COAST, CANYONS, AND TRAILS COMPREHENSIVE MULTIMODAL CORRIDOR PLAN

Appendix D: Transportation Solution Strategies

D1. Transportation Solution Strategies

D2. Mobility Hub Profiles

D3. Proposed TSS Concepts

FEDERAL CMP CONSISTENCY

The proposed transportation solution strategies (TSS) are consistent with SANDAG's Federal congestion management process (CMP). Proposed projects utilizing federal funds that may add single occupancy vehicle (SOV) capacity undergo evaluation for non-SOV inducing and multimodal alternatives prior to programming. Projects captured on the CMP network are regularly monitored through State of the Commute reports. More information, including levels of analysis and reporting, can be found in Technical Appendix N of the 2021 Regional Plan.

D1. Transportation Solution Strategies

Building on the insight and the key takeaways resulting from the existing conditions analysis, planning documents review, and engagement activities, the CCT CMCP project team developed transportation solution strategies (TSS) to address the corridor's needs through the year 2050.

The TSS proposed in this plan align with the SANDAG 2021 Regional Plan and its five transformational strategies— the 5 Big Moves—integrated into one regional transportation system. These 5 Big Moves (Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and Next Operating System (OS)) are the lens through which the transportation solution strategies have been developed and organized.

This appendix includes tables of all proposed TSS by Big Move, including a description and applicable Alternative(s) (Alt), 1, 2, and/or 3.

TRANSIT LEAP

Transit Leap creates a complete network of fast, high-capacity, high-frequency[1] transit services that connect major residential areas with employment centers and attractions throughout the San Diego region. Transit Leap services would connect to supporting flexible fleets at mobility hubs. New high-speed services covering longer distances with limited stops may be separated from non-transit vehicular traffic through the use of bridges, tunnels, or dedicated lanes. Improvements to existing transit services such as the Trolley, COASTER, SPRINTER, and *Rapid* may include additional rail tracks, more frequent service, managed lanes or dedicated transit lanes, and traffic signal priority to keep transit moving quickly.

- **Commuter Rail** is a high-speed train that serves longer regional trips and typically arrives every 5-10 minutes all day.
- **Light Rail** comprises tram (also known as streetcar) services that operate on major streets and improved Trolley services with higher frequencies, expanded service times, and faster travel times. Light rail typically arrives every 10 minutes all day.
- **Next Gen *Rapid*** offers fast, frequent, and more reliable bus service that uses transit priority measures such as dedicated bus lanes and priority at traffic signals, typically arriving every 10 minutes all day.
- **Local Bus** services broaden the reach of the transit network into diverse neighborhoods, with buses arriving every 15 to 60 minutes depending on local need and demand.
- **Microtransit** completes the Transit Leap network by expanding access to transit into areas difficult to reach by buses. Microtransit is typically a multi-passenger shuttle that provide rides within a defined service area but operates without fixed routes or schedules, arriving when summoned through a smartphone app.

[1] "High-Frequency Transit can be characterized as transit headways between 2-6 minutes, 10-30 buses per hour, or a system capable of carrying 500 – 2,000 passengers per hour. Transit Frequency & Volume | National Association of City Transportation Officials (nacto.org)

COMPLETE CORRIDORS

Complete Corridors provide a variety of travel choices and use technology to manage how highways and major roads are used in real time. They provide a balance of dedicated, safe space for everyone, including freight vehicles and people who walk, bike, drive, ride transit, and use Flexible Fleets.

SANDAG is planning for a regional network of Complete Corridors on major roads and highways. The proposed network intertwines with the adopted regional bike network to create seamless connections within communities and across jurisdictions. Complete Corridors create a backbone for Flexible Fleets and Transit Leap services by combining infrastructure and technology solutions.

- **Managed Lanes**, such as those along the Interstate 15 Corridor, offer priority access to people using transit, carpooling, or vanpooling. People driving alone can access these lanes for a fee. When paired with technology, this can help move more people, reduce traffic congestion, and increase transit ridership.
- **Truck Climbing Lanes** provide an extra lane for short distances to enable cars and other vehicles to pass trucks and slow-moving vehicles. These lanes help improve safety and reduce traffic congestion resulting from trucks needing to slow down due to steep grades.
- **Zero-Emission Vehicle (ZEV) infrastructure** such as public charging stations help support California's shift to electric vehicles and a reduction of greenhouse gases.[i]
- **Flexible (Flex) Lanes** are repurposed lanes for transit and/or other modes of shared mobility (rideshare, autonomous vehicles, etc...) that can operate all day or only during peak periods. Flex Lanes encourage the use of transit, carpooling, and other alternatives to single-occupancy vehicles.
- **Wildlife crossings** facilitate safe passage for wildlife across transportation infrastructure, restoring and enhancing connections between conservation lands and native habitat. These connections are beneficial for biodiversity and resiliency of several animal species.
- **Green infrastructure** protects, restores, and mimics the natural water cycle by using plants, mulch, soil, and other natural materials to store rainwater and stormwater and treat runoff.
- **Utility enhancements** harden electrical and communications infrastructure to make them more resilient during wildfires, earthquakes, and other natural disasters.

Active Transportation

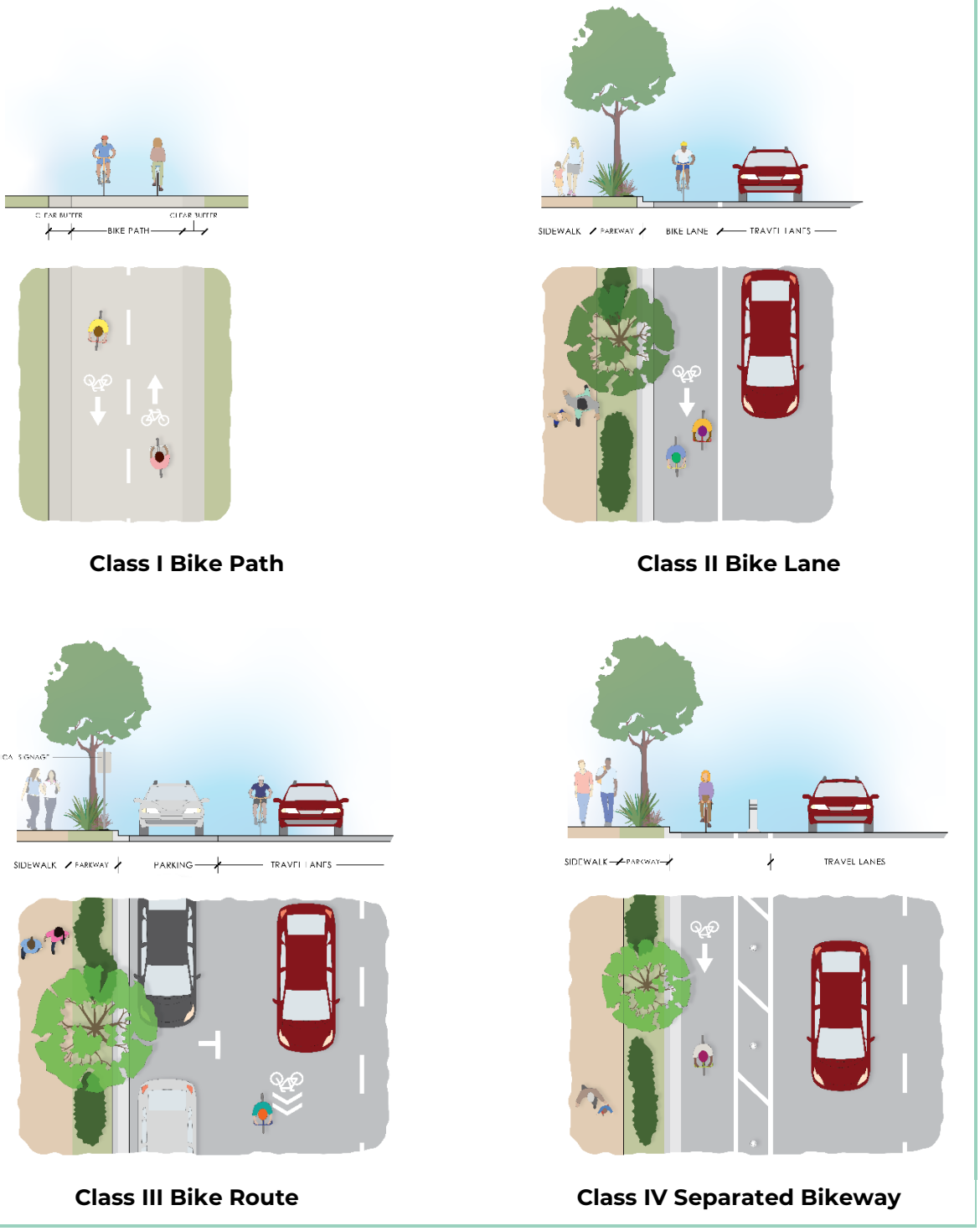
The Complete Corridors strategy also includes active transportation such as cycling and walking, which can serve whole trips or provide first and last-mile connections to other forms of transportation.

- **Class I (Bike Path)** – a path separated from vehicle traffic for shared use by cyclists, pedestrians, and other non-motorized users with minimal vehicle crossings. Some paths may have restricted access or speed limits.
- **Class II (Bike Lane)** – a striped lane for one-way bike travel on a roadway.
- **Class III (Bike Route)** – bike riders share the roadway with motor vehicles. This bikeway type may be designated with signs only but may also include shared lane markings called "sharrows."
- **Class IV (Separated Bikeway)** – an on-street bike lane that is physically separated from moving vehicles by parked cars or bollards.

In addition to the four bicycle facility classifications recognized by Caltrans, SANDAG recognizes a fifth type of facility called a Bike Boulevard.

- **Bike Boulevards** accommodate cyclists and motorists through Class II or III bike facilities on low-volume, low-speed roadways that have been enhanced with traffic calming treatments to prioritize people traveling by bike.

Figure D-1 *Depiction of Caltrans recognized bikeway classifications*



Class I Bike Path

Class II Bike Lane

Class III Bike Route

Class IV Separated Bikeway

MOBILITY HUBS

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. Mobility hubs would make it easy to connect to and from Transit Leap services by offering on-demand Flexible Fleet choices. Mobility hubs were identified based on land use and employment characteristics, travel patterns, and demographics. Mobility hubs also integrate with Complete Corridors to ensure walking and biking are safe experiences while prioritizing pooled ride options over single-occupant vehicles.

Key mobility hub services and supporting amenities include bikeshare, carshare, neighborhood electric vehicles, convenient micromobility parking and e-charging, dynamic parking management strategies, real-time traveler information, on-demand ridesharing, microtransit services, safer bikeways and walkways, and a variety of urban design features. Integrating information technology helps people find, book, and pay for transit and all other shared mobility options. In the future, automated and connected vehicle technology can enhance travel for people of all ages and abilities while fostering a safer environment for all mobility hub users. The different projects include the following categories of amenities.

Table D-1 *List of Potential Amenities at Mobility Hub Locations*

AMENITY TYPE	AMENITY	DESCRIPTION
Micromobility	Bike or Scooter share	Shared fleet of bikes or scooters for short-term use that can be accessed by using a smartphone app. These can be checked out a payment kiosk.
	Rideables	Portable devices with wheels that use an electric power source and feature a footboard for the rider to stand on.
Bike Amenities	Bike Share	Provides convenient, affordable, on-demand access to bikes for short-term use in urban areas while enhancing access to transit.
	Bike Parking	Provides secure locations for people to park and lock their bikes while they are away or transferring modes.

AMENITY TYPE	AMENITY	DESCRIPTION
	Bikeways	Provides a safe and comfortable riding experience for people of all ages and abilities and employ design elements such as signage, detection, and signals to alert drivers to the presence of bike riders on or near the roadway.
	Bike Repair Station	Provides common bicycle maintenance and repair tools to help cyclists reach their destinations safely.
	Signage	Provide bike signage to indicate the presence of cyclists to drivers, employing design elements such as bike signals and detection.
Pedestrian Amenities	Walkways	Introduces design elements such as wide walkways, landscaping, pedestrian scale lighting, enhanced paving, pedestrian cut-throughs, and other urban design enhancements to create a safe and efficient pedestrian connection.
	Crossings	Provides short crossing distances and makes pedestrians more visible to drivers using design elements such as pedestrian crossing beacons, curb extensions, audible crossing signals, raised crosswalks, or pedestrian crossing medians.
	Signage	Provide pedestrian signage to indicate the presence of pedestrians to drivers.
Transit Amenities	Enhanced Transit Waiting Areas	Includes seating, lighting, shade, rain cover, trash receptacles, complementary Wi-Fi, real-time travel alerts, daily schedule information.
	Real Time Travel Information	Helps passengers make informed travel choices based on availability or nearby mobility options. People can plan their trips more efficiently and wait less for transit connections.
	Passenger Loading Zones	Zones where passengers can be dropped off or picked up, conveniently and safely. This curb space can be flexible to allow space for TNCs, NEVs, or Micro-transit vehicles.

AMENITY TYPE	AMENITY	DESCRIPTION
	Electric Vehicle Charging Station (EVCs)	Gives people the opportunity to charge plug-in electric vehicles (PEVs) at a mobility hub.
	Neighborhood Electric Vehicle (NEV)	Offers a low speed (25 mph), zero-emission motorized travel option for local trips in self-contained areas such as planned communities, resorts, college campuses, and industrial parks.
	Micro Transit Connections	Provides a flexible, on-demand option for small groups of people to common locations. This provides an alternative to fixed-route transit service.
	Dedicated Transit Lanes	Dedicated transit lanes are physically separated from traffic with curbs or paint to discourage drivers from entering them and making it easier for busses to re-emerge into the travel network.
Motorized Services Amenities	On-Demand Rideshare	Allows someone to request a ride in real-time using a mobile app and links passengers with available drivers based on a trip's origin and destination, while also identifying the quickest route.
	Carshare	Shared fleet of cars that can be found within a specified service area, at transit stations, or other locations, and accessed via a smartphone app or provider's website. Carshare offers people a convenient way to make connections beyond the first and last mile and provides an alternative to owning a vehicle.
	Flexible Curb Space	Designates curb space for some mobility services during peak demand periods, while the same space can be designated for other uses during off-peak periods.
Support Services & Amenities	Wayfinding	Assists travelers with navigation to other transit stations, civic and community buildings, or parks. Wayfinding signage can be placed throughout

AMENITY TYPE	AMENITY	DESCRIPTION
		the five-minute walk, bike, and drive access sheds.
	Mobile Retail Services	Provides opportunities for local businesses to come directly to customers, allowing travelers to finish some errands while at the mobility hub.
	Package Delivery	Provides a secure location for online orders to be picked up at any time of day.
Intelligent Transportation Solutions	Smart Parking	Uses technology to make searching and paying for parking more convenient and efficient. This can also be used to provide data on parking patterns within a community.
	Universal Transportation Account	Provides people with an integrated payment solution for a wide variety of mobility services.
Placemaking Amenities	Green Space	Provides park or urban greenery to the community.
	Landscaping and Shade	Provides an enhanced sense of place to passenger waiting areas using design elements such as shade trees and lighting to enhance community spaces.
	Public Seating	Creates a meeting place for community members and an enhanced sense of place for passengers waiting for a transit connection.
	Device Charging Stations	Allows travelers to charge their electronic devices while waiting for transit.
	Public Art	Creates an enhanced sense of place.

FLEXIBLE FLEETS

The Flexible Fleets strategy builds on the popularity of shared mobility services such as on-demand rideshare, bikeshare, and scootershare. These fleets provide different mobility options and vehicles for all types of trips, including package deliveries, thus reducing the need to own a car. Services can make it easier for a person to connect to high-speed transit and other important destinations by providing a first and last-mile connection or fulfilling a complete trip.

A trip on a Flexible Fleet can be reserved through a mobile app. Public agencies are working with the private sector to ensure there are options for people without a smartphone or credit card who would like to use the service.

- **Micromobility** includes small, low-speed, vehicles like e-scooters, bikes, and other rideables to support short trips around a community.
- **Rideshare** is when riders headed in a similar direction can share the ride in a vehicle. This includes carpool, vanpool, and pooled ride hailing services such as uberPOOL and Lyft Shared. Eventually these services will operate as automated and shared taxis that will be designed to meet passenger needs.
- **Microtransit** is typically a multi-passenger shuttle that can carry up to 15 passengers and provide rides within a defined service area. This technology-enabled transit service allows users to reserve a ride ahead of time or on-demand. Smaller, all-electric shuttles, also known as neighborhood electric vehicles (NEV), are another form of microtransit that provides a sustainable and convenient solution for short trips around communities.
- **Ridehailing services** enable someone to request a ride in real-time. Services link the passenger with available drivers based on their trip length, number of passengers, origin, and destination. This includes services such as Uber, Lyft, or taxis. Ridehailing services will be automated in the future, allowing users to reserve any type of vehicle for their trip.

NEXT OPERATING SYSTEM (OS)

Next OS is the "brain" of the entire transportation system. It is a digital platform that compiles information from sources like passenger vehicles, delivery trucks, e-bikes, and scooters into a centralized data hub. Analysis of this data will improve how transportation is planned, operated, and experienced.

The Next OS makes the transportation system smarter, allowing it to adapt and respond to changing conditions throughout the day. For example, travel lanes on Complete Corridors can be dedicated to different uses or modes at different times of day depending on traffic levels, transit services can become more responsive to user demand, and different numbers and types of transit vehicles can be deployed as needed to serve specific areas. Next OS supports dashboards with real-time data to help service providers and transportation operators optimize their services.

Next OS also provides people with timely and accurate information about travel choices so they can make more informed decisions about the best modes or routes to use. Applications and interactive kiosks can then be used to browse for, book, and pay for any mobility service.

Next OS can also help planners and policymakers make informed decisions using data that provides a clear perspective on how the transportation system is functioning and what improvements might be needed and where. Next OS would unify Complete Corridor management systems and complement the proposed infrastructure improvements to let people choose the travel option that works best for them.

- **Active Transportation and Demand Management** (ATDM) technology enables transportation operators to modify how infrastructure and services are used based on changing traffic conditions. This also allows operators to make more use of existing roads and offers an alternative to costly road expansion. Real-time travel information helps people decide how, where, and when to travel to avoid congestion and dangerous driving conditions, thereby supporting mode shift.
- **Active Traffic Management** (ATM) technology enables operators to dynamically manage the roadway based on recurrent and non-recurrent congestion and traffic patterns. This strategy improves the efficiency and throughput of the freeway or roadway while simultaneously providing benefit to traveler safety. When integrated regionally, ATM can aid congestion management and travel time-reliability throughout the transportation system.
- **Smart infrastructure and connected vehicles** use high-speed communication networks to enable connected vehicles, smartphones, and smart roads to share data, which can help reduce collisions, increase network capacity, and improve travel times.

- **Priority for transit, active transportation, and shared mobility services**, including smart intersections, flexible lanes, dedicated transit lanes, micromobility lanes, and separate space for people who walk and bike, make traveling by transit, bike, or foot safer, faster, and more comfortable. More people choosing shared transportation options leads to better air quality.

CCT CMCP TSS

TSS Maps

Figures D-2 through D-6 map the 367 TSS included in this CMCP and included in Alternatives 2 and 3.

Figure D-2 *Transit Leap*

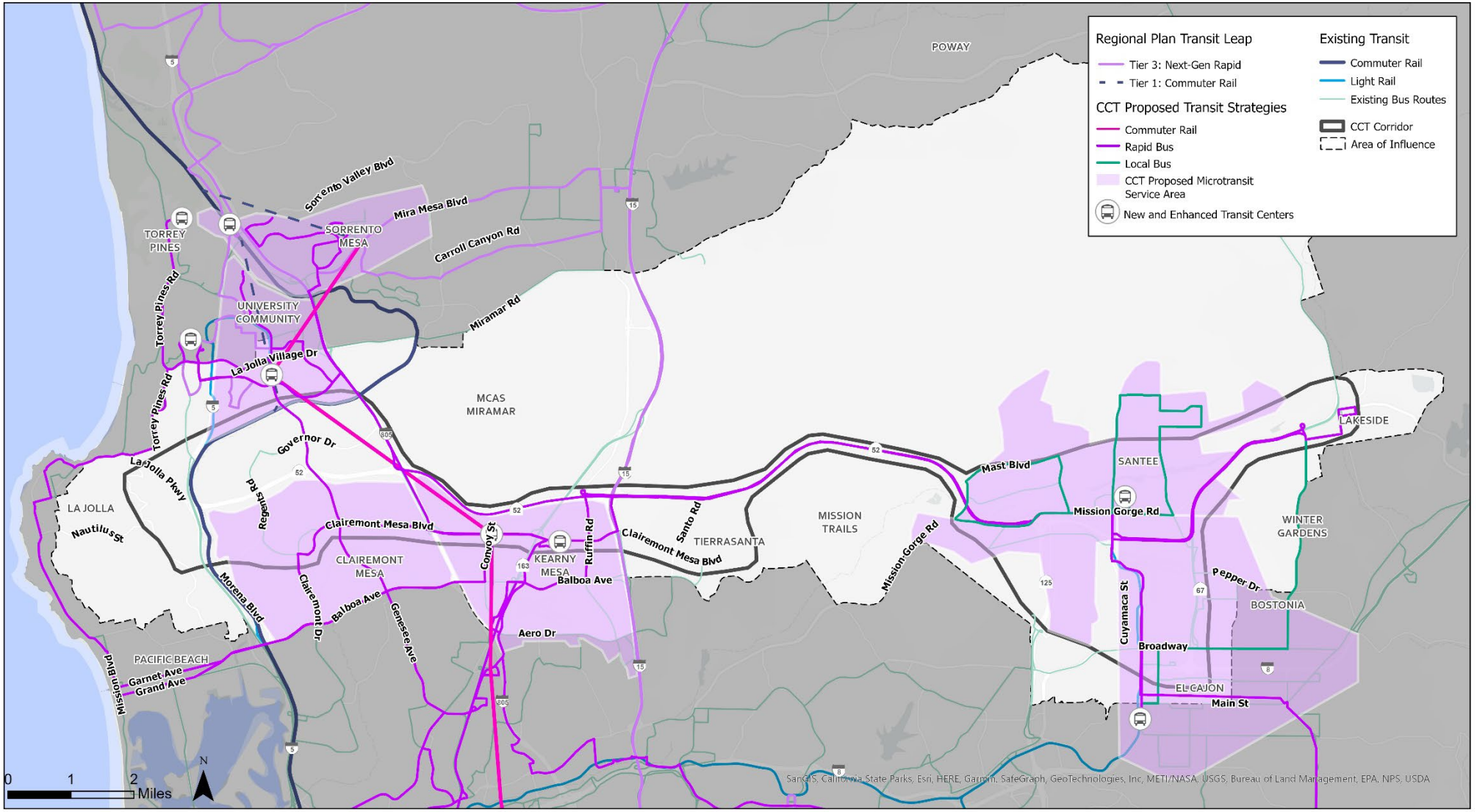


Figure D-3 *Complete Corridors*

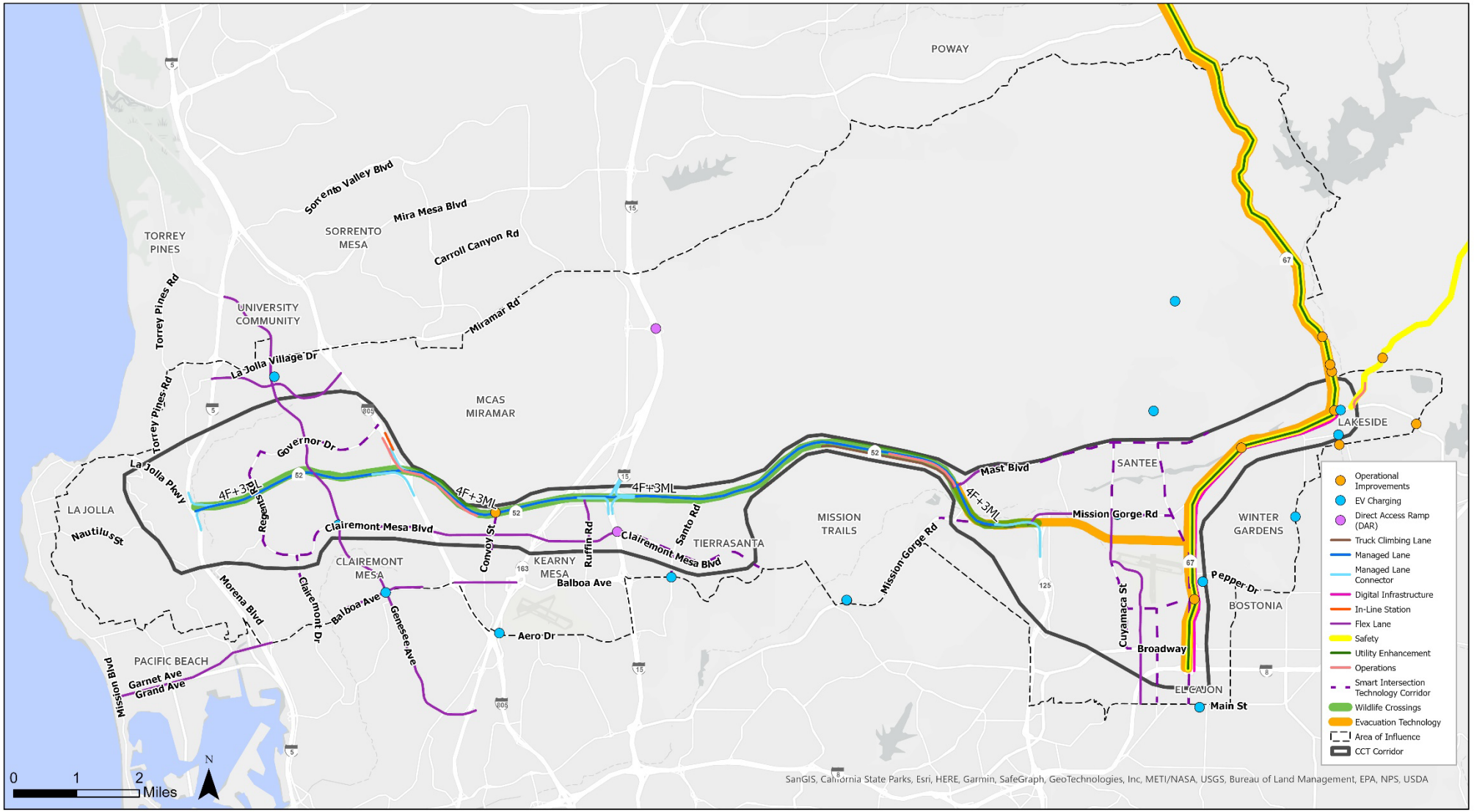


Figure D-3-A Complete Corridors – Active Transportation

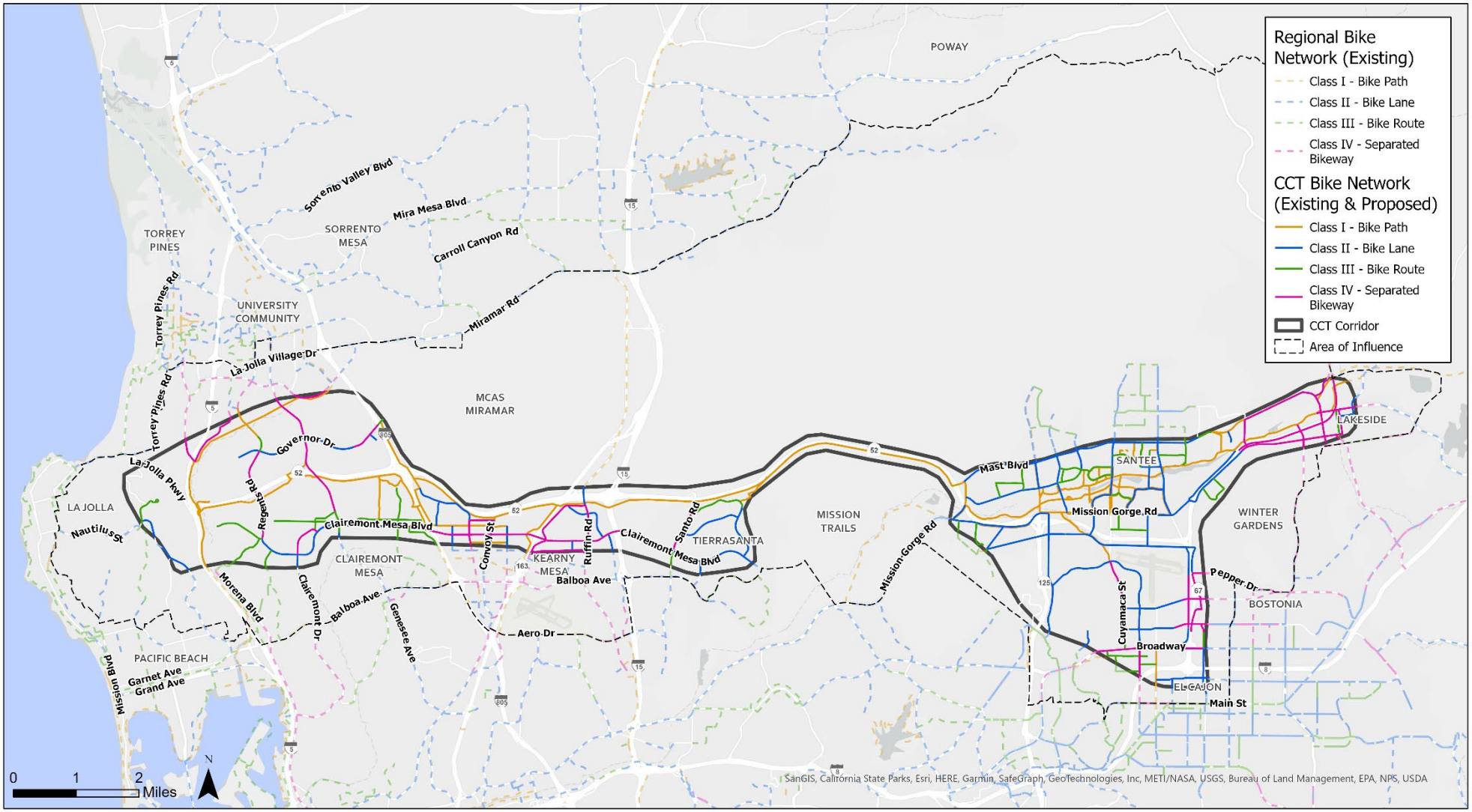


Figure D-4 *Mobility Hubs*

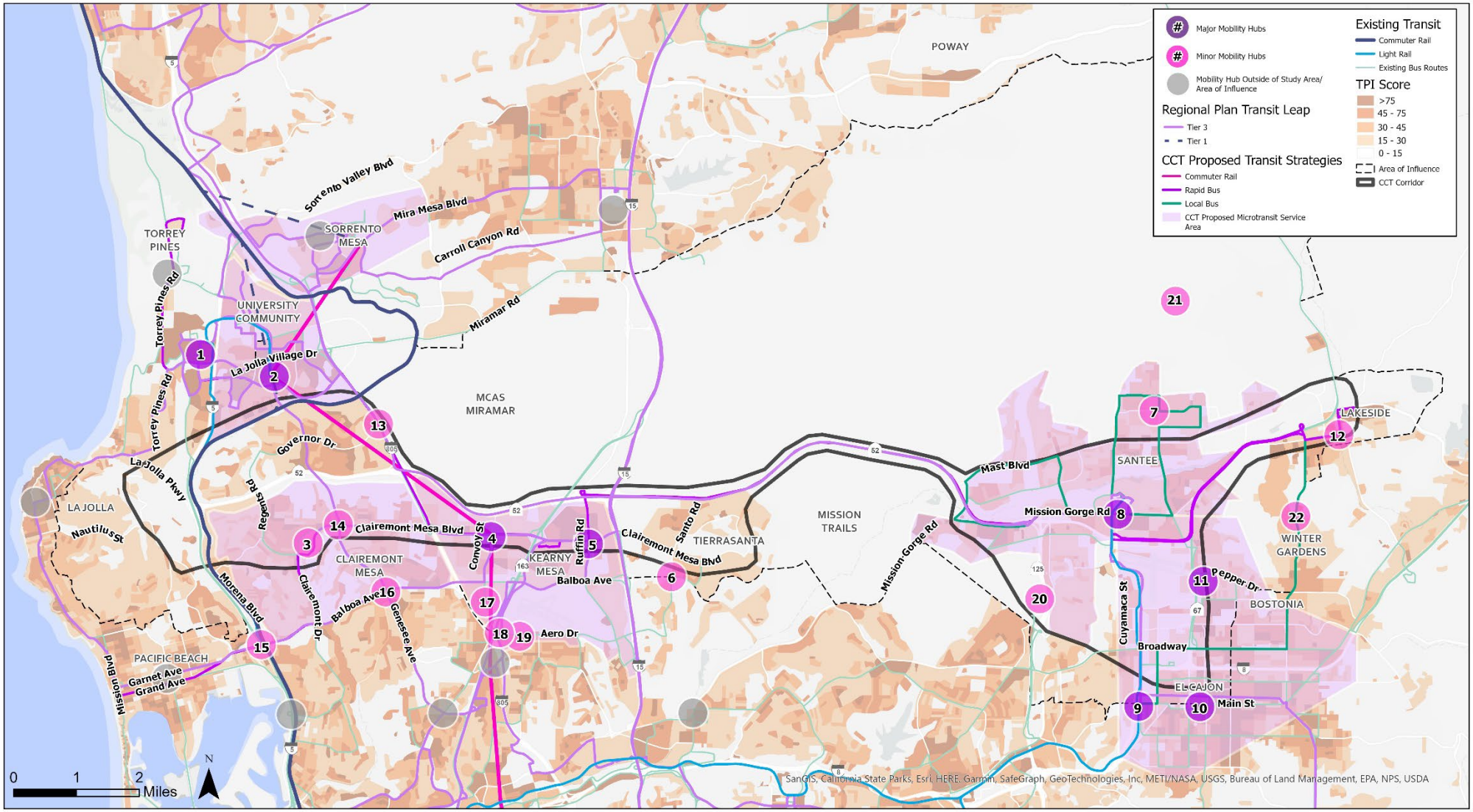


Figure D-5 *Flexible Fleets*

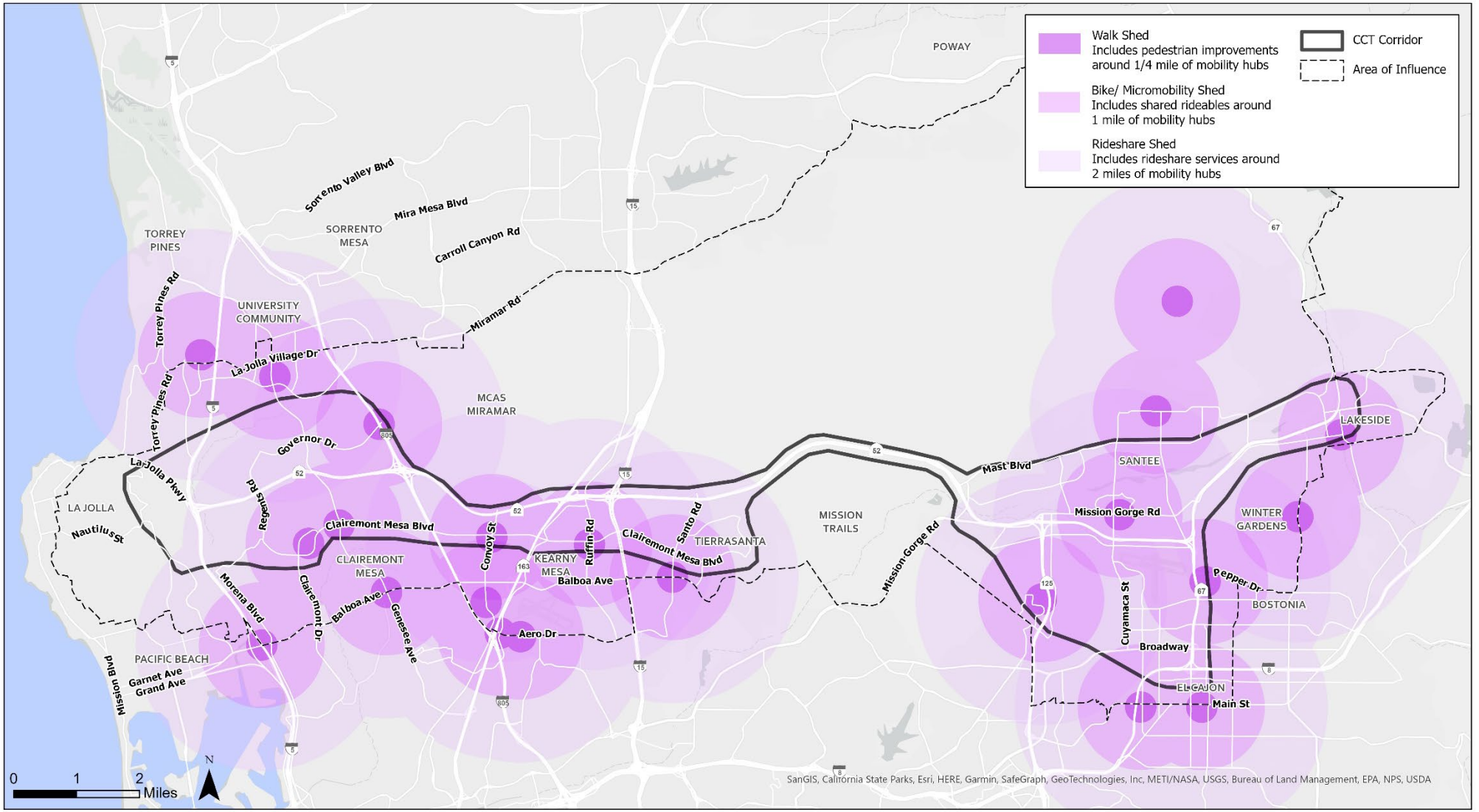
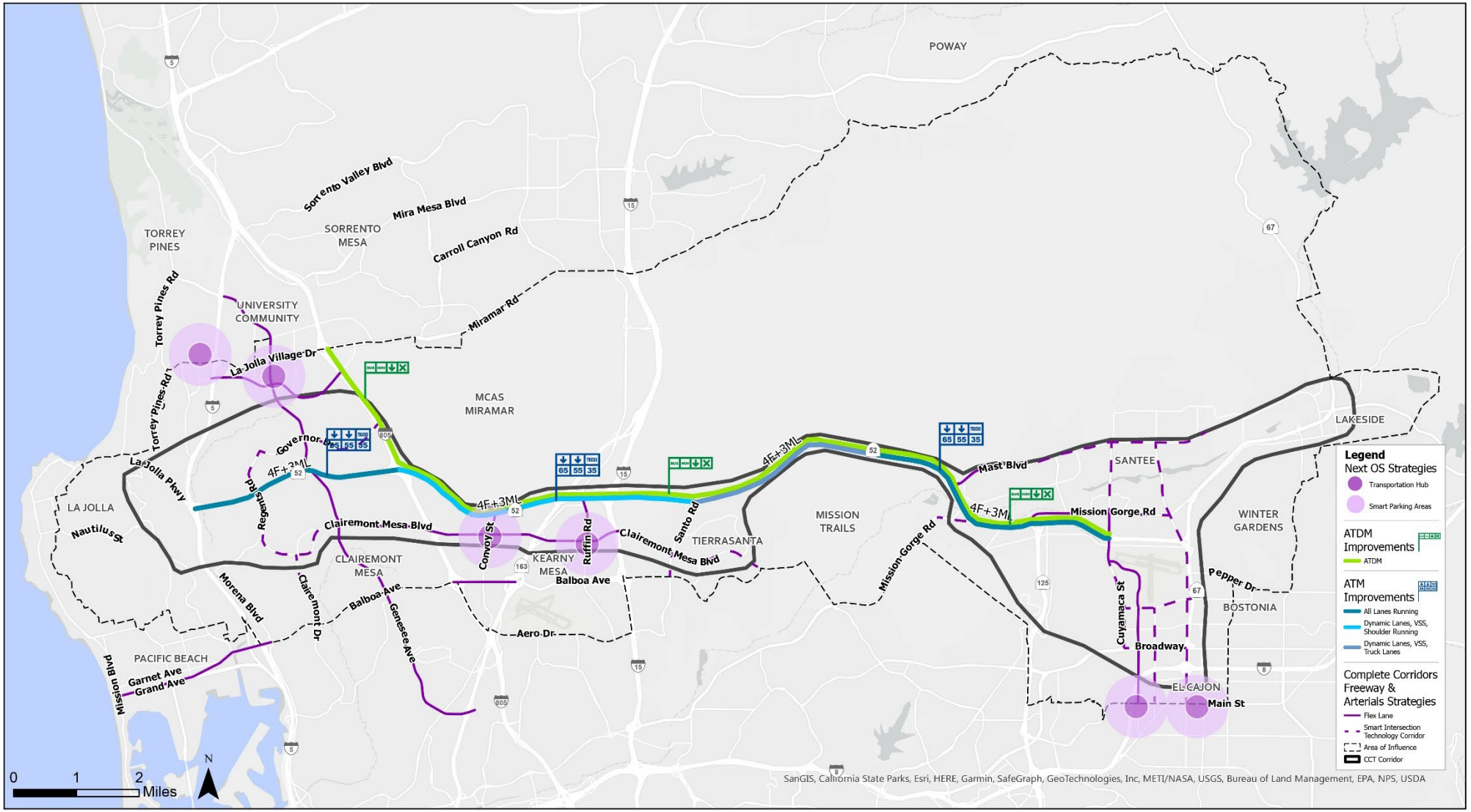


Figure D-6 *Next OS Strategies*



TSS Descriptions and Alternatives

Tables D-2 through D-6 list the TSS developed as part of this CMCP and included in Alternatives 2 and 3.

Table D-2 *Transit Leap Strategies*

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
TC01	Torrey Pines Transit Center	Torrey Pines Transit Center at Callan Road	No	Yes	Yes
TC02	Gilman Transit Center (UC San Diego)	UC San Diego Transit Center at Gilman Drive	No	Yes	Yes
TC03	Sorrento Valley Transit Center	Sorrento Valley Coaster Station at Sorrento Valley Road	No	Yes	Yes
TC04	UTC Transit Center	UTC Trolley Station at Genesee Avenue	No	Yes	Yes
TC05	West Kearny Mesa Transit Center	West Kearny Mesa Transit Center at Convoy Street	No	Yes	Yes
TC06	East Kearny Mesa Transit Center	East Kearny Mesa Transit Center at Complex Drive	No	Yes	Yes
TC07	Santee Transit Center	Santee Transit Center at Santee Town Center	No	Yes	Yes
TC08	El Cajon Transit Center	El Cajon Trolley Station at Marshall Avenue	No	Yes	Yes
TM01	Sorrento Mesa Microtransit	Sorrento Mesa Mobility Hub	No	Yes	Yes
TM02	UTC Microtransit	UTC Mobility Hub	No	Yes	Yes
TM04	Clairemont Mesa Microtransit	Clairemont Mesa Mobility Hub	No	Yes	Yes
TM05	Kearny Mesa Microtransit	Kearny Mesa Mobility Hub	No	Yes	Yes
TM06	Santee Microtransit	Santee Mobility Hub	No	No	Yes
TM07	El Cajon Microtransit	El Cajon Mobility Hub	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
TR01	Rapid 27 Phase 1	Balboa Transit Center to Kearny Mesa via Balboa Avenue	No	Yes	Yes
TR02	Rapid 27 Phase 2	Pacific Beach to Kearny Mesa via Balboa Avenue	No	Yes	Yes
TR03	Rapid 28	Point Loma to Kearny Mesa via Central Mobility Hub	Yes	Yes	Yes
TR04	Rapid 30	Balboa Transit Center to Sorrento Mesa via Pacific Beach, La Jolla, and UTC	Yes	Yes	Yes
TR05	Rapid 41	Fashion Valley to UTC/UC San Diego via Linda Vista and Clairemont Mesa	Yes	Yes	Yes
TR06	Rapid 43	Pacific Beach to Kearny Mesa via Clairemont Mesa	No	Yes	Yes
TR07	Rapid 120	Kearny Mesa to Downtown San Diego via Fashion Valley	Yes	Yes	Yes
TR08	Rapid 292	El Cajon to Otay Mesa via Jamacha and Otay Lakes	No	Yes	Yes
TR09	Rapid 292 Phase 1	Pacific Beach to Kearny Mesa	Yes	Yes	Yes
TR10	Rapid 292 Phase 2	Pacific Beach to Otay Mesa via El Cajon, Jamacha, and Otay Lakes	Yes	No	No
TR11	Rapid 295	Spring Valley to Clairemont Mesa via Kearny Mesa	Yes	Yes	Yes
TR12	Commuter Rail 582	Sorrento Mesa to National City via UTC, Kearny Mesa, and University Heights	Yes	Yes	Yes
TR13	Rapid 630	Iris Avenue to Kearny Mesa via I-5 and City College	Yes	Yes	Yes
TR14	Route 848	El Cajon to Lakeside via Winter Gardens	No	Yes	Yes
TR15	Rapid 870	El Cajon to Torrey Pines via Santee, SR 52, UC San Diego, I-805	No	Yes	No
TR16	Rapid 870	El Cajon to UTC via Santee, SR 52, I-805	Yes	No	No
TR17	Rapid 870	El Cajon to Torrey Pines via Santee, SR 52, UC San Diego, I-805	No	No	Yes
TR18	Rapid 880	El Cajon to UC San Diego via Santee, SR 52, Kearny Mesa, I-805, UTC	No	Yes	No
TR19	Rapid 880	El Cajon to UC San Diego via Santee, SR 52, Kearny Mesa, I-805, UTC	No	No	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
TR20	Rapid 890	El Cajon to Sorrento Mesa via Santee, SR 52, I-805	No	Yes	No
TR21	Rapid 890	El Cajon to Sorrento Mesa via Santee, SR 52, I-805	Yes	No	No
TR22	Rapid 890	El Cajon to Sorrento Mesa via Santee, SR 52, I-805	No	No	Yes
TR23	Rapid 893	Lakeside to El Cajon via SR 52, SR 67	No	No	Yes
TR24	Route 832	Santee Town Center to North Santee	No	Yes	No
TR25	Route 834	Santee Town Center to West Santee	No	Yes	No

Table D-3 Complete Corridors Strategies

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC01	SR 52 Managed Lanes	Add 2 managed lanes and 1 reversible	I-5	I-805	Yes	Yes	Yes
CC02	SR 52 Managed Lanes	Convert 2 general purpose lanes to 2 managed lanes and add 1 reversible	I-805	I-15	Yes	Yes	Yes
CC03	SR 52 Managed Lanes	Convert 2 general purpose lanes to 2 managed lanes and add 1 reversible	I-15	Mast Blvd	Yes	Yes	Yes
CC04	SR 52 Managed Lanes	Add 2 managed lanes and 1 reversible	Mast Blvd	SR 125	Yes	Yes	Yes
CC05	Complete Corridor: MLC SR 52 (I-5)	South to East and West to North	I-5	SR 52	Yes	Yes	Yes
CC06	Complete Corridor: MLC SR 52 (I-5)	North to East and West to South	I-5	SR 52	Yes	Yes	Yes
CC07	Complete Corridor: MLC SR 52 (I-805)	West to North and South to East	I-805	SR 52	Yes	Yes	Yes
CC071	Complete Corridor: MLC SR 52 (I-805)	North to West and East to South	I-805	SR 52	Yes	Yes	Yes
CC081	Complete Corridor: MLC SR 52 (I-15)	South to West and East to North	I-15	SR-52	Yes	Yes	Yes
CC082	Complete Corridor: MLC SR 52 (I-15)	West to North and South to East	I-15	SR 52	Yes	Yes	Yes
CC083	Complete Corridor: MLC SR 52 (I-15)	North to West and East to South	I-15	SR 52	Yes	Yes	Yes
CC084	Complete Corridor: MLC SR 52 (I-15)	North to East and West to South	I-15	SR 52	Yes	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC09	Complete Corridor: MLC SR 52 (SR 125)	North to West and East to South	SR 125	SR 52	Yes	Yes	Yes
CC10	Genesee Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	I-5	Regents Road	No	Yes	Yes
CC11	Genesee Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Regents Road	Nobel Drive	No	Yes	Yes
CC12	Genesee Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Nobel Drive	SR 52	No	Yes	Yes
CC13	Genesee Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	SR 52	Marlesta Drive	No	Yes	Yes
CC14	Genesee Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Marlesta Drive	SR 163	No	Yes	Yes
CC15	Nobel Drive Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	I-5	I-805	No	Yes	Yes
CC16	Clairemont Mesa Blvd Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	I-805	I-15	No	Yes	Yes
CC17	Ruffin Road Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Kearny Villa Road	Clairemont Mesa Boulevard	No	Yes	Yes
CC18	Mast Boulevard Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	SR 52	Boulder Vista	No	Yes	Yes
CC19	Mission Gorge Road Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	SR 52	Cuyamaca Street	No	Yes	Yes
CC20	Cuyamaca Street Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Mission Gorge Road	Marshall Avenue	No	Yes	Yes
CC21	Marshall Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Cuyamaca Street	Bradley Avenue	No	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC22	Marshall Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Bradley Avenue	Fletcher Parkway	No	Yes	Yes
CC23	Marshall Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Fletcher Parkway	Main Street	No	Yes	Yes
CC24	Balboa Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	I-805	SR 163	No	Yes	Yes
CC42	Garnet Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Grand Avenue	Morena Boulevard	No	Yes	Yes
CC43	Grand Avenue Flex Lane	Convert general purpose lanes and/or shoulder/parking to flex lane.	Mission Blvd	Garnet Avenue	No	Yes	Yes
CC44	SR 67 Broadband Digital Infrastructure	Install fiber optic connection filling the missing gap between El Cajon and Lake Side	El Cajon	Lakeside	No	Yes	Yes
CC45	WB 52 to NB 805 Auxiliary (Aux) Lane	Add additional freeway to freeway ramp lane and extend as aux lane to Governor Drive.	SR 52	Governor Drive	No	Yes	Yes
CC46	WB 52 Aux Lane	Add aux lane from Convoy Street to NB 805 connector.	Convoy Street	I-805	No	Yes	Yes
CC47	WB 52 Truck Climbing Lane	Add truck climbing lane from Mast Boulevard to crest of hill	Mast Blvd	Crest of hill	No	Yes	Yes
CC48	EB 52 Aux Lane	Add aux lane from Spring Canyon Bridge to Mast Boulevard	Spring Canyon Bridge	Mast Boulevard	No	Yes	Yes
CC49	SR 67 & Mapleview Street ICE (ICE)	Perform ICE and evaluate intersection geometry	SR 67	Mapleview Street	No	Yes	Yes
CC50	SR 67 & Willow Road ICE	Perform ICE and evaluate intersection geometry	SR 67	Willow Road	No	Yes	Yes
CC51	Willow Road & Wildcat Canyon ICE	Perform ICE and evaluate intersection geometry	Wildcat Canyon	Wildcat Canyon	No	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC52	Lake Jennings Road & El Monte Road ICE	Perform ICE and evaluate intersection geometry	Willow Road	Wildcat Canyon	No	Yes	Yes
CC53	Julian Avenue & Lemon Crest Drive ICE	Perform ICE and evaluate intersection geometry	Lemon Crest Drive	Lemon Crest Drive	No	Yes	Yes
CC54	SR 67 & Gold Bar Lane ICE	Perform ICE and evaluate intersection geometry	Gold Bar Lane	Gold Bar Lane	No	Yes	Yes
CC55	SR 67 & Lakeside Avenue	Perform signal warrant analysis	Lakeside Avenue	Lakeside Avenue	No	Yes	Yes
CC56	Willow Road Traffic Calming	Implement traffic calming strategies to SR-67	Willow Road	Willow Road	No	Yes	Yes
CC58	Wildcat Canyon Road Falling Rock Improvement	Install falling rock protection devices and warning signage along roadway	El Cajon Mountain Trailhead	Mapleview Street	No	Yes	Yes
CC59	SR 67: San Diego River Bridge	Widen bridge to accommodate evacuation needs (based on Highway Safety Improvement Plan evacuation study)	Vine Street	Lakeside Avenue	No	Yes	Yes
CC60	Ashwood Street: Mapleview Street to Cactus Park Road	Create passing lane from Mapleview Street to Cactus Park	Mapleview Street	Cactus Park	No	Yes	Yes
CC61	SR 67 PM 6.05 to 9.01 Shoulder Widening	Widen shoulders on both sides of the roadway to be used for evacuation (based on Highway Safety Improvement Plan evacuation study)	PM 6.05	PM 9.01	No	Yes	Yes
CC62	SR 67 PM 5.48 to 5.85 Shoulder Widening	Widen shoulders on both sides of the roadway to be used for evacuation (based on Highway Safety Improvement Plan evacuation study)	PM 5.48	PM 5.85	No	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC63	SR 67 Utility Enhancements	Ensure all utilities have redundancy for resiliency for wildfires, earthquakes, and other natural disasters	I-8	Ramona	No	Yes	Yes
CC64	SR 67 Wildlife Crossing #1	Restore/enhance habitat connection via wildlife crossing facility	SR 52	Main Street	No	Yes	Yes
CC65	SR 67 Wildlife Crossing #2	Restore/enhance habitat connection via wildlife crossing facility	SR 52	Main Street	No	Yes	Yes
CC66	SR 67 Wildlife Crossing #3	Restore/enhance habitat connection via wildlife crossing facility	SR 52	Main Street	No	Yes	Yes
CC67	Mapleview Street Green Infrastructure	Create green infrastructure elements to improve stormwater runoff water quality	SR 67	Pino Drive	No	Yes	Yes
CC68	SR 67 VMS	Install variable message signs from I-8 to SR 78 at major intersections to communicate evacuation events, and provide navigation information	I-8	SR 78	No	Yes	Yes
CC69	SR 67 CCTV	Install corridor-wide CCTV from I-8 to SR 78 with live data stream to Transportation Management Center	I-8	SR 78	No	Yes	Yes
CC70	SR 67 Emergency Event Tow	Implement emergency even tow-truck deployment utilizing CCTV system to identify stranded vehicles	I-8	SR 78	No	Yes	Yes
CC71	SR 67 Guardrail	Install guardrail where necessary for reducing run-off-road collisions	I-8	SR 78	No	Yes	Yes
CC73	Governor Drive In-Line Rapid Station	Add an in-line station on I-805 at Governor Drive to serve the 870, 880, 890	Governor Drive	Governor Drive	No	No	Yes
CC74	SR 52 HOV Policy	Create a HOV 3+ policy change when managed lanes are utilized at their target capacity (LOS C).	I-5	SR 125	No	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC75	SR 52 CCTV	Install CCTV from SR 67 to Mast Blvd with live data stream to Transportation Management Center	SR 67	Mast Boulevard	No	Yes	Yes
CC76	SR 52 VMS	Install variable message signs from SR 67 to Mast Blvd at major intersections to communicate evacuation events, and provide navigation information	SR 67	Mast Boulevard	No	Yes	Yes
CC77	SR 52 at Convoy Interchange	Recommend a focused operational investigation at this interchange	SR 52 EB ramps	SR 52 WB ramps	No	Yes	Yes
CC78	I-15 at Miramar Way Direct Access Ramp (DAR)	Add a DAR at I-15 at Miramar Way	Miramar Way	Miramar Way	No	Yes	Yes
CC79	I-15 at Clairemont Mesa Boulevard DAR	Add a DAR at I-15 at Clairemont Mesa Boulevard	Clairemont Mesa Boulevard	Clairemont Mesa Boulevard	Yes	Yes	Yes
CC80	SR 67 at Riverford Road Interchange	Recommend a focused operational investigation at this interchange (existing project).	SR 67	SR 67	Yes	Yes	Yes
CC81	EB SR 52 Aux Lane	Add eastbound SR 52 auxiliary lane from I-15 to Santo Road	I-15	Santo Road	Yes	Yes	Yes
CC82	SR 52 Wildlife Crossing	Initiate and environmental study to restore/enhance habitat connection via wildlife crossings.	I-15	Santo Road	No	Yes	Yes
CC83	SR 67 at Bradley Interchange	Recommend a focused operational investigation at this interchange (existing project).	SR 67	SR 67	Yes	Yes	Yes
CC84	Kate Session Park Drive at Soledad Road	Recommend a focused operational investigation at this intersection.	Kate Sessions Park Drive	Kate Sessions Park Drive	Yes	Yes	Yes
CC85	SR 52 at Mast Blvd DAR	Add a DAR at SR 52 at Mast Blvd	Mast Boulevard	SR 52	No	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC86	Gilman Drive Class IV Separated Bikeway	Osler Lane to La Jolla Colony Drive	n/a	n/a	Yes	Yes	Yes
CC87	Rose Canyon Class I Bike Path	Judicial Drive to Gilman Drive	n/a	n/a	Yes	Yes	Yes
CC88	SR 52 Class I Bike Path	Rose Canyon Bike Path/Coastal Rail trail to Mast Boulevard	n/a	n/a	Yes	Yes	Yes
CC89	SR 52 Bike Path Grade-Separated Crossing	SR 52 Bike Path Grade-Separated Crossing to Rose Creek Bike Path	n/a	n/a	Yes	Yes	Yes
CC90	La Jolla Colony Drive Class IV Separated Bikeway	Gilman Drive to Charmant Drive/Palmilla Drive	n/a	n/a	No	Yes	Yes
CC91	Palmilla Drive Class IV Cycle Track	La Jolla Colony Drive to Arriba Street	n/a	n/a	No	Yes	Yes
CC92	Regents Road Class I Bike Path	Arriba Street to Rose Canyon Bike Path and Across Canyon	n/a	n/a	No	Yes	Yes
CC93	SR 52 Bike Path Grade-Separated Crossing	Connect University Community to SR-52 Bike Path via Grade-Separated Crossing Just West of Genesee Avenue. Connect to Syracuse Avenue and/or Genesee Avenue	n/a	n/a	Yes	Yes	Yes
CC94	SR 52 Class I Bike Path to MacDowell Park	Connect SR-52 Bike Path to Clairemont Mesa Community	n/a	n/a	No	Yes	Yes
CC95	Limerick Avenue Class III Bike Route	Limerick Avenue/Chandler Drive/Charger Boulevard, from Northern terminus to Charger Boulevard southern terminus	n/a	n/a	No	Yes	Yes
CC96	SR 52 Bike Path Grade-Separated Crossing of I-805	Continue SR-52 Bike Path via Grade-Separated Crossing of I-805	n/a	n/a	Yes	Yes	Yes
CC97	SR 52 Class I Bike Path to Clairemont Mesa	Parallel to I-805 along east side	n/a	n/a	No	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC98	SR 52 Bike Path Grade-Separated Crossing of SR-163	Continue SR-52 Bike Path via Grade-Separated Crossing of SR-163	n/a	n/a	Yes	Yes	Yes
CC99	SR 52 Bike Path Grade-Separated Crossing of I-15	Continue SR-52 Bike Path via Grade-Separated Crossing of I-15	n/a	n/a	Yes	Yes	Yes
CC100	SDGE Class I Bike Path	SR-52 Bike Path to Conrad Avenue via Utility Corridor	n/a	n/a	No	Yes	Yes
CC101	Genesee Avenue Class IV Separated Bikeway	Nobel Drive to Appleton Street/Lehrer Drive	n/a	n/a	No	Yes	Yes
CC102	Nobel Drive Class IV Separated Bikeway	Villa La Jolla to I-805	n/a	n/a	No	Yes	Yes
CC103	Regents Road Class IV Cycle Track	Nobel Drive to Arriba Street; Governor Drive to Luna Ave	n/a	n/a	No	Yes	Yes
CC104	Jutland Drive Class III Bike Route	Morena Boulevard to Luna Avenue	n/a	n/a	No	Yes	Yes
CC105	Luna Avenue Class III Bike Route	Western terminus to Regents Road	n/a	n/a	No	Yes	Yes
CC106	Clairemont Mesa Boulevard Class IV Cycle Tr	Doliva Drive to Santo Road	n/a	n/a	Yes	Yes	Yes
CC107	Clairemont Mesa Boulevard Class II Bike Lan	Clairemont Drive to Kleefeld Avenue; Genesee Avenue to Doliva Drive	n/a	n/a	No	Yes	Yes
CC108	Convoy Court Class I Bike Path	Hickman Field Drive to Mercury Street	n/a	n/a	Yes	Yes	Yes
CC109	Convoy Street Class II Bike Lanes	SR-52 Bikeway to Aero Road	n/a	n/a	No	Yes	Yes
CC110	Raytheon Road Class I Bike Path	Ruffner Street to Mercury Street	n/a	n/a	Yes	Yes	Yes
CC111	Kearny Mesa Road Class I Bike Path	Engineer Road to SR-52 Bikeway	n/a	n/a	Yes	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC112	Chesapeake Drive Class II Bike Lanes	Kearny Villa Road to Clairemont Mesa Boulevard	n/a	n/a	No	Yes	Yes
CC113	Shawline Street Class II Bike Lanes	Ronson Road to Convoy Court	n/a	n/a	No	Yes	Yes
CC114	Mercury Street Class II Bike Lanes	Convoy Court to Engineer Road	n/a	n/a	No	Yes	Yes
CC115	Murphy Canyon Road Class II	Clairemont Mesa Boulevard to Balboa Avenue	n/a	n/a	No	Yes	Yes
CC116	Copley Park Place Class IV Separated Bikeway	Ruffner Street to Convoy Street	n/a	n/a	Yes	Yes	Yes
CC117	Tech Way Class IV Separated Bikeway	Kearny Villa Road to Overland Avenue	n/a	n/a	Yes	Yes	Yes
CC118	Kearny Via Road Class IV Separated Bikeway	Ruffin Road to Mesa College Road	n/a	n/a	Yes	Yes	Yes
CC119	Ruffin Road Class IV Separated Bikeway	SR-52 Bikeway to Murphy Canyon Road Class I Bike Path	n/a	n/a	Yes	Yes	Yes
CC120	Ruffner Street Class IV Separated Bikeway	Copley Park Place to just south of Balboa Avenue	n/a	n/a	Yes	Yes	Yes
CC121	Clairemont Drive Class IV Separated Bikeway	Kleefeld Avenue to Clairemont Mesa Boulevard	n/a	n/a	No	Yes	Yes
CC122	San Diego River Bikeway (Class I Bike Path)	Parallels San Diego River	n/a	n/a	Yes	Yes	Yes
CC123	Mission Gorge Road Class I Bike Path	SR-125 to Carlton Hills Blvd	n/a	n/a	Yes	Yes	Yes
CC124	Magnolia Avenue Class II Bike Lane	Prospect Avenue to Airport Drive	n/a	n/a	No	Yes	Yes
CC125	Magnolia Avenue Class IV Separated Bikeway	Airport Drive to Bradley Avenue	n/a	n/a	No	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC126	Graves Avenue Class IV Separated Bikeway	Pepper Drive to Vernon Way	n/a	n/a	No	Yes	Yes
CC127	Santo Road Class IV Separated Bikeway	SR-52 Bike Path to Clairemont Mesa Boulevard	n/a	n/a	No	Yes	Yes
CC128	Governor Drive Class II Bike Lanes	Stresemann Street to Gullstrand Street	n/a	n/a	Yes	Yes	Yes
CC129	Governor Drive Class IV Separated Bikeway	Gullstrand Street to I-805 Bikeway	n/a	n/a	Yes	Yes	Yes
CC130	Greenwich Drive Class II Bike Lanes	Governor Drive to Shoreham Place	n/a	n/a	No	Yes	Yes
CC131	Prospect Avenue Class II Bike Lanes	Mesa Road to Fanita Drive and Magnolia Avenue to Graves Avenue	n/a	n/a	Yes	Yes	Yes
CC132	Cottonwood Avenue Class II Bike Lane	Mission Gorge Road to Prospect Avenue	n/a	n/a	No	Yes	Yes
CC133	Mission Greens Road Class III Bike Route	Mission Gorge Road to Buena Vista Avenue	n/a	n/a	No	Yes	Yes
CC134	Fanita Parkway Class I Bike Path	Carlton Oaks Drive to Mission Gorge Road	n/a	n/a	No	Yes	Yes
CC135	Mast Boulevard Class I Bike Path	Los Ranchitos Road to River Trail	n/a	n/a	Yes	Yes	Yes
CC136	San Diego River Trail Grade-Separated Cross	Town Center to Town Center Park	n/a	n/a	No	Yes	Yes
CC137	Carlton Hills Boulevard Class II Bike Lanes	Lake Canyon Road to Swanton Drive	n/a	n/a	Yes	Yes	Yes
CC138	Madison Avenue Class II Bike Lanes	Johnson Avenue to Greenfield Drive	n/a	n/a	No	Yes	Yes
CC139	Fletcher Parkway Class IV Separated Bikeway	Sharon Way/Westwind Dr to Ballantyne Street	n/a	n/a	No	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC140	West Bradley Avenue Class II Bike Lanes	Marshall Avenue to City Limit	n/a	n/a	No	Yes	Yes
CC141	N Magnolia Avenue Class II Bike Lanes	El Cajon City Limit to Fletcher Parkway	n/a	n/a	Yes	Yes	Yes
CC142	N Johnson Avenue Class II Bike Lanes	West Bradley Avenue to Fletcher Parkway	n/a	n/a	No	Yes	Yes
CC143	Buena Terrace/Petree Street/Jackman Street	Fletcher Parkway to N Johnson Avenue	n/a	n/a	No	Yes	Yes
CC144	Arnele Avenue Class III Bike Route	Marshall Avenue to N Johnson Avenue	n/a	n/a	No	Yes	Yes
CC145	Cuyamaca Street Class III Bike Route	W Bradley Avenue to Fletcher Parkway	n/a	n/a	No	Yes	Yes
CC146	Marshall Avenue Class IV Separated Bikeway	Fletcher Parkway to W Main Street	n/a	n/a	Yes	Yes	Yes
CC147	Johnson Ave Class I Bike Path	Fletcher Parkway to El Cajon Boulevard	n/a	n/a	No	Yes	Yes
CC148	Riverside Drive Class I Bike Path	Marathon Parkway/Piney Grove to Riverford Road	n/a	n/a	Yes	Yes	Yes
CC149	Riverside Drive Class IV Separated Bikeway	Riverford Road to Lakeside Avenue	n/a	n/a	Yes	Yes	Yes
CC150	Riverford Road Class IV Separated Bikeway	Riverside Drive to Woodside Avenue	n/a	n/a	No	Yes	Yes
CC151	Woodside Avenue Class IV Separated Bikeway	Woodside Avenue from Woodside Trail to Vine Street	n/a	n/a	No	Yes	Yes
CC152	Winter Gardens Boulevard Class IV Cycle Track	Industry Road to Gardena Way	n/a	n/a	No	Yes	Yes
CC153	Mapleview Street Class IV Separated Bikeway	Channel Road to Pino Drive	n/a	n/a	Yes	Yes	Yes

Strategy ID	Strategy Name	Description	Start	Finish	Alt 1	Alt 2	Alt 3
CC154	Vine Street Class IV Separated Bikeway	Mapleview Street to Woodside Avenue	n/a	n/a	No	Yes	Yes
CC155	Lakeside Avenue Class IV Separated Bikeway	Riverside Drive to SR-67	n/a	n/a	Yes	Yes	Yes
CC156	Channel Road Class IV Separated Bikeway	Lakeside Avenue to Julian Avenue	n/a	n/a	No	Yes	Yes
CC157	Maine Avenue Class III Bike Route	Mapleview Street to Woodside Avenue	n/a	n/a	Yes	Yes	Yes
CC158	Pedestrian Hybrid Beacon at San Diego River Trail/Cuyamaca Street	Pedestrian Hybrid Beacon at the San Diego River and Cuyamaca Street	n/a	n/a	No	Yes	Yes
CC159	Pedestrian Hybrid Beacon at Forrester Creek Trail/Mission Gorge Road	Pedestrian Hybrid Beacon at Forrester Creek and Mission Gorge Rd	n/a	n/a	No	Yes	Yes
CC160	Pedestrian Hybrid Beacon at Forrester Creek Trail/Prospect Avenue	Pedestrian Hybrid Beacon at Forrester Creek and Prospect Avenue	n/a	n/a	No	Yes	Yes
CC161	Jutland Drive Class I Bike Path to Santa Fe Street/Rose Creek Bikeway	Class I connection from Jutland Drive/Morena Boulevard to Santa Fe Street/Rose Creek Bikeway	n/a	n/a	No	Yes	Yes

Table D-4 Mobility Hubs Solutions

Strategy ID	Strategy Name	Description	Location	Alt 1	Alt 2	Alt 3
MH01	MoHub - Major Node 1 - UCSD Transit Center	Bike lockers and fix-it station	UCSD Transit Center	No	Yes	Yes
MH02	MoHub Major Node 2 - UTC Transit Center	Bike lockers and fix-it station	UTC Transit Center	No	Yes	Yes
MH03	MoHub Minor Node 20 - Grossmont College	Bike lockers and fix-it station	Grossmont College	No	Yes	Yes
MH04	MoHub Minor Node 21 - Fanita Ranch	Bike Parking	Fanita Ranch	No	Yes	Yes
MH05	MoHub Minor Node 22 - Winter Gardens	Bike Parking	Winter Gardens	No	Yes	Yes
MH06	MoHub Minor Node 13 - Governor Drive	Bike parking and fix-it station	Governor Drive	No	Yes	Yes
MH07	MoHub Major Node 2 - UTC Transit Center	Dynamic / flexible parking	UTC Transit Center	No	Yes	Yes
MH08	MoHub Major Node 4 - W Kearny Mesa Transit Center	Dynamic / flexible parking	W Kearny Mesa Transit Center	No	Yes	Yes
MH09	MoHub Major Node 5 - E Kearny Mesa Transit Center	Dynamic / flexible parking	E Kearny Mesa Transit Center	No	Yes	Yes
MH10	MoHub Minor Node 17 - Convoy Street and Othello Avenue	Dynamic / flexible parking	Near Convoy Street & Othello Avenue	No	Yes	Yes
MH11	MoHub Minor Node 20 - Grossmont College	Dynamic / flexible parking	Grossmont College	No	Yes	Yes
MH12	MoHub - All - Dynamic signage and wayfinding	Dynamic signage, such as TransitScreens, provide real-time information to travelers on	Overlay	No	Yes	Yes

Strategy ID	Strategy Name	Description	Location	Alt 1	Alt 2	Alt 3
		transit connections, airport arrivals/departures. Dynamic wayfinding allows varied messages to show on electronic screens to travelers that are making connections				
MH13	MoHub Major Node 2 - UTC Transit Center	EV Charging Stations	UTC Transit Center	No	Yes	Yes
MH14	MoHub Minor Node 6 - Tierrasanta	EV charging stations	Tierrasanta	No	Yes	Yes
MH15	MoHub Minor Node 7 - Santee City Hall	EV Charging Stations	Santee City Hall	No	Yes	Yes
MH16	MoHub Major Node 8 - Santee Town Center	EV Charging Stations	Santee Town Center	No	Yes	Yes
MH17	MoHub Major Node 10 - Downtown El Cajon	EV Charging Stations	Downtown El Cajon	No	Yes	Yes
MH18	MoHub Major Node 11 - Hillsdale	EV Charging Stations	Hillsdale	No	Yes	Yes
MH19	MoHub Minor Node 12 - Lakeside	EV Charging Stations	Lakeside	No	Yes	Yes
MH20	MoHub Minor Node 14 - Clairemont Mesa Boulevard and Genesee Ave	EV Charging Stations	Clairemont Mesa Blvd & Genesee Ave	No	Yes	Yes
MH21	MoHub Minor Node 16 - Balboa Avenue and Genesee Avenue	EV Charging Stations	Balboa Avenue and Genesee Avenue	No	Yes	Yes
MH22	MoHub Minor Node 18 - Aero Drive and Kearny Villa Road	EV Charging Stations	Aero Drive and Kearny Villa Road	No	Yes	Yes

Strategy ID	Strategy Name	Description	Location	Alt 1	Alt 2	Alt 3
MH23	MoHub Minor Node 21 - Fanita Ranch	EV Charging Stations	Fanita Ranch	No	Yes	Yes
MH24	MoHub Minor Node 22 - Winter Gardens	EV Charging Stations	Winter Gardens	No	Yes	Yes
MH25	MoHub - All - Placemaking Amenities	Including landscaping and shade, benches, device charging stations and public art	Placemaking Amenities	No	Yes	Yes
MH26	MoHub - All - Interactive Kiosks	Kiosks at transit station may provide such services as fare payment, wayfinding, real-time transit, and services and amenities directories	Interactive Kiosks	No	Yes	Yes
MH27	MoHub - Major Node 1 - UCSD Transit Center	Lockers for safe retail deliveries	UCSD Transit Center	No	Yes	Yes
MH28	MoHub Major Node 2 - UTC Transit Center	Lockers for safe retail deliveries	UTC Transit Center	No	Yes	Yes
MH29	MoHub Minor Node 3 - Clairemont Town Square	Lockers for safe retail deliveries	Clairemont Town Square	No	Yes	Yes
MH30	MoHub Minor Node 6 - Tierrasanta	Lockers for safe retail deliveries	Tierrasanta	No	Yes	Yes
MH31	MoHub Minor Node 7 - Santee City Hall	Lockers for safe retail deliveries	Santee City Hall	No	Yes	Yes
MH32	MoHub Major Node 8 - Santee Town Center	Lockers for safe retail deliveries	Santee Town Center	No	Yes	Yes
MH33	MoHub Major Node 10 - Downtown El Cajon	Lockers for safe retail deliveries	Downtown El Cajon	No	Yes	Yes
MH34	MoHub Minor Node 14 - Clairemont Mesa Boulevard and Genesee Ave	Lockers for safe retail deliveries	Clairemont Mesa Blvd & Genesee Ave	No	Yes	Yes
MH35	MoHub Minor Node 20 - Grossmont College	Lockers for safe retail deliveries	Grossmont College	No	Yes	Yes

Strategy ID	Strategy Name	Description	Location	Alt 1	Alt 2	Alt 3
MH36	MoHub Minor Node 21 - Fanita Ranch	Lockers for safe retail deliveries	Fanita Ranch	No	Yes	Yes
MH37	MoHub Minor Node 22 - Winter Gardens	Lockers for safe retail deliveries	Winter Gardens	No	Yes	Yes
MH38	MoHub Minor Node 7 - Santee City Hall	Multilingual wayfinding, real-time information and interactive kiosks	Santee City Hall	No	Yes	Yes
MH39	MoHub Major Node 8 - Santee Town Center	Multilingual wayfinding, real-time information and interactive kiosks	Santee Town Center	No	Yes	Yes
MH40	MoHub Major Node 9 - El Cajon Transit Center	Multilingual wayfinding, real-time information and interactive kiosks	El Cajon Transit Center	No	Yes	Yes
MH41	MoHub Major Node 10 - Downtown El Cajon	Multilingual wayfinding, real-time information and interactive kiosks	Downtown El Cajon	No	Yes	Yes
MH42	MoHub - Major Node 1 - UCSD Transit Center	Parking for shared rideables	UCSD Transit Center	No	Yes	Yes
MH43	MoHub Major Node 2 - UTC Transit Center	Parking for shared rideables	UTC Transit Center	No	Yes	Yes
MH44	MoHub Major Node 4 - W Kearny Mesa Transit Center	Parking for shared rideables	W Kearny Mesa Transit Center	No	Yes	Yes
MH45	MoHub Major Node 5 - E Kearny Mesa Transit Center	Parking for shared rideables	E Kearny Mesa Transit Center	No	Yes	Yes
MH46	MoHub Minor Node 7 - Santee City Hall	Parking for shared rideables	Santee City Hall	No	Yes	Yes
MH47	MoHub Major Node 8 - Santee Town Center	Parking for shared rideables	Santee Town Center	No	Yes	Yes

Strategy ID	Strategy Name	Description	Location	Alt 1	Alt 2	Alt 3
MH48	MoHub Major Node 9 - El Cajon Transit Center	Parking for shared rideables	El Cajon Transit Center	No	Yes	Yes
MH49	MoHub Major Node 10 - Downtown El Cajon	Parking for shared rideables	Downtown El Cajon	No	Yes	Yes
MH50	MoHub Minor Node 13 - Governor Drive	Parking for shared rideables	Governor Drive	No	No	Yes
MH51	MoHub Minor Node 20 - Grossmont College	Parking for shared rideables	Grossmont College	No	Yes	Yes
MH52	MoHub - Major Node 1 - UCSD Transit Center	Within 1/2-mile of major node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	UCSD Transit Center	No	Yes	Yes
MH53	MoHub Major Node 2 - UTC Transit Center	Within 1/2-mile of major node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	UTC Transit Center	No	Yes	Yes
MH54	MoHub Major Node 4 - W Kearny Mesa Transit Center	Within 1/2-mile of major node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	W Kearny Mesa Transit Center	No	Yes	Yes
MH55	MoHub Major Node 5 - E Kearny Mesa Transit Center	Within 1/2-mile of major node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	E Kearny Mesa Transit Center	No	Yes	Yes

Strategy ID	Strategy Name	Description	Location	Alt 1	Alt 2	Alt 3
MH56	MoHub Major Node 8 - Santee Town Center	Within 1/2-mile of major node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Santee Town Center	No	Yes	Yes
MH57	MoHub Major Node 10 - Downtown El Cajon	Within 1/2-mile of major node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Downtown El Cajon	No	Yes	Yes
MH58	MoHub Major Node 11 - Hillsdale	Within 1/2-mile of major node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Hillsdale	No	Yes	Yes
MH59	MoHub Minor Node 3 - Clairemont Town Square	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Clairemont Town Square	No	Yes	Yes
MH60	MoHub Minor Node 6 - Tierrasanta	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Tierrasanta	No	Yes	Yes
MH61	MoHub Minor Node 7 - Santee City Hall	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Santee City Hall	No	Yes	Yes

Strategy ID	Strategy Name	Description	Location	Alt 1	Alt 2	Alt 3
MH62	MoHub Minor Node 12 - Lakeside	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Lakeside	No	Yes	Yes
MH63	MoHub Minor Node 13 - Governor Drive	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Governor Drive	No	Yes	Yes
MH64	MoHub Minor Node 14 - Clairemont Mesa Boulevard and Genesee Ave	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Clairemont Mesa Blvd & Genesee Ave	No	Yes	Yes
MH65	MoHub Minor Node 15 - Balboa and Garnet Avenue	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Balboa Avenue & Garnet Avenue	No	Yes	Yes
MH66	MoHub Minor Node 16 - Balboa and Genesee Avenue	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Balboa Avenue & Genesee Avenue	No	Yes	Yes
MH67	MoHub Minor Node 17 - Convoy Street and Othello Avenue	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Convoy Street & Othello Avenue	No	Yes	Yes

Strategy ID	Strategy Name	Description	Location	Alt 1	Alt 2	Alt 3
MH68	MoHub Minor Node 18 - Aero Drive and Kearny Villa Road	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Aero Drive & Kearny Villa Road	No	Yes	Yes
MH69	MoHub Minor Node 19 - Aero Drive	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Aero Drive	No	Yes	Yes
MH70	MoHub Minor Node 20 - Grossmont College	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Grossmont College	No	Yes	Yes
MH71	MoHub Minor Node 21 - Fanita Ranch	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Fanita Ranch	No	Yes	Yes
MH72	MoHub Minor Node 22 - Winter Gardens	Within 1/4-mile of minor node: Complete missing sidewalks; Signalized intersection crossing enhancements: Continental crosswalks, advance stop bars, pedestrian countdown signal heads, LPIs, signage	Winter Gardens	No	Yes	Yes
MH73	EV Charging SR 67 & Mapleview	EV Charging Stations	SR 67 & Mapleview	No	Yes	Yes
MH74	EV Charging at Mission Trails Regional Park	EV Charging Stations	Mission Trails Regional Park	No	Yes	Yes

Table D-5 Flexible Fleets Solutions

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
FF01	Flexible Fleets Operations	Operations for Flexible Fleets services include micromobility, ridehailing, rideshare, microtransit, and last-mile delivery	Yes	Yes	Yes
FF02	Flexible Fleets - Major Node 1 - UCSD Transit Center	Mobile retail services	No	Yes	Yes
FF03	Flexible Fleets - Major Node 1 - UCSD Transit Center	Micromobility shared rideables	No	Yes	Yes
FF04	Flexible Fleets - Major Node 2 - UTC Transit Center	Micromobility shared rideables	No	Yes	Yes
FF05	Flexible Fleets - Major Node 2 - UTC Transit Center	Mobile retail services	No	Yes	Yes
FF06	Flexible Fleets - Major Node 2 - UTC Transit Center	Rideshare services	No	Yes	Yes
FF07	Flexible Fleets - Minor Node 3 - Clairemont Town Square	Mobile retail services	No	Yes	Yes
FF08	Flexible Fleets - Minor Node 3 - Clairemont Town Square	Rideshare services	No	Yes	Yes
FF09	Flexible Fleets - Major Node 4 - W Kearny Mesa Transit Center	Rideshare services	No	Yes	Yes
FF10	Flexible Fleets - Major Node 4 - W Kearny Mesa Transit Center	Micromobility shared rideables	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
FF11	Flexible Fleets - Major Node 5 - E Kearny Mesa Transit Center	Rideshare services	No	Yes	Yes
FF12	Flexible Fleets - Major Node 5 - E Kearny Mesa Transit Center	Micromobility shared rideables	No	Yes	Yes
FF13	Flexible Fleets - Minor Node 6 - Tierrasanta	Rideshare services	No	Yes	Yes
FF14	Flexible Fleets - Minor Node 6 - Tierrasanta	Mobile retail services	No	Yes	Yes
FF15	Flexible Fleets - Minor Node 7 - Santee City Hall	Mobile retail services	No	Yes	Yes
FF16	Flexible Fleets - Minor Node 7 - Santee City Hall	Rideshare services	No	Yes	Yes
FF17	Flexible Fleets - Minor Node 7 - Santee City Hall	Micromobility shared rideables	No	Yes	Yes
FF18	Flexible Fleets - Major Node 8 - Santee Town Center	Rideshare services	No	Yes	Yes
FF19	Flexible Fleets - Major Node 8 - Santee Town Center	Mobile retail services	No	Yes	Yes
FF20	Flexible Fleets - Major Node 8 - Santee Town Center	Micromobility shared rideables	No	Yes	Yes
FF21	Flexible Fleets - Major Node 9 - El Cajon Transit Center	Rideshare services	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
FF22	Flexible Fleets - Major Node 9 - El Cajon Transit Center	Micromobility shared rideables	No	Yes	Yes
FF23	Flexible Fleets - Major Node 10 - Downtown El Cajon	Rideshare services	No	Yes	Yes
FF24	Flexible Fleets - Major Node 10 - Downtown El Cajon	Mobile retail services	No	Yes	Yes
FF25	Flexible Fleets - Major Node 10 - Downtown El Cajon	Micromobility shared rideables	No	Yes	Yes
FF26	Flexible Fleets - Major Node 11 - Hillsdale	Rideshare services	No	Yes	Yes
FF27	Flexible Fleets - Minor Node 12 - Lakeside	Rideshare services	No	Yes	Yes
FF28	Flexible Fleets - Minor Node 13 - Governor Drive	Micromobility shared rideables	No	Yes	Yes
FF29	Flexible Fleets - Minor Node 14 - Clairemont Mesa Boulevard and Genesee Avenue	Rideshare services	No	Yes	Yes
FF30	Flexible Fleets - Minor Node 14 - Clairemont Mesa Boulevard and Genesee Avenue	Mobile retail services	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
FF31	Flexible Fleets - Minor Node 16 - Balboa Avenue and Genesee Avenue	Rideshare services	No	Yes	Yes
FF32	Flexible Fleets - Minor Node 17 - Convoy Street and Othello Avenue	Rideshare services	No	Yes	Yes
FF33	Flexible Fleets - Minor Node 18 - Aero Drive and Kearny Villa Road	Rideshare services	No	Yes	Yes
FF34	Flexible Fleets - Minor Node 19 - Aero Drive	Rideshare services	No	Yes	Yes
FF35	Flexible Fleets - Minor Node 20 - Grossmont College	Rideshare services	No	Yes	Yes
FF36	Flexible Fleets - Minor Node 20 - Grossmont College	Mobile retail services	No	Yes	Yes
FF37	Flexible Fleets - Minor Node 20 - Grossmont College	Micromobility shared rideables	No	Yes	Yes
FF38	Flexible Fleets - Minor Node 21 - Fanita Ranch	Mobile retail services	No	Yes	Yes
FF39	Flexible Fleets - Minor Node 22 - Winter Gardens	Mobile retail services	No	Yes	Yes

Table D-6 Next OS Solutions

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
NO01	Next OS - Data Hub	High-speed data analytics, data repository, and data performance management platform that will bring together public transportation data and develop a public–private information exchange with companies such as transportation network companies and micromobility fleets. Micromobility and other Flexible Fleets will benefit from a consolidated database given the decentralized nature of the service. In addition, a data hub should support complete corridor performance monitoring and metrics to support optimization of dynamic lane management for Active Traffic Management (ATM) and ATDM.	Yes	Yes	Yes
NO02	Next OS - Curb Access and Parking	Dynamic management of curbs including access and pricing rules. Overall functionality to be applied in proximity to neighborhood mobility hubs and where flex lanes are designated. Can also be applied throughout the study area where higher densities of commercial and residential uses occur, and the strategy would assist with reducing static parking requirements and allowing increased PUDO (pick-up/drop-off) areas.	Yes	Yes	Yes
NO03	Next OS - Transit Optimization	Dynamic transit routing, scheduling, and communications, already some functionality in place regionally, but enhanced optimization would include improved monitoring of traffic conditions and ensuring optimal use of ATDM functions.	Yes	Yes	Yes
NO04	Next OS - Mobility as a Service App	Application to plan, book, and pay across public and private shared services. Relies on the sharing of information between public and private	Yes	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
		providers. This function should be provided regionally and leveraged in the study area to promote transit and alternative modes and lower obstacles to greater mode shifts.			
NO05	Next OS - Smart Intersections - Mast Blvd	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO06	Next OS - Smart Intersections - Mission Gorge Rd	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO07	Next OS - Smart Intersections - Broadway	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO08	Next OS - Smart Intersections - Clairemont Mesa Blvd	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO09	Next OS - Smart Intersections - Ruffin Rd	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO10	Next OS - Smart Intersections - Convoy St	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between	Yes	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
		vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.			
NO11	Next OS - Smart Intersections - Genesee Ave	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO12	Next OS - Smart Intersections - Regents Rd	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO13	Next OS - Smart Intersections - Santo Rd	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO14	Next OS - Smart Intersections - Bradley Avenue	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO15	Next OS - Smart Intersections - Marshall Ave	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO16	Next OS - Smart Intersections - Johnson Ave	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
NO17	Next OS - Smart Intersections - Magnolia Ave	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO18	Next OS - Smart Intersections - Nobel Dr	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO19	Next OS - Smart Intersections - Governor Dr	Install smart Intersection technology to give priority to transit, freight and emergency vehicles and reduce intersection conflicts between vehicles, pedestrians, and cyclists, improving safety for vulnerable road users.	Yes	Yes	Yes
NO20	Next OS - Next Generation Integrated Corridor Management System	Provide coordinated response and control for real-time operations across freeway, arterials, and transit networks as part of the broader complete corridors concept in the study area. In particular ICMS functions should support and integrate with the ATM/ATDM features and provide for improved mobility between the designated ATDM and the smart intersection/flex lane facilities under recurring and non-recurring congestion conditions.	Yes	Yes	Yes
NO21	Next OS - Systems and Software	Enables regional transportation system operators to collect, analyze, and share data to improve transportation systems management and operations. This is a regionally enabled function that would be leveraged by the corridor to support a variety of operations and optimization efforts including optimizing transit service and operations, ATM, ATDM, and monitoring the success of on-going mobility programs.	Yes	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
NO22	Next OS - Truck Route Data	ATM concepts along the corridor include provisions for a temporal truck lane in areas with significant grades along SR-52. The scheduled times or actual status of this truck lane should be made available through Next OS to 511SD and associated traveler information systems.	No	Yes	Yes
NO23	Next OS - Emergency Response and Other Data	Emergency situations and incidents can significantly impact mobility along key portions of the corridor (e.g., open spaces susceptible to wildfires, etc.) that could limit capacity and impact transit services, truck routing, etc. It is important incidents and situations of this sort of leverage Next OS to inform all operations centers and private and public mobility operators of the situation to allow for shifts in operations and to inform travelers of viable alternatives to reduce exacerbating impacts of the situation.	Yes	Yes	Yes
NO24	Next OS - Dynamic Curb Management - Kearny Mesa	Physical, signage, and ITS infrastructure in Kearny Mesa should be implemented to support flexible curb usage and accommodate for changing demand. Curb management may be integrated with smart parking solutions where appropriate.	No	Yes	Yes
NO25	Next OS - Dynamic Curb Management - Santee	Physical, signage, and ITS infrastructure in Santee should be implemented to support flexible curb usage and accommodate for changing demand.	No	Yes	Yes
NO26	Next OS - Dynamic Curb Management - Clairemont	Physical, signage, and ITS infrastructure in Clairemont should be implemented to support flexible curb usage and accommodate for changing demand.	No	Yes	Yes
NO27	Next OS - Dynamic Curb Management - University City	Physical, signage, and ITS infrastructure in university should be implemented to support of flexible curb usage and accommodate for changing demand. Curb management may be integrated with smart parking solutions where appropriate.	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
NO28	Next OS - Dynamic Lane Assignment	Part of the ATM/ATDM concept, lanes can be dynamically assigned based on temporal conditions and anticipated demands and traffic types. For ATDM this will typically include bus only lanes or bus and HOV lanes but can also include HOT/Express Lanes or support Connected Autonomous Vehicle designated lanes. Repurpose road space to reflect current or expected demand conditions.	No	Yes	Yes
NO29	Next OS - Shoulder Running	Part of the ATM/ATDM concept, shoulder running or "all-lanes running" allows for peak period use of shoulder areas as running lanes presuming the shoulders have been properly upgraded and prepared for regular traffic. Shoulder lanes may be used for transit lanes, truck lanes, or additional auxiliary (aux) lanes to support transitions to/from major N/S freeway corridors to the SR-52.	No	Yes	Yes
NO30	Next OS - Variable Speed Limits - East	Utilize information on the roadway like volume and traffic speed to post speed limits that are adaptive to changing network conditions. This can reduce accidents and increase throughput of traffic overall. In the future VSS may be paired with speed enforcement. Signage also allows for tailored messaging to indicate incidents and improve safety.	No	Yes	Yes
NO31	Next OS - Variable Speed Limits - West	Utilize information on the roadway like volume and traffic speed to post speed limits that are adaptive to changing network conditions. This can reduce accidents and increase throughput of traffic overall. In the future VSS may be paired with speed enforcement. Signage also allows for tailored messaging to indicate incidents and improve safety.	No	Yes	Yes
NO32	Next OS - Flexible Travel Lanes - Genesee Ave	Flexible Travel lanes to be dynamically reserved for transit, shuttles, rideshare, carshare and/or electric vehicles to relieve congestion and improve travel times.	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
NO33	Next OS - Flexible Travel Lanes - Nobel Dr	Flexible Travel lanes to be dynamically reserved for transit, shuttles, rideshare, carshare and/or electric vehicles to relieve congestion and improve travel times.	No	Yes	Yes
NO34	Next OS - Flexible Travel Lanes - Ruffin Rd	Flexible Travel lanes to be dynamically reserved for transit, shuttles, rideshare, carshare and/or electric vehicles to relieve congestion and improve travel times.	No	Yes	Yes
NO35	Next OS - Flexible Travel Lanes - Santo Rd	Flexible Travel lanes to be dynamically reserved for transit, shuttles, rideshare, carshare and/or electric vehicles to relieve congestion and improve travel times.	No	Yes	Yes
NO36	Next OS - Flexible Travel Lanes - Clairemont Mesa Blvd	Flexible Travel lanes to be dynamically reserved for transit, shuttles, rideshare, carshare and/or electric vehicles to relieve congestion and improve travel times.	No	Yes	Yes
NO37	Next OS - Flexible Travel Lanes - Mission Gorge Rd	Flexible Travel lanes to be dynamically reserved for transit, shuttles, rideshare, carshare and/or electric vehicles to relieve congestion and improve travel times.	No	Yes	Yes
NO38	Next OS - Flexible Travel Lanes - North Cuyamaca St	Flexible Travel lanes to be dynamically reserved for transit, shuttles, rideshare, carshare and/or electric vehicles to relieve congestion and improve travel times.	No	Yes	Yes
NO39	Next OS - Flexible Travel Lanes - North Marshall Ave	Flexible Travel lanes to be dynamically reserved for transit, shuttles, rideshare, carshare and/or electric vehicles to relieve congestion and improve travel times.	No	Yes	Yes
NO40	Next OS - ATM 1 - All Lanes Running	Active Traffic Management 1: Enables the smooth flow of all traffic modes with a few dedicated lanes to HOV and transit, but all lanes open and running with variable speeds. Electronic signage enables use of shoulder	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
	SR52 from I-5 to I-805	areas, as well as enhanced traffic separation prior to major moves to N/S connecting facilities. ATM includes traveler information functions to warn of incidents and other conditions and would be integrated with regional traveler information solutions such as 511SD.			
NO41	Next OS - ATM 2 - Variable Speeds & Dynamic Lanes SR52 from I-805 to Spring Canyon	Active Traffic Management 2: Enables the smooth flow of all traffic modes with dynamic lane assignments, VSS, shoulder running, and possible truck climbing lane. ATM includes traveler information functions to warn of incidents and other conditions and would be integrated with regional traveler information solutions such as 511SD.	No	Yes	Yes
NO42	Next OS - ATM 3 - Variable Speeds, Dynamic Lanes SR52 from Spring Canyon to Mast Blvd.	Active Traffic Management 3: Enables the smooth flow of all traffic modes with dynamic lane assignments, and VSS. ATM includes traveler information functions to warn of incidents and other conditions and would be integrated with regional traveler information solutions such as 511SD.	No	Yes	Yes
NO43	Next OS - ATM 4 - Variable Speeds & All Lanes Running SR52 from Mast Blvd to Cuyamaca St	Active Traffic Management 4: Enables the smooth flow of all traffic modes with possible dedicated lanes to HOV and transit, but all lanes open and running with variable speeds. Note this is a constrained environment and shoulder running may be used to support early transitions and movement to N/S facilities SR-125. ATM includes traveler information functions to warn of incidents and other conditions and would be integrated with regional traveler information solutions such as 511SD.	No	Yes	Yes
NO44	Next OS - ATDM 1	Active Transportation and Demand Management 1: Promote a mode shift and support alternative modes along the corridor by integrating with smart intersections, incentivizing mode shifts, designating special	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
		transit lanes and ramp access along the ATM enabled areas of SR52. ATDM would include integration with supporting traveler information and trip planning functions regionally as provided through systems such as 511SD and others.			
NO45	Next OS - ATDM 2	Active Transportation and Demand Management 2: Promote a mode shift and support alternative modes along the corridor by integrating with smart intersections, incentivizing mode shifts, designating special transit lanes and ramp access along the ATM enabled areas of SR52. ATDM would include integration with supporting traveler information and trip planning functions regionally as provided through systems such as 511SD and others.	No	Yes	Yes
NO46	Next OS - ATDM Integration at Mast Blvd/SR-52	To support proper access and improve transit service, the configuration of the Mast Blvd. ramps should be adjusted and temporal transit/HOV lanes put in place to support integration of the arterial flex lanes and the ATDM elements on SR-52. This should allow buses to bypass long queues on Mast Blvd. near SR52.	No	Yes	Yes
NO47	Next OS - ATDM Integration at Cuyamaca St/SR52	To support proper access and improve transit service, the configuration of the Cuyamaca St. ramps should be adjusted and temporal transit/HOV lanes put in place to support integration of the arterial flex lanes and the ATDM elements on SR-52. This should allow buses to bypass long queues on Cuyamaca St. near SR52. Trolley operations should be integrated with the concept as well.	No	Yes	Yes
NO48	Next OS - Incident Management	Install the systems and ITS to coordinate incident detection, response, and clearing and restore traffic flow quickly and safely. This includes enhancement of camera, vehicle detection, and incident detection systems along SR52 and I-805, as well as improved integrated incident	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
		management between State and local agencies along the corridor consistent with emerging TSM&O and ICMS efforts.			
NO49	Next OS - Incident Response	Systems that prepare and communicate incidents to the community. Responses could dynamically adjust speed, divert or reroute traffic, encourage transit, and reach corridor wide coordination/integration.	No	Yes	Yes
NO50	Next OS - Performance Monitoring	Utilities real- time data (speeds, volumes, vehicle occupancy, VSS compliance) to improve performance of transit, carshare, bikeshare, and traffic flows. This information can be used to point users to mobility alternatives and to enforce ATDM and dynamic lane assignments.	No	Yes	Yes
NO51	Next OS - Performance Assessment, Evaluation, Optimization	Utilize historical data (vehicle classification, speeds, volumes, vehicle occupancy, VSS compliance) to perform system assessments and evaluations to better understand the impact of network changes and events on performance. Optimize system function informed by this analysis.	No	Yes	Yes
NO52	Next OS - Fleet and Vehicle tracking	Consistent with current practice for bus and BRT systems, automatic vehicle location (AVL) functions help operators and the central management system understand the locations of individual vehicles within a transit network. This informs real-time transit information and should support integrated information between MTS provided services and potential private supporting flex fleet services.	No	Yes	Yes
NO53	Next OS - Passenger Counting	This function helps to understand passenger demand patterns that can be used to adjust and inform service changes and improvements.	No	Yes	Yes
NO54	Next OS - Integrated fare	Off-board fare payment and routing information makes it more seamless for riders using transit. Riders can pay beforehand for their whole trip and receive guided instructions for their trip, particularly if	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
	payment and trip-planning portal	they are using multiple modes. This function should be regionally integrated with the Maas functions and leveraged within the study area. Account based approaches such as those being rolled out regionally with Pronto could be leveraged.			
NO55	Next OS - Regional Traveler Information/511	Regional traveler information on trip planning, roadway conditions, weather, travel options, congestion, incidents, mobility services, mobility systems status, etc. would be provided for the CCT corridor through regional outlets such as 511SD and other private options receiving data from agency systems. Access to this information would be through multiple means including smartphone apps, web, broadcast through third parties, kiosks at mobility hubs, etc.	Yes	Yes	Yes
NO56	Next OS - Real-time Information	Real-time information allows riders to receive updates on their smartphone or locally placed dynamic signage to know the status of their transit vehicles and ease rider uncertainty.	No	Yes	Yes
NO57	Next OS - Wi-Fi	Reliable on-board Wi-Fi is increasingly important as smartphones are widely used and can connect riders to real-time transit information, routing and payment as well for an enhanced experience while riding.	No	Yes	Yes
NO58	Next OS - Audio and visual next stop announcements	Consistent with current standard practice ensure all buses and transit are equipped with communication devices to provide next stop announcements letting riders know the next stop and enhancing the customer experience. This feature also helps support the goal of equity for all types of users.	No	Yes	Yes
NO59	Next OS - Transportation Management Center	Leverage and operate ATM/ATDM functions through existing operations centers for Caltrans and MTS.	No	Yes	Yes

Strategy ID	Strategy Name	Description	Alt 1	Alt 2	Alt 3
NO60	Next OS - Universal Transportation Account	Leverage regional efforts towards an integrated application providing centralized information related to parking, rideable, mobility-on-demand and fixed route transit. This may leverage current account-based solutions such as Pronto (depending on institutional agreements).	No	Yes	Yes
NO61	Next OS - Transit Signal Priority	Part of the smart intersection corridors functionality where signal programming allows transit vehicles to be prioritized at crossings/intersections. Shorter travel times and more reliable service could result from the addition of dedicated lanes paired with signal priority during peak travel hours. Should be integrated with physical infrastructure improvements (e.g., Flex Lanes, etc.) where possible.	No	Yes	Yes
NO62	Next OS - Bike Signals	Along key active transportation arterials or in known areas of bicycle/auto conflict issues, bike signals (e.g., the green wave) may be installed to incentivize safe bicycle use as well as prioritize bikes on streets.	No	Yes	Yes
NO63	Next OS - Smart Parking - Kearny Mesa	Implement smart parking functionality which provides enhanced information on parking availability, time limitations, costs, and payment in conjunction with curb management and mobility hub efforts.	No	Yes	Yes
NO64	Next OS - Smart Parking - UTC	Implement smart parking functionality which provides enhanced information on parking availability, time limitations, costs, and payment in conjunction with curb management and mobility hub efforts.	No	Yes	Yes
NO65	Next OS - Smart Parking - UCSD	Implement smart parking functionality which provides enhanced information on parking availability, time limitations, costs, and payment in conjunction with curb management and mobility hub efforts.	No	Yes	Yes
NO66	Next OS - Smart Parking - El Cajon	Implement smart parking functionality which provides enhanced information on parking availability, time limitations, costs, and payment in conjunction with curb management and mobility hub efforts.	No	Yes	Yes

D2. Mobility Hub Profiles (22 TOTAL, 8 MAJOR & 14 Minor NODES)

Mobility Hub Major Node 1 – UCSD Transit Center

Source: Google Street View

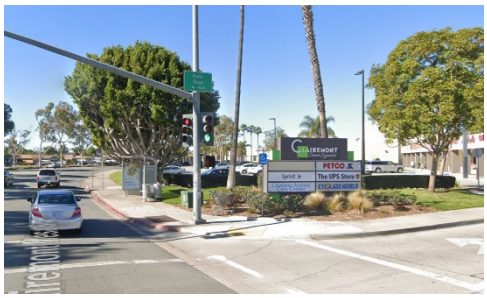
University of California San Diego (UCSD) is part of the state university network and serves as a tier 1 employment center. UCSD is located in an area with a high population, also indicative of a high travel demand. Additionally, over 25 people per acre are low-income near the Center. Over 25 people per acre in this area do not have access to a personal vehicle. This suggests a higher dependence on transit for populations living in the area. This area scored a 176 on the transit propensity index (TPI), which indicates favorable conditions for transit. This area is included in the University City Community Plan Update, which discusses the introduction of Transit Villages and transit supportive infrastructure as well as proposes the addition of several mobility hubs along La Jolla Village Drive, Genesee Avenue, and along the Mid-Coast Trolley line.

Mobility Hub Major Node 2 – UTC Transit Center

University Town Center (UTC) is a tier 1 employment center. There are also several regional destinations located near the UTC Transit Center, including the Westfield UTC mall. UTC is proximate to UCSD and has a high student population. Over 25 people per acre are low-income and approximately 5 to 10 people per acre do not have access to a vehicle. The communities surrounding this mobility hub scored a 170 on the Transit Propensity Analysis, indicating favorable conditions for transit. Additionally, this area is included in the University Community Plan Update, which highlights this area as a transit village. Transit villages will provide additional housing and public space near transit.

Mobility Hub Minor Node 3 – Clairemont Towne Square

Clairemont Towne Square is a growing employment center with 15-25 jobs per acre. Population densities around Clairemont Towne Square exceed 25 people per acre and 10-15 people per acre identify as a minority population. The hub includes a proposed NextGen *Rapid* route. The area surrounding the center has a maximum TPI score of 149, indicating favorable conditions for transit.



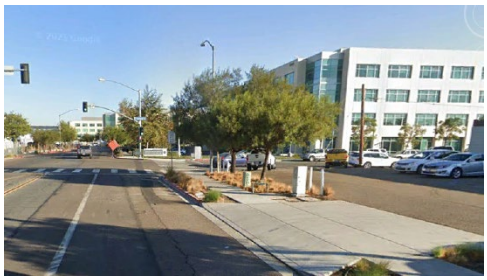
Source: Google Street View

Mobility Hub Major Node 4 – West Kearny Mesa Transit Center

West Kearny Mesa Transit Center is a growing tier 1 employment center with over 25 jobs per acre. Population densities around West Kearny Mesa Transit Center are 1-5 people per acre and 1-5 people per acre identify as a minority population. The hub is adjacent to a planned smart corridor with flexible lanes. The area surrounding the center has a maximum TPI score of 149, indicating favorable conditions for transit.

Mobility Hub Major Node 5 – East Kearny Mesa Transit Center

East Kearny Mesa Transit Center is a growing tier 1 employment center with over 25 jobs per acre. Population densities around East Kearny Mesa Transit Center are 1-5 people per acre and 5-10 people per acre identify as a minority population. The hub is adjacent to a planned smart corridor with flexible lanes. The area surrounding the center has a maximum TPI score of 162, indicating favorable conditions for transit.



Source: Google Street View

Mobility Hub Minor Node 6 – Tierrasanta

Source: Google Street View

Tierrasanta is near a growing tier 1 employment center with over 25 jobs per acre. Population densities around Tierrasanta are 15-25 people per acre and 5-10 people per acre identify as a minority population. The hub is adjacent to a planned smart corridor with flexible lanes. The area surrounding the hub has a maximum TPI score of 49, indicating moderately favorable conditions for transit.

Mobility Hub Minor Node 7 – Santee City Hall

Santee City Hall is near a tier 4 employment center with 5-10 jobs per acre. Population densities around Santee City Hall exceed 25 people per acre and 5-10 people per acre identify as a minority population. The hub is near a planned smart corridor and supported by local bus routes. The area surrounding the hub has a maximum TPI score of 66, indicating moderately favorable conditions for transit.

Mobility Hub Major Node 8 – Santee Town Center

Santee Town Center is in a tier 4 employment center with 5-10 jobs per acre. Population densities around Santee Town Center exceed 25 people per acre and over 25 people per acre identify as a minority population. The center is near a planned smart corridor and has a direct connection to the green line trolley. The area surrounding the center has a maximum TPI score of 263, indicating favorable conditions for transit.

Mobility Hub Major Node 9 - El Cajon Transit Center

El Cajon Transit Center is in a tier 2 employment center with 15-25 jobs per acre. Population densities around El Cajon Transit Center exceed 25 people per acre and 5-10 people per acre identify as a minority population. The center is adjacent to a planned smart corridor with flexible lanes and direct connection to the Green Line Trolley. The area surrounding the center has a maximum TPI score of 93, indicating favorable conditions for transit.

Source: Google Street View

Mobility Hub Major Node 10- Downtown El Cajon

Source: Google Street View

Downtown El Cajon is a tier 2 employment center with over 25 jobs per acre. Population densities around Downtown El Cajon exceed 25 people per acre and over 25 people per acre identify as a minority population. The hub is adjacent to a planned smart corridor with flexible lanes. The area surrounding the hub has a maximum TPI score of 184, indicating favorable conditions for transit.

Mobility Hub Major Node 11 – Hillsdale

The Hillsdale Mobility Hub is between a tier 2 and 3 employment centers with over 25 jobs per acre. Population densities around the Hillsdale Mobility Hub exceed 25 people per acre and 15-25 people per acre identify as a minority population. The hub is adjacent to a planned smart corridor. The area surrounding the hub has a maximum TPI score of 100, indicating favorable conditions for transit.

Source: Google Street View

Mobility Hub Minor Node 12 – Lakeside

The Lakeside Hub is in a tier 4 employment center with over 25 jobs per acre. Population densities around the Lakeside Hub exceed 25 people per acre and 15-25 people per acre identify as a minority population. The area surrounding the hub has a maximum TPI score of 113, indicating favorable conditions for transit.

Mobility Hub Minor Node 13 – Governor Drive

The Governor Drive Hub is in a tier 4 employment center with 15-25 jobs per acre. Population densities around the Governor Drive Hub are 15-25 people per acre and 1-5 people per acre identify as a minority population. The hub is adjacent to a planned smart corridor. The area surrounding the hub has a maximum TPI score of 101, indicating favorable conditions for transit.

Source: Google Street View

Mobility Hub Minor Node 14 – Clairemont Mesa Boulevard & Genesee Avenue

Source: Google Street View

The Clairemont Mesa Boulevard & Genesee Avenue Hub is between tier 4 employment centers with 15-25 jobs per acre. Population densities around the Clairemont Mesa Boulevard & Genesee Avenue Hub are 15-25 people per acre and over 25 people per acre identify as a minority population. The hub is adjacent to a planned smart corridor and near a flexible lane corridor. The area surrounding the hub has a maximum TPI score of 108, indicating favorable conditions for transit.

Mobility Hub Minor Node 15 – Balboa Avenue & Garnet Avenue

The Balboa Avenue and Garnet Avenue Hub is in a tier 4 employment center with 15-25 jobs per acre. Population densities around the Balboa Avenue and Garnet Avenue Hub exceed 25 people per acre and over 25 people per acre identify as a minority population. The hub is adjacent to a planned smart corridor with flexible lanes. The area surrounding the hub has a maximum TPI score of 170, indicating favorable conditions for transit.

Source: Google Street View

Mobility Hub Minor Node 16 – Balboa Avenue & Genesee Avenue

Source: Google Street View

The Balboa Avenue and Genesee Avenue Hub is in a tier 4 employment center with over 25 jobs per acre. Population densities around the Balboa Avenue and Genesee Avenue Hub exceed 25 people per acre and over 25 people per acre identify as a minority population. The hub is adjacent to two planned smart corridors with flexible lanes and a planned Next Gen *Rapid* route. The area surrounding the hub has a maximum TPI score of 180, indicating favorable conditions for transit.

Mobility Hub Minor Node 17 – Convoy Street & Othello

The Convoy Street and Othello Hub is in a tier 1 employment center with over 25 jobs per acre. Population densities around the Convoy Street and Othello Hub are 15-25 people per acre and 10-15 people per acre identifying as a minority population. The hub is adjacent to a planned smart corridor with flexible lanes. The area surrounding the hub has a maximum TPI score of 51, indicating moderately favorable conditions for transit.

Source: Google Street View

Mobility Hub Minor Node 18 – Aero Drive & Kearny Villa Road

Source: Google Street View

The Aero Drive and Kearny Villa Road Hub is in a tier 1 employment center with over 25 jobs per acre. Population densities around the Aero Drive and Kearny Villa Road Hub exceed 25 people per acre and 10-15 people per acre identify as a minority population. The area surrounding the hub has a maximum TPI score of 130, indicating favorable conditions for transit.

Mobility Hub Minor Node 19 – Aero Drive

The Aero Drive Hub is in a tier 1 employment center with 15-25 jobs per acre. Population densities around the Aero Drive Hub exceed 25 people per acre and over 25 people per acre identify as a minority population. The area surrounding the hub has a maximum TPI score of 90, indicating favorable conditions for transit.

Source: Google Street View

Mobility Hub Minor Node 20 – Grossmont College

Source: Google Street View

Grossmont College is near a tier 4 employment center with over 25 jobs per acre. Population densities around Grossmont College are 10-15 people per acre and 1-5 people per acre identify as a minority population. The area surrounding the hub has a maximum TPI score of 117, indicating favorable conditions for transit.

Mobility Hub Minor Node 21 – Fanita Ranch

Source: Google Street View

Fanita Ranch is a planned development in what is currently a remote location in northern Santee. Currently, there are only 1-5 jobs per acre and population densities around Fanita Ranch are 1-5 people per acre with 1-5 people per acre identifying as a minority population. The area surrounding the hub has a maximum TPI score of 11, however is expected to undergo significant population growth and development.

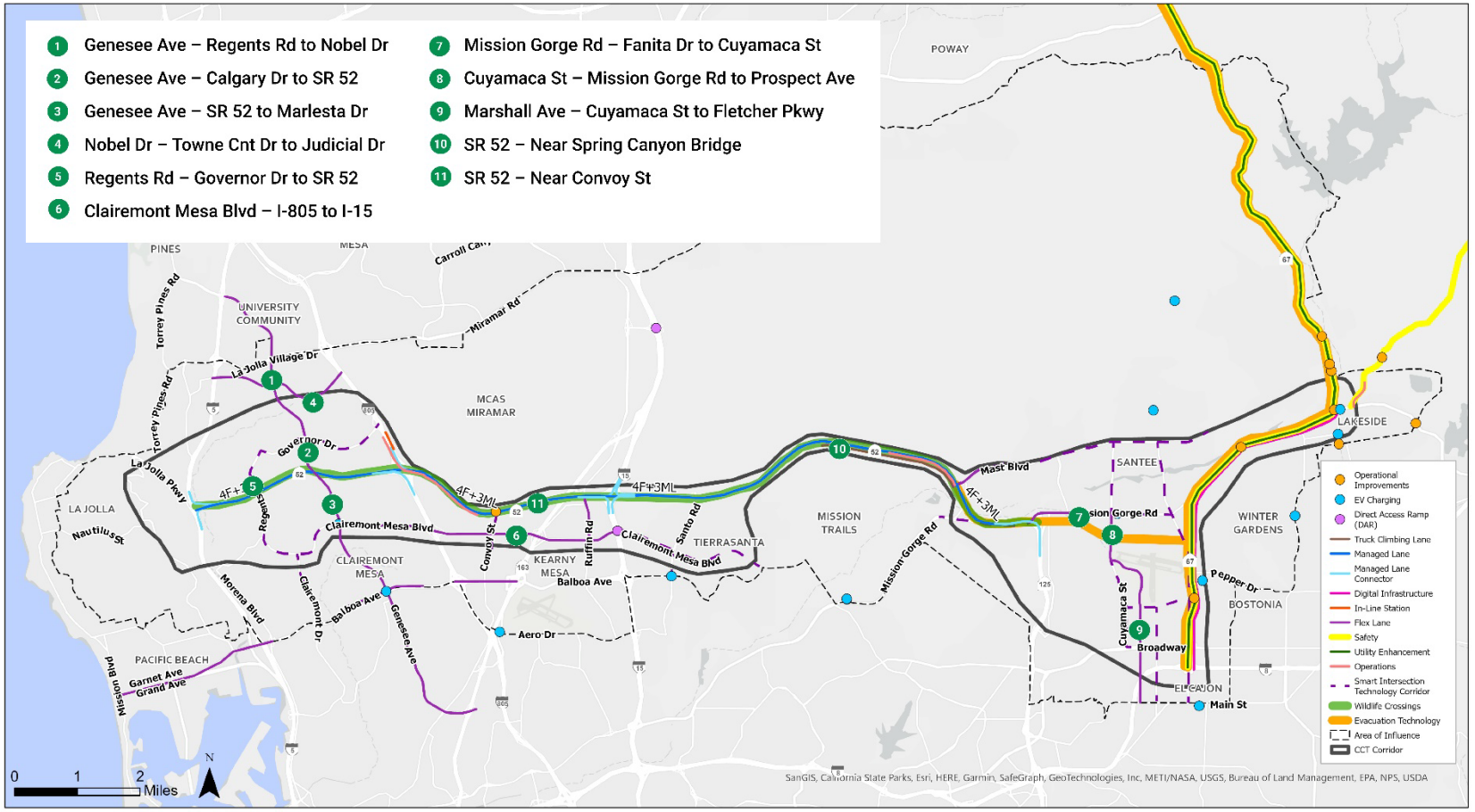
Mobility Hub Minor Node 22 – Winter Gardens

Source: Google Street View

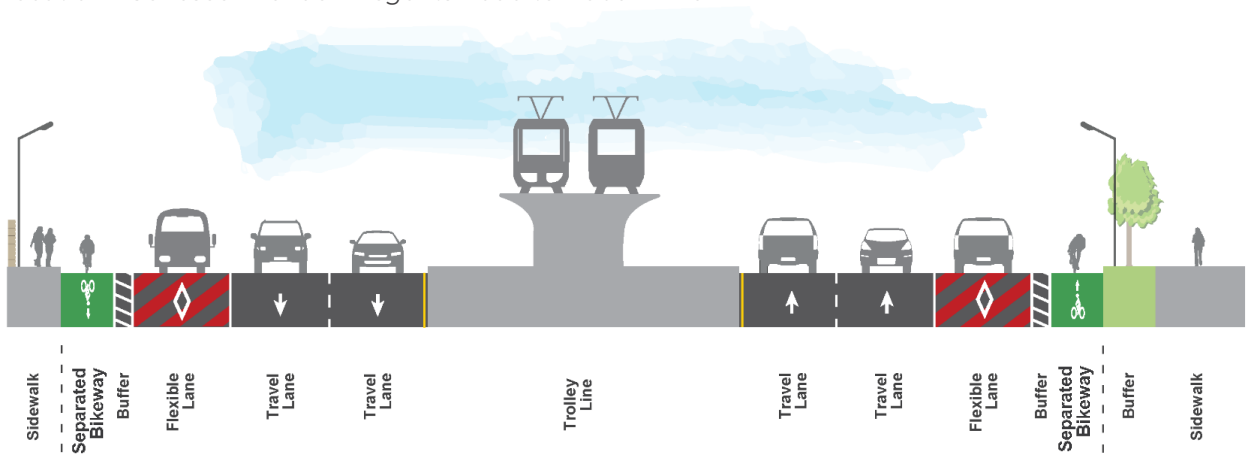
The Winter Gardens Hub is between tier 1, 2, and 3 employment centers with 1-5 jobs per acre. Population densities around the Winter Gardens Hub are 5-10 people per acre and 5-10 people per acre identify as a minority population. The area surrounding the hub has a maximum TPI score of 46, indicating moderately favorable conditions for transit.

D3. Proposed TSS Concepts

Figure D-7 *Rendering Key Map*

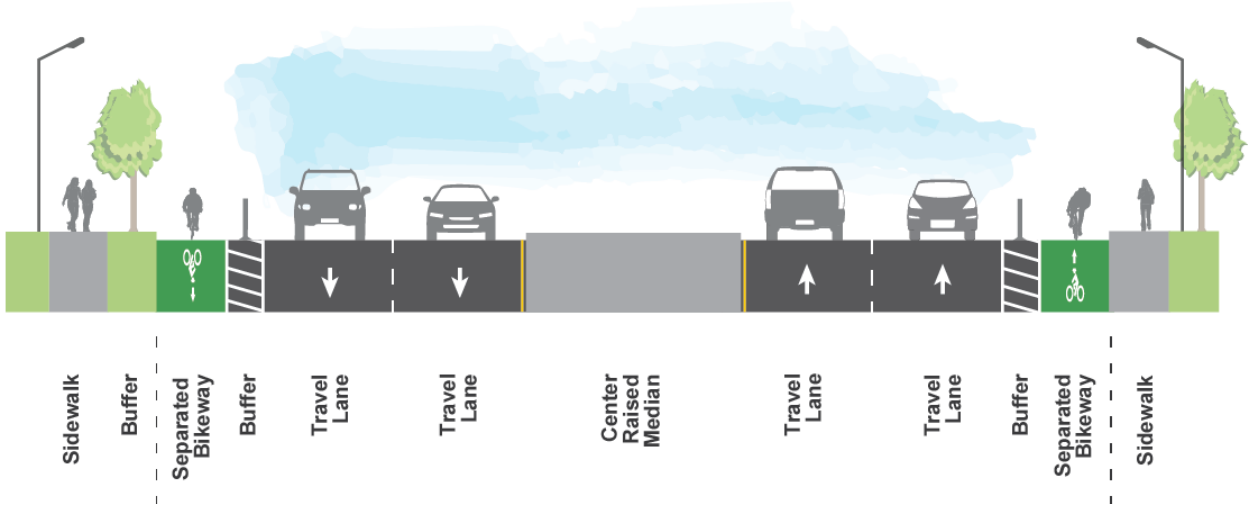


Location 1 Genesee Avenue – Regents Road to Nobel Drive



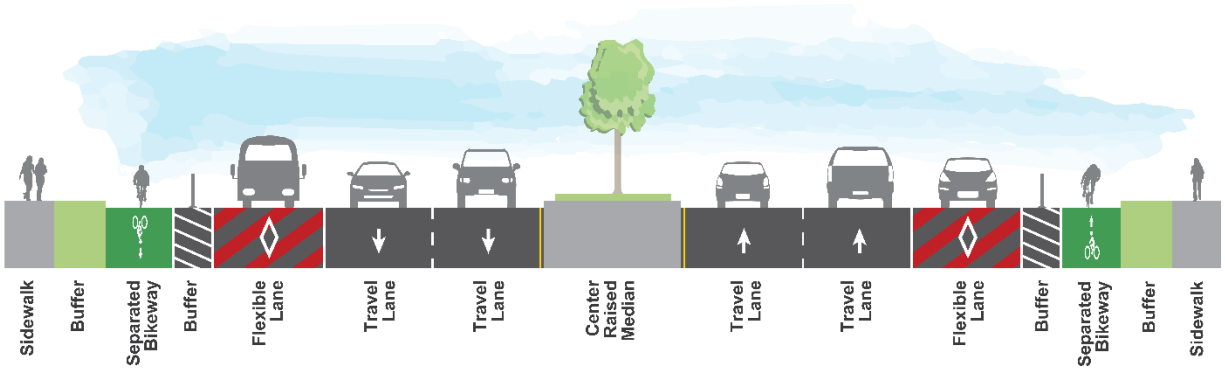
Source: University Community Plan (DRAFT, April 2020)

Location 2 Genesee Avenue – Calgary Drive to SR 52

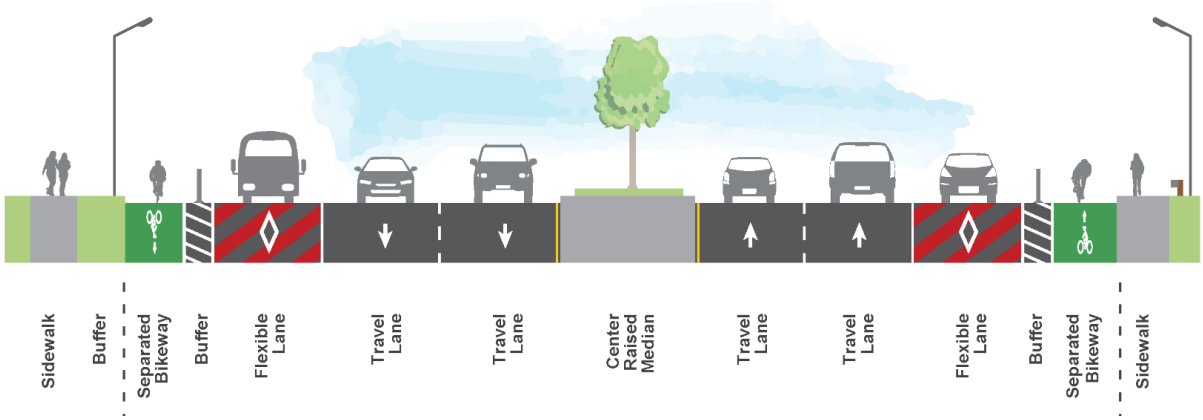


Source: University Community Plan (DRAFT, April 2020)

Location 3 Genesee Avenue – SR 52 to Marlesta Drive

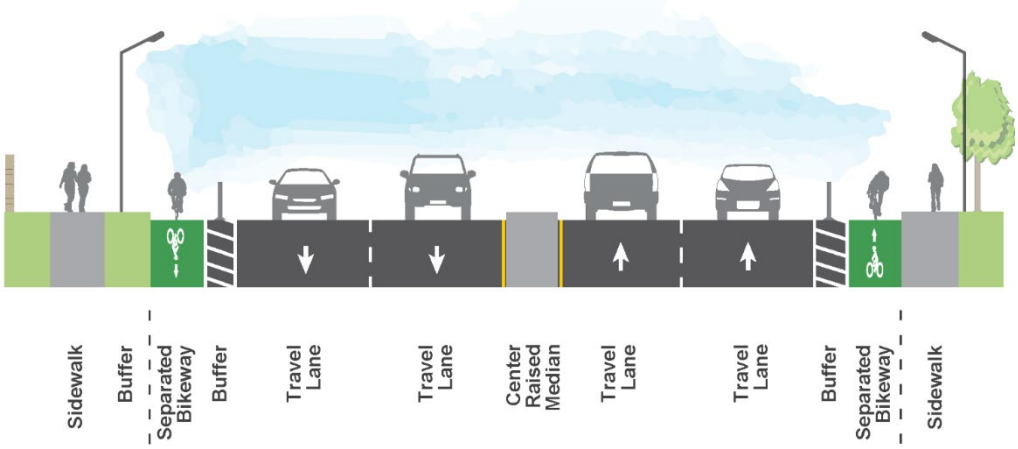


Location 4 Nobel Drive – Towne Centre Drive to Judicial Drive



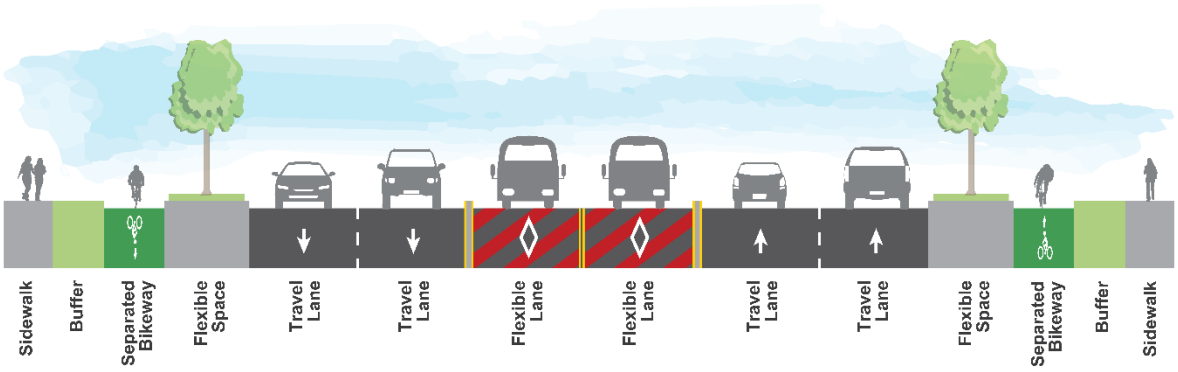
Source: University Community Plan (DRAFT, April 2020)

Location 5 Regents Road – Governor Drive to SR 52

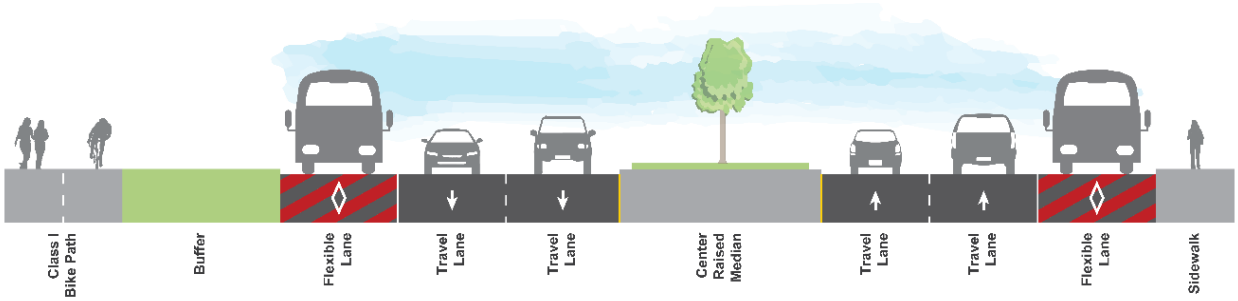


Source: University Community Plan (DRAFT, April 2020)

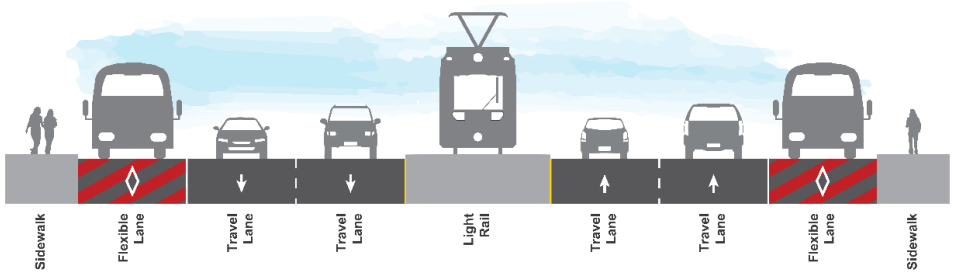
Location 6 Clairemont Mesa Boulevard – I-805 to I-15



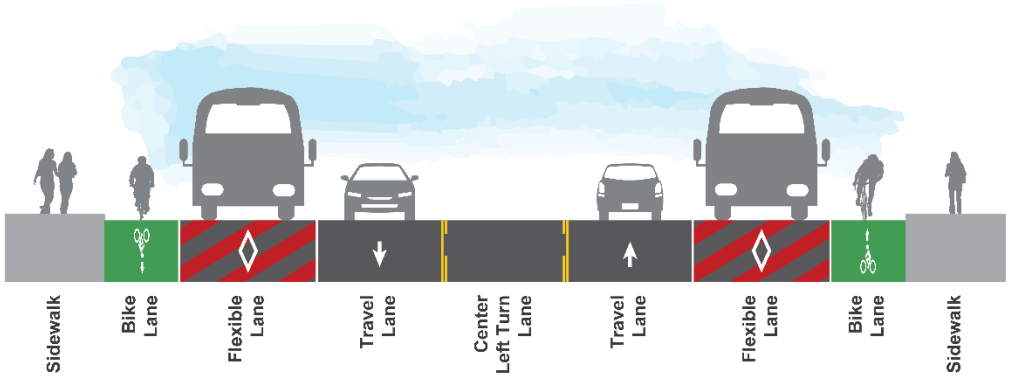
Location 7 Mission Gorge Road – Fanita Drive to Cuyamaca Street



Location 8 Cuyamaca Street - Mission Gorge Road to Prospect Avenue



Location 9 Marshall Avenue – Cuyamaca Street to Fletcher Parkway



Location 10 SR 52 near Spring Canyon Bridge

Location 11 SR 52 near Convoy Street