER ST
S JUNIPER ST
E 9TH AVE
W 9TH AVE
E FELICITA AVE
E 17TH AVE
S CENTRE CITY
S14
78
15
56
N
W
E
S
0
.25
.5
.75
Miles
2015 SANDAG On-Board Survey
Route: NCTD BREEZE 353
Number of Passengers: 321
Number of Surveys: 37
SANDAG
Surveyed Passenger Boarding/Alighting (Weighted)
500
250
125
Surveyed Passenger Origins/Destinations (Weighted)
500
250
125


Marcos
Escondido
Palomar Medical Center
Eagle Crest Golf Club
15
78
N
W
E
S
0
.33
.67
1
Miles
2015 SANDAG On-Board Survey
Route: NCTD BREEZE 355
Number of Passengers: 312
Number of Surveys: 36
SANDAG
Surveyed Passenger Boarding/Alighting (Weighted)
500
250
125
Surveyed Passenger Origins/Destinations (Weighted)
500
250
125


Dixon Reservoir
Escondido
Palomar Medical Center
Eagle Crest Golf Club
San Diego
2015 SANDAG On-Board Survey
Route: NCTD BREEZE 357
Number of Passengers: 204
Number of Surveys: 20
SANDAG
0 .33 .67 1
Miles
Surveyed Passenger Boarding/Alighting (Weighted)
500
250
125
Surveyed Passenger Origins/Destinations (Weighted)
500
250
125


2015 SANDAG On-Board Survey
Route: MTS BUS 929
Number of Passengers: 8,917
Number of Surveys: 667
SANDAG
Surveyed Passenger Boarding/Alighting (Weighted)
1000
500
250
Surveyed Passenger Origins/Destinations (Weighted)
1000
500
250
N
W
E
S
0
1
2
3
Miles
San Diego Int'l Airport
Naval Broadway Complex
North Island Naval Air Station
Naval Base Point Loma
Cabrillo National Monument
Naval Base San Diego
U.S. Naval Amphibious Base
Silver Strand State Beach
NCTS San Diego
Naval Outlying Field Imperial Beach
Brown Field Municipal Airport


Old Town San Diego State Hist Park
USMC Recruit Depot San Diego
San Diego Int'l Airport
Navy Broadway Complex
North Island Naval Air Station
Naval Base San Diego
2015 SANDAG On-Board Survey
Route: MTS BUS 955
Number of Passengers: 5,990
Number of Surveys: 421
SANDAG
0 .5 1 1.5
Miles
Surveyed Passenger Boarding/Alighting (Weighted)
500
250
125
Surveyed Passenger Origins/Destinations (Weighted)
500
250
125