2024 OC TRANSIT VISION

MAY **2025**

OCTA

OC TransitVision

2024 OC Transit Vision

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THE 2024 OC TRANSIT VISION

1.1 INTRODUCTION

The 2024 OC Transit Vision (Plan) is a 30-year plan to enhance and expand public transit service in Orange County, building on the successful foundation laid in the 2018 Plan. The 2024 OC Transit Vision features a number of elements to help improve transit service today and in the coming decades.

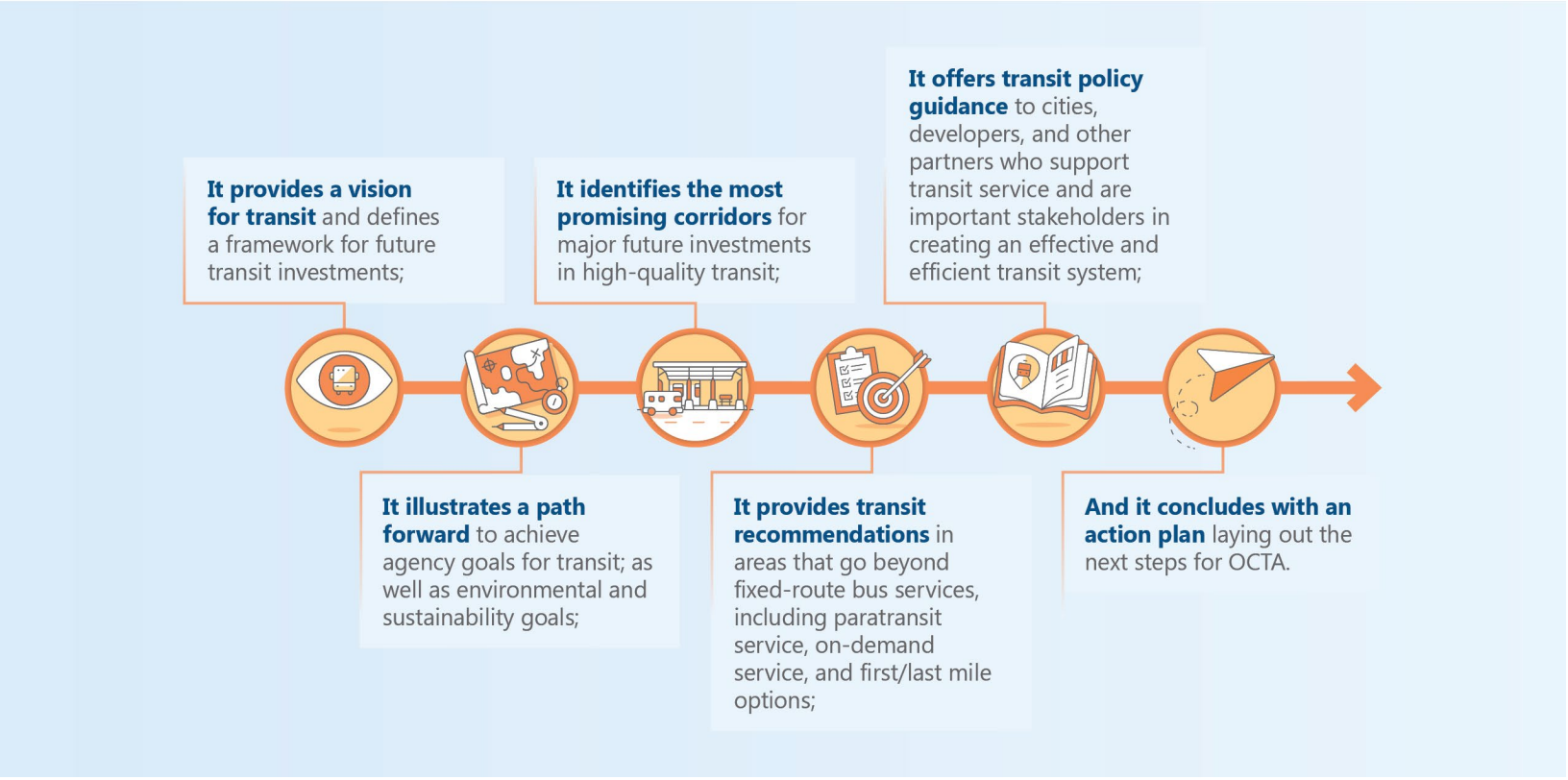
OC Bus is Orange County Transportation Authority's (OCTA) largest and most visible service, providing 52 routes and serving over 30 million passengers annually throughout Orange County (2023). OCTA also provides service to major events and destinations, as well as vanpools, on-demand microtransit, and OC ACCESS paratransit service for people with disabilities.

OCTA's OC Bus Rapid comprises four routes along some of Orange County's busiest corridors, providing limited-stop service that is fast, direct, and convenient. OC Bus Rapid stops serve only the busiest locations, such as transfer points and major destinations.

Scheduled to open in 2026, the OC Streetcar will be Orange County's first urban rail line. It will run more than four miles from the Santa Ana Regional Transportation Center to the City of Garden Grove and provide key connections to popular OC Bus routes. Orange County is served by both Amtrak Pacific Surfliner and Metrolink

regional/commuter rail lines. The Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor is a north-south regional rail spine connecting Orange County to Los Angeles and San Diego. LA Metro operates bus service connecting to OC Bus routes within Orange County. Agencies in neighboring counties also provide connections to OC Bus routes. More locally, numerous communities offer a variety of circulators, shuttles, rideshare services, and active transportation options.

The 2024 OC Transit Vision features a number of elements to help improve transit service today and in the coming decades (see image below). It provides a vision and maps out a course for achieving agency goals. The Plan identifies transit opportunity corridors for high-capacity transit and recommends countywide multi-modal strategies. Additionally, it provides guidance on transit-supportive design and policies for cities and developers. The Plan concludes with action steps for OCTA to bring the vision to reality.



1.2 OC TRANSIT VISION STATEMENT, GOALS, AND OBJECTIVES

The 2024 OC Transit Vision was built on a foundation of goals and objectives, which in turn were based on a vision statement. These were developed collaboratively by staff from a broad cross-section of OCTA departments and were later reviewed by the OCTA Board of Directors. The vision statement, goals, and objectives also take into account previous OCTA transit planning efforts, public engagement described in Chapter 3, as well as the findings from the State of OC Transit Report described in Chapter 2.

Transit Vision Statement

What is our vision for transit?

Provide compelling and competitive transit service that expands transportation choices for current riders, attracts new riders, and equitably supports immediate and long-term mobility in Orange County.

What are our goals for transit?

Enhance — Make it *more desirable* to take transit

Connect — Connect Orange County's people and places with *effective transit*

Simplify — Make transit *easier to use* and more convenient

Collaborate — Make Orange County a *more attractive place* to live, work, and visit by providing transit services that supports community priorities

Sustain — Create a system that is *resilient* over the long term

Goals and Objectives

In addition to the vision statement and five goals mentioned above, OCTA developed objectives to support each goal.

Below are the five goals and supportive objectives for the 2024 OC Transit Vision.

Enhance Make it *more desirable* to take transit

Reliability and Competitiveness:

- Provide convenient services that appeal to a broad cross-section of Orange County residents.
- Make transit travel times in key corridors competitive with automobile travel times.
- Improve the reliability of transit trips.
- Consider expanding the span and service frequency.
- Consider a network of high-capacity or premium services such as bus rapid transit (BRT) and streetcar to provide attractive transit service and support local land use.
- Continue to recruit and train operators to restore transit offerings.

Frequency:

- Develop a service network that provides frequent (15 minutes or better), all-day service from early morning to late night in major corridors and to major destinations.

Quality:

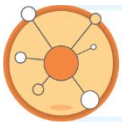
- Improve service quality in the highest-demand transit markets.
- Develop services tailored to the needs of specific markets.

Affordability:

- Provide affordable transit choices for riders.

Facility Design and Passenger Comfort:

- Provide a comfortable and safe environment for transit passengers.
- Improve access to, and the quality of, transit stops and stations.



Connect

Connect Orange County's people and places with *effective transit*

Local and Regional Connections:

- Expand services to currently underserved areas of Orange County that have sufficient transit demand and to emerging areas to support new development.
- Improve connections to major attractions and destinations.
- Improve access to jobs and services to improve economic opportunities for Orange County residents, workers, and visitors.
- Improve transit connections with surrounding counties to develop a stronger regional transit system.

Integration:

- Integrate transit services with other complementary modes.
- Develop new partnerships to help expand microtransit services to residents where fixed-route service is impractical.

Multimodal Access and First/Last Mile Connections:

- Use mobility hub elements to create great places where modes connect to facilitate seamless integration of Orange County's pedestrian, bicycle, and transit networks.
- Strengthen multimodal connections and make it safe and easy to access transit.
- Enhance partnerships with shared mobility providers, including those providing e-assist and e-powered devices.
- Support and participate in efforts to develop complete streets by working with local communities to provide safe corridors for transit and safe streets with connections to transit stops.

Simplify

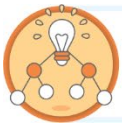
Make transit *easier to use* and more convenient

Legibility:

- Provide service that is easy for people to understand.
- Build upon digital tools and update trip planning and payment options for customers.
- Make it easier for customers to plan door-to-door trips with a seamless menu of travel options among transit services, operators, and other transportation modes using technology.
- Improve signage and information at transit stops.

Education and Information:

- Educate Orange County residents, workers, and visitors about available transit services.
- Continue to provide transit and mobility information that is readily available, accurate, and easy to understand.
- Make real-time schedule information extensively available online and at physical locations such as transit centers and transit stops.



Collaborate

Make Orange County a *more attractive place* to live, work, and visit by providing transit services that supports community priorities

Economy and Development:

- Support economic development, including the development patterns envisioned in local, county, and regional plans.
- Support the vitality of the county's downtowns, local centers, neighborhoods, and job centers.

Environment:

- Provide transit services that relieve congestion, improve air quality, and reduce greenhouse gas (GHG) emissions.
- Transition to Zero-Emission Vehicles (ZEV) to reduce GHG emissions and promote clear air initiatives.
- Use transit as a way to enhance healthy, complete communities and compact, livable neighborhoods.

Equity:

- Use transit to create a transportation system responsive to the needs of people for whom transit is a necessity (e.g., youth, older adults, people with disabilities, low-income populations, people without autos).
- Improve the accessibility of transit for older adults and people with disabilities to support their ability to live independent lives.
- Develop a sustainable model for paratransit services to provide mobility and independence.
- Continue programs to encourage use of transit for youth and older adults—including free and discounted fares.

Sustain

Create a system that is *resilient* over the long term

Ridership and Perception:

- Get more people to ride transit.
- Retain existing customers and make it easier for them to take additional trips using transit.
- Improve public perception of transit in Orange County.
- Develop services that achieve a high level of public support.

Productivity:

- Focus services in areas where it can be most effective.
- Develop cost-effective and productive transit services.

Funding:

- Develop reliable and predictable revenue streams that grow with Orange County's economy.
- Invest public resources in a financially responsible manner.
- Identify and pursue opportunities for new funding sources, including leveraging private funds and grants.

Performance Monitoring:

- Continue to measure performance and adjust services and implementation plans, as necessary.

Partnerships:

- Build upon existing partnerships with communities, businesses, and schools to enhance transit offerings.
- Partner with community groups, local businesses, and schools to develop local training programs for future operators.

Flexibility:

- Plan for investments in a way that allows OCTA to respond and adapt to changes in the environment for transit.

Infrastructure:

- Continue to invest in resilient infrastructure to help support OCTA services.

1.3 SUMMARY OF RECOMMENDATIONS

The 2024 OC Transit Vision offers recommendations for improving transit throughout Orange County, both in the higher transit demand areas of North/Central County and in lower transit demand areas. The analysis to inform these recommendations considered both current and future conditions, recognizing that changes to the transportation network and built environment needed to support transit will evolve as Orange County continues to grow and change.

The recommendations acknowledge that different types of services are needed in different parts of the county. Higher capacity, fixed-route transit (rapid bus and BRT) has potential for success in Orange County's denser, more walkable areas. At the same time, service in the less dense, more suburban areas of the county should focus on key connections to jobs, including community bus routes and on-demand services.

The 2024 OC Transit Vision offers something for everyone, whether improvements to existing OC Bus routes, new high-capacity transit corridors, enhancements to OC ACCESS paratransit service, or first/last mile connections at mobility hubs. The recommendations described in Sections 1.4 and 1.5 below include investments in high-capacity bus service as well as improvements to mobility options throughout the county.

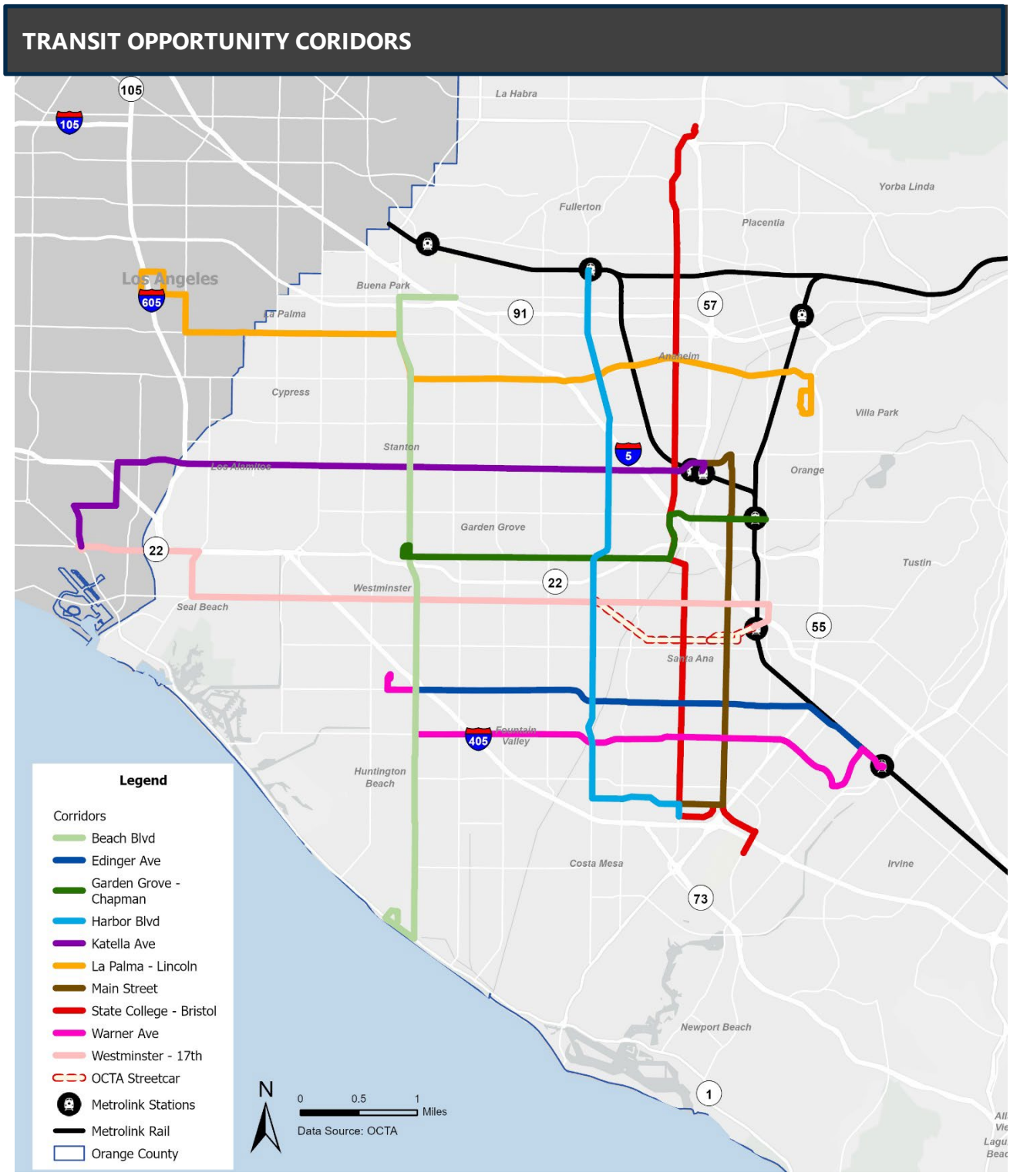
Additional information about each of these can be found in the following chapters.

1.4 INVESTMENTS IN TRANSIT OPPORTUNITY CORRIDORS

One of the primary reasons to develop a transit vision for Orange County was to identify Transit Opportunity Corridors (TOCs)—high-demand corridors meriting major investments in higher-quality service (see Transit Propensity map on page 18). Major investments along TOCs may include more frequent service, higher-capacity vehicles, roadway improvements such as transit signal priority and dedicated lanes, and other transit enhancements to improve speed and reliability.

The TOCs were selected based on community input and technical evaluation. Figure 1 below shows the top 10 corridors recommended for further study and implementation over the next 30 years.

Figure 1 Transit Opportunity Corridors



1.5 COUNTYWIDE TRANSIT STRATEGIES

Fixed-Route Recommendations

The 2024 OC Transit Vision recommends improving the efficiency and connectivity of the bus network through full implementation of the Making Better Connections (MBC) Plan, which was approved by the OCTA Board of Directors in 2022. Through the MBC Plan, certain routes will experience increased frequencies, extended operational hours, and reduced wait times at transfer locations. A separate OC Bus Comprehensive Operations Analysis should be conducted over the next five years to analyze travel patterns since the pandemic and further optimize service levels. The 2024 OC Transit Vision also recommends a study of express bus service that was discontinued during the pandemic, taking into consideration changes in travel patterns.

Other fixed-route recommendations include the following:

- Identify short-term transit improvement strategies on Harbor Blvd. upon completion of two ongoing Harbor corridor studies.
- Extend OC Bus Rapid Route 553 from the Anaheim Regional Transportation Center (ARTIC) to the Anaheim Resort on Katella Ave. to serve increased demand due to the upcoming OC Vibe project, Anaheim Resort expansion, and 2028 Olympic and Paralympic games.
- Determine high-growth areas in the county where OC Bus service coverage may expand or where existing route frequencies may increase.
- Implement a new Rider Validation System (RVS) to simplify the fare payment process and introduce a fare capping mechanism to save riders money and increase transit usage.
- Accelerate the transition to a 100 percent zero-emission bus fleet by 2040 to fully comply with The State of California's clean air goals.
- Prepare for OC Streetcar by coordinating bus connections through the Bus-Rail Interface Plan.

LOSSAN/Metrolink Improvements

The LOSSAN corridor is the existing rail spine for Orange County. A regional rail line, it connects Orange County to downtown Los Angeles. Within Orange County, it runs from Buena Park in the north to San Clemente in the south via major destinations, including downtown Fullerton, Anaheim's Platinum Triangle, downtown Santa Ana, Irvine, and Laguna Niguel. It is served by multiple operators and several lines, including Amtrak's Pacific Surfliner from San Luis Obispo to San Diego, as well as the Metrolink Orange County, 91/Perris Valley, and Inland Empire-Orange County lines. Additionally, the Metrolink 91/Perris Valley and Inland Empire-Orange County lines operate on tracks east of LOSSAN, connecting to Riverside County.

OCTA should support improvements to Orange County rail service planned by Metrolink and other partner agencies and proceed with existing plans to increase the number of rail trips, improve station access, and reduce the number of at grade crossings.

OC Vanpool Expansion

OCTA's OC Vanpool Program offers a subsidized, month-to-month shared commuting option for groups of 7 to 15 people traveling to workplaces within Orange County. As demand for vanpool services begins to recover from the coronavirus pandemic, OCTA may incentivize employee vanpools in a number of ways:

- **Promote increased financial incentives offered to participants.** OCTA provides qualified vanpools a $600 per month (up to $800 per month if certain conditions are met but not to exceed 50 percent of vehicle lease cost) per vanpool incentive.
- **Continue partnership with the California Department of Transportation (Caltrans)** to expand the managed lane network on freeways.

Paratransit Enhancements

OC ACCESS provides nearly one million boardings annually and projected growth in the population of older Americans is expected to boost paratransit demand in the future. Recognizing the growth in paratransit costs, OCTA has begun taking steps to manage demand, including continued support of senior mobility programs, expanding cooperative agreements, and expanding the Same-Day Taxi Program. Going forward, the following will be implemented over the short term:

- **Procurement of a Software-as-a-Service (SaaS)** that will retire current legacy products and bring all services available to OC ACCESS eligible riders under one platform while integrating with the existing OC Bus app. The new software will provide flexibility for other service types such as Same-Day Taxi and Senior Mobility Programs to easily schedule trips for alternative services. Scheduling and dispatching for paratransit trips will be automated to improve accuracy and continuous optimization.

Seasonal and Special Event Services

Building on the success of existing services such as the beach community trolleys, the OC Fair Express, and the Angels Express, seek other opportunities to provide part-time service where traffic and parking issues make transit an attractive alternative.

OCTA should explore opportunities to expand its existing seasonal and special event services. It should also pilot new services through Project V (its program of matching grants for local transit services), which may include on-demand microtransit in areas of the county where demand for fixed-route service is low. A Measure M2 Project V call for projects in 2030 should focus on additional opportunities for seasonal and special events services and consider on-demand services with a goal of reducing local congestion and expand access.

In addition to local and ongoing special events, OCTA will be working with local and regional agencies to help plan for transit services related to the 2026 FIFA World Cup and 2028 Summer Olympic and Paralympic Games.

First/Last Mile Connections

Every transit trip begins and ends with a connection to an origin or destination. Investments in first/last mile journeys are essential for making transit trips safe, accessible, and convenient for riders.

OCTA should advance recommendations outlined in the Mobility Hub Study to implement a suite of mobility services at major transit centers and destinations throughout the county.

The active transportation network also plays an important role in expanding access to transit. OCTA should continue to coordinate with local jurisdictions to improve connections to bus stops and transit services.

1.6 HOW DO WE MOVE TO ACTION?

The 2024 OC Transit Vision has been developed over 18 months through significant input from various stakeholders. These include the OCTA Board of Directors, the OCTA Citizens Advisory Committee, elected officials, municipal staff from Orange County's 34 jurisdictions, and thousands of residents and visitors. The Plan builds on extensive data analysis and national best practices to explore transit trends and markets and proposes recommendations for improving transit throughout Orange County.

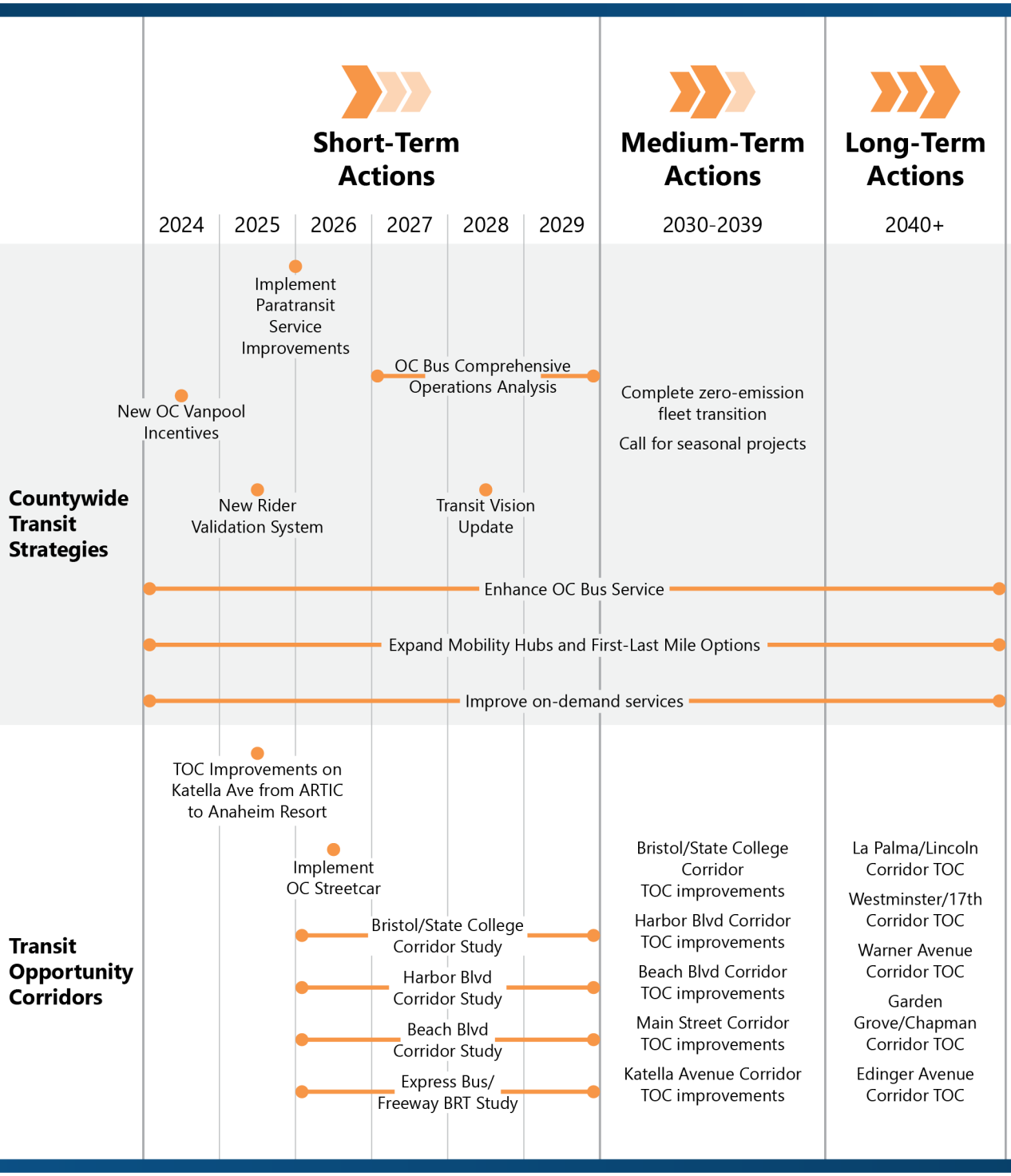
Implementing recommendations of the 2024 OC Transit Vision will require concerted effort and resources from OCTA. While many of the projects identified in this Plan will take years to come to fruition, there are steps that OCTA can take immediately to begin moving the vision to reality.

Figure 2 has projects grouped into three timeframes for implementation: short-term (2025–2029), midterm (2030–2039), and long-term (2040+). This phasing approach recognizes the project development process for major capital investments, such as procuring zero-emission buses (ZEB), as well as existing and projected OCTA revenues.

The short-term recommendations focus on projects, programs, and additional studies that largely can be undertaken using existing OCTA resources. By improving bus service on existing routes through the MBC Plan, expanding countywide transit services, and advancing studies along high-priority TOCs, OCTA can take immediate steps to make transit more frequent, fast, and reliable for Orange County residents and visitors.

The mid- and long-term recommendations will require additional revenues and depend, in part, on progress made in the next five years.

Figure 2 OC Transit Vision Phasing



1.7 GUIDE TO THE 2024 OC TRANSIT VISION

The contents of the 2024 OC Transit Vision, which help to further explain these recommendations and focus on moving OCTA from planning to implementation, include the following:

Chapter 2—Context for the Transit Vision

This chapter briefly introduces the overall state of transit in Orange County by summarizing key findings from The State of OC Transit, a report prepared early in the 2024 OC Transit Vision process to understand the landscape of transit in the county today and shape the direction of analysis and recommendations.

Chapter 3—Outreach Summary Report

This chapter begins with a review of the various public outreach efforts that informed the 2024 OC Transit Vision. These included outreach to a range of individual and institutional stakeholders representing diverse interests within the community; two surveys that collected thousands of responses; and a series of meetings with the OCTA Citizens Advisory Committee, elected officials, and planning directors representing all areas of the county.

Chapter 4—Transit Opportunity Corridors

This chapter provides details of the analysis conducted for the identified ten TOCs where future investments in rapid transit might be most beneficial. This chapter summarizes the analysis process and makes recommendations on how to proceed with additional planning and design for these corridors.

Chapter 5—Transit Integration: Additional Services and Studies

This chapter includes recommendations for other types of transit service, including on-demand service, expansion of the OC Vanpool program, and enhancements to paratransit. A number of potential future studies for further research are also recommended.

Chapter 6—Transit-Supportive Design and Policies

This chapter summarizes guidance from the Transit-Supportive Design & Policies Handbook. The handbook is intended to assist cities, developers, and other potential OCTA partners as they implement land use changes, access improvements, and other programs and policies that support effective transit service.

Chapter 7—Action Plan and Next Steps

This chapter presents the Action Plan with implementation steps, costs, and funding options. It provides a roadmap for achieving the goals outlined in the previous chapters.

SECTION

2

CONTEXT FOR THE TRANSIT VISION

Transit planning in Orange County occurs as part of a larger planning process. The 2024 OC Transit Vision informs—and is informed by—many other efforts, including the recently updated OCTA Long-Range Transportation Plan (LRTP) known as *Directions 2045*, which plans for the future of all transportation modes in the county. Additionally, the analysis and recommendations described in the 2024 OC Transit Vision builds on work completed in the early stages of this planning process, specifically the State of OC Transit report. The following sections introduce the background and planning context for the 2024 OC Transit Vision.

2.1 OCTA'S LONG-RANGE TRANSPORTATION PLAN

OCTA completed *Directions 2045* in May 2023. The 2024 OC Transit Vision will ensure that recommendations in the 2024 OC Transit Vision support the overall goals of the LRTP.

Directions 2045 assesses Orange County's long-term transportation needs, forecasts its financial ability to meet those needs, and prioritizes the multimodal projects and programs that would be most effective in meeting them. In addition to its "constrained" plan, the LRTP also includes an "unconstrained" plan identifying additional projects that could be implemented with added funding.

The Paths to Success outlined by the LRTP provided six transportation strategies that either directly improve transit or support model and infrastructure improvements that will be essential to the success of transit. These include:

- Extend or Modify Programs funded by OC Go (also known as Measure M, a 30-year one half-cent sales tax for transportation improvements in Orange County from 2011 through 2041).
- Expand Transit Services.
- Enhance Active Transportation.
- Explore Mobility Integration.
- Embrace Technology.
- Elevate Maintenance and Resilience Priorities.

In addition to the Paths to Success, the LRTP has valuable information on goals, funding, and projects that will help provide a guide for overall development of the 2024 OC Transit Vision.

Upon completion of the 2024 OC Transit Vision, study recommendations will be assessed during the development of the next LRTP, *Directions 2050* to determine how OC Transit Vision projects fulfill goals set by the Paths to Success as well as voter-approved OC Go programs. A 2050 Preferred Plan will include

transportation projects that span short-term, mid-term, and long-term time horizons with a section dedicated to transit services. The Preferred Plan will analyze how all projects will perform over the long-term, including forecasted number of daily trips, households with access to high-capacity bus stops, number of transportation facilities, reduction in pollutant emissions, equitable access among other performance measures. The LRTP will forecast costs as well as funding strategies to implement the Preferred Plan.

A short-term action plan will identify which activities may be implemented over the next five years to support the Preferred Plan. The LRTP will also determine which transit projects may require more research, development, funding, and/or public input before being considered in future Preferred Plan scenarios. Examples may include Metrolink or OC Streetcar expansion.

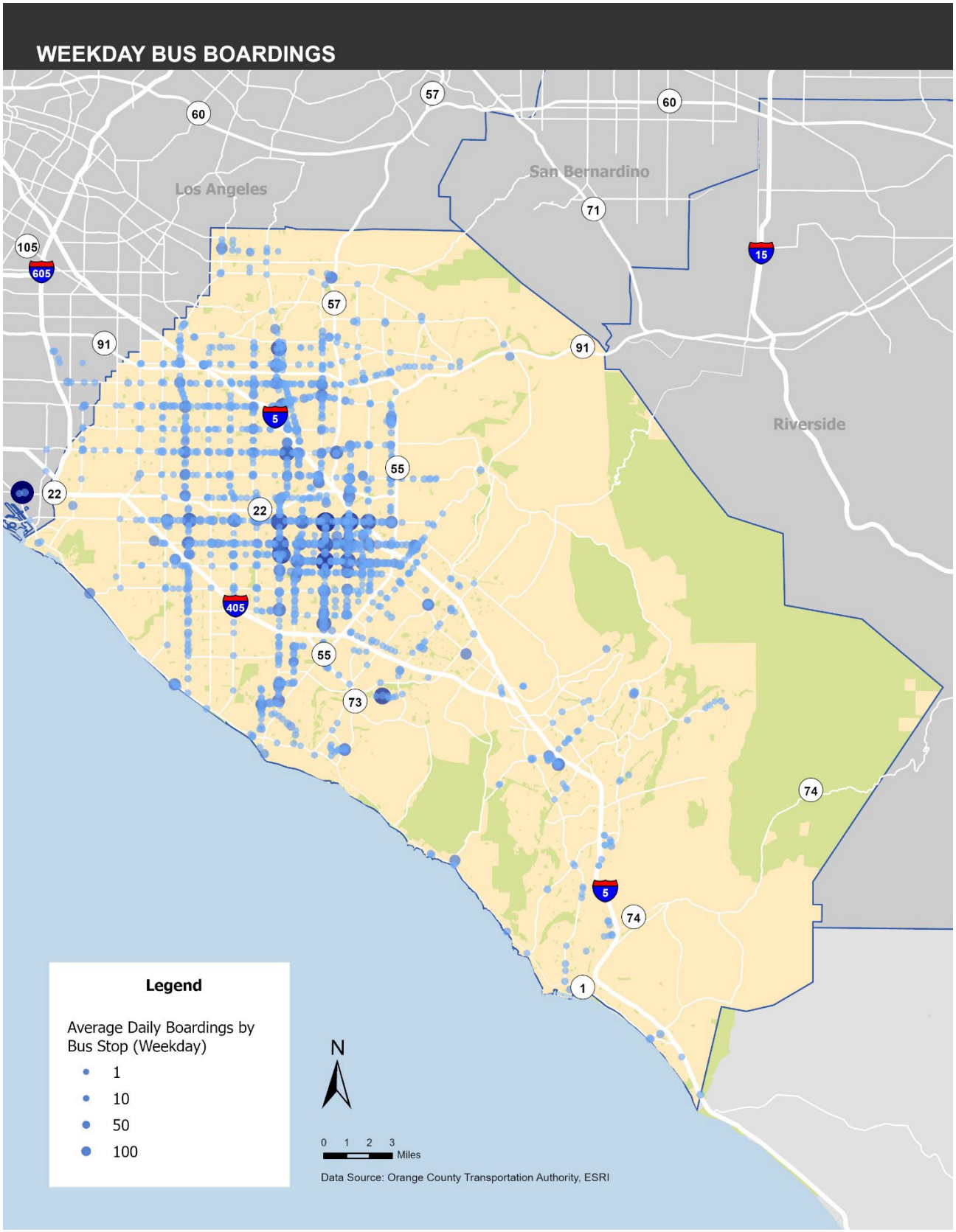
2.2 THE STATE OF OC TRANSIT

The first step in developing the 2024 OC Transit Vision is an in-depth analysis of the current state of transit in Orange County. The 2024 State of OC Transit report builds upon the 2017 State of OC Transit but reflects current conditions of transit in Orange County, changes in travel patterns after the coronavirus pandemic, and informs additional changes to the planning context since 2018. A complete analysis can be found in the 2024 State of OC Transit report in Appendix A. This section briefly reviews that report's key findings.

The majority of existing OC Bus ridership is concentrated in key corridors:

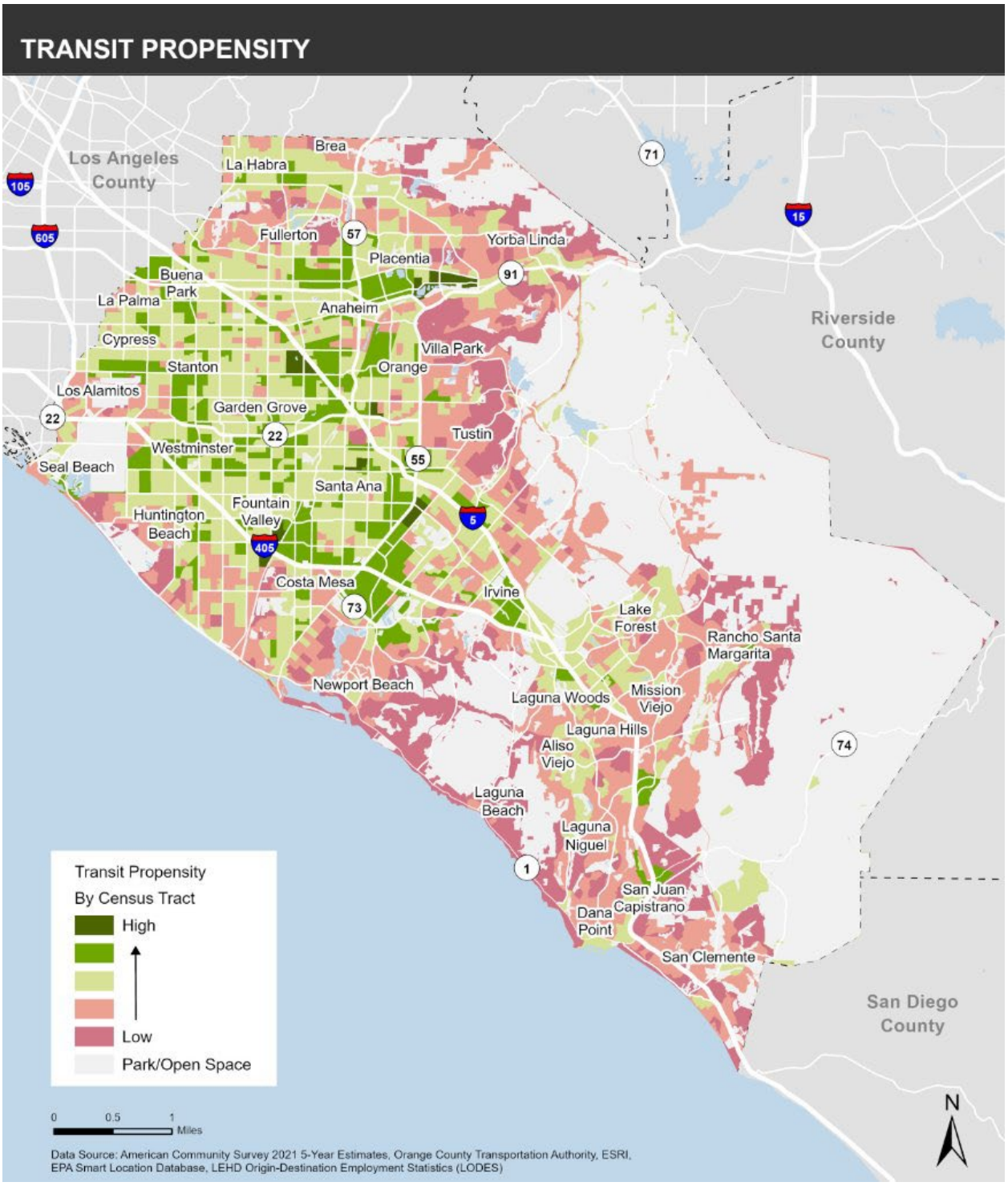
- OCTA currently operates 52 OC Bus routes, but just the top 10 routes carry 55 percent of weekday boardings. The top 20 routes carry 79 percent of weekday boardings. These figures explain how prioritizing transit enhancements in productive corridors improves service for the vast majority of riders. This high concentration of ridership was reflected in the development of the MBC Service Plan, which concentrates resources in the highest-demand portions of the OCTA service area. Figure 3 shows the average number of weekday boardings by OCTA bus stop in 2023.

Figure 3 Weekday Bus Boardings



- Most OC Bus service is concentrated in the central and north areas of the county, where denser neighborhoods and relatively flat topography are prevalent. The major job centers in South County as well as the overall transportation and land use environment there are predominately auto oriented and result in lower transit usage. Figure 4 shows an analysis of transit propensity in Orange County (based on the methodology described in the State of OC Transit and Appendix C).

Figure 4 Transit Propensity



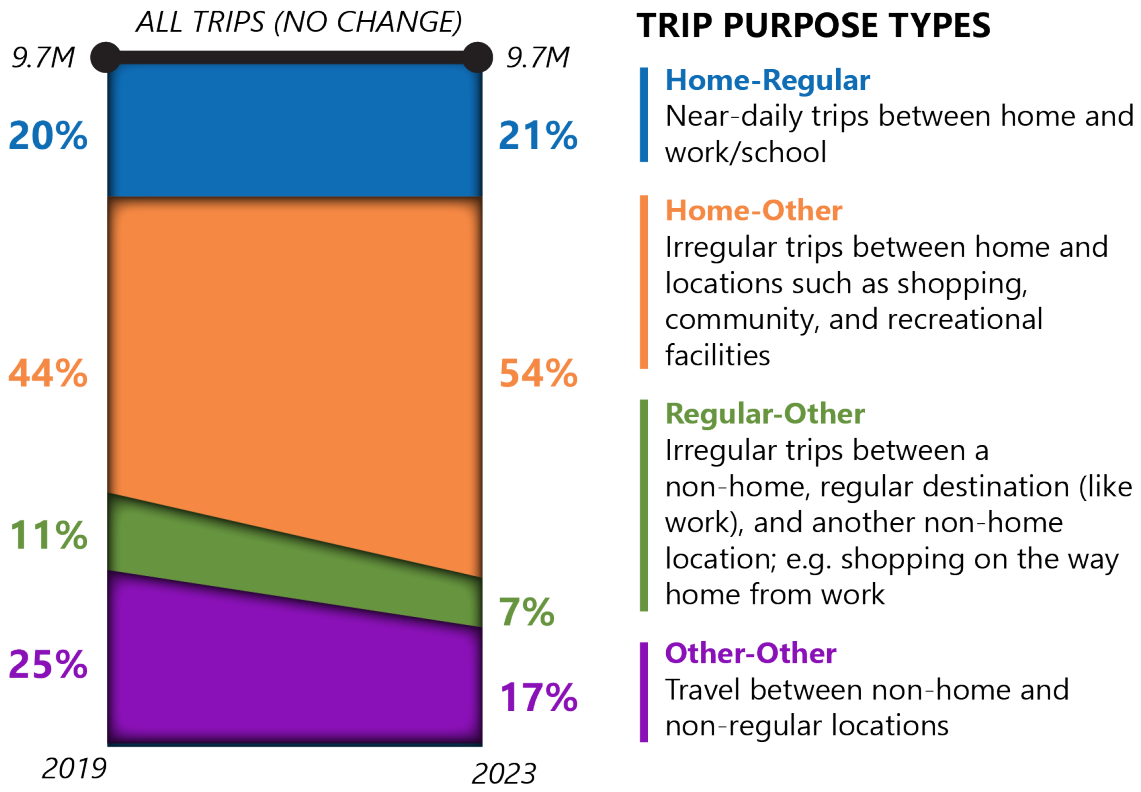
OC Bus service is focused on the weekday commuter market:

- In the past, travel patterns experienced periods of highest demand during weekday peak commute periods, or rush hours, followed by late mornings and early afternoons on weekdays. Since the coronavirus pandemic, demand has become more consistent throughout the day. Weekend demand is typically high among beach communities and theme parks. The MBC Plan, which is currently in the process of being implemented, changes the network to better reflect these changing travel patterns.
- OCTA provides limited evening service with service frequency reductions following the evening peak period. The MBC Plan, however, will expand bus frequency later in the evening and on weekends (on certain routes) to provide additional access for riders.
- OCTA provides special event and holiday service. These services are typically used by people who do not regularly ride transit (or choice riders) and—if provided effectively—can serve as a gateway to more regular transit use.

Changing Travel Patterns—LOCUS data:

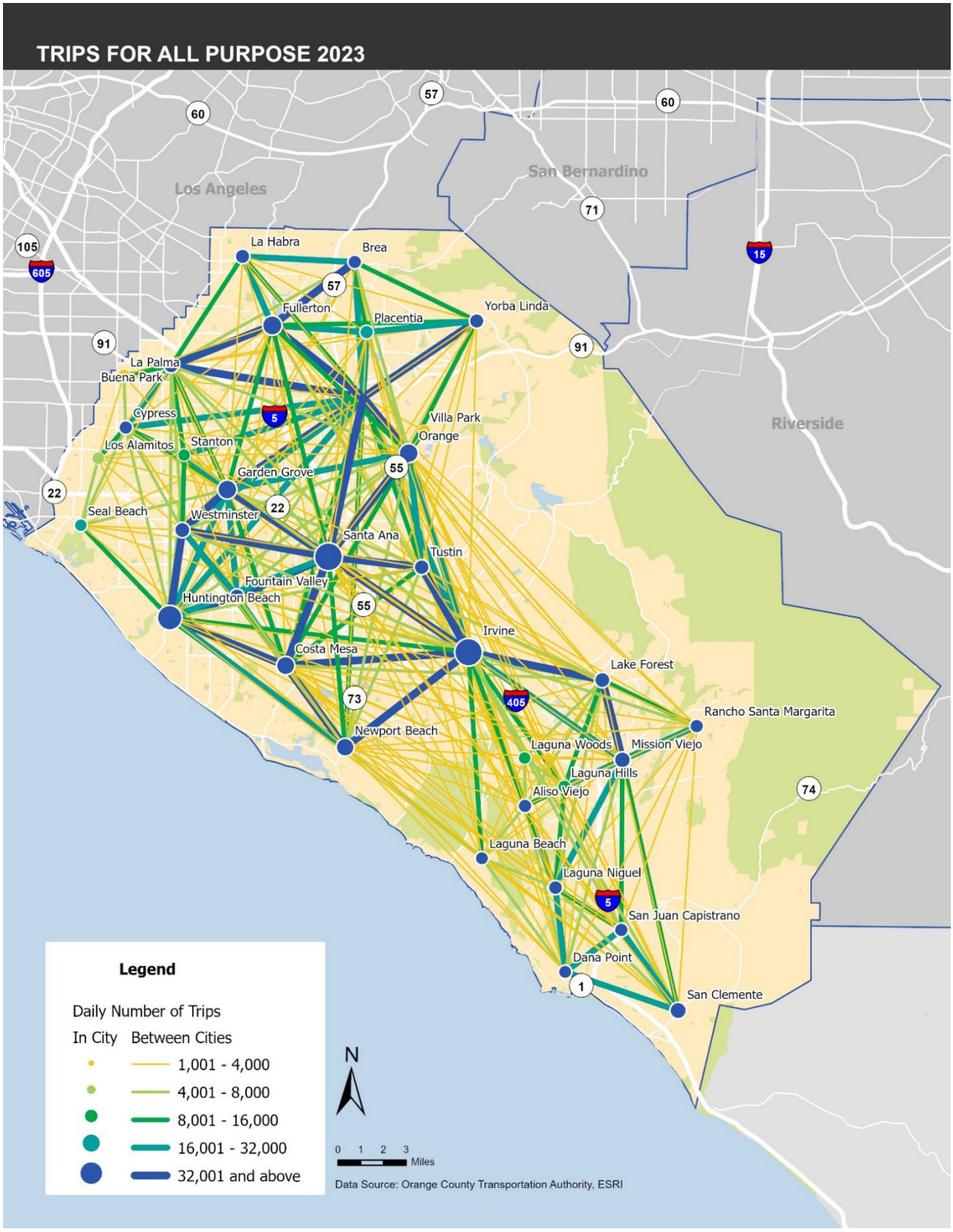
- The coronavirus pandemic changed travel patterns. Work from home and remote work flexibility for employees and students has altered when, where, and by what modes people travel. To help understand where people are traveling now, the 2024 OC Transit Vision uses anonymized Location-Based Services data (LOCUS). The LOCUS data and subsequent analysis illustrates that there are still important nodes and travel trends in Orange County that continue from before the pandemic to today.
- As part of an overall understanding of travel patterns, this study also looks at other transit agencies that operate in Orange County. This includes Metrolink, who saw demand for rail travel change since the pandemic. During the 2022–2023 fiscal year, Metrolink recorded approximately 40 percent of pre-pandemic ridership at Orange County stations.
- Figure 5 illustrates that travel patterns remained relatively stable between 2019 and 2023, with the total number of trips (all modes) remaining largely unchanged. The data also provides information on trip purpose. Below are the definitions for each trip purpose and their respective trip trend information. While all trips remained unchanged between 2019 and 2023, the mix of trip purposes evolved. Figure 5 shows that Home-Regular trips (like work/school) increased slightly. The greatest jump was between Home-Other travel. Regular-Other trips or travel between a non-home, regular destination (work/school) and another non-home location declined markedly. These travel shifts are likely due to remote work and school schedules since the pandemic which altered how people travel between regular and non-regular destinations.

Figure 5 Total Trips (All Modes) by Purpose 2019–2023



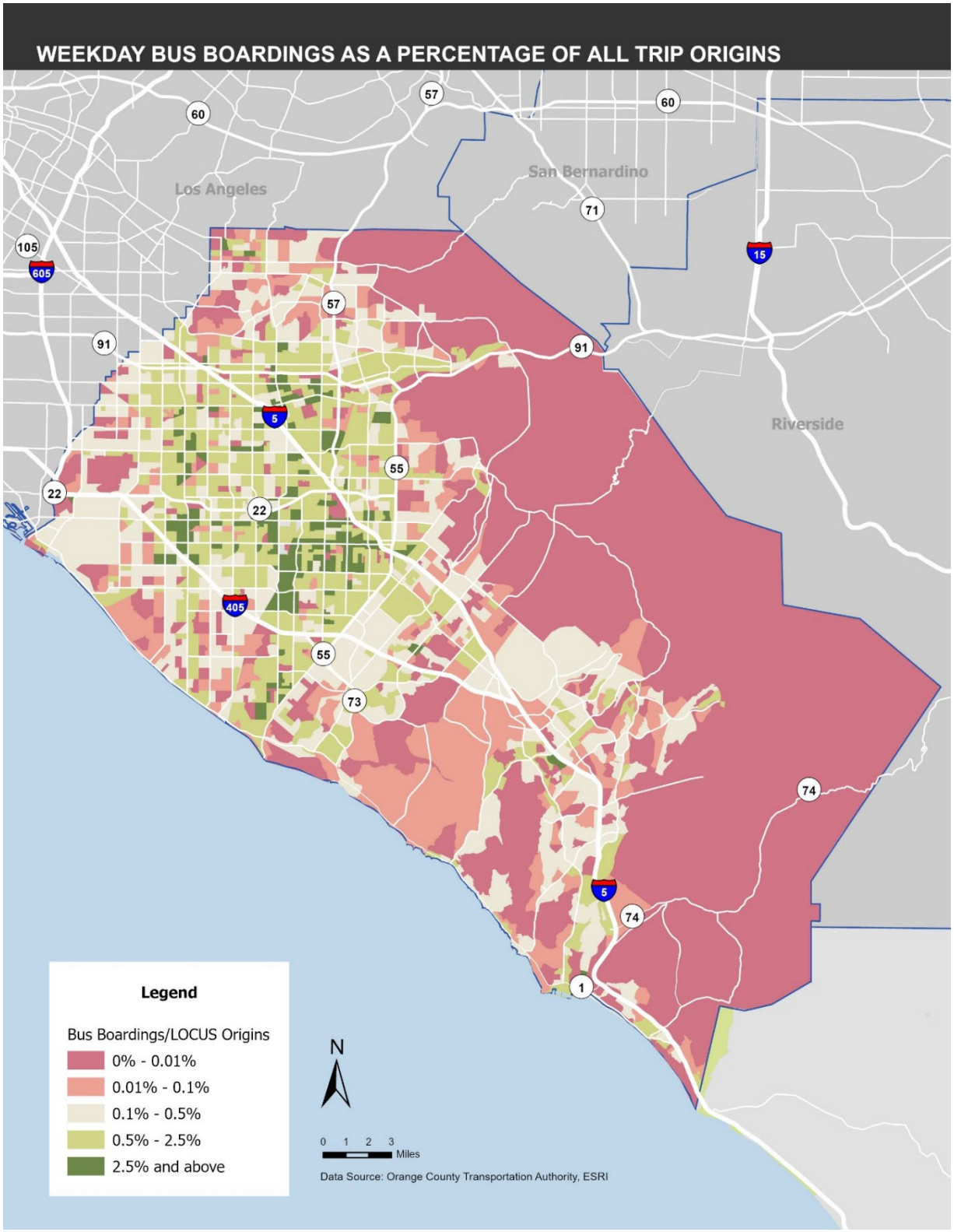
- Figure 6 illustrates the daily number of trips (all modes) between cities. The larger the node, the more trips originate from that city. The width and color show the number of trips between the nodes. This information provides an understanding of how people are traveling within Orange County and do not include regional trips outside the county.

Figure 6 Weekday Travel Flows by City



- Figure 7 illustrates the market share for bus travel by showing the percentage of OCTA bus boardings to all trip mode origins using LOCUS data. The dark green areas highlight locations that have the highest percentage of bus boardings compared to overall travel in that area.

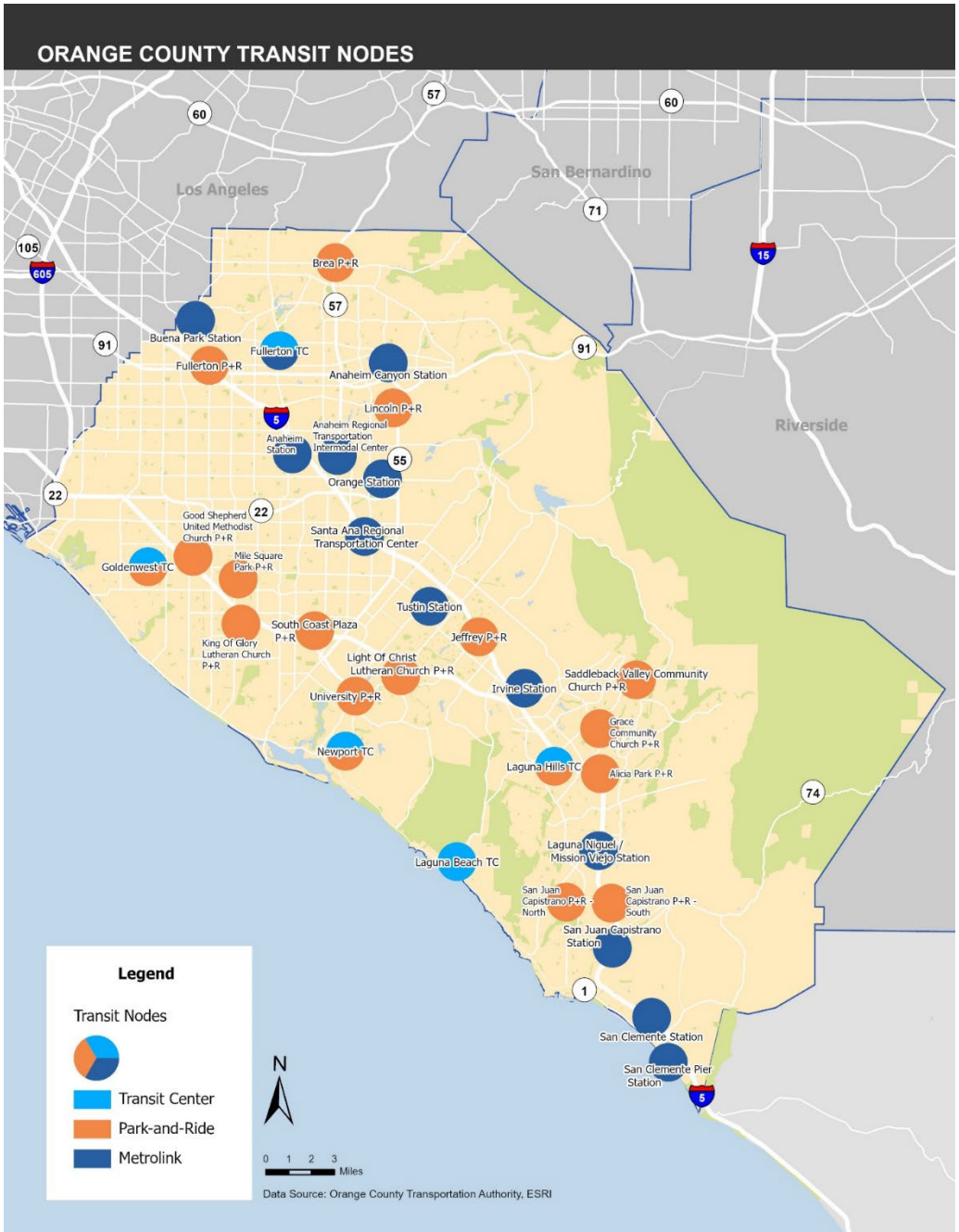
Figure 7 Weekday Bus Boardings as a Percentage of All Trip Origins



OC Bus service focuses on a select number of hubs:

- OCTA, Caltrans, and Orange County cities operate more than 30 intermodal transfer facilities, ranging from Metrolink stations to park-and-rides. While these facilities serve as transfer points between multiple transportation modes (such as bus-to-train, car-to-bus, and bus-to-bus), riders also arrive on foot and bike, making multimodal access to these facilities an area for attention. Figure 8 shows the locations of Orange County's transit nodes.

Figure 8 Orange County Transit Nodes



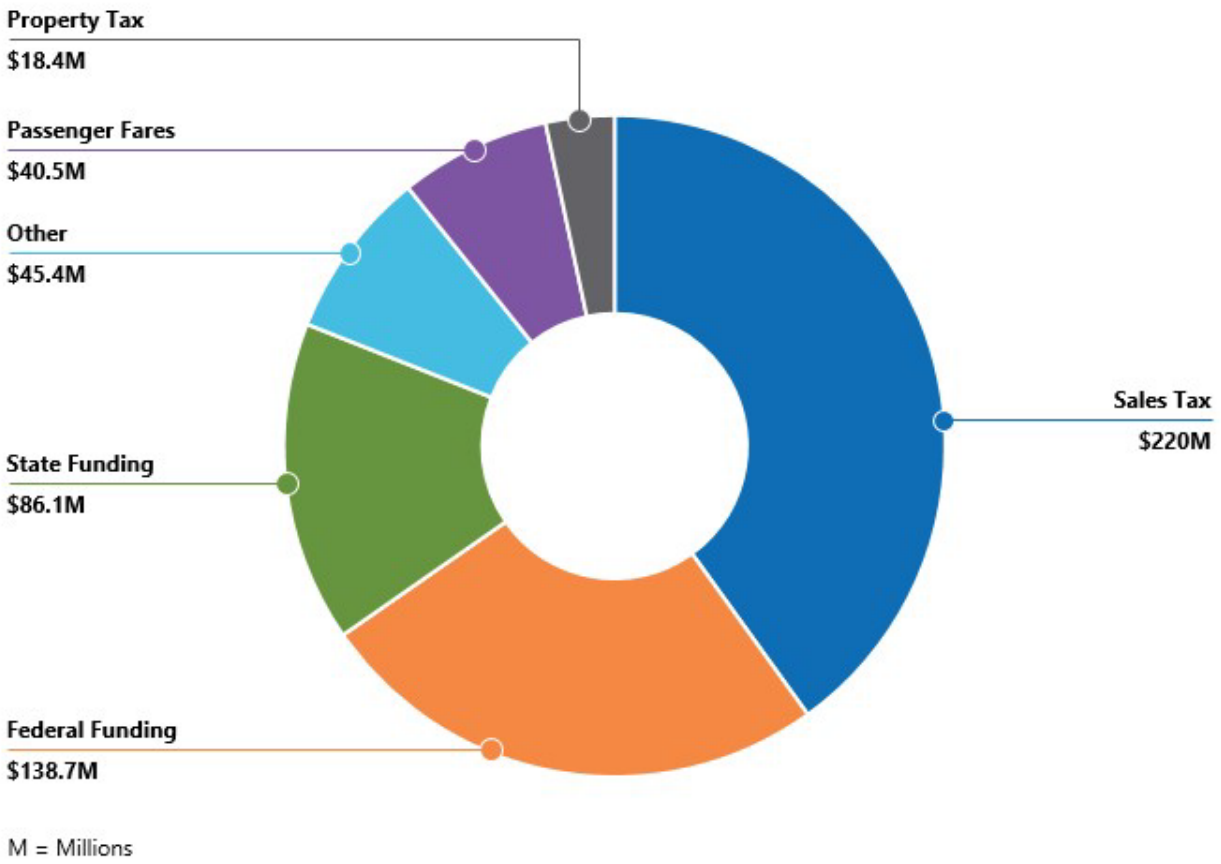
OCTA has been taking steps to address changing travel patterns since the coronavirus pandemic:

- The agency is tailoring service focused on fixed-route bus lines along its most productive corridors and exploring creative mobility solutions in other areas. The 2024 OC Transit Vision considers a range of modes for other priority corridors, including rapid bus and BRT.
- OCTA's work on enhancing transit services and fare programs has led to a full recovery of ridership on the OC Bus system in 2024.
- OCTA has emphasized connectivity through mobility hubs that integrate multiple modes to promote regional, local, and first/last mile travel options.

Limited funding and a recent driver shortage have constrained OCTA's ability to boost service to attract ridership:

- In addition to changes in travel patterns since the pandemic, funding constrains OCTA's ability to expand service. Figure 9 illustrates OCTA's revenue sources in 2023. Passenger fares account for a small portion of OCTA transit funding, and the agency relies heavily on local and state sales taxes and other external funding sources, such as federal or regional grants, which can be volatile at times.

Figure 9 OCTA Bus and Paratransit Revenues (2023)



- OCTA, along with most transit agencies throughout the U.S., experienced an operator shortage coming out of the pandemic. This was a constraint for OCTA to restore and expand service in the near term. Strategies such as consolidating service onto the highest-demand corridors, where frequency can be increased to attract ridership, were considered as part of the MBC Plan. In 2024, operator recruitment rebounded, and OCTA is monitoring resources before fully implementing MBC in 2025.

Land uses and demographics in Orange County—as well as Orange County's overall transportation network—present both challenges and opportunities for effective transit service:

- While South County is primarily suburban, much of the central and northern parts of the county exhibit some attributes of urban areas, including racial and economic diversity, pockets of density, and major employment centers.
- The county features major destinations, including college campuses, retail centers, and unique recreational attractions such as Disneyland, Knott's Berry Farm, and popular beaches. These recreational destinations are busiest on weekends when there is traditionally less transit service. Moreover, these major destinations are dispersed across the county rather than concentrated in a traditional downtown core.
- The northern part of the county presents a well-connected street grid suitable for both transit and walking. However, wide, and high-speed arterials discourage walking. The image below shows a typical Orange County intersection at which pedestrians must cross many lanes of traffic.
- South County has a more disconnected street network that creates out-of-direction pedestrian pathways. The irregular street network in South County and its auto-oriented land-use patterns make it challenging to serve effectively with transit.

Intersection at Bristol St. and 17th St.

Long-term trends are moving towards a greener and cleaner future, presenting challenges and opportunities:

- OCTA has purchased new zero-emission buses (ZEBs) and is on track to replace its current fleet with all ZEB buses by 2040. While the change is positive for the environment, ZEB technology is still evolving, and OCTA may need to modify its operations to accommodate a full ZEB fleet.
- OCTA has partnered with smartphone app developers to provide customers with a number of different features to improve transit information and services. As technology improves smartphones will be an important tool in providing a well-connected and convenient transit system for customers. Real-time information, trip planning tools, fare payment, and other features will be better integrated.
- Connectivity may be further enhanced through mobility hubs and the development of an active transportation network. Mobility hubs integrate multiple transportation modes at one location, improving access to regional travel and first/last mile options. E-bikes and micromobility modes such as scooters offer opportunities to expand transit access beyond traditional modes of cycling and walking.
- Transportation Network Companies (TNCs) such as Uber and Lyft could play a role in improving connectivity by providing an alternative to traditional fixed-route service to lower-demand areas. Similarly, advanced technologies such as autonomous vehicles, artificial intelligence, and transit signal priority could reduce travel times and improve overall efficiency for the entire transportation network.
- Enhancing the network (in both frequency and geographic reach) will be key for increasing ridership and helping the region achieve its VMT and mode shift goals, thereby reducing GHG emissions.

SECTION

3

OUTREACH SUMMARY REPORT

3.1 EXECUTIVE SUMMARY

Community engagement and stakeholder feedback was an integral part of building and updating the 2024 OC Transit Vision. As part of the recent 18-month study, a comprehensive community outreach program was conducted to inform and engage stakeholders of the Plan and receive feedback. These informative opportunities included two virtual webinars and multiple briefings and presentations with key stakeholder groups. Two surveys were also developed and conducted to gauge the public's input on their travel patterns and transit corridor preferences. Throughout the engagement periods, the outreach team promoted the draft Plan and survey questions at dozens of community and cultural events as well as through post and digital advertisements in Orange County. Feedback from the engagement efforts was used to develop and identify transit priorities for the 2024 OC Transit Vision.

Community Engagement Approach

A comprehensive and flexible outreach plan was developed at the start of the Plan development to outline the outreach strategies used to gather feedback from stakeholders and the public during the three key project milestones. The three project milestones included:

- **Phase 1**—Development of the State of OC Transit Report.
- **Phase 2**—Development of Project Recommendations.
- **Phase 3**—Draft Project Recommendations.

The engagement plan also outlined the anticipated timeline, identified target audiences, and detailed strategies for effectively engaging with them. Inclusive outreach strategies prioritized connecting with underserved communities while ensuring broad reach across the county.

Phase 1 of the approach focused on gathering feedback from OCTA committees, including the Community Advisory Committee, Diverse Community Leaders Group, and Accessible Transit Advisory Group. Individual key stakeholder interviews were also held to gauge input and recommendations in a focused setting. Informational resources, including website updates and trilingual fact sheets, were also developed to inform stakeholders of the Plan.

Phases 2 and 3 included engagement with the general public and two qualitative surveys. The first survey, conducted from October 11 to November 12, 2023, focused on travel patterns and Plan feedback. The second

survey centered on transit corridors and was implemented from May 3 through July 14, 2024. Each survey period included additional meetings and briefings with OCTA committees, community leaders, planning directors, and elected officials to inform about the Plan development and outreach strategies and encourage feedback. In addition, two virtual webinars were held to update the public on the Plan development, gather feedback, and answer questions.

To expand outreach to underserved communities, notification efforts for each survey used both traditional and digital methods, including newspaper advertisements, emails, organic social media posts, and a promotional digital toolkit. These efforts were further broadened by engaging with stakeholders at community and cultural events and distributing flyers at key locations such as community centers and libraries. The second survey introduced additional tactics, including bus interior advertising and promotion of the Plan on the OC Bus App. The notification approach aimed to engage a diverse range of stakeholders and incorporate their feedback in the Plan development process.

Diversity Outreach

A key objective of the outreach plan was to ensure strategies were designed to engage with communities that have been historically underserved and underrepresented. It was essential to OCTA and the Plan that feedback received reflected the range of diverse stakeholder populations in the county. To that end, the outreach plan focused on engaging members of the communities from various backgrounds, age groups, and socioeconomic status. Reaching diverse audiences was made possible by targeting cultural events, collaborating with community leaders from diverse Orange County organizations, conducting stakeholder interviews, and promoting the survey on OCTA buses to reach current transit riders. A dedicated effort was also made to engage multilingual residents. All informational materials, including fact sheets, surveys, and webinar presentations, were translated into Spanish and Vietnamese. Newspaper advertisements were placed in prominent Spanish and Vietnamese newspapers. In addition, the public webinars offered simultaneous interpretation in Spanish, Vietnamese, and American Sign Language (ASL) languages to ensure accessibility for a wider audience.

Key Themes

The following is a summary of key themes collected from stakeholders on transit mobility.

- The top three preferred transit service considerations included more frequent services on major routes, fast bus service, and service to more areas, including lower-usage areas.
- The top three transit improvements the community would like to see include high-capacity rail, BRT, and increased OC Bus service.
- The top five corridors preferred for potential transit improvements include Harbor Blvd., Beach Blvd., Garden Grove Blvd., Katella Ave., and Main St.
- Non-bus riders do not ride because the bus takes too long and does not take them where they need to go.
- Focus on improving systemwide efficiency and accessibility.

Engagement Highlights

Comprehensive outreach efforts were conducted throughout the study. The highlights of the combined outreach efforts for both phases and meeting details are as follows:

Figure 10 Community Engagement Highlights

Please see **Appendix B** to view the complete public engagement report.

SECTION

4

TRANSIT OPPORTUNITY CORRIDORS

This chapter focuses on the TOCs selected for potential future high-capacity transit investments in Orange County. It provides an overview of high-capacity transit, the rationale behind focusing on TOCs, the process for identifying and prioritizing these corridors, and a summary of the public outreach efforts that informed the selection.

4.1 TRANSIT OPPORTUNITY CORRIDORS - OVERVIEW

Transit Opportunity Corridors (TOCs) or High-capacity transit refers to transit modes that can efficiently move large numbers of people quickly and reliably. These modes typically include:

- **Bus Rapid Transit (BRT)**—Enhanced bus service that operates on dedicated lanes or with signal priority, offering faster and more frequent service with fewer stops.
- **Light Rail Transit (LRT)**—Electrically powered rail systems that typically operate on dedicated tracks, often in urban areas.
- **Streetcar**—A rail-based vehicle that operates on city streets, often sharing space with car traffic, and typically serving shorter distances than LRT.
- **Rapid Bus**—Bus service that is similar to BRT but does not operate in dedicated transit lanes. Target measures to improve transit priority may include queue jump lanes and signal priority.

OCTA is prioritizing high-capacity transit corridors to address several critical needs in Orange County. Desired outcomes from high-capacity transit can be tied to measurable performance such as increased daily ridership, on-time adherence, faster travel time, or increased service frequency.

First, TOCs provide opportunities to expand transit service in the densest areas of the county, connecting disadvantaged communities and promoting economic growth. Additionally, by offering efficient and attractive transit options in high-demand areas, TOCs can more effectively compete with single-occupancy vehicles and attract new riders.

TOCs also play a vital role in improving regional mobility by creating strong connections at Metrolink and Amtrak stations and with partner transit agencies in surrounding counties. Finally, as Orange County continues to grow, TOCs will provide more frequent connections to local and community bus routes to help reduce travel times throughout the county.

4.2 SELECTION PROCESS

Identifying priority corridors for high-capacity transit in Orange County is crucial for long-term transportation planning. To maximize the impact of future investments, OCTA used a process that combines data analysis with stakeholder engagement and public outreach. This approach ensures that TOCs are selected based on a balance of factors, including ridership potential, equity considerations, community input, and cost efficiency, ultimately yielding the greatest benefit for Orange County. As we shift towards high-capacity transit options through TOCs, the reliance on single-occupancy vehicles can be reduced and congestion alleviated. Additionally, investments in high-capacity transit are intended to support community development by improving regional connectivity, stimulating the economy, and increasing access to employment and essential services.

To translate these objectives into action, OCTA implemented a process that combined data analysis with stakeholder input and public feedback.

1. **Data Collection and Analysis**—Extensive data was gathered on travel patterns, demographics, existing transit service, and land use. This data was used to identify 24 potential corridors with high ridership potential and alignment with community needs.

2. **Corridor Scoring and Ranking**—A multifactor scoring system was used to evaluate and rank 12 potential corridors based on seven criteria—trip intensity, equity, existing ridership, mode share, key destinations, transit propensity index, and intercity travel.

3. **Stakeholder Engagement**—OCTA actively engaged with stakeholders, including city officials, community groups, and residents, to gather input and feedback on countywide transit needs and the 12 TOCs.

4. **Public Outreach**—A comprehensive public outreach campaign was conducted to inform the community about the project and solicit feedback on countywide transit needs and TOC preferences. This included online surveys, webinars, pop-up events, and digital media engagement.

5. **Draft Corridor Refinement and OCTA Review**—Presented the initial set of draft corridors to OCTA's CEO and Planning Staff for review and feedback, then presented the draft corridors to the relevant OCTA committees and Board for further review and direction.

6. **Final Selection**—Based on a final screening using ten criteria, including public feedback, a final selection of ten TOCs was made, ensuring that the chosen corridors align with community priorities and offer the greatest potential for successful transit investment.

Methodology

Overview

This analysis applied a weighted scoring methodology to objectively prioritize transit corridors. Ten criteria, detailed below, were used to rank each corridor in order of relative importance. Each criterion was assigned a

weight reflecting its relative importance, determined through stakeholder engagement. These weighted scores were aggregated to produce a composite score for each corridor, enabling unique ranking and prioritization. This approach minimized subjectivity, ensuring that transit investments were guided by measurable factors and aligned with community needs and countywide transportation goals.

Criteria Definitions and Methodology

- **Boardings per Mile**—Projected ridership per mile by year 2050. Average ridership projections for BRT and rapid bus were applied to each corridor.
- **Trip Intensity**—Density of trip origins and destinations within a quarter-mile buffer of the corridor, derived from the LOCUS dataset. Block group trip intensity was calculated by dividing the total number of trips originating or ending in the block group by the land area.
- **Equity**—Density of population with income below 150 percent of the poverty line within a quarter-mile buffer of the corridor, derived from the American Community Survey 5-year dataset.
- **Existing Ridership**—Density of transit boardings within a quarter-mile buffer of the corridor, based on Q1 2022 boardings data provided by OCTA.
- **Mode Share**—Ratio of transit boardings to trip origins within a quarter-mile buffer of the corridor, calculated using OCTA boardings data and the LOCUS dataset.
- **Outreach Results**—Percentage of survey respondents who listed the corridor in their top 5 transit priorities. Only the top 12 (short list) corridors were included in the survey.
- **Cost per Passenger**—Estimated cost of the corridor divided by the projected 2050 corridor ridership. Cost per mile was based on estimated BRT capital costs as defined in the previous Harbor Blvd. study and the LRTP and escalated to 2024 dollars. Lower cost per passenger received higher scores.
- **Key Destinations**—Average score of the top 2 key destinations (employment centers, educational institutions, etc.) within a quarter-mile buffer of the corridor. Key destinations were identified through stakeholder involvement and scored based on the density of LOCUS trip ends within a quarter-mile buffer.
- **Transit Propensity Index (TPI)**—Average TPI score of block groups within a quarter-mile buffer of the corridor. TPI measures the likelihood of residents to use transit based on demographic factors and accessibility.
- **Intercity Travel**—Total number of trips between city pairs served by the corridor, derived from the LOCUS dataset. City jurisdictions were used as catchment areas for trip totals.

Calculating Corridor Scores

To calculate the final scores for each block group, we first identified and gathered the relevant variables and data sources. Then, we calculated the score for each block group based on the gathered data. Next, we assigned

each block group a quintile score ranging from 1 to 5. The quintile bins are shown in Table 1. We then created a quarter-mile buffer for each corridor and spatially joined it to find the block groups that intersect the corridor buffer. The criteria are outlined in the table below.

Table 1 Methodology and Information

				Bin Upper Bound—Quintile Scores			
Criteria	Units	Coefficient	Aggregation	1	2	3	4
Boardings per Mile (2050)	Boardings/ mi	0.18	–	Long List Corridors[2]	577	673	770
Trip Intensity—Block group density of LOCUS trip ends (O and D)	Trips/sq mi	0.16	Block group average	29.5	45.4	63.5	93.2
Equity—Block group density of pop (income < 150% of poverty)	Persons/sq mi	0.15	Block group average	0.22	0.71	1.65	3.99
Existing Ridership—Block group density of boardings	Boardings/ sq mi	0.13	Block group average	0	N/A[1]	0.07	0.4
Mode share—Block group ratio of boardings to LOCUS origin trips	Boardings/ Trips	0.11	Block group average	0	N/A[1]	0.26	1.16
Outreach Results—Percentage of Responders who listed Corridor in Top 5	Percentage	0.09	–	Long List Corridors[2]	23.25	27.00	31.00
Cost per passenger—Cost of Corridor divided by Projected Ridership (2050)	$/Passenger	0.07	–	Long List Corridors[2]	28,083	24,101	20,218
Key Destinations—Top 2 Destinations' LOCUS trip ends in quarter mile buffer	Trips	0.05	Average scores of Top 2 destinations	32,038	47,536	62,189	84,367
Transit Propensity Index	–	0.04	Block group average	2.35	2.80	3.17	3.49
Intercity Travel—LOCUS City O-D Pair Trip Totals	Trips	0.02	Trip totals of city pairs	75,012	169,570	232,876	401,156

[1] *More than 40 percent of block groups have a raw value of 0, so categorical value 2 was not used.*

[2] *Long List Corridors were not surveyed for the outreach results and were not included in the modeling of the projected rider increase, so their scores were set to the default value of 1.*

Weighting and Scoring

To calculate the final composite score, a weighted sum approach was employed. The highest-ranked criterion was assigned a weight of 10, the second highest a weight of 9, and so on, with the lowest-ranked criterion receiving a weight of 1. The score for each criterion was multiplied by its corresponding weight, and the resulting

weighted scores were summed. This sum was then divided by 55 (the sum of the weights) to normalize the composite score to a range of 1 to 5.

Community Input

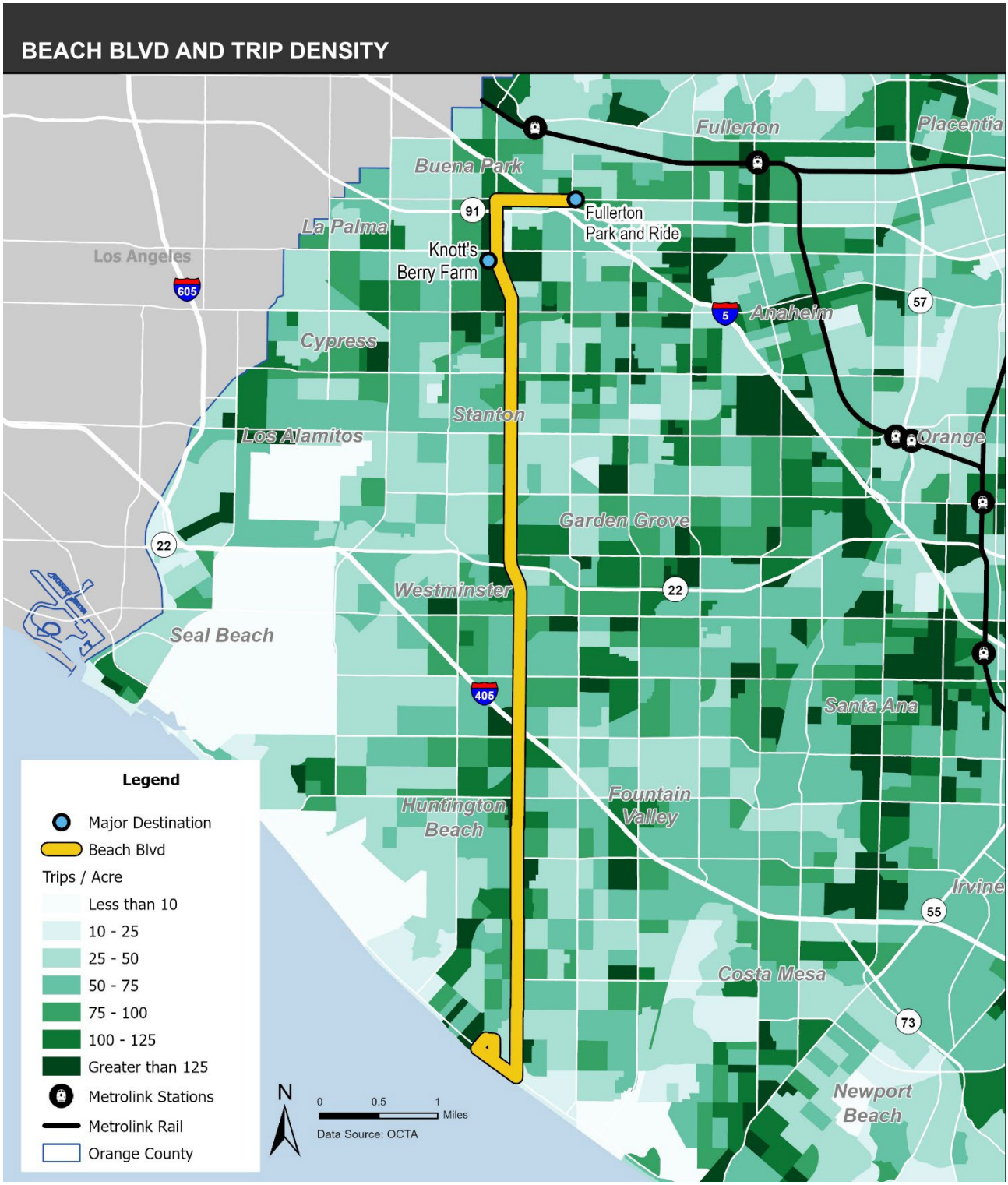
As outlined in Chapter 3, OCTA employed a public outreach campaign to gather feedback for the 2024 OC Transit Vision, with a focus on community identification of TOCs. While the initial draft identified 12 potential corridors, the survey helped to refine and confirm the final selection. In the survey, respondents were asked to select their top five priority corridors. The percentage of respondents who chose each corridor was then factored into the overall scoring criteria used to determine the final TOC selections. Specific concerns and priorities raised by the public, such as the need for improved connectivity, access to key destinations, and equitable service distribution, were considered in the evaluation and prioritization of corridors.

Top Ten Transit Opportunity Corridors

Corridors with the highest composite scores are shortlisted. The Plan incorporates individual corridor profiles for each prioritized transit corridor. These profiles offer a concise summary of key corridor attributes, including final ranking, composite score, length, significant destinations served, and associated municipalities. An overview of corridor performance across the individual evaluation criteria provides stakeholders with an at-a-glance assessment of relative strengths and weaknesses. Figure 11 shows the top ten TOCs, while Figures 12-21 highlight each corridor with density of total travel trips per acre. Detailed supporting information regarding the scoring methodology, data sources, and quintile bins employed for each criterion is available in Appendix C.

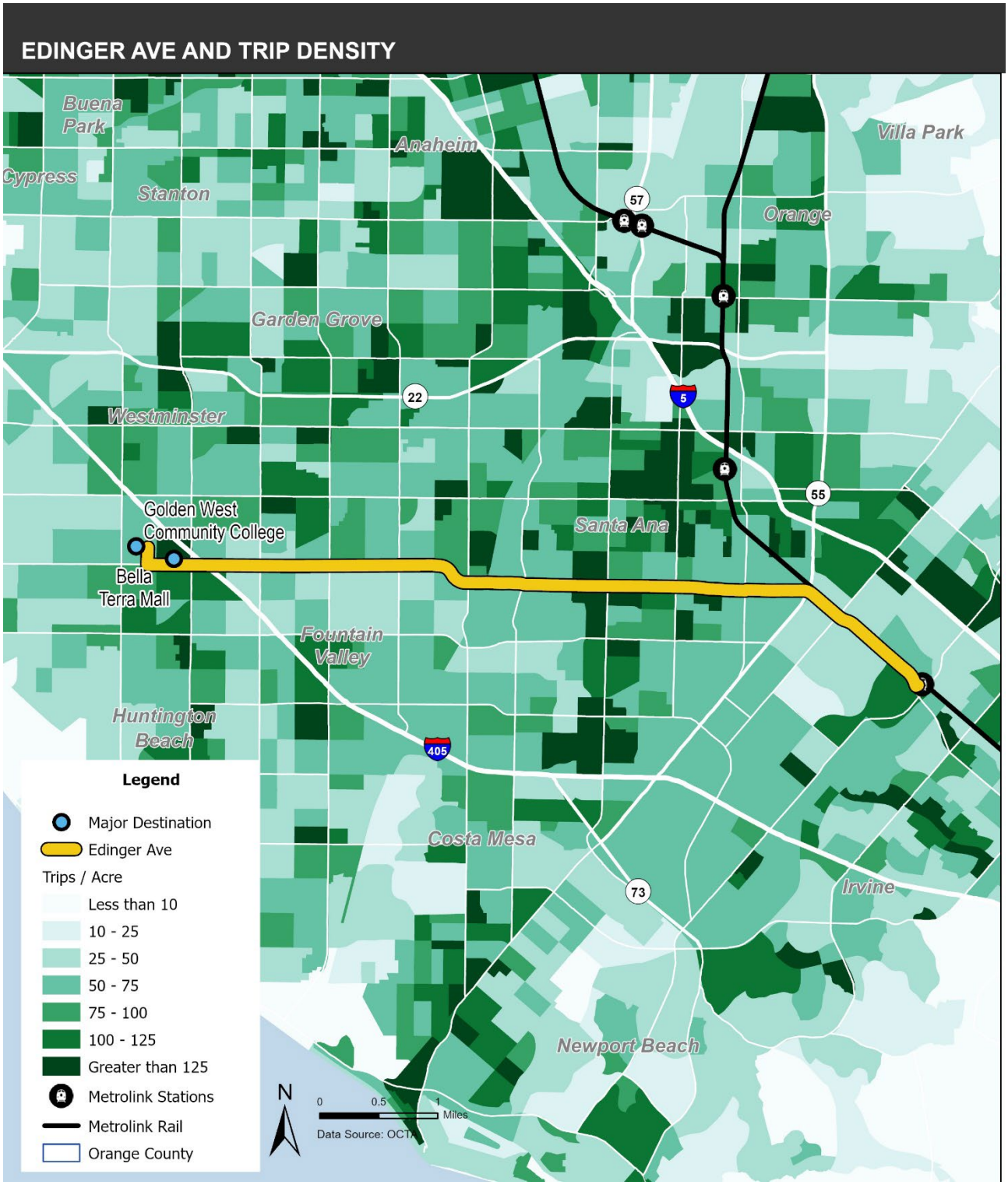
Figure 11 Top 10 Transit Opportunity Corridors

Figure 12 Beach Blvd.—Corridor Profile



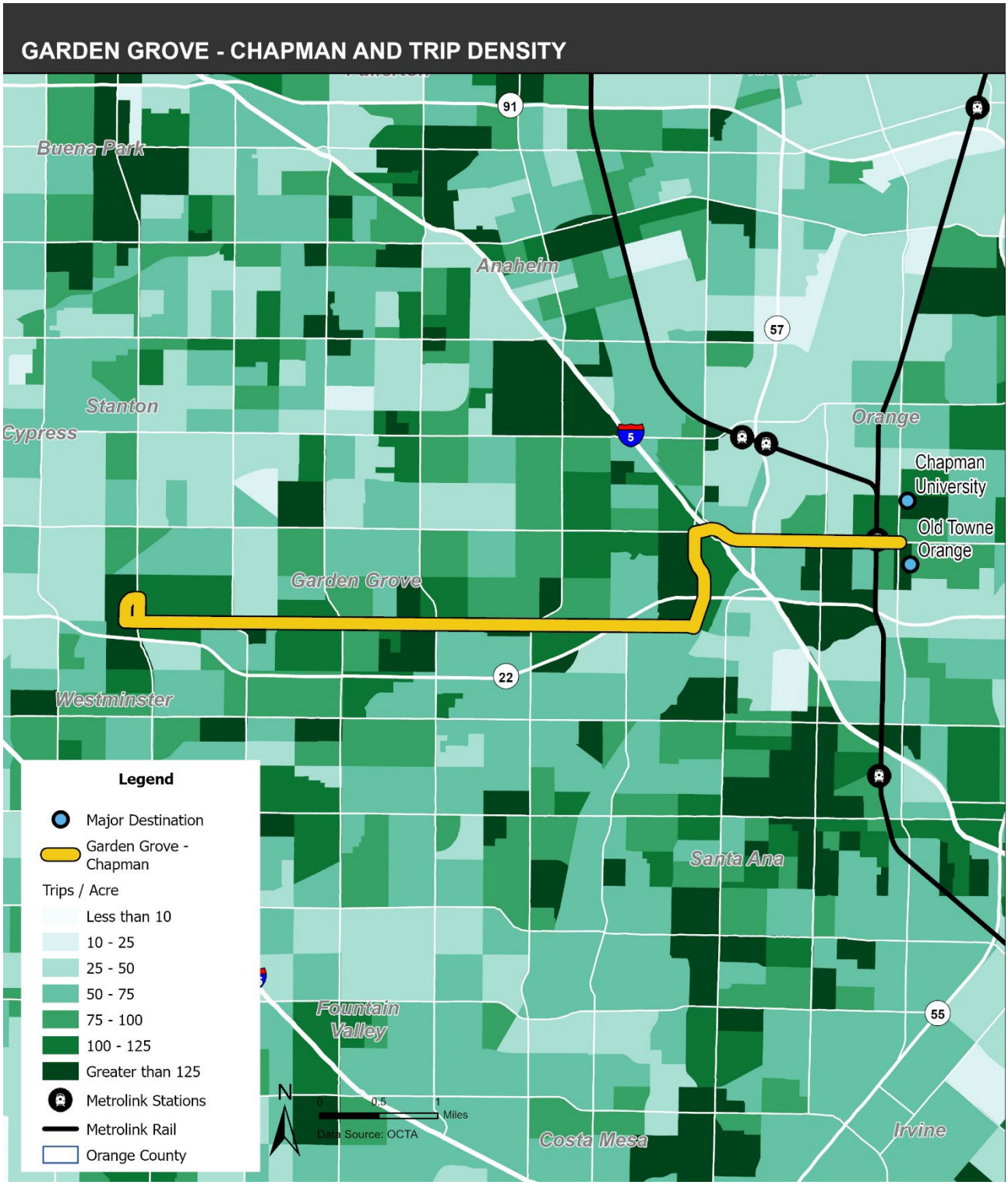
Name	Beach Blvd.
Length	17 miles
Local Routes Along Corridor	29 & 529
Current Local Bus Frequency	24 & 30 minutes (peak)
Proposed Operational Characteristics	
Weekday Hours	4:00 a.m.–1:00 a.m.
Weekday Peak	10 minutes
Weekday Off-peak	15 minutes
Weekend Hours	5:00 a.m.–1:00 a.m.
Weekend Peak	15 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.28 miles to 0.54 miles
Scoring Criteria	
Composite Score	4.06
Trip Intensity	3.82
Equity	3.88
Existing Ridership	3.76
Mode Share	3.66
Outreach Surveys Ranked in Top 5	43%
Cost Per Passenger	$21,466/passenger
Key Destinations (Top 2)	Fullerton Park and Ride, Knott's Berry Farm
Transit Propensity Index	4.24
Intercity Travel (Top 2 Pairs)	Fullerton-Anaheim, Garden Grove-Westminster
Ridership Modeling	
Baseline 2050 (no changes)	9,400
Rapid Bus	9,000
BRT	13,900

Figure 13 Edinger Ave.—Corridor Profile



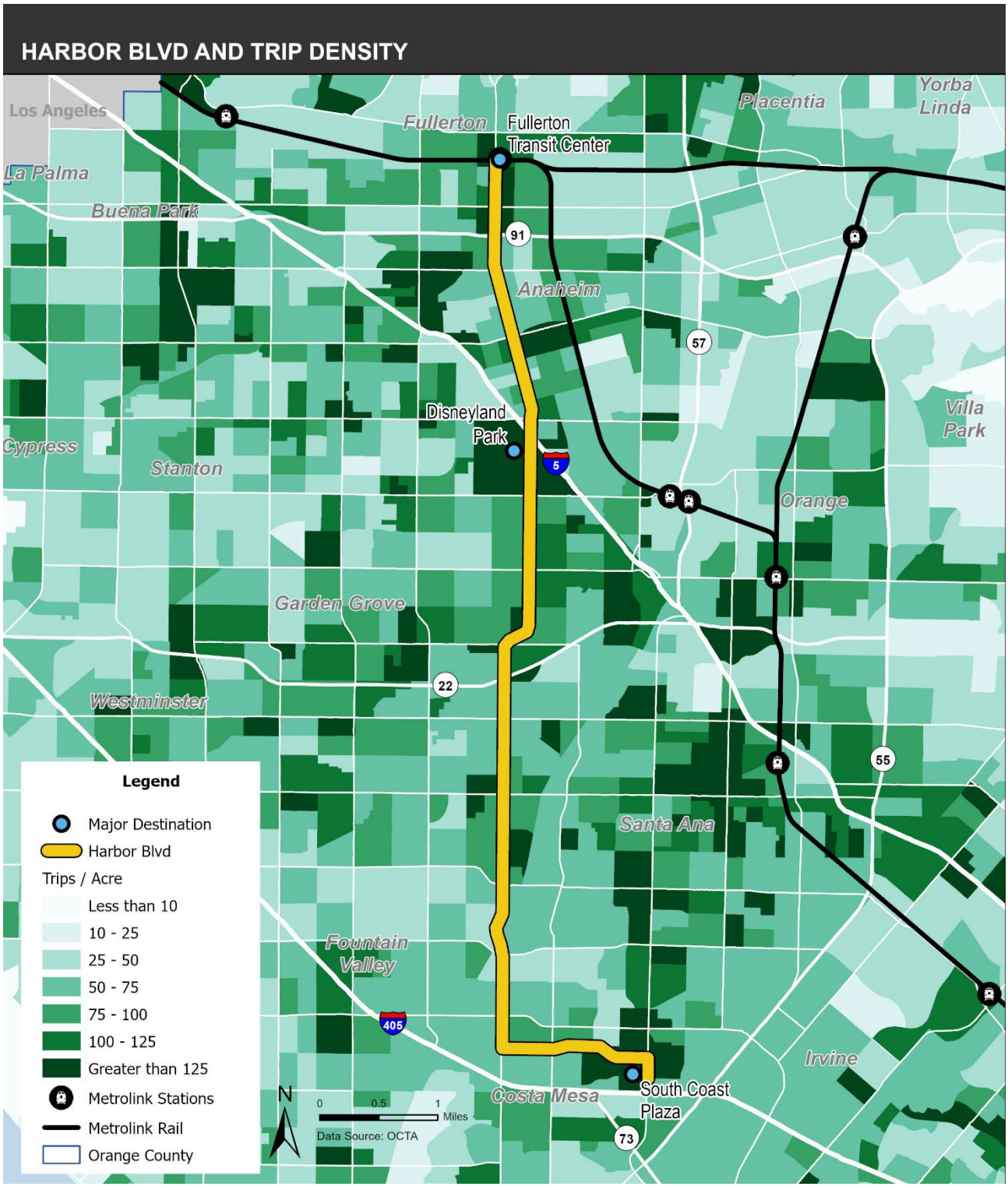
Name	Edinger Ave.
Length	12.2 miles
Local Routes Along Corridor	70
Current Local Bus Frequency	20 minutes (peak)
Proposed Operational Characteristics	
Weekday Hours	5:00 a.m.–12:00 a.m.
Weekday Peak	15 minutes
Weekday Off-peak	20 minutes
Weekend Hours	6:00 a.m.–11:00 p.m.
Weekend Peak	20 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.28 miles to 0.50 miles
Scoring Criteria	
Composite Score	3.30
Trip Intensity	3.65
Equity	3.68
Existing Ridership	4.14
Mode Share	4.07
Outreach Surveys Ranked in Top 5	27%
Cost Per Passenger	$43,204/passenger
Key Destinations (Top 2)	Bella Terra Mall, Golden West College
Transit Propensity Index	4.11
Intercity Travel (Top 2 Pairs)	Huntington Beach-Fountain Valley, Westminster-Huntington Beach
Ridership Modeling	
Baseline 2050 (no changes)	2,200
Rapid Bus	2,800
BRT	5,300

Figure 14 Garden Grove-Chapman—Corridor Profile



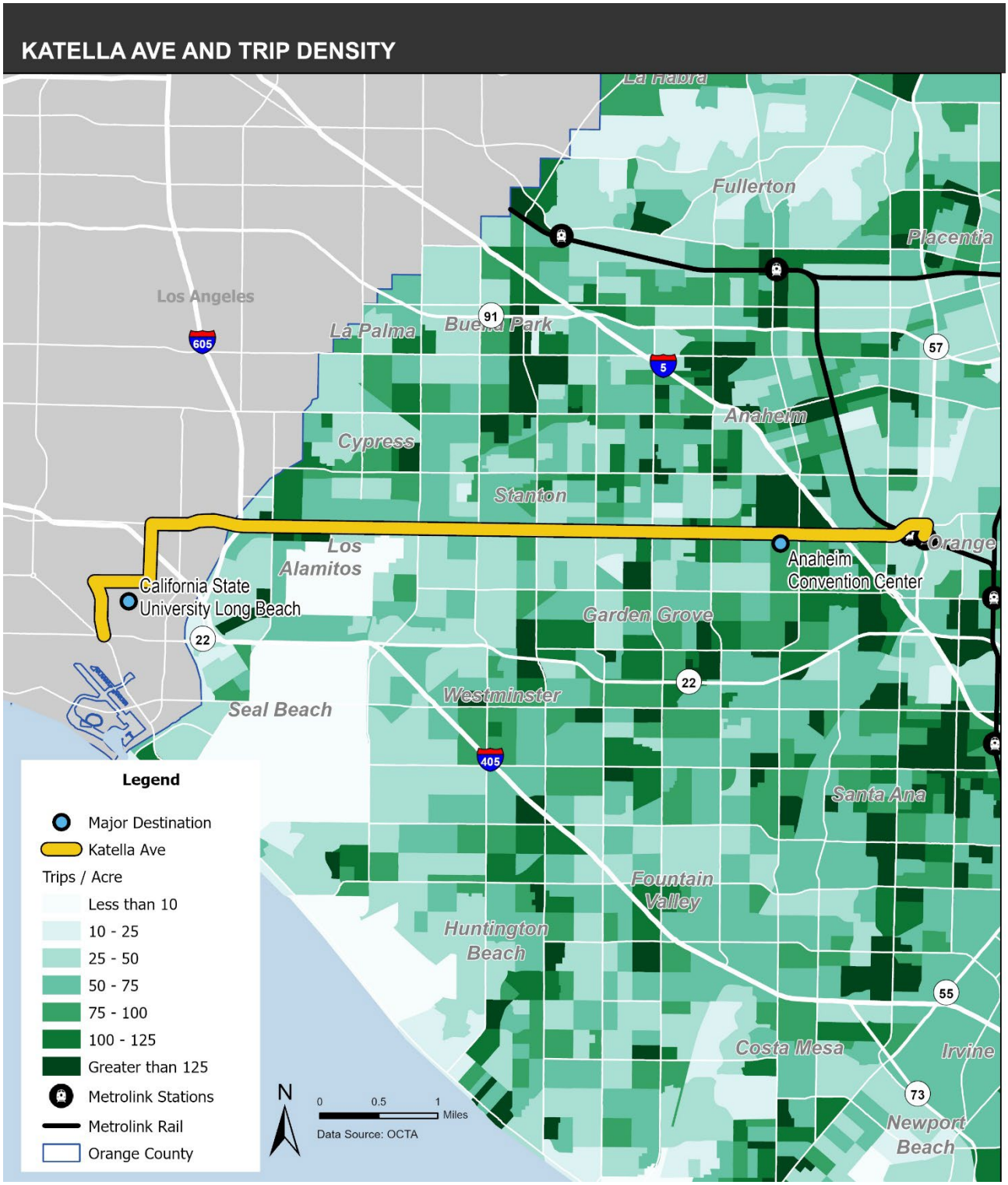
Name	Garden Grove-Chapman
Length	9.9 miles
Local Routes Along Corridor	56
Current Local Bus Frequency	30 minutes
Proposed Operational Characteristics	
Weekday Hours	5:00 a.m.–12:00 a.m.
Weekday Peak	15 minutes
Weekday Off-peak	20 minutes
Weekend Hours	6:00 a.m.–11:00 p.m.
Weekend Peak	20 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.24 miles to 0.48 miles
Scoring Criteria	
Composite Score	3.31
Trip Intensity	4.19
Equity	3.98
Existing Ridership	3.58
Mode Share	3.51
Outreach Surveys Ranked in Top 5	31%
Cost Per Passenger	$45,130/passenger
Key Destinations (Top 2)	Chapman University, Old Towne Orange
Transit Propensity Index	4.11
Intercity Travel (Top 2 Pairs)	Garden Grove-Westminster, Garden Grove-Stanton
Ridership Modeling	
Baseline 2050 (no changes)	800
Rapid Bus	1,700
BRT	3,900

Figure 15 Harbor Blvd.—Corridor Profile



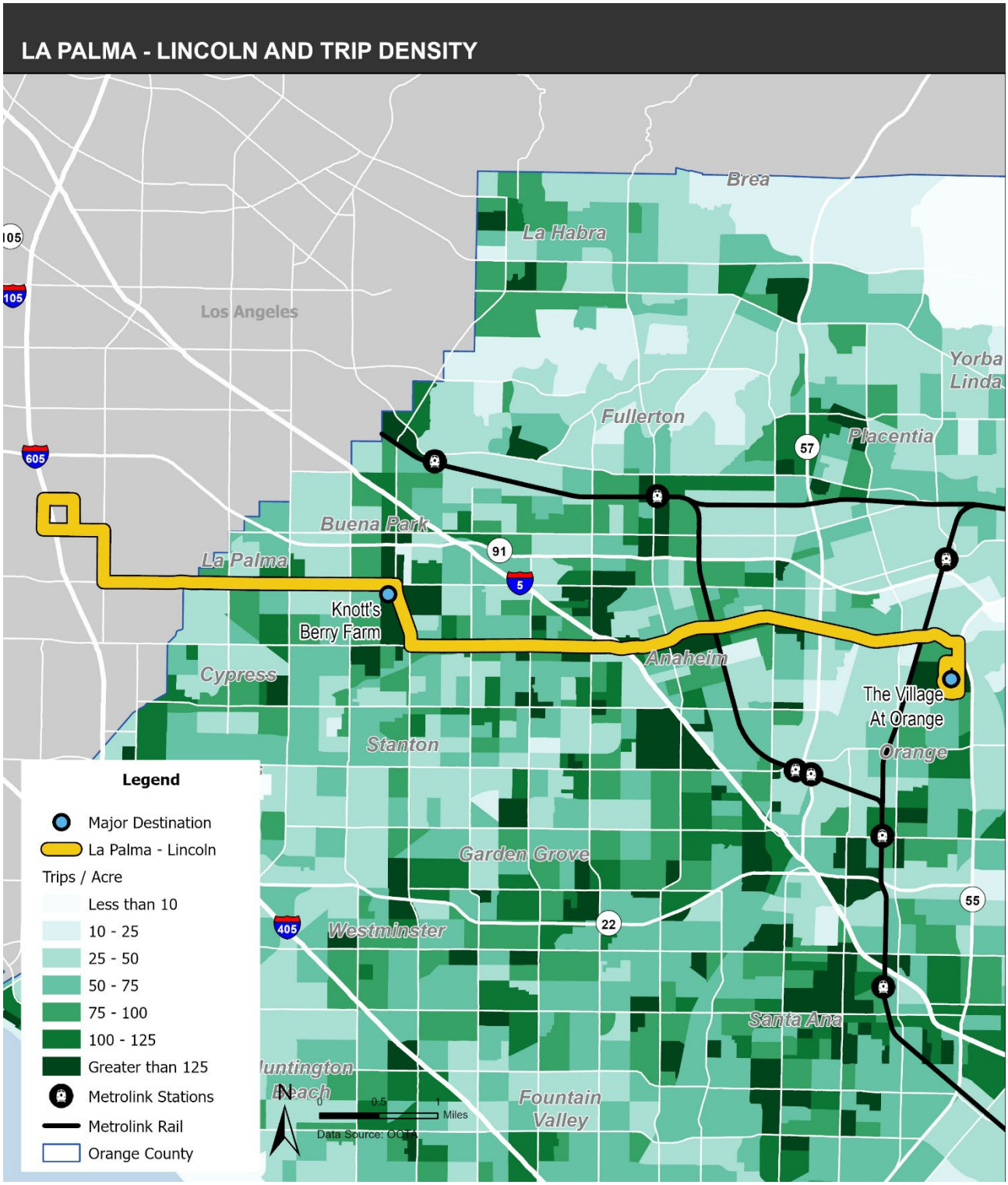
Name	Harbor Blvd.
Length	16 miles
Local Routes Along Corridor	43 & 543
Current Local Bus Frequency	20 & 20 minutes (peak)
Proposed Operational Characteristics	
Weekday Hours	4:00 a.m.–1:00 a.m.
Weekday Peak	10 minutes
Weekday Off-peak	15 minutes
Weekend Hours	5:00 a.m.–1:00 a.m.
Weekend Peak	15 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.28 miles to 0.66 miles
Scoring Criteria	
Composite Score	4.11
Trip Intensity	4.02
Equity	3.55
Existing Ridership	3.87
Mode Share	3.83
Outreach Surveys Ranked in Top 5	46%
Cost Per Passenger	$20,895/passenger
Key Destinations (Top 2)	Disneyland, Fullerton Transit Center
Transit Propensity Index	4.39
Intercity Travel (Top 2 Pairs)	Anaheim-Garden Grove, Fullerton-Anaheim
Ridership Modeling	
Baseline 2050 (no changes)	8,500
Rapid Bus	9,000
BRT	13,400

Figure 16 Katella Ave.—Corridor Profile



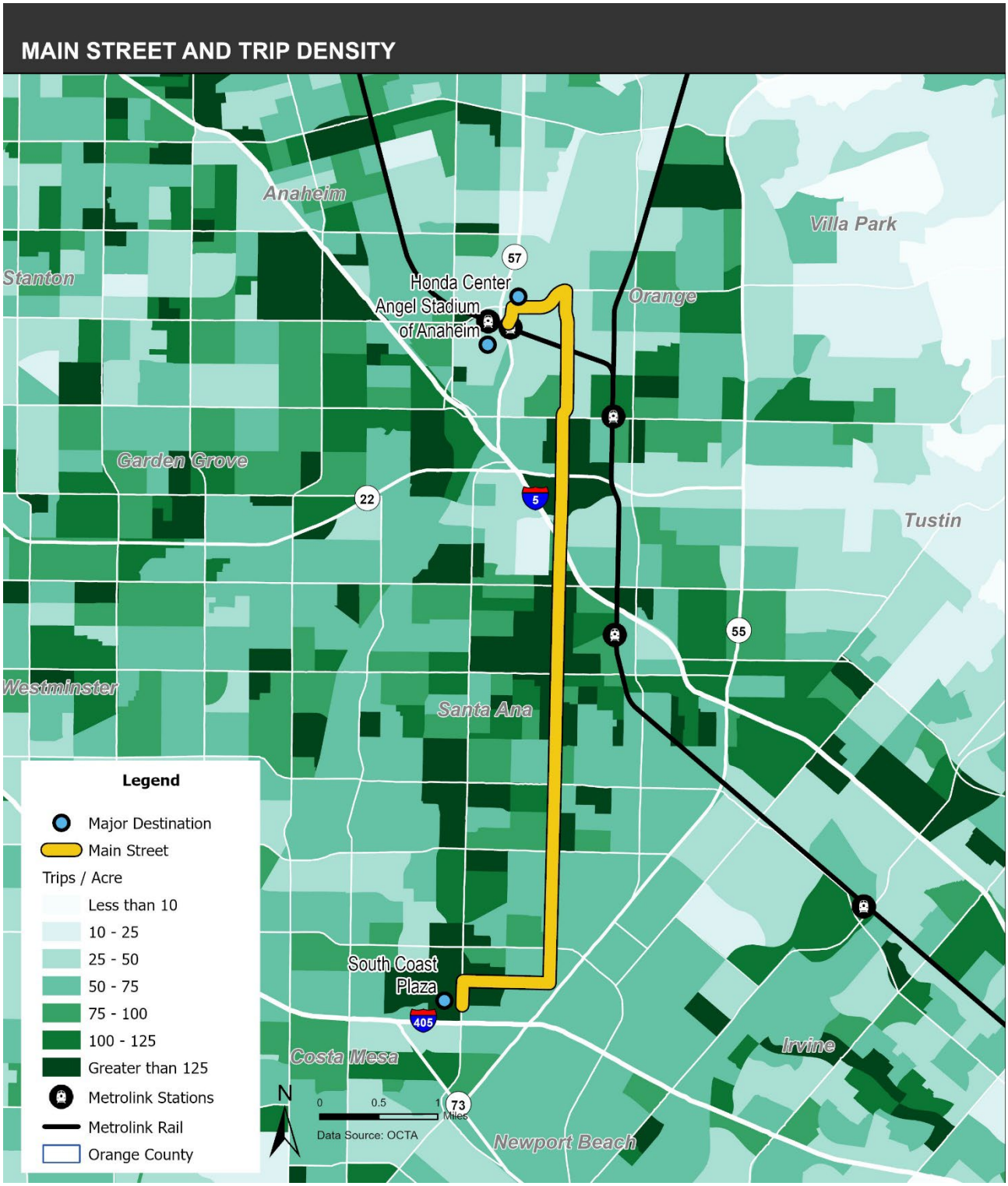
Name	Katella Ave.
Length	16.8 miles
Local Routes Along Corridor	50
Current Local Bus Frequency	20 minutes (peak)
Proposed Operational Characteristics	
Weekday Hours	5:00 a.m.–12:00 a.m.
Weekday Peak	15 minutes
Weekday Off-peak	20 minutes
Weekend Hours	6:00 a.m.–11:00 p.m.
Weekend Peak	20 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.33 miles to 0.72 miles
Scoring Criteria	
Composite Score	3.63
Trip Intensity	3.44
Equity	3.81
Existing Ridership	3.47
Mode Share	3.49
Outreach Surveys Ranked in Top 5	31%
Cost Per Passenger	$22,946/passenger
Key Destinations (Top 2)	Anaheim Convention Center, California State University Long Beach
Transit Propensity Index	4
Intercity Travel (Top 2 Pairs)	Anaheim-Garden Grove, Garden Grove-Stanton
Ridership Modeling	
Baseline 2050 (no changes)	6,200
Rapid Bus	8,000
BRT	12,700

Figure 17 La Palma-Lincoln—Corridor Profile



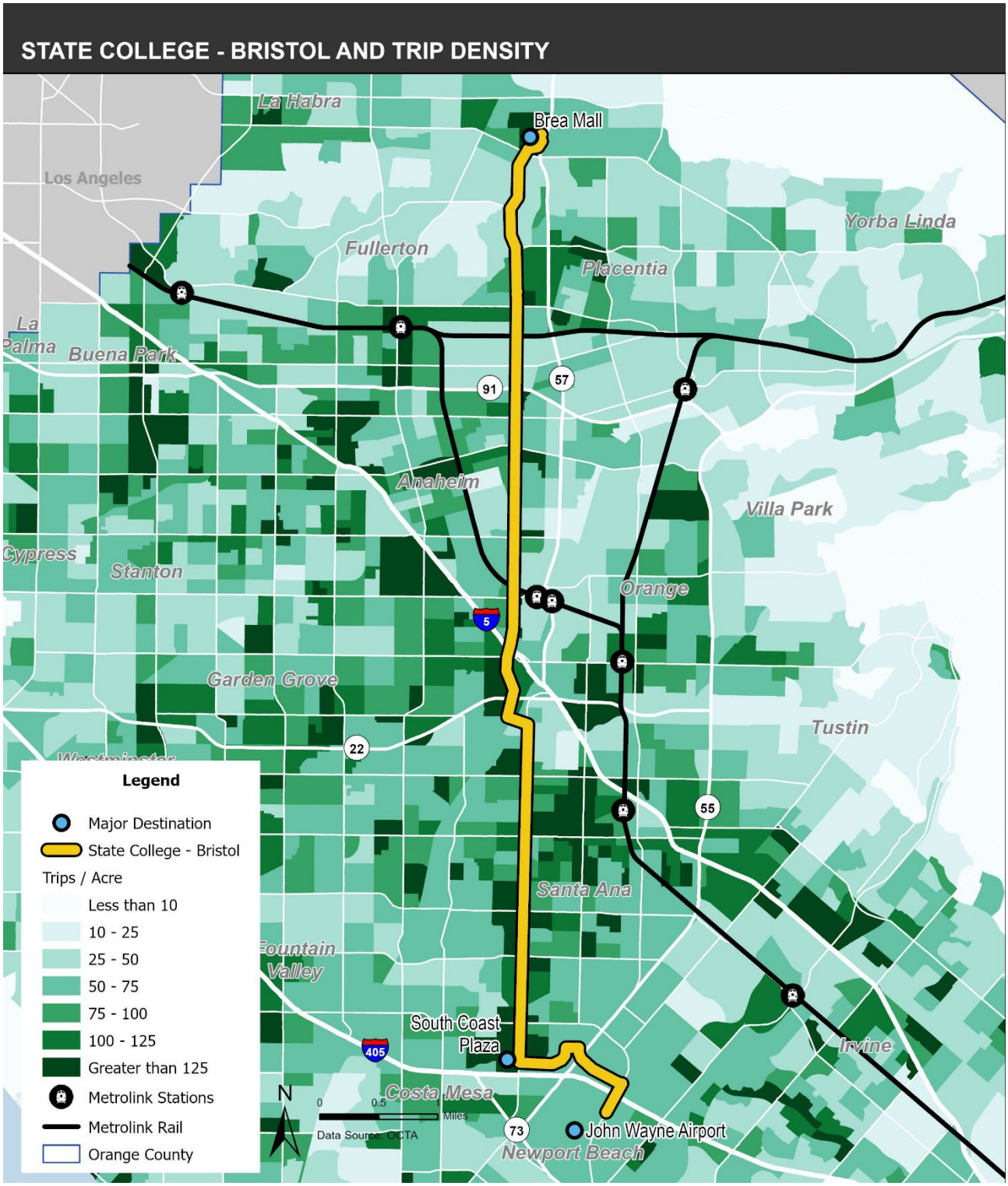
Name	La Palma-Lincoln
Length	18.8 miles
Local Routes Along Corridor	38 & 42
Current Local Bus Frequency	20 & 15 minutes (peak)
Proposed Operational Characteristics	
Weekday Hours	5:00 a.m.–12:00 a.m.
Weekday Peak	15 minutes
Weekday Off-peak	20 minutes
Weekend Hours	6:00 a.m.–11:00 p.m.
Weekend Peak	20 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.28 miles to 0.44 miles
Scoring Criteria	
Composite Score	3.49
Trip Intensity	3.65
Equity	4.20
Existing Ridership	3.00
Mode Share	2.99
Outreach Surveys Ranked in Top 5	25%
Cost Per Passenger	$27,986/passenger
Key Destinations (Top 2)	Knott's Berry Farm, The Village At Orange
Transit Propensity Index	3.79
Intercity Travel (Top 2 Pairs)	Orange-Anaheim, Anaheim-Buena Park
Ridership Modeling	
Baseline 2050 (no changes)	10,700
Rapid Bus	10,700
BRT	10,400

Figure 18 Main St.—Corridor Profile



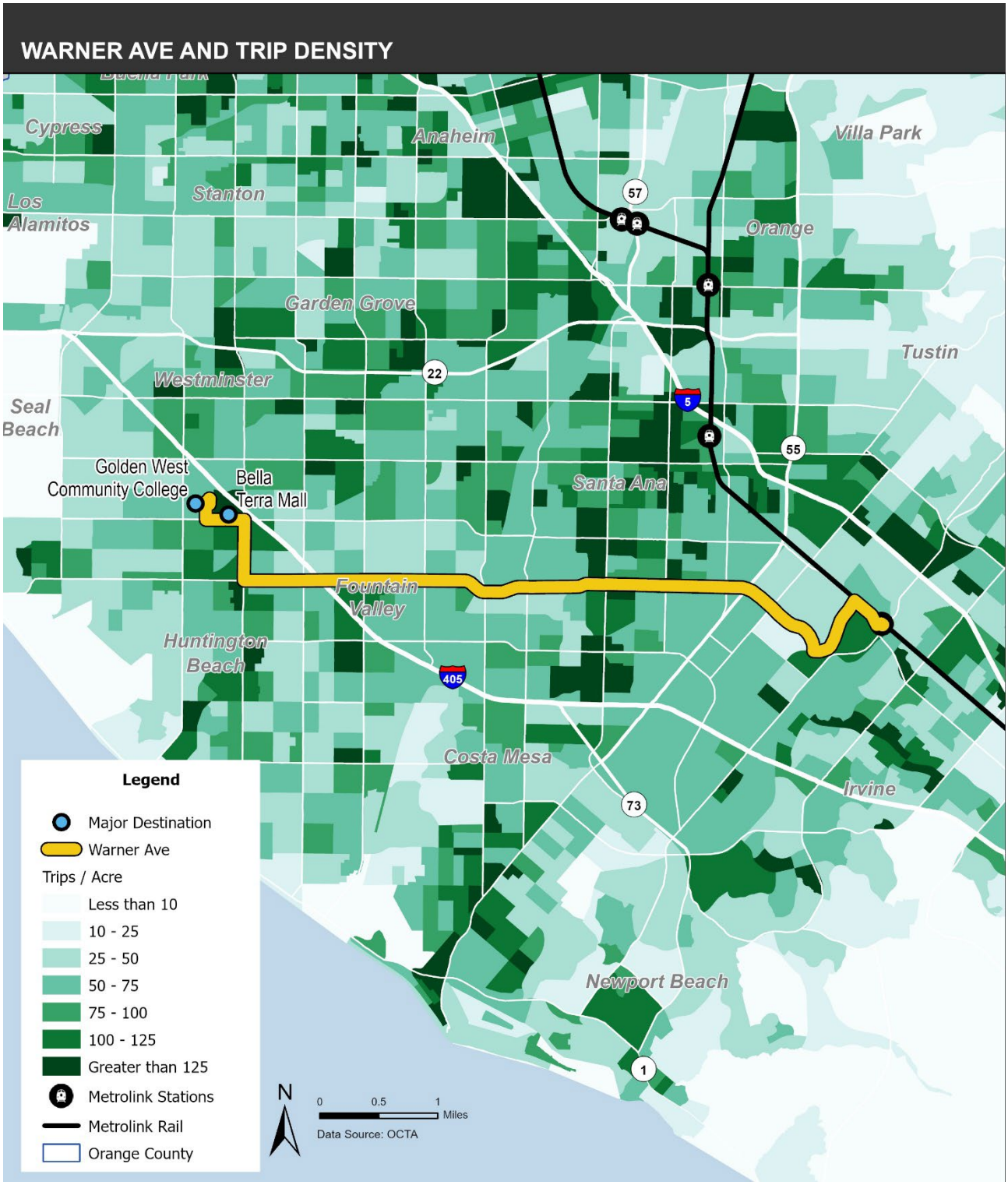
Name	Main St.
Length	11.5 miles
Local Routes Along Corridor	53 & 553
Current Local Bus Frequency	11 minutes (peak)
Proposed Operational Characteristics	
Weekday Hours	4:00 a.m.–1:00 a.m.
Weekday Peak	10 minutes
Weekday Off-peak	15 minutes
Weekend Hours	5:00 a.m.–1:00 a.m.
Weekend Peak	15 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.24 miles to 0.43 miles
Scoring Criteria	
Composite Score	4.02
Trip Intensity	3.90
Equity	3.35
Existing Ridership	3.52
Mode Share	3.47
Outreach Surveys Ranked in Top 5	30%
Cost Per Passenger	$18,188/passenger
Key Destinations (Top 2)	Honda Center, Angel's Stadium
Transit Propensity Index	4.21
Intercity Travel (Top 2 Pairs)	Orange-Anaheim, Orange-Santa Ana
Ridership Modeling	
Baseline 2050 (no changes)	4,800
Rapid Bus	6,400
BRT	9,700

Figure 19 State College-Bristol—Corridor Profile



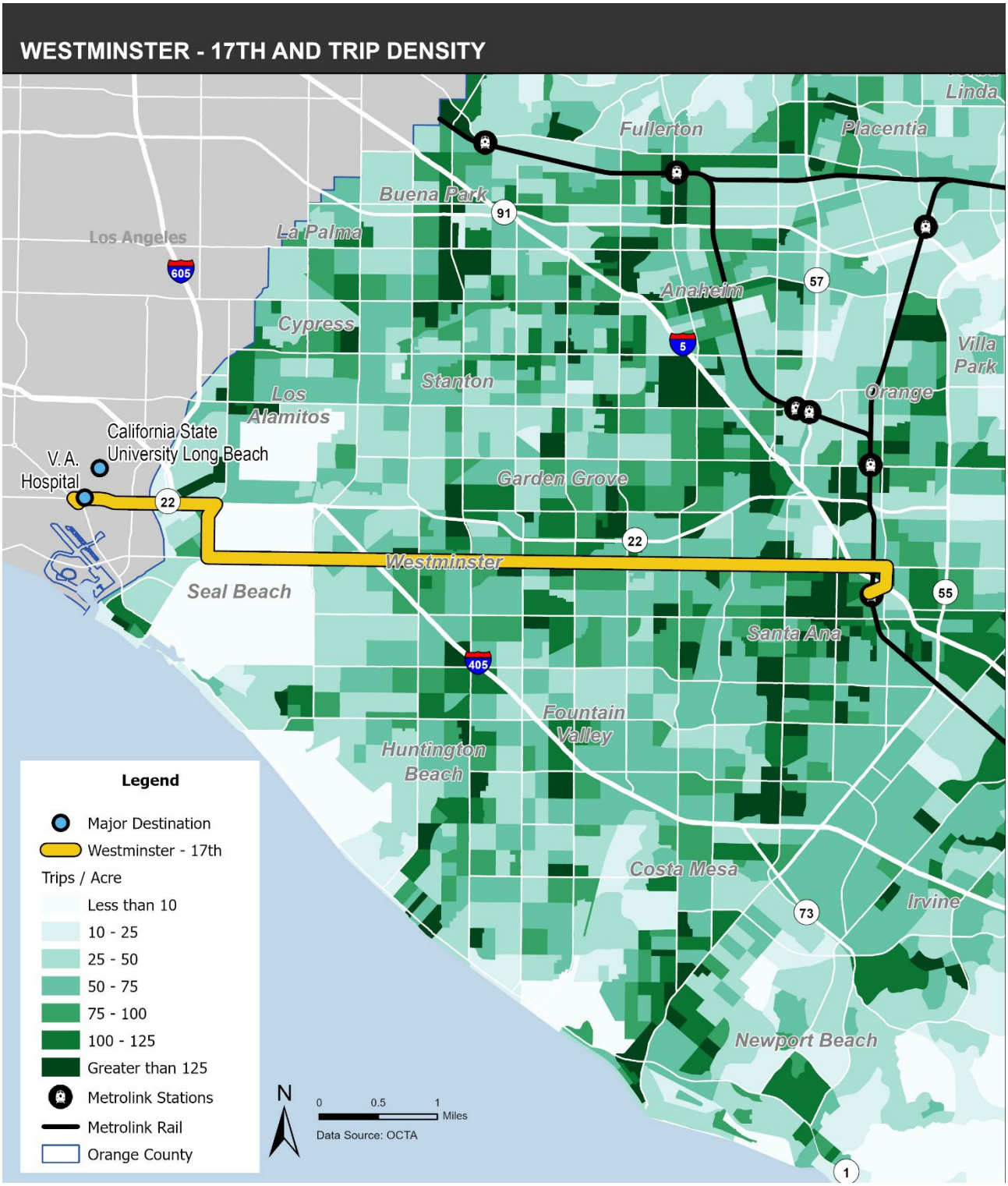
Name	State College-Bristol
Length	20.1 miles
Local Routes Along Corridor	57
Current Local Bus Frequency	15 minutes (peak)
Proposed Operational Characteristics	
Weekday Hours	4:00 a.m.–1:00 a.m.
Weekday Peak	10 minutes
Weekday Off-peak	15 minutes
Weekend Hours	5:00 a.m.–1:00 a.m.
Weekend Peak	15 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.30 miles to 0.41 miles
Scoring Criteria	
Composite Score	4.14
Trip Intensity	3.72
Equity	3.43
Existing Ridership	3.64
Mode Share	3.62
Outreach Surveys Ranked in Top 5	32% (adjusted to include 'Short' and 'Long' alignment scores)
Cost Per Passenger	$18,177/passenger
Key Destinations (Top 2)	Brea Mall, South Coast Plaza
Transit Propensity Index	3.91
Intercity Travel (Top 2 Pairs)	Fullerton-Anaheim, Orange-Anaheim
Ridership Modeling	
Baseline 2050 (no changes)	11,500
Rapid Bus	12,900
BRT	21,000

Figure 20 Warner Ave.—Corridor Profile



Name	Warner Ave.
Length	13.8 miles
Local Routes Along Corridor	72
Current Local Bus Frequency	28 minutes (peak)
Proposed Operational Characteristics	
Weekday Hours	5:00 a.m.–12:00 a.m.
Weekday Peak	15 minutes
Weekday Off-peak	20 minutes
Weekend Hours	6:00 a.m.–11:00 p.m.
Weekend Peak	20 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.24 miles to 0.53 miles
Scoring Criteria	
Composite Score	3.33
Trip Intensity	3.94
Equity	3.04
Existing Ridership	4.18
Mode Share	4.04
Outreach Surveys Ranked in Top 5	18%
Cost Per Passenger	$25,362/passenger
Key Destinations (Top 2)	Bella Terra Mall, Golden West College
Transit Propensity Index	4.20
Intercity Travel (Top 2 Pairs)	Huntington Beach-Fountain Valley, Santa Ana-Fountain Valley
Ridership Modeling	
Baseline 2050 (no changes)	2,500
Rapid Bus	4,400
BRT	6,600

Figure 21 Westminster-17th—Corridor Profile



Name	Westminster-17th
Length	17.9 miles
Local Routes Along Corridor	60 & 560
Current Local Bus Frequency	24 & 24 minutes (peak)
Proposed Operational Characteristics	
Weekday Hours	4:00 a.m.–1:00 a.m.
Weekday Peak	10 minutes
Weekday Off-peak	15 minutes
Weekend Hours	5:00 a.m.–1:00 a.m.
Weekend Peak	15 minutes
Weekend Off-peak	30 minutes
Stop Spacing	0.33 miles to 0.65 miles
Scoring Criteria	
Composite Score	3.37
Trip Intensity	3.70
Equity	3.66
Existing Ridership	4.09
Mode Share	4.07
Outreach Surveys Ranked in Top 5	21%
Cost Per Passenger	$25,257/passenger
Key Destinations (Top 2)	California State University Long Beach, V. A. Hospital
Transit Propensity Index	4.11
Intercity Travel (Top 2 Pairs)	Garden Grove-Westminster, Garden Grove-Santa Ana
Ridership Modeling	
Baseline 2050 (no changes)	7,300
Rapid Bus	7,600
BRT	12,300

Table 2 TOC Scoring Table

	Priority	1	2	3	4	5	6	7	8	9	10
	Weighting	10	9	8	7	6	5	4	3	2	1
Route Name		Boardings per Mile (2050)	Trip Intensity—Block Group Density of LOCUS Trip Ends (O or D)	Equity—Block Group Density of Pop (Income <150% of Poverty)	Existing Ridership—Block Group Density of Boardings	Outreach Results	Cost per Passenger	Mode Share—Block Group Ratio of Boardings to LOCUS Origin Trips	Key Destinations—Top 2 Destinations' LOCUS Trip Ends in Quarter Mile Buffer	Transit Propensity Index (Block Group)	Intercity Travel—Top 2 LOCUS City O-D Pair Trip Totals	Composite Score
State College-Bristol		5	3.72	3.43	3.64	4	5	3.62	5	3.91	5	4.14
Harbor Blvd.		4	4.02	3.55	3.87	5	4	3.83	5	4.39	5	4.11
Beach Blvd.		4	3.82	3.88	3.76	5	4	3.66	4.5	4.24	5	4.06
Main St.		5	3.90	3.35	3.52	3	5	3.47	5	4.21	4	4.02
Katella		3	3.44	3.81	3.47	4	4	3.49	5	4.00	3	3.63
La Palma-Lincoln		4	3.65	4.20	3.00	2	3	2.99	5	3.79	3	3.49
Westminster-17th		3	3.70	3.66	4.09	2	3	4.07	3.5	4.11	2	3.37
Warner Ave.		3	3.94	3.04	4.18	2	3	4.04	3.5	4.20	2	3.33
Garden Grove-Chapman		2	4.19	3.98	3.58	4	2	3.51	3	4.11	2	3.31
Edinger Ave.		2	3.65	3.68	4.14	3	2	4.07	4.5	4.11	4	3.30
Average		3.50	3.80	3.66	3.73	3.40	3.50	3.67	4.40	4.11	3.50	3.67

4.3 ADVANCEMENT OF OC TRANSIT VISION GOALS

Individually and collectively, the top ten TOCs advance each of the study goals. By focusing on areas of the county with the highest transit propensity, high-capacity transit service improves the rider experience along each priority corridor as well as connections throughout the OC Bus network. Each goal is referenced below with TOC supportive measures.

- **Enhance**—The TOCs will make transit more desirable by improving frequencies, expanding service hours, and increasing speeds with rapid bus service. By improving service quality in the highest-demand transit markets, TOCs provide an affordable travel option that is competitive with private auto travel.

- **Connect**—High-capacity and frequent transit service along the ten corridors will improve access to jobs and services, strengthen multimodal connections to the OC Bus network and underserved areas of the county, and integrate transit with other modes. Chapter 5 provides additional recommendations for transportation services to areas of the county with limited transit offerings.

- **Simplify**—Integrating all TOCs into transit planning technology will provide a seamless menu of transit options that will make it easier for customers to plan door-to-door trips. A network of TOCs will also include special branding and improved information at transit stops.

- **Collaborate**—The TOCs supports community priorities through the placement of high-capacity transit in the most productive areas of the county as well as major destinations. The TOC network also promotes equity by serving communities with high populations of youth, older adults, people with disabilities, low-income populations, and people without autos.

- **Sustain**—The OC Bus network will be resilient over the long term by investing in services that are efficient, flexible, and increase transit ridership. Investments in BRT for all ten TOCs are expected to increase average weekday ridership by around 45,000 by 2050 compared to existing system projections. OCTA will build upon existing relationships with communities, business, and schools to implement TOC routes and enhance transit offerings.

The 2024 OC Transit Vision recommends developing a dashboard to track TOC progress. Each corridor will have a proposed timeline for implementation and visual markers to see which corridors are progressing through the planning, construction, and operational phases.

SECTION

5

TRANSIT INTEGRATION: ADDITIONAL SERVICES AND STUDIES

Chapter 4 identified top potential corridors for future rapid transit investment. While those corridors are important for growing ridership and providing enhanced service for the core service area, a transit system requires additional strategies to support all areas of Orange County. This chapter discusses countywide strategies that support OCTA's service allocation and capital investment guidelines, and additional recommendations related to a variety of supportive transit services offered by OCTA. These include the following:

- **OC Bus**—Continue to upgrade OC Bus routes to meet the headway and service span guidelines outlined in the Transit Investment Framework described in this chapter. Implement timed-transfers between routes where feasible, consider returning express bus service, and fully implement zero-emission bus transition.
- **LOSSAN/Metrolink**—Support improvements to Orange County rail service planned by Metrolink and Amtrak. Improve station access through improved bus frequencies and first-last mile connections.
- **OC Streetcar**—Prepare for the launch of OC Streetcar in 2026 and monitor ridership and operational performance.
- **OC Vanpool**—Promote increased financial incentives to encourage shared commuting options for groups occupying 50% of a vehicle with a capacity for 7 to 15 people.
- **OC ACCESS**—Improve paratransit services through expanding partnerships and upgrading technology.
- **On Demand Services/Microtransit**—Seek opportunities to expand on-demand services through community partnerships.
- **Project V and Special Event Services**—Building on the success of existing services, seek additional opportunities to reduce parking and traffic congestion through transit alternatives.
- **Mobility Hubs**—Expand locations where multiple travel options are integrated to enhance connectivity and encourage mode shifts.
- **Active Transportation**—Continue to expand the active transportation (bicycle/pedestrian) network and seek opportunities to integrate with the transit system to improve first/last mile connections.
- **Transportation Demand Management (TDM)**—Promote programs and policies that encourage the use of transit along with other travel alternatives such as walking, cycling, and carpooling to capture the broader scope of TDM strategies.

- **Transit Fares**—Expand upon OCTA's wide range of payment and pass options to encourage ridership growth and increase access to equity populations.

5.1 SERVICE ALLOCATION GUIDELINES

The OCTA Transit Investment Framework (Appendix D) includes service allocation guidelines to enhance mobility in Orange County. These guidelines aid in deciding where to implement or operate different service types and delivery models. Service allocation for fixed-route bus operations is based on seven corridor characteristics, extending half a mile on either side of the route. These characteristics encompass land use factors (residential density, employment/student density, other trip generators, traffic volumes), equity factors (density of low-income residents), and access factors (transit connectivity, intersection density). These were chosen based on their influence on transit demand in Orange County, aligning with previous OCTA research on factors impacting individual transit use.

These guidelines offer a framework for allocating fixed-route bus service—determining service category, peak and midday frequencies, and service span—based on corridor characteristics and service types. However, these are not rigid rules. Corridors rarely fit neatly into a single category, and OCTA must consider other crucial factors like productivity, equity, and available funding when making service allocation decisions.

Table 3 Service Allocation Guidelines

Category	Service Characteristics	Corridor Characteristics
Major	• Frequency: 15 mins or greater peak, 30 mins or greater base • Span: 5:00 a.m.–12:00 a.m., M–F, 6:00 a.m.–12:00 a.m. weekend	• Residential Density: 10 or more persons per acre • Employment/Enrollment Density: 8 or more jobs/college or university students per acre • Other Trip Generators: Serves 5 or more hospitals or medical centers with 50 or more beds, retail centers with 50 or more stores, or other major destinations • Traffic Volumes: Average combined Average Daily Traffic (ADT) at all major intersections of more than 100,000 per corridor mile • Density of Low-Income Residents (Household Income Below 150% of Poverty Level): 2 or more per acre • Transit Connectivity: Connects to 2 or more Metrolink stations, transit centers, or park-and-rides, and to 5 or more Major routes • Intersection Density: 100 or more per square mile

Category	Service Characteristics	Corridor Characteristics
Local	○ Frequency: 30 mins or greater peak and base ○ Span: 5:30 a.m.–8:30 p.m. M–F, 7:00 a.m.–7:00 p.m. weekend	○ Residential Density: 5–10 persons per acre ○ Employment/Enrollment Density: 4–8 jobs/college or university students per acre ○ Other Trip Generators: Serves 2–5 hospitals or medical centers with 50 or more beds, retail centers with 50 or more stores, or other major destinations ○ Traffic Volumes: Average combined ADT at all major intersections of less than 100,000 per corridor mile ○ Density of Low-Income Residents (Household Income below 150% of Poverty Level): 1–2 per acre ○ Transit Connectivity: Connects to 1 or fewer Metrolink stations, transit centers, or park-and-rides, and 1–4 Major routes ○ Intersection Density: Any
Community	○ Frequency: 60 mins or greater peak and base ○ Span: 5:30 a.m.–8:30 p.m. M–F, 7:00 a.m.–7:00 p.m. weekend	○ Residential Density: Fewer than 10 persons per acre ○ Employment/Enrollment Density: Fewer than 8 jobs/college or university students per acre ○ Other Trip Generators: Serves 1 or more hospitals or medical centers with 50 or more beds, retail centers with 50 or more stores, or other major destinations ○ Traffic Volumes: Average combined ADT at all major intersections of less than 100,000 per corridor mile ○ Density of Low-Income Residents (Household Income below 150% of Poverty Level): Any ○ Transit Connectivity: Connects to 1 or fewer Metrolink stations, transit centers, or park-and-rides, and 1–4 Major routes ○ Intersection Density: Any
Other	○ Frequency and Span: n/a (explore alternatives to OCTA fixed-route bus service)	○ Residential Density: Fewer than 5 persons per acre ○ Employment/Enrollment Density: Fewer than 4 jobs/college or university students per acre ○ Other Trip Generators: Any ○ Traffic Volumes: Any ○ Density of Low-Income Residents (Household Income below 150% of Poverty Level): Any ○ Transit Connectivity: Any ○ Intersection Density: Fewer than 100 per square mile

Category	Service Characteristics	Corridor Characteristics
No Transit	○ Frequency and Span: n/a (publicly funded service should not be provided)	○ Residential Density: Fewer than 3 persons per acre ○ Employment/Enrollment Density: Fewer than 2 jobs/college or university students per acre ○ Other Trip Generators: Does not connect to hospitals or medical centers with 50 or more beds, retail centers with 50 or more stores, or other major destinations ○ Traffic Volumes: Any ○ Density of Low-Income Residents (Household Income below 150% of Poverty Level): Fewer than 2 per acre ○ Transit Connectivity: Does not connect to Metrolink stations, transit centers, or park-and-rides, or to Major routes ○ Intersection Density: Fewer than 100 per square mile

The following are guidelines for Stationlink and Express services. Express service was discontinued during the coronavirus pandemic but will be reevaluated as OCTA continues to monitor demand.

- **Stationlink**—Stationlink routes provide connections solely between Metrolink stations and nearby destinations such as job centers. They should operate only during peak periods, in the peak direction (from the station in the morning, and to the station in the afternoon).

- **Express**—Express routes serve long trips during peak periods, primarily commute trips to job centers. As they mainly serve commuters who own automobiles, access to these routes is primarily by auto; thus, Express routes rely on proximity to park-and-ride lots as a primary criterion for service.

5.2 CAPITAL INVESTMENT GUIDELINES

This section describes capital investment guidelines in two categories: investments in infrastructure supportive of existing bus operations, and investments in new fixed-guideway lines and stations (e.g., streetcars or bus rapid transit). These standards build on the service allocation guidelines to identify both existing corridors and potential future corridors where capital investments—in addition to potential investments in service—may be justified. In addition to these investment guidelines, evaluation criteria for investments in TOCs were developed as part of the 2024 OC Transit Vision process.

Bus Investment Guidelines

- **New Vehicles**—Prioritize increased capacity to reduce overcrowding, improved passenger comfort both onboard and while waiting, and distinctive branding for specialized services like bus rapid transit.
- **Transit Priority Improvements**—Include dedicated bus lanes, queue jumps at intersections, and signal prioritization to speed up bus travel.
- **Stop and Station Improvements**—Focus on operational efficiency such as curb extensions and stop relocation, and improved passenger amenities like shelters, seating, and real-time information displays.

The guidelines for capital investment in existing bus operations are linked to the service types described in the Service Allocation Guidelines. For each service type, a "high," "medium," or "low" levels of investment—defined in terms of service type—is recommended.

Table 4 Bus Capital Investment Guidelines

Service Type	Investment Level	Investment Types
Major	High	○ Higher-capacity vehicles ○ Vehicle branding (OC Bus Rapid routes only) ○ All types of transit-priority treatments, including transit lanes ○ Operational improvements to and enhanced amenities at stops ○ Off-vehicle fare collection and all-door boarding
Local	Medium	○ Signal timing improvements ○ Enhanced passenger amenities at busier stops
Community	Low	○ Standard bus stop
Express	Medium	○ Comfortable vehicles designed for longer trips ○ High-occupancy vehicle facilities on freeways and direct access ramps ○ Enhanced passenger amenities at park-and-ride lots
Stationlink	Low	○ Standard bus stop
Other	Low	○ Vehicle branding (shuttles only) ○ Technology integration

High-Capacity Transit Investment Guidelines

Future high-capacity transit investments in Orange County, particularly rail, require significant capital and are best suited for high-ridership corridors with transit-supportive characteristics like high population and employment density. While subways may not be feasible in Orange County currently, light rail, streetcars, and BRT are viable options, as demonstrated by successful systems in comparable regions. The busiest OC Bus routes already experience high passenger loads and could benefit from high-capacity transit solutions to improve efficiency and on-time performance. Corridors with densities exceeding 15 persons or employees per acre and existing services with peak loads and frequent headways should be prioritized for future high-capacity transit investments.

5.3 COUNTYWIDE FIXED-ROUTE TRANSIT SERVICES

OC Bus

The 2024 OC Transit Vision recommends a series of OC Bus improvements in addition to the TOCs identified in Chapter 4. The goal is to balance ridership growth with service expansion to offer more service to more people. OCTA recommends the following strategies to be accomplished over the next 5 to 10 years.

- **Making Better Connections (MBC) Plan**—In 2022, OCTA completed a redesign of the OC Bus network. The MBC Plan is the outcome of months of analysis of travel patterns and ridership trends, engagement with community stakeholders, and thoughtful redesign of routes to provide better outcomes for riders by expanding access to destinations, increasing frequency, reducing transfer wait time, and extending hours of service. The plan is being implemented through 2025.

  The plan greatly increases frequency across the network, adding service to 28 routes on weekdays, 11 routes on Saturdays, and 12 routes on Sundays. No route will operate less often than every 60 minutes. The plan also expands the number of routes, riders, residents, and jobs with access to frequent service (15 minutes or better) between 6:00 a.m. and 6:00 p.m.

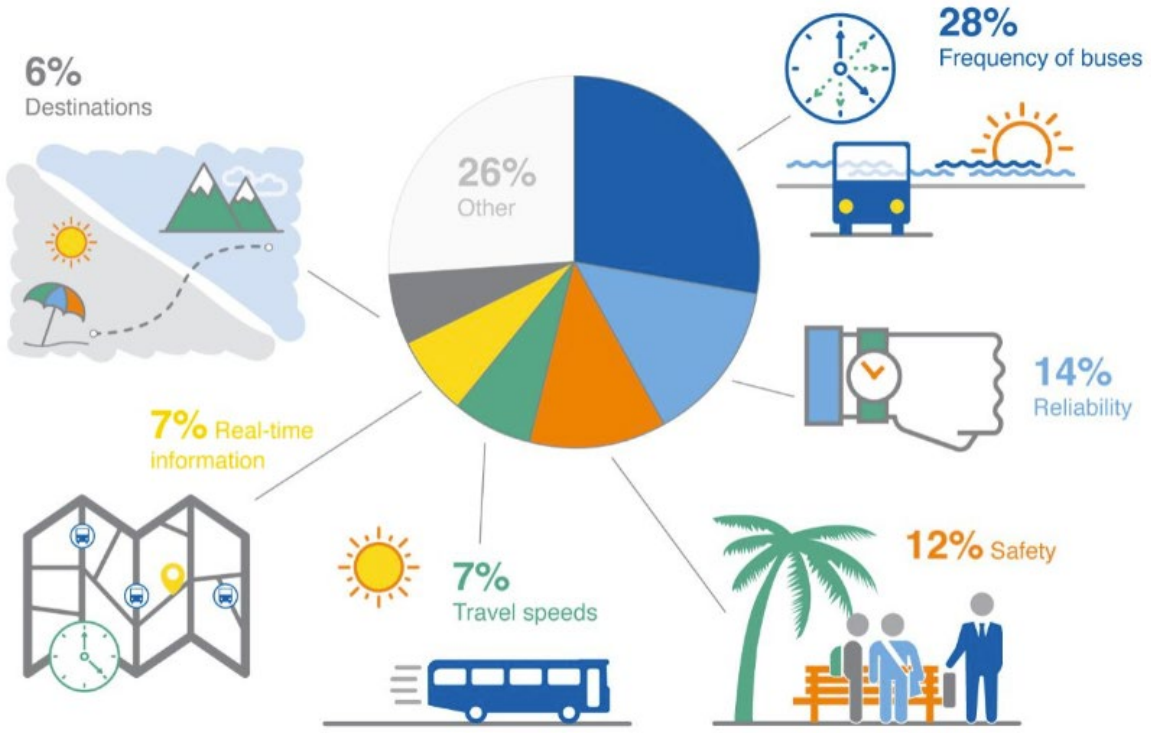
The plan also greatly expands service hours across the network, starting earlier in the morning and ending later at night to give riders more flexibility in their travel options. A total of 24 routes will have extended service hours on weekdays, 26 routes on Saturdays, and 30 routes on Sundays.

The plan greatly improves access to new destinations throughout Orange County. Several routes are proposed to be extended to reach more destinations, including Metrolink Stations, shopping centers, and major bus transfer locations. By bringing more routes together at a common place, riders will be able to more easily transfer between routes and reach desired destinations. A few highlights of the plan are listed below:

- Route 38 will be extended to Los Cerritos Center.
- Route 59 will be extended to Brea Mall.
- Route 71 will be extended to Cal State Fullerton.
- Route 72 will be extended to Tustin Metrolink Station.
- Route 83 will be extended to Fullerton Park and Ride.

The plan coordinates transfers at key locations to reduce transfer wait times and improve reliability. Route schedules will be coordinated for all routes to meet once an hour at Laguna Hills Transportation Center and Brea Mall. The plan will also result in better transfers on the grid network, as better frequencies on key grid routes will lead to shorter transfer wait times.

Figure 22 OCTA Making Better Connections Study Survey Responses



After the MBC Plan is fully implemented, the 2024 OC Transit Vision recommends a new comprehensive operations analysis (COA) to be completed before 2030. The new study will determine long-term travel trends since the pandemic and recommend further OC Bus improvements that expand access, improve frequencies, and shorten travel times. The study will also analyze how to improve service integration with the new OC Streetcar and Metrolink service enhancements. Specific improvements to OC Bus services to be explored in the future study may include extending Route 64 to the Great Park in Irvine, increasing fixed-route bus service in high-growth areas of South OC, and analyzing the top 24 TOCs in the 2024 OC Transit Vision for potential service enhancements.

- **Timed Transfers—**One strategy to reduce transit travel times is to schedule routes to meet at the same time at transit centers or major transfer locations. Passengers should be able to seamlessly transfer between routes with minimal wait time. As mentioned above, the MBC Plan will implement timed transfers at the Laguna Hills Transportation Center. This location is particularly important since routes in South Orange County are less frequent and wait times between routes are higher. OCTA should analyze other locations where timed transfers are feasible, including regional connections with other transit operators.

- **Transit Signal Priority (TSP)—**Corridors with high levels of transit use may benefit from providing special treatment to buses at signalized intersections. A queue jump lane, a short stretch of a bus-only lane that bypasses queues of traffic, may be combined with TSP at signalized intersections to help make transit vehicles more competitive with auto travel. TSP should be a near-term systemwide priority to incrementally improve speed and reliability prior to full implementation of the TOCs. OCTA is currently exploring TSP along Harbor Boulevard as part of a series of corridor improvements.

- **Harbor Blvd. Improvements—**OCTA is conducting two studies to enhance bus travel times and service reliability along the Harbor Blvd. corridor. The Harbor Boulevard Pilot Innovative Transit Signal Priority Study seeks to improve the overall efficiency of transit systems, reduce congestion and enhance the reliability of public transportation, benefiting both transit riders and overall traffic flow. Outcomes from this study could lead to the implementation of similar solutions on other OCTA routes throughout the county. The Microsimulation Model Development Study for Harbor Blvd. will analyze key aspects of current traffic operations along the Harbor corridor, between the Fullerton Transportation Center in Fullerton and MacArthur Blvd. in Santa Ana using microsimulation models, with a particular focus on improving bus operations such as safety and travel time reliability. Both studies are scheduled to be completed by late 2025. Study recommendations from both studies will be incorporated into the 2026 LRTP.

Figure 23 OC Bus Rapid Route Extension

- **OC Bus Rapid Route 553 Extension**—OCTA currently offers rapid bus service between ARTIC and South Coast Plaza in Costa Mesa via Main Street. OCTA is exploring an extension of OC Bus Rapid Route 553 from ARTIC to the Disneyland Resort, approximately 2.5 miles east on Katella Ave. and north on Harbor Blvd. The Katella corridor is primarily served by Route 50 which operates approximately every 20 minutes. The Anaheim Transportation Network also operates bus service between ARTIC and the Disneyland resort. Chapter 4 identified Katella Ave. as a TOC with mid- to long-term plans for rapid or BRT service. An extension of Route 553 would be a short-term step to introducing rapid service along Katella Ave. with a goal of expanding high-frequency service throughout the corridor. OCTA plans to implement the north extension to Route 553 in May 2025.

  OCTA is also exploring adding a southern extension to Route 553 from South Coast Plaza to John Wayne Airport and University of California–Irvine (UCI). Throughout the 2024 OC Transit Vision public outreach process, OCTA staff received requests to provide more service to John Wayne Airport and UCI. A rapid route extension to both destinations would increase access and shorten travel times throughout the county.

- **Express Bus/Freeway BRT**—Prior to the coronavirus pandemic in 2020, OCTA operated three intercounty and two intracounty express routes (see example in Figure 24). Schedules were limited to peak-hour service and primarily served office workers at major employment centers. During the pandemic, OCTA discontinued the five express routes as stay-at-home orders depressed demand. Although ridership on regular OC Bus routes has mostly recovered in 2024, regional travel on Metrolink services and other regional express routes has lagged as hybrid work schedules continue to be prevalent among office workers.

  OCTA, in partnership with Caltrans District 12, completed a study on developing two freeway BRT routes on Interstate 5 (I-5) and State Route 55 (SR 55). The study identified improvements to infrastructure and transportation solutions and stops along each corridor. The I-5 route is approximately 30 miles from the Laguna Niguel/Mission Viejo Station to the Fullerton Park and Ride, while the north-south route is 12 miles

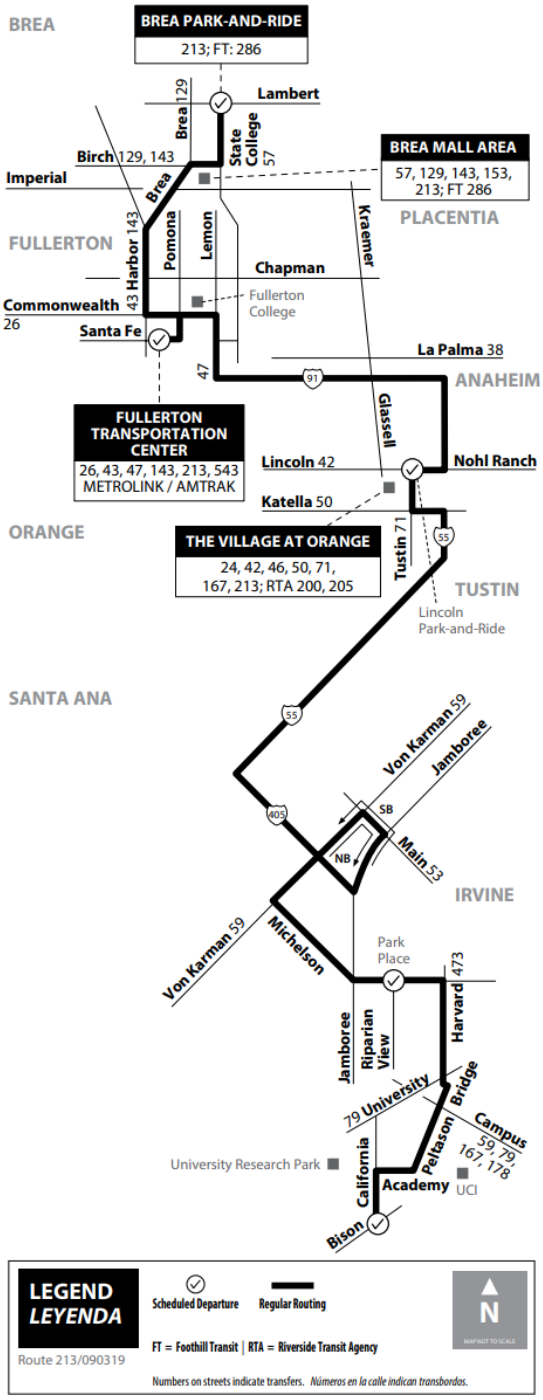
Figure 24 Map of Discontinued Route 213

along SR 55 from the Santa Ana Regional Transit Center to Hoag Memorial Hospital Presbyterian in Newport Beach.

The study concluded that considering the substantial costs associated with the capital improvements necessary for the implementation of freeway BRT, the recommended approach is to implement freeway BRT when larger managed lane freeway improvement projects enter the planning stage.

The 2024 OC Transit Vision recommends a comprehensive study to analyze regional travel demand, remote work trends, and the feasibility of implementing new express bus services or freeway BRT corridors. This study should inform future service planning and investment decisions.

- **Transit Optimization Study**—OCTA is developing recommendations to address chokepoints along OC Bus routes. A transit chokepoint is typically an intersection or route segment where congestion, delays, or operational issues significantly affect the flow of buses and/or passenger trip times. The Transit Optimization Study is an 18-month study that aims to identify a list of priority transit chokepoints in Orange County and propose cost-effective strategies to mitigate their impact. The study is expected to be completed by late 2025. Recommendations from the study will be incorporated into the 2026 LRTP.



- **Bus Stop Safety and Accessibility Study—** OCTA in partnership with the Southern California Association of Governments (SCAG) is analyzing all bus stops with over 300 daily riders per stop to determine infrastructure enhancements that will create safe pedestrian networks, access to key destinations and services, and strategies to improve safety. Aligned with regional goals, it aims to boost walking and biking, cut emissions, and improve access while fostering community resilience. The study is expected to conclude in 2026. Outcomes from the study will be incorporated into the 2026 LRTP.

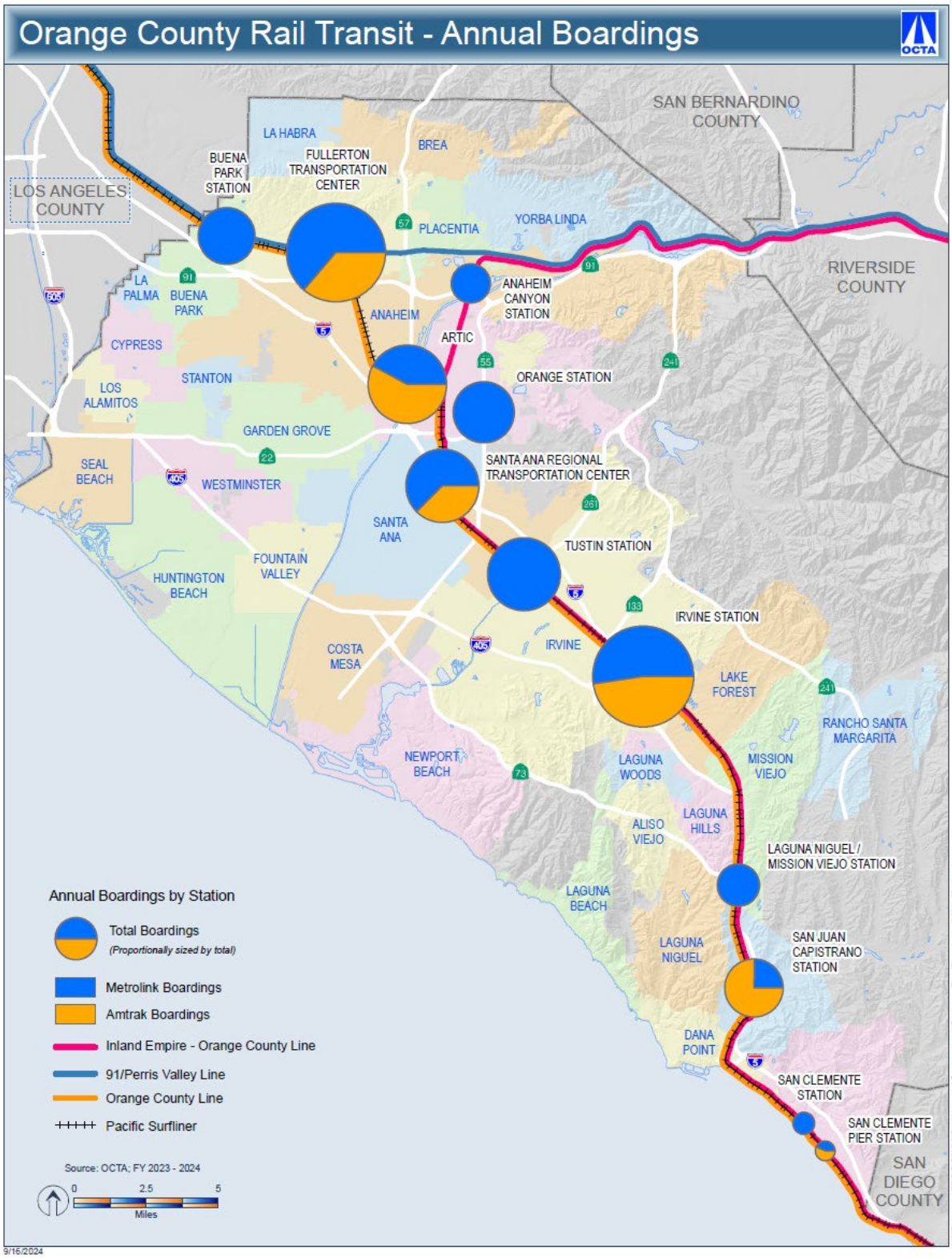
- **Zero-Emission Bus Transition—**OCTA'S Zero-Emission Bus Program plans to convert its bus fleet to 100 percent zero-emission technology by 2040. The program is testing two types of buses—plug-in battery-electric and hydrogen fuel-cell electric. The pilot program will determine the best technology or mix of technologies for mid- to long-term implementation.

LOSSAN/METROLINK

The LOSSAN corridor is the existing rail spine for Orange County. A commuter/ intercity rail line, it connects Orange County to downtown Los Angeles. Within Orange County, it runs from Buena Park in the north to San Clemente in the south via major destinations, including downtown Fullerton, Anaheim's Platinum Triangle, downtown Santa Ana, Irvine, and Laguna Niguel. It is served by multiple operators and several lines, including Amtrak's Pacific Surfliner from San Luis Obispo to San Diego as well as the Metrolink Orange County, 91/Perris Valley, and Inland Empire-Orange County lines.

Additionally, the Metrolink 91/Perris Valley and Inland Empire-Orange County lines operate on tracks east of the LOSSAN corridor, connecting to Riverside County. Figure 25 shows the rail network in Orange County, along with station locations and ridership (note that a new station is planned in Placentia).

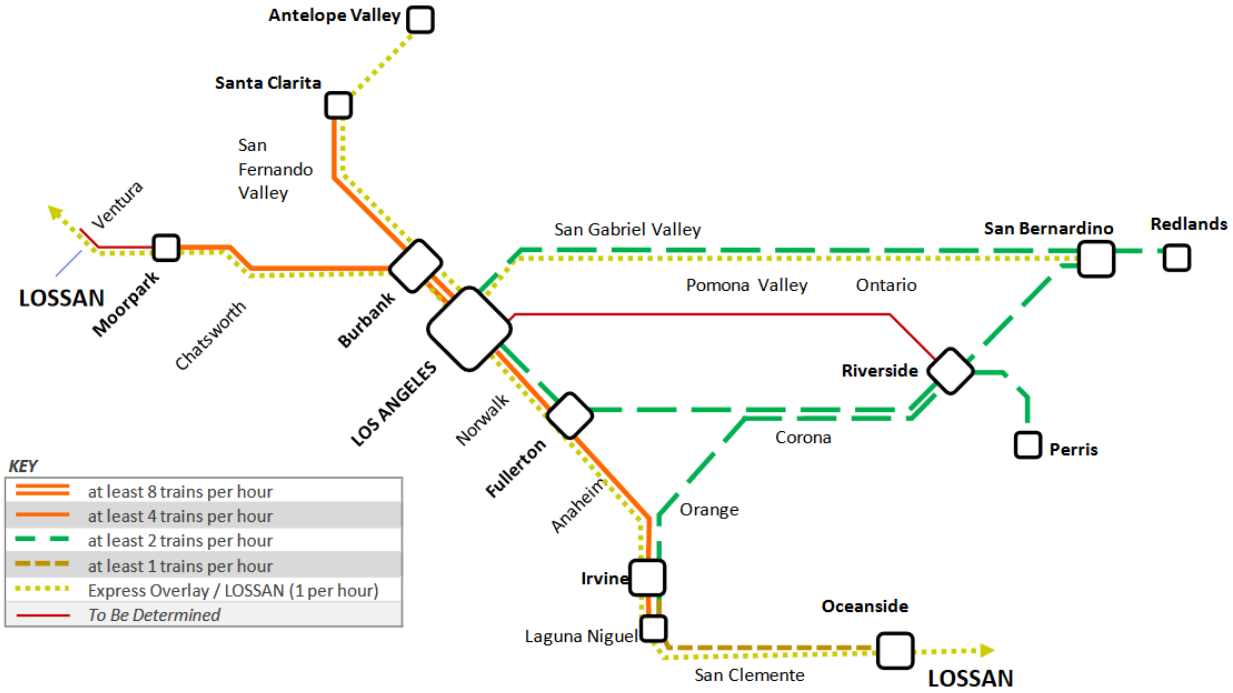
Figure 25 Orange County Rail Transit—Annual Boardings



A number of entities are planning improvements to the LOSSAN and Metrolink corridors in Orange County. Highlights of these efforts include the following:

- The Metrolink SCORE Program and the Service Growth Development Plan (SGDP) call for a series of improvements and service optimization (see Figure 26). Foremost among these would be electrification of segments including the LOSSAN corridor north of Irvine, allowing service in that segment to increase to every 15 minutes during peak periods. Trains would operate every 30 minutes peak and hourly off-peak on the 91/Perris Valley, Orange County, and Inland Empire-Orange County lines. Changes would also be made in the interim, starting with improved schedule optimization in late 2024 to add midday trips and support better connections between trains and buses.

Figure 26 SCORE Program Modernization Map



- The California State Rail Plan (2023) calls for changes to intercity rail lines throughout the State by 2040. These include faster service (up to 125 miles per hour on Orange County lines), more frequent service (starting with 30-minute local and hourly express service between Los Angeles and San Diego, with stops in Santa Ana and Laguna Niguel/Mission Viejo), electrification (as far south as Laguna Niguel/Mission Viejo), and greater multimodal integration.

- The California High Speed Rail Authority plans to extend high-speed rail service from San Francisco to the Anaheim Regional Transportation Intermodal Center (ARTIC) with a possible station in Fullerton. A blended approach calls for high-speed trains to share the LOSSAN corridor with Amtrak and Metrolink. Toward that end, interim improvements include grade-separation of two crossings in Orange County, benefiting all three operators. Consistent with the Metrolink and State plans, the LOSSAN corridor would be electrified north of Anaheim.

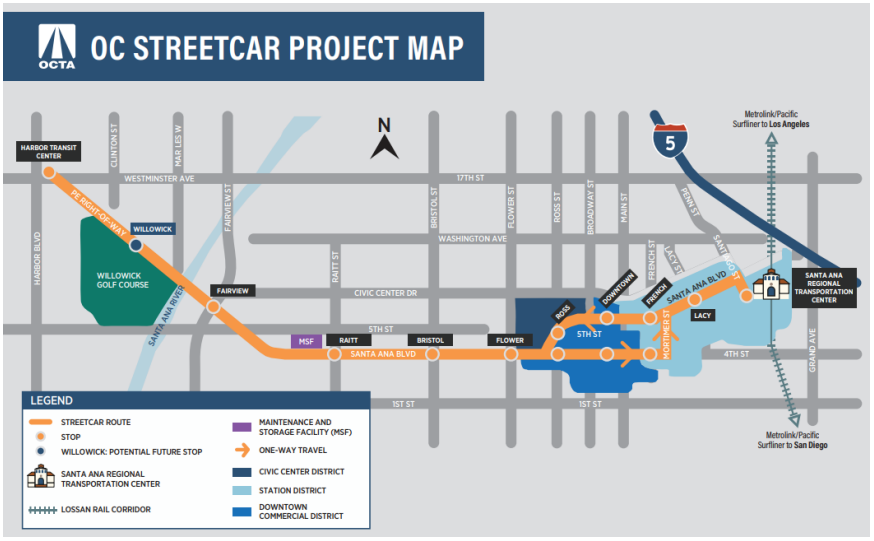
- The Metrolink Station Connectivity Enhancement Plan aims to improve first-last mile connections between stations and passengers' origins and destinations through integrated strategies, pilot projects, and a toolkit. Two OC stations, Buena Park and Fullerton, were selected for pilot projects.

Currently, all the above plans remain largely unfunded. As the local managing agency for the LOSSAN Rail Corridor Agency (and owner of more than 40 miles of the Orange County railroad), OCTA has an important role to play in advocating for funding. The agency may also partner with cities on projects that improve station access and grade separations.

Additionally, OCTA has studied multimodal access improvements to Metrolink stations in its Nonmotorized Metrolink Accessibility Strategy and is in the process of developing a Strategic Rail Plan focused on current and future operating constraints and service scenarios, to be released in 2026.

OC Streetcar

The OC Streetcar is Orange County's first modern streetcar. The 4.15-mile route is currently under construction and will travel through the cities of Santa Ana and Garden Grove, connecting major destinations like the Santa Ana Regional Transportation Center, downtown Santa Ana, and a new transit hub at Westminster Ave. and Harbor Blvd. in Garden Grove. Construction began in 2018, and service is expected to start in 2026.



In preparation for the launch of OC Streetcar, OCTA is conducting a Bus-Rail Interface Plan that will coordinate service schedules between OC Bus and the streetcar with a goal of improving connections and shortening travel times. The plan is expected to be completed by mid-2025.

After the launch of OC Streetcar, OCTA will conduct a thorough analysis of the streetcar's performance, ridership patterns, and connections to OC Bus routes. Short-term improvements may include schedule changes or bus route realignments. Long-term improvements may include extending the streetcar corridor which will be explored in the 2028 OC Transit Vision and a separate Harbor Blvd. study.

5.4 OTHER TRANSPORTATION SERVICES

OC Vanpool

OCTA's OC Vanpool Program offers a subsidized, month-to-month shared commuting option for groups traveling to workplaces within Orange County in a vehicle with a capacity for seven to fifteen people. To qualify, vanpools must maintain at least 50 percent occupancy, remain open to nearby riders, and report monthly ridership and expenses. The program benefits both employees and employers by decreasing commute costs and offering reliable transportation.

Prior to the coronavirus pandemic, there were over 450 vanpools operating in Orange County. As of July 2024, there were 156 active vanpools, roughly 35 percent of pre-pandemic levels. The long-term growth trend is favorable as many commuters are returning to their workplaces, notwithstanding, on hybrid work schedules. Despite the pandemic related decline, funding for the program has not been affected. Based upon the past five reporting years, OCTA paid $11.6 million in monthly vanpool subsidies and received more than $25 million in increased Federal allocation of transit capital funds. Since vanpool vehicles have seven to fifteen seats and must be at least 50 percent occupied, this means that daily combined ridership on vanpools totals several thousand—more than many OC Bus routes. Additionally, vanpools require a lower subsidy than express bus service. Vanpooling is an essential component of the transportation system in Orange County, even more so because it reduces traffic congestion during peak periods.

There are three ways that OCTA could leverage and expand on the OC Vanpool program:

- **Increase the financial incentives offered to participants—**In late 2024, OCTA increased its financial incentive toward vehicle leases from $400 to $600 per month to eligible groups. An additional $100 is available for high-occupancy vanpools and $100 for vanpools utilizing ZEVs. These subsidies result in substantial savings for vanpool program participants—OCTA estimates that vanpooling can save participants up to $600 per month in reduced fuel, repairs, and other costs (see Figure 27).

- **Expand outreach efforts to employers—**Under California statewide policies, employers may be required to reduce solo driving from existing levels. OC Vanpool may be an effective partner in encouraging shared rides.

- **Continue partnership with Caltrans to expand the Priced Managed Lane network on freeways—**On Interstate 405, OCTA and Caltrans recently converted HOV lanes to express lanes and added a second express lane in each direction. "Managed" lanes allow solo drivers to use the express lanes for a fee, while remaining free for vehicles with three or more occupants. Continued expansion of managed lanes would offer benefits for rideshare vehicles of all kinds, including vanpools.

Figure 27 OC Vanpool Monthly Commute Costs

Paratransit (OC ACCESS)

Like other transit operators, OCTA provides paratransit services for customers with mobility limitations. OC ACCESS is the agency's shared-ride complementary paratransit service in compliance with the provisions of the Americans with Disabilities Act of 1990, available by reservation (or on a subscription basis) for eligible or certified customers. The agency also offers a same-day taxi service, provides rides to and from Regional Center of Orange County programs for people with developmental disabilities, and subsidizes group trips provided by non-profit adult day programs under cooperative agreements.

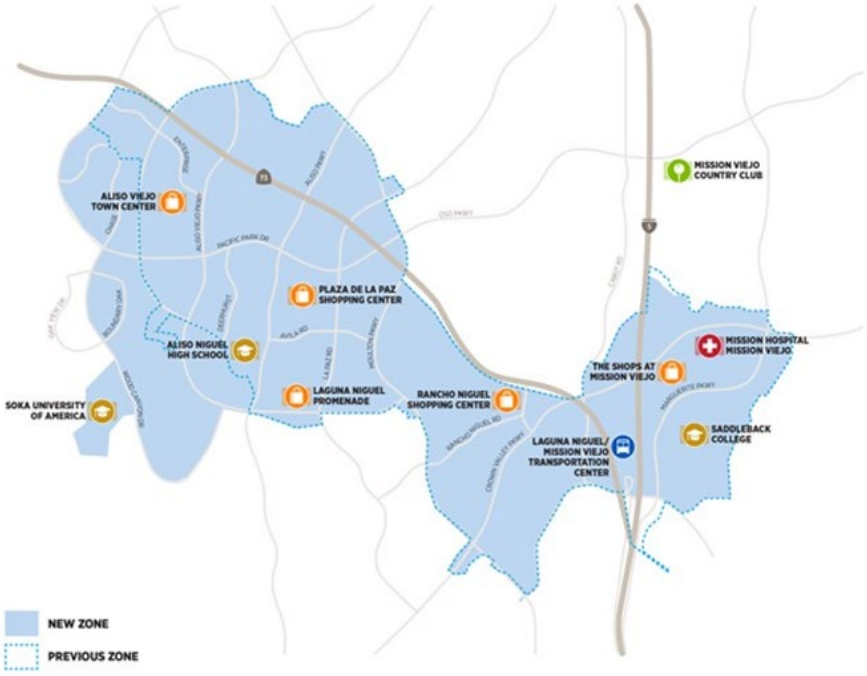
OC ACCESS provides nearly 1 million boardings annually and projected growth in the population of older Americans is expected to boost paratransit demand in the future. Recognizing the growth in paratransit costs, OCTA has begun taking steps to manage demand, including continued support of senior mobility programs; expanding cooperative agreements; and expanding the same-day taxi program. Going forward, the following additional steps will be implemented over the short term:

- **Procurement of a Software-as-a-Service (SaaS) for paratransit and microtransit service**—The SaaS will replace three current legacy software products that support OC ACCESS eligibility, OC ACCESS operations, and OC Flex operations. The goals of the SaaS project are to:

- Provide a solution that will retire current legacy products.
- Bring all services available to OC ACCESS eligible riders under one platform while integrating with the existing OC Bus app.
- Provide flexibility for other service types, like Same Day Taxi, Senior Mobility Programs, to use the software and allow OC ACCESS riders to easily schedule trips for alternative services.
- Automate the scheduling and dispatching process for OC ACCESS trips to improve accuracy and continuous optimization.

On Demand Services/Microtransit

Figure 28 OC Flex Zone



OC Flex is a microtransit pilot program to explore the potential of on-demand, shared-ride services where fixed-route bus service is limited. For $4.50, riders have access to unlimited local rides all day within the OC Flex zone. The current zone operates in South Orange County in parts of Aliso Viejo, Laguna Niguel, and Mission Viejo.

OC Flex experienced a decline in ridership due to impacts from the coronavirus pandemic. The core of OC Flex riders consisted of Metrolink riders using the service to get to their worksites. Since Metrolink was most severely impacted by the coronavirus pandemic, ridership on OC Flex has not rebounded. Key performance metrics are not being met; therefore, OCTA is currently evaluating the viability of the current OC Flex service. A decision on the continuation of the service is expected from the Board of Directors. OCTA should explore opportunities to expand community transit services through the Project V program (see below).

Project V

Project V, also known as the Community-Based Transit Circulator Program, is a funding program administered by OCTA. It utilizes Measure M2 funds to support local transit services that complement OCTA's regional bus

and rail services. Overall, Project V plays a crucial role in expanding transit options in communities with limited access to transit services. By supporting a variety of transit modes, including traditional fixed-route bus and on-demand solutions, Project V aims to improve mobility and connectivity for residents throughout the county.

Examples of transit projects funded through Project V (2020 projects) include the Anaheim Canyon Circulator, Huntington Beach Rideshare Pilot Program, and the Laguna Beach Trolley Service.

Figure 29 Laguna Beach Trolley Map

Source: City of Laguna Beach.

OCTA has issued five calls for projects since 2013, with the latest issued in November 2023. Eighteen letters of interest for a future round of Project V funding were received. The next call for projects is projected to be in 2030, whereby OCTA will continue to partner with cities to determine underserved areas where transit funding can support local needs.

Special Event Services

Special event services help introduce new riders to OCTA, who may then become regular riders. The OC Fair Express bus service and Metrolink's Angels Express train service are supported by OCTA to reduce congestion and encourage transit ridership to events where parking availability is limited. The 2028 Olympic and Paralympic

Games, which is expected to attract 10–15 million visitors, is being designed as a car-light event prioritizing public transportation. OCTA is committed to maintaining efficient transit services for both daily commuters and Olympic attendees. OCTA is coordinating with regional partners to determine Olympic venue locations and transportation strategies that support demand. OCTA will continue to explore opportunities to expand its special event services after the Olympic Games.

5.5 MOBILITY HUBS AND ACTIVE TRANSPORTATION

Mobility Hubs

Over the past decade, technology advancements and changing preferences have transformed how people travel. Mobility hubs encourage multimodal journeys by connecting various transportation modes and services.

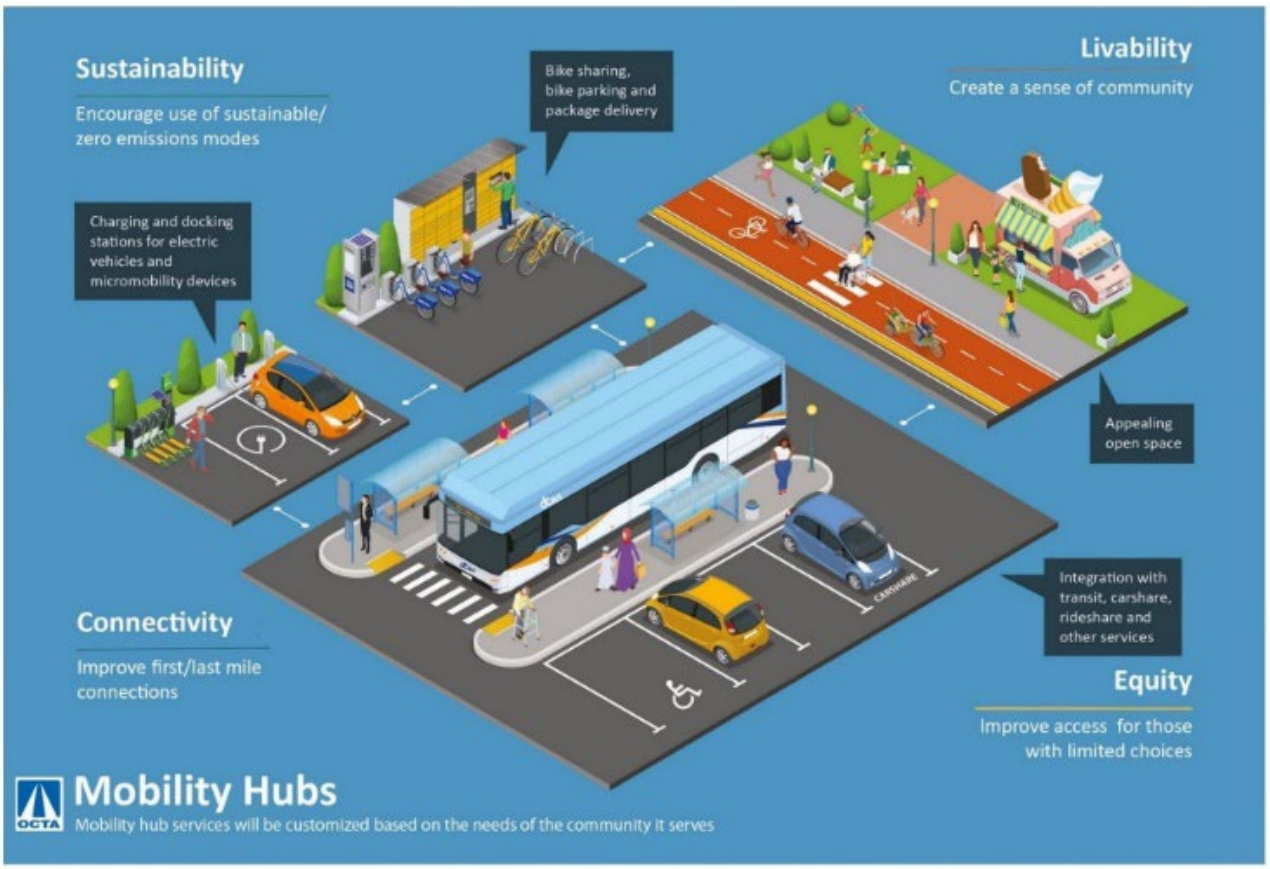
Mobility hubs are designed to adapt to their specific location and community needs (Figure 30). They typically combine a mobility service such as transit (ie. bus, train, or shared mobility options) with non-transit related amenities (such as Wi-Fi, food, or seating). A successful mobility hub usually includes an anchor service (like a major transit station) and at least one additional transportation option.

MOBILITY HUB DEFINITION

Identifiable places that facilitate more seamless, sustainable, and inclusive travel experiences by co-locating regional and local travel modes and amenities at a facility designed for the local context.

- OCTA, June 2022

Figure 30 Illustration of Mobility Hubs Components



Mobility hubs in Orange County are designed to cater to the diverse needs of different locations, ranging from small neighborhood hubs to larger multimodal gateways. The adaptability of mobility hubs allows for the incorporation of future technologies and modes of transport, ensuring they remain relevant and continue to enhance travel experiences.

The Orange County Mobility Hubs Strategy report was released in 2022 and identified a network of locations and potential benefits for such hubs within the county, see Figure 31. This study was prompted by the 2018 OC Transit Vision, which highlighted a need for improved transit connections, pedestrian and cycling access, and park-and-ride facilities.

The 2024 OC Transit Vision recommends advancing the proposed mobility hub locations identified in the 2022 Mobility Hubs Strategy Report to a follow-up analysis called The Mobility Hub Concept of Operation Study. This study will identify three hub locations that provide a high potential for success. The study will develop conceptual design plans for hub services and prepare strategies for implementation, including technical requirements and stakeholder coordination. The Mobility Hub Concept of Operation Study is anticipated to be completed under the short-term action items listed on page 95. Mobility hub construction and implementation are expected to be medium-term to long-term projects.

Figure 31 Mobility Hubs and the Top 24 Transit Opportunity Corridors

Active Transportation

Active transportation is any form of human-powered transportation that promotes physical activity, including walking, biking, skating, using a wheelchair, and accessing public transportation. OCTA continues to improve safety and accessibility to a growing network of more than 1,000 miles of Orange County bikeways. The following projects are helping to improve the active transportation network and connections to transit:

- OC Loop—The Orange County (OC) Loop is a vision for 66 miles of seamless connections and an opportunity for people to bike, walk, and connect to some of California's most scenic beaches and inland reaches. About 88 percent of the OC Loop is already in place and is used by thousands of people. Currently, nearly 58 miles use existing off-street trails along the San Gabriel River, Coyote Creek, Santa Ana River, and the Coastal/Beach Trail. The OC Loop connects with most OC Bus routes that serve Central to North Orange County. Work continues to advance the remaining OC Loop segments in the Cities of La Habra and Brea that will connect with several OC Bus routes in each city.

Figure 32 Map of OC Loop

- **OC Connect**—OCTA is studying the development of a biking and walking trail connection along the former Pacific Electric Right-of-Way corridor in Santa Ana and Garden Grove. The project creates a 4-mile biking and walking trail connection that would improve the transportation network along the corridor and connect with the countywide 66-mile OC Loop bikeway (see Figure 33). The trail would also provide access to some of OCTA's busiest bus routes and the future OC Streetcar. This study will complete the environmental review of the corridor for a Class 1 bike path, which is a shared bicycle and pedestrian path separated from vehicular traffic. The study is expected to be complete by the end of 2024.

Figure 33 OC Connect Project

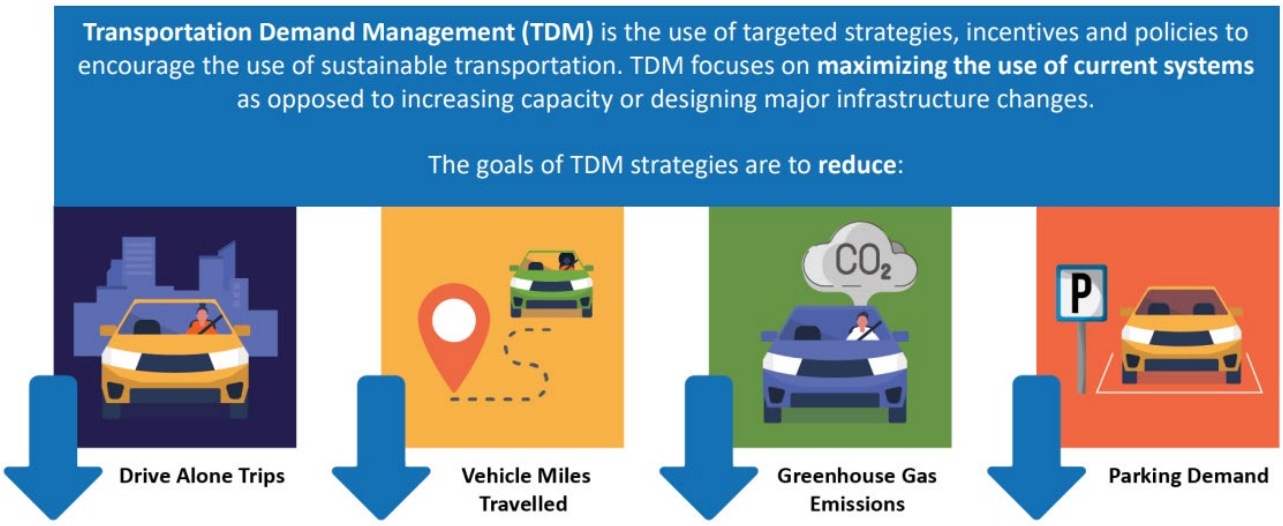
- **Bikeway Connectivity Project**—OCTA is conducting a study to identify streets on the Master Plan of Arterial Highways that are forecasted to have excess roadway capacity and can potentially accommodate Class IV bikeways. Class IV bikeways, also known as separated bikeways, are dedicated bike lanes that are physically separated from vehicle traffic by barriers such as curbs, parking lanes, or posts. The conversion of excess road capacity to bikeways along arterial roadways would improve first/last mile access to OC Bus stops. The study is expected to be completed by late 2025.

OCTA will continue to explore the expansion of the active transportation network and seek opportunities for integration with transit for improved first/last mile connections.

5.6 TRANSPORTATION PROGRAMS AND POLICIES

Transportation Demand Management

Transportation Demand Management (TDM) describes the use of programs and policies to reduce single-occupancy vehicle trips. With population expected to grow by 3% and employment by 9% by 2045, travel across the county is anticipated to increase, leading to greater congestion and air quality issues. To proactively address these challenges, OCTA is developing a Countywide TDM Plan that will recommend a set of TDM strategies to shift trips away from those driving alone and expand access to alternative travel options. These strategies prioritize sustainable alternatives such as carpooling, biking, walking, and public transit, while also supporting initiatives such as remote work and land use planning to further reduce drive-alone trips.



The plan will provide a well-rounded approach that will be shared with local jurisdictions and other partner agencies to encourage the implementation of TDM strategies. The final study is expected to be completed by early 2025.

Transit Fares

OCTA is actively working to enhance the affordability and convenience of public transportation through several key initiatives.

- **Rider Validation System (RVS)**—In 2025, OCTA will launch a new RVS for the OC Bus network, offering passengers more convenience and easier access to discounted fares. The new system will allow riders to tap their credit card or use other contactless applications such as Apple Pay or Google Pay. Additionally, the system will introduce smart cards embedded with chips. The smart cards will enable passengers to store fare value in a centralized account, allowing them to autoload payments. Another important feature of RVS will be fare capping, which charges riders as they travel and caps the total fare amount for daily and monthly

periods. This eliminates the need for passengers to pay full cost for monthly passes in advance and makes fare collection more equitable while simplifying the fare structure.

- **Youth Ride Free Program**—An initiative by OCTA that provides free bus rides to youth aged 6 to 18. The program is grant-funded and requires parental consent. Eligible youth can obtain a Youth Ride Free pass from their participating school or directly from OCTA. The pass allows unlimited rides on all OC Bus fixed-route services.

- **Specialty Passes**—OCTA offers specialty passes and fares throughout the year. They are designed specifically to meet the needs of college and university students and employers. The Community College Pass is a partnership between OCTA and local participating colleges that provides all registered students with an OC Bus pass for the semester. The 30-day College Pass is a reduced fare pass available to students enrolled in nine or more units a semester at participating colleges. OCTA has partnered with Cal State Fullerton, UC Irvine, and Chapman University to provide a low-cost University pass for students and faculty. The Perk Pass, offered through eligible employers, is an affordable bus pass that can reduce employee transportation costs.

- **Regional Fare Integration**—OCTA will explore strategies to simplify fare payment across multiple transit agencies, facilitating seamless travel throughout the region. This will require partnerships with regional transportation providers.

The 2024 OC Transit Vision recommends expanding upon its transit fare initiatives to make transit more affordable, accessible, convenient, and competitive.

SECTION

6

TRANSIT-SUPPORTIVE DESIGN AND POLICIES

6.1 TRANSIT-SUPPORTIVE DESIGN AND POLICIES - OVERVIEW

To truly thrive, Orange County's transit system needs more than just buses and trains. By working closely with cities, developers, and other community partners, OCTA aims to implement a comprehensive strategy that fosters transit-oriented development (TOD) and sustainable transportation choices. To encourage a shift from solo driving, OCTA emphasizes the importance of integrating transit-supportive design and policies. This chapter outlines key steps that community partners can take to support effective transit, focusing on transit-supportive land use and policies.

- Transit-Supportive Land Use:
  - Distance and Access—Minimizing the distance between key destinations and transit stations by ensuring convenient access through walkable, bikeable paths, and a variety of first/last mile transportation options.
  - Density and Diversity—Higher-density development and a mixture of land uses near transit corridors can provide a concentrated population base that makes transit more efficient, cost-effective, and attractive to riders, thus enabling more frequent service and a wider range of route options in those areas.
- Transit-Supportive Policies:
  - TOD Strategies—Establishing a TOD framework that prioritizes equity through upzoning near transit corridors, incentivizing mixed-use development, and protecting affordable housing to ensure accessible and inclusive communities.
  - Statewide Initiatives—California Senate Bills 375 and 743 (see page 91).
  - Local Strategies—Incentivizing TOD through density bonuses, streamlined permitting, and tax incentives, while prioritizing equity populations by protecting affordable housing and engaging with the community.
  - Transportation Demand Management Strategies—Implementing demand strategies to incentivize transit use (reduced fares, employer-sponsored passes) and disincentivize solo driving (congestion pricing, parking restrictions).

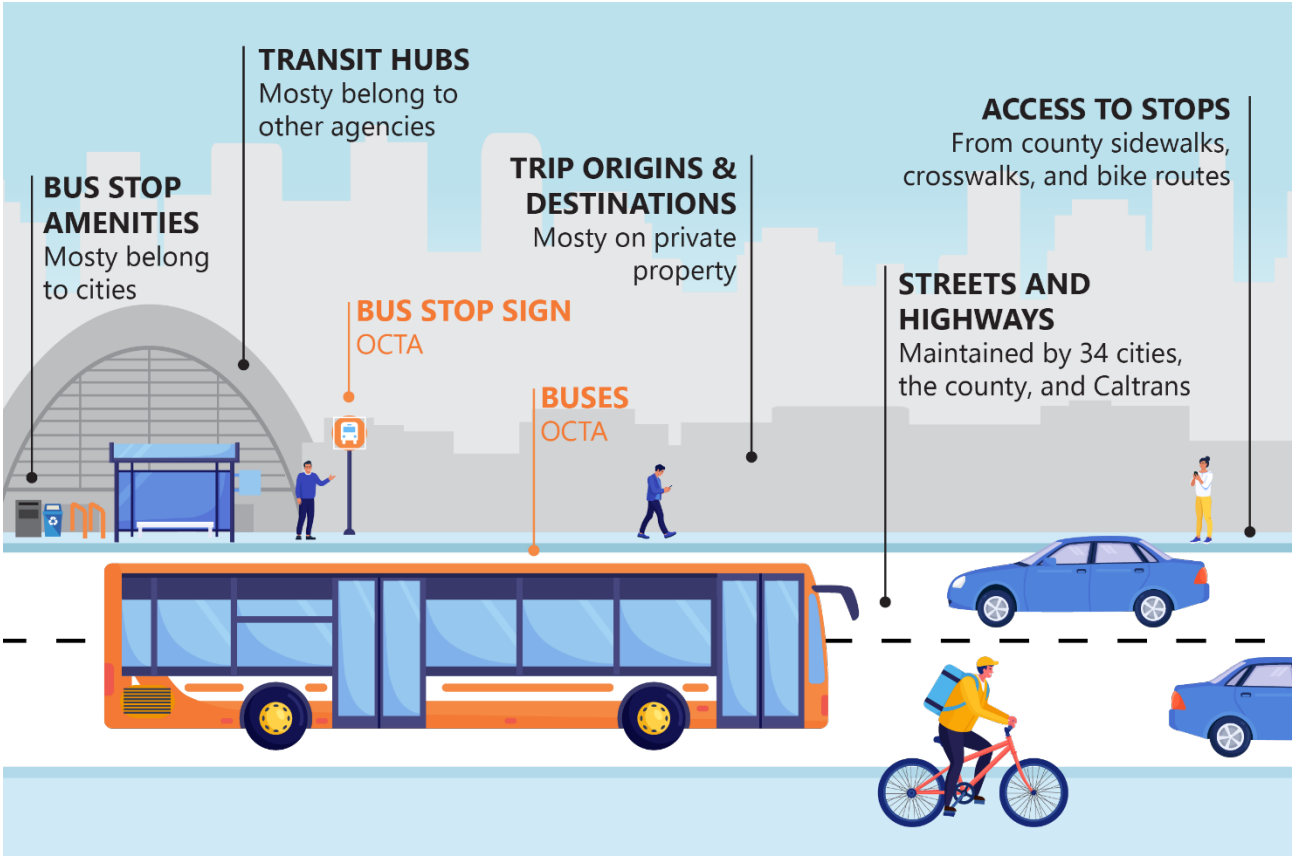
Transit-Supportive Land Use

OCTA's vehicles operate on streets and highways maintained by the county's 34 cities, the county, and the California Department of Transportation. OCTA bus stops are on city and county property, as are the sidewalks, crosswalks, and bike routes that provide access to them. Transit hubs are mostly the property of other public agencies (see Figure 34). For OCTA to be successful in its mission of providing high-quality transit service, it must partner with other public and private entities. To support the transit system in Orange County, a transit-supportive approach considers how transit, buildings, and neighborhoods interact. Key elements in this relationship are shortening distance and access to transit and increasing land use density and diversity to encourage transit use.

OCTA SUPPORT ROLE

OCTA does not control land use and development, but actively encourages local jurisdictions to develop transit-supportive designs.

Figure 34 Ownership of Public Infrastructure



Distance and Access

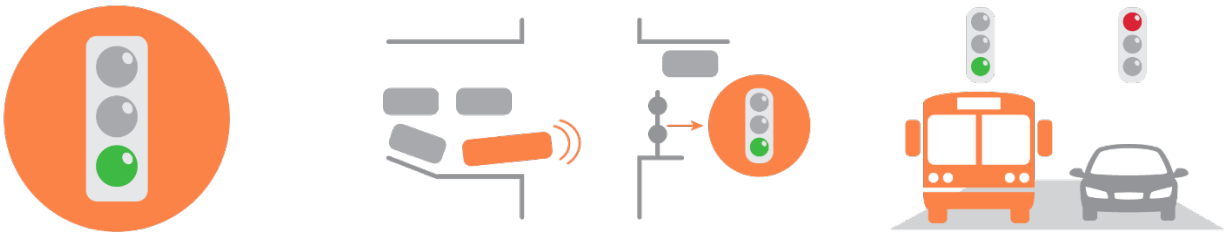
By minimizing the distance between key destinations and transit, the transit system becomes more convenient for existing and future riders. People are more likely to choose transit over driving if they can easily reach their destination in a time-competitive manner. Land use strategies that can improve transit access include an efficient street network, street design that incorporates all modes of travel, transit stop placement and design, and transportation system integration.

- **Street Network—**Many older neighborhoods in Orange County (typically in the north/central part of the county) sit on traditional street grids, and it is in these neighborhoods that OC Bus ridership is highest. Serving subdivisions is more challenging, but they can be retrofitted with cut-through pedestrian paths.

- **Street Design—**Most transit in Orange County operates on city streets, and street design is essential to providing effective transit service. Historically, this has meant simply accommodating auto movements, but current best practice is to design "complete streets" for all people. The Orange County Council of Governments has published a handbook providing detailed guidance for complete-street design in Orange County. In addition to supporting transit, complete streets provide additional space for transit stops, improve pedestrian and bicycle access to transit, and bolster land uses such as pedestrian and transit-oriented retail.

  OCTA's Transit-Supportive Design Guidelines provide detailed specifications on street design and engineering requirements for transit vehicles and transit-priority treatments that help reduce delays for transit vehicles and passengers. The transit-priority toolbox ranges from simple design treatments to more extensive interventions such as exclusive transit lanes. Exclusive transit lanes are typically located where transit services are most frequent and may increase a street's capacity by carrying more people by transit than individual cars. Three relatively simple measures cities can implement to significantly reduce transit travel times are shown in Figure 35.

Figure 35 Measures to Reduce Transit Travel Times



SMARTER TRAFFIC SIGNALS
Adjusts signal timing in real-time to improve traffic flow.

TRANSIT SIGNAL PRIORITY (TSP)
TSP extends green lights for approaching transit vehicles to reduce delays.

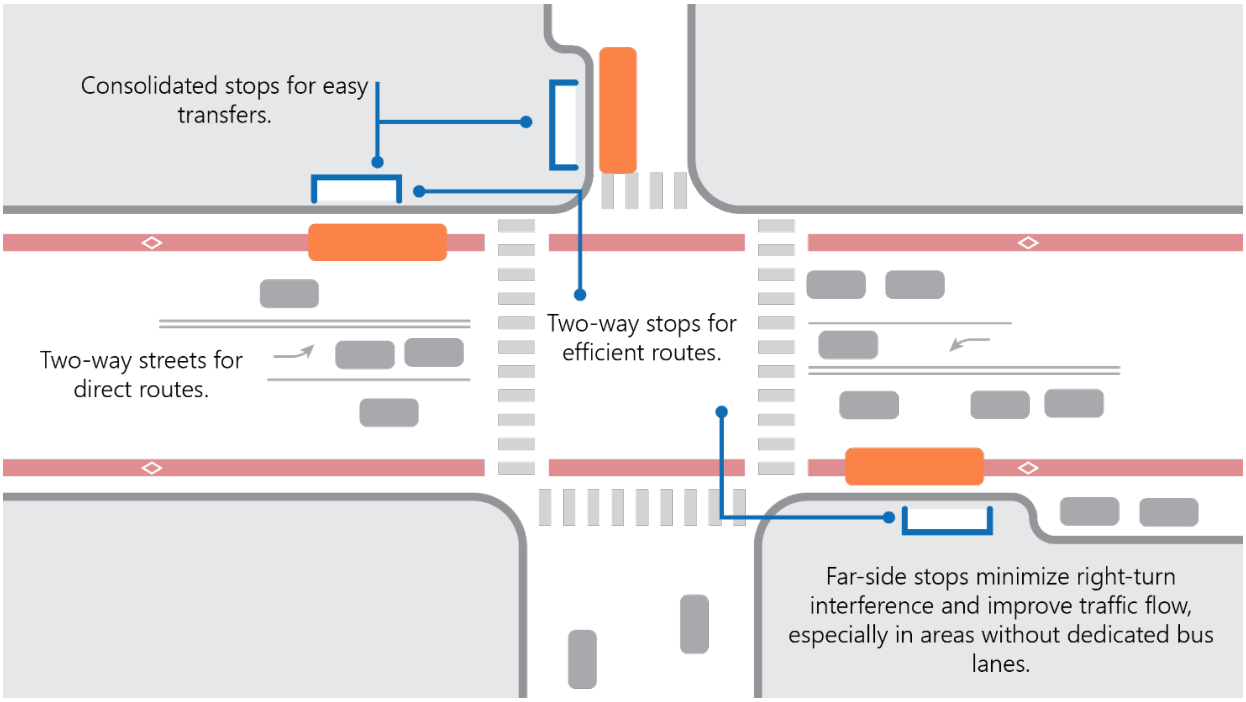
QUEUE JUMPS
Queue jumps allow transit to bypass stopped traffic.

- **Transit Stop Location and Design**—Figure 36 illustrates several principles for locating transit stops. Transit stops should be located at intersections a short walk from origins and destinations and accessible via direct paths. Stops should also be along wide, continuous sidewalks. Stops where routes converge should be close together to facilitate transfers.

  To support round-trip travel, every stop should be accompanied by a stop in the other direction. Two-way streets support more direct routes and enable clear sightlines between pairs of stops.

  Stops on the far side of intersections are usually preferable, as they separate transit vehicles from right-turning traffic, make it easier for them to merge back into traffic, and allow pedestrians to cross the street behind the transit vehicle.

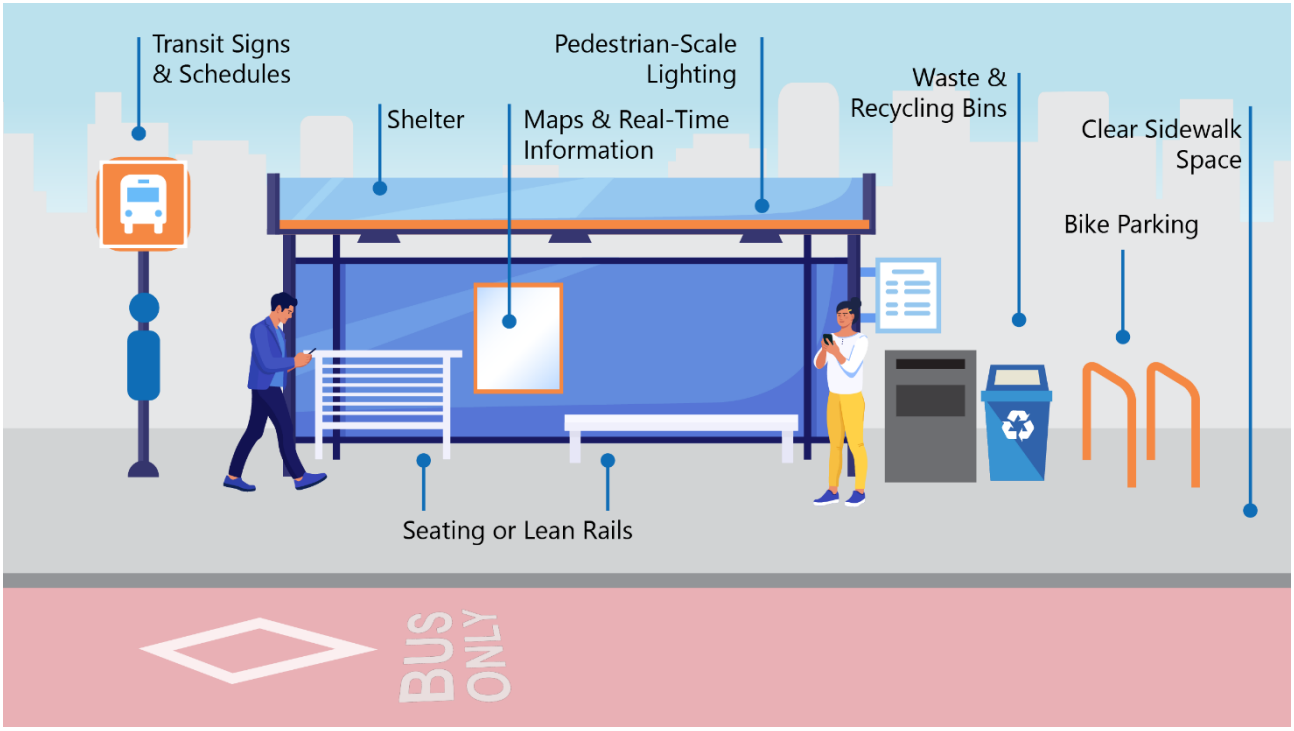
Figure 36 Principles for Transit Stop Design



Many communities locate stops at turnouts where buses can pull out of traffic, forcing buses to merge back into travel lanes. If there are multiple lanes of traffic, buses should be allowed to stop in the outside lane. If streets are quiet enough, buses can temporarily block traffic. On streets with curbside parking, stops can be located on sidewalk extensions.

New stops must be Americans with Disabilities Act (ADA) accessible and older stops should be retrofitted to meet ADA standards for seniors and people with disabilities. Stops should be comfortable, safe, and clean, with seating, shelters at busier stops, pedestrian-scale lighting, and trash cans). They should provide schedules, maps, and (at busier stops) real-time updates. They should provide enough space for wheelchairs, walkers, strollers, bicycles, and room for pedestrians to pass easily.

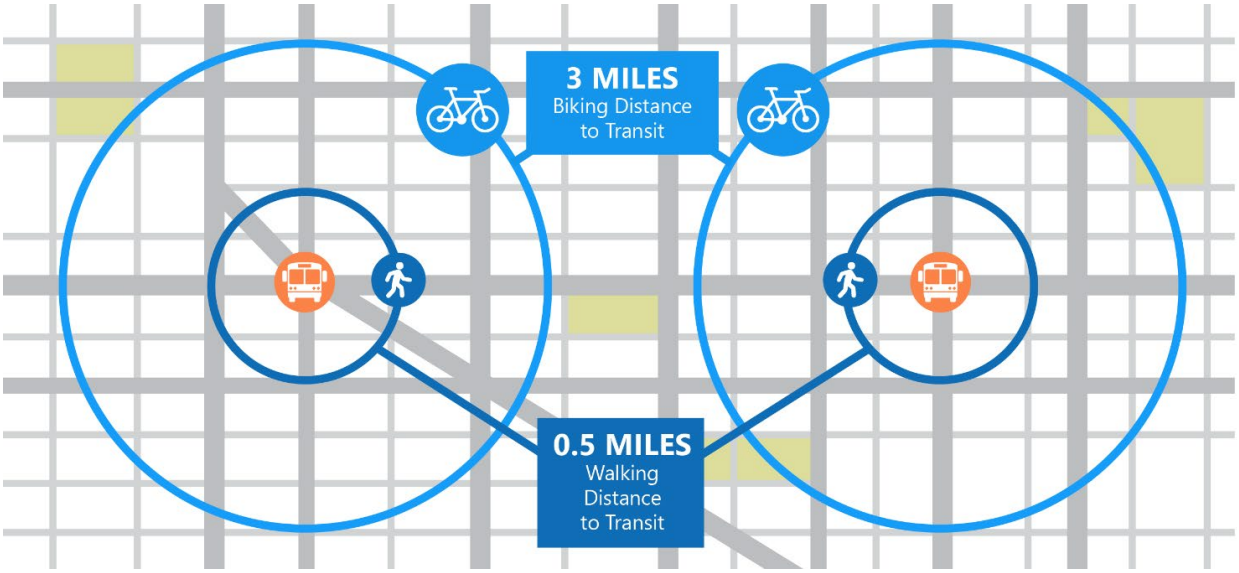
Figure 37 Key Features of Accessible Transit Stops



Transit centers have varying design requirements, but a few universal rules apply. Distances between stops or platforms should be minimized. Where possible, transit centers and their stops should be close to the street and should avoid circuitous access and circulation pathways. In some cases, putting some stops on the street next to the transit center may reduce passenger travel time. Wayfinding and directional signage are essential. Transit centers should also be designed around intermodal connectivity and access, as discussed later in this chapter.

- **Transportation System Integration**—Ideally, transit stops should be located a short walk from trip origins and destinations. But for a variety of reasons, they may be a half mile, a mile, or even several miles away. In these cases, passengers rely on first-/last-mile connections to sidewalks, bike routes, and to other transit services. Research has found that most transit riders will walk up to a quarter or half mile to stops, and that most cyclists will ride three to five miles (see Figure 38). Improvements to pedestrian and bicycle infrastructure can improve access to transit.

Figure 38 Biking and Walking Distances to Transit



Transit stops should support direct pedestrian connections. Pathways should be as comfortable and safe as possible, using complete streets practices. Marked street crossings should be both relatively close together and as short as possible. Crossings can be shortened by aligning them at right angles to sidewalks, by reducing travel lanes, and by providing sidewalk extensions and pedestrian refuges in medians. Crossing times at signals should be sufficient to allow people of all ages and abilities time to cross the street safely. Motorist awareness of pedestrians can be enhanced by using high-visibility crosswalk treatments and other measures to improve safety.

ADA-compliant curb ramps should be provided at all intersections. Grade-separated crossings, including pedestrian bridges, should be avoided, as these make pathways less direct and can be difficult for less mobile people to navigate.

Bicycle routes to transit stops should follow the same principles—direct paths with frequent, short, high-visibility crossings. Ideally, busy transit stops should connect to designated bicycle routes featuring high-quality facilities such as off-street paths, separated or buffered on-street lanes, or prioritized treatments on lower-volume streets. Jurisdictions can minimize conflicts between transit and bicycles by providing dedicated space for both modes.

Transit centers should prioritize pedestrians and bicycles over people using other modes. Connecting or feeder transit routes, bike parking, micromobility, kiss-and-rides, taxis, and services such as Uber and Lyft should all be conveniently located to transit.

Density and Diversity

Increased density and diversity of land use play a crucial role in the success of transit systems. Areas in Orange County with higher population and employment densities naturally have a larger pool of potential transit users. This concentration of people not only supports a more efficient transit system with fuller buses and

trains but also creates the demand necessary to justify more frequent service, further enhancing convenience and making transit a more attractive option. Additionally, higher-density areas are often more walkable and bikeable. A diverse mix of land uses can make transit more convenient by serving multiple purposes.

Transit-oriented development (TOD) is land development located near transit stations or stops that includes a mixture of housing, office, retail, and other amenities integrated into a walkable neighborhood. TOD leverages transit access and focuses development in close proximity to those places.

At its most basic, TOD is a mixed-use community that encourages people to live near transit and reduces dependence on driving. The most effective TOD is located less than a half mile (roughly 10-minute) walk from a transit stop or station, giving people choices in how they travel, minimizing the impact of traffic in their lives, and creating a sense of community and place. TOD elements (Figure 39) include vibrant streetscapes, pedestrian-oriented buildings, and land use characteristics that make it convenient and safe to walk, bike, and use public transit.

Figure 39 Characteristics of TOD

Source: Institute for Transportation & Development Policy.

Transit-Supportive Policies

Transit-Oriented Development Strategies

TOD policies are gaining traction as a powerful tool to promote sustainable and equitable urban growth. A series of policies have been adopted at the state and regional levels promoting TOD. These range from grants and low-interest loans for TOD to reduce greenhouse gases or carbon emissions and to promote TOD through changes to environmental review processes.

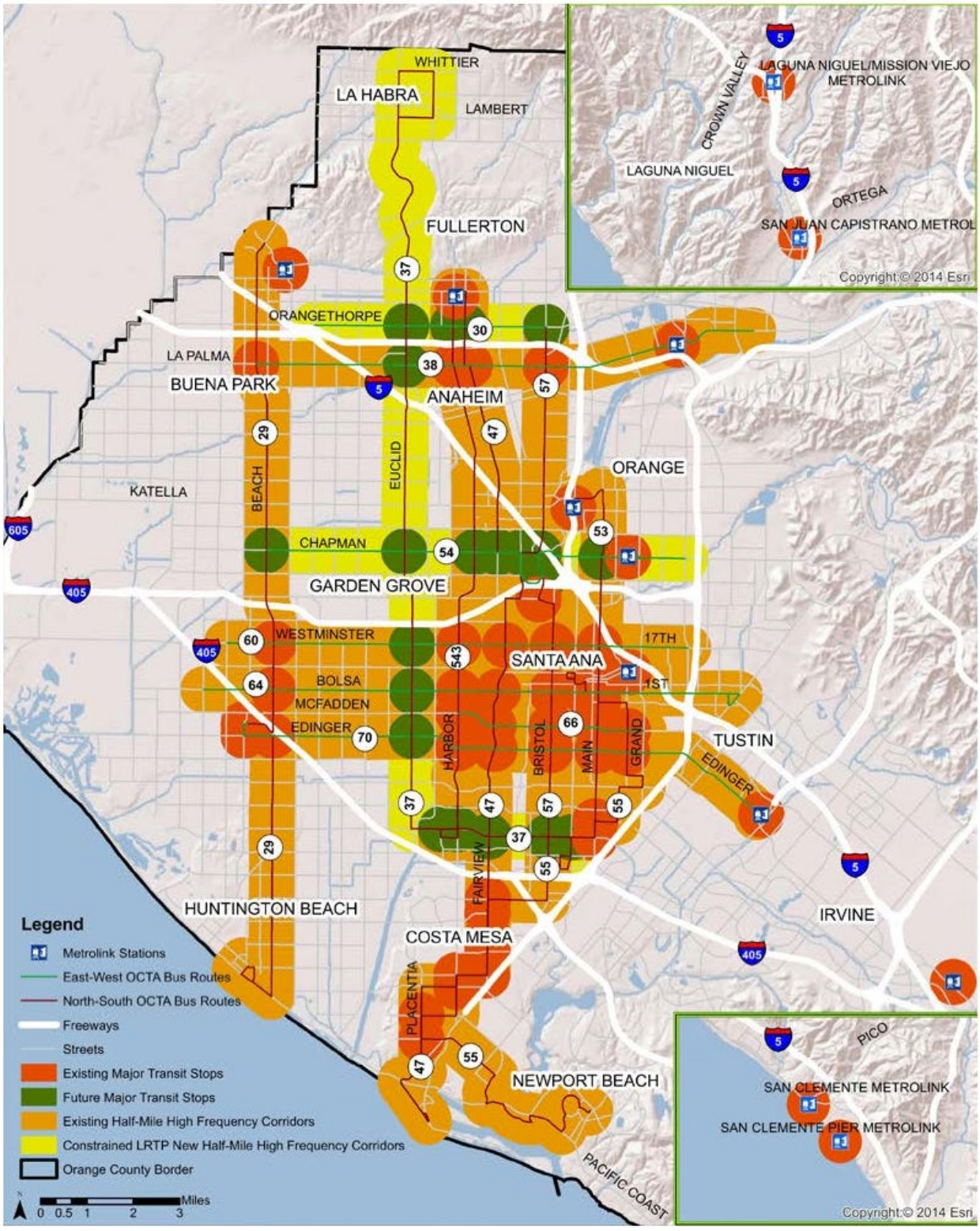
Statewide Initiatives

Across California, there is a growing recognition of the transformative potential of TOD, leading to the implementation of various policies and initiatives aimed at promoting its adoption:

- **California Senate Bill 375**—One of the highest profile bills, this legislation streamlines environmental review processes for housing and mixed-use developments located near transit corridors with frequent service. These locations are called "High-Quality Transit Corridors" and they can be found throughout northern Orange County and near Metrolink stations in the south, as shown in Figure 40. This bill incentivizes the creation of transit-oriented communities and reduces the time and cost of development.

- **California Senate Bill 743**—This bill shifts the focus of transportation impact analysis from vehicular level of service (LOS) to vehicle miles traveled (VMT). This encourages development patterns that prioritize walking, biking, and transit use over car-centric designs.

Figure 40 Orange County High-Quality Transit Corridors



Source: OCTA Transit-Supportive Design Guidelines (2021).

Local Strategies

Cities should consider strategies to incentivize TOD through density bonuses, streamlined permitting, and tax incentives, while prioritizing equity populations by protecting affordable housing and engaging with the community. A key focus is upzoning near transit corridors, which can increase housing supply, attract investment, and create more vibrant communities while ensuring that development benefits all residents.

- **Incentivizing Development—**Mechanisms to incentive TOD may include density bonuses, streamlined permitting processes, and tax incentives to encourage developers to build projects that align with transit-oriented principles. Additionally, cities can partner with developers and community organizations to create public-private partnerships that leverage resources and expertise for successful TOD implementation.

- **Protecting Equity Populations—**Ensure that the benefits of TOD are accessible to all residents. This means protecting existing affordable housing, promoting mixed-income development, and engaging with community members throughout the planning process. By actively considering the needs and concerns of vulnerable populations, cities can support TOD initiatives that foster diverse, inclusive communities while enhancing mobility for everyone.

- **Upzoning—**This is a planning tool that modifies the existing zoning regulations to permit greater density and/or a wider range of uses on a particular parcel of land. Upzoning can play a crucial role in incentivizing TOD surrounding major transit corridors. By allowing for taller buildings and a greater mix of uses, upzoning can make development projects near transit stations more financially viable, attracting investment and accelerating the development towards TOD communities. Upzoning can also help increase the supply of housing, particularly affordable options, which is critical for maintaining equity through TOD.

- **Parking Policies—**Effective parking policies are essential for fostering TOD in Orange County. Relevant policy interventions that support TOD include eliminating parking minimums and setting maximums, implementing parking districts, paid on-street parking, ride hailing and ridesharing accommodations, and unbundling parking costs from leases and cash-out programs for employers.

- **Engage with Stakeholders—**Cities can continue to build partnerships with stakeholders, including local businesses, community organizations, advocacy groups, developers, and residents.

- **Monitor and Evaluate—**Establish a robust monitoring and evaluation framework for cities to assess the effectiveness of implemented policies in achieving TOD goals. Track key metrics such as transit ridership, parking utilization rates, VMT, and development patterns. Use this data to inform future policy adjustments, identify best practices, and share lessons learned with other communities.

These strategies can work together to encourage use of public transportation and promote efficient land use. The implementation and design of TOD requires a supportive policy environment. To ensure that innovative TOD concepts can exist in Orange County, coordination with local jurisdictions regarding zoning may be essential. A shared understanding across the county and within jurisdictions to adjust zoning will allow for a successful implementation of TOD in Orange County.

Transportation Demand Management

Managing demand through incentives and disincentives may encourage a shift in travel behavior (see Section 5.6). Even with well-designed transit systems, strategies are needed to motivate people to choose transit over driving. This involves making transit more appealing through affordability, efficiency, and reliability, while also implementing measures that discourage car use, especially for shorter trips. This balanced approach helps maximize the use of existing transit infrastructure and reduces the need for costly expansions in the future. Demand management approaches may include the following:

- **Incentivizing Transit—**Offering reduced fares, monthly passes, or employer-sponsored benefits can make transit more affordable and attractive.
- **Disincentivize Car Use—**Implementing measures like congestion pricing, parking restrictions, or higher parking fees can make driving less appealing, especially for shorter trips.
- **Prioritize Transit in Infrastructure—**Dedicating lanes for buses or other transit vehicles can improve transit travel times and reliability.

SECTION

7

ACTION PLAN AND NEXT STEPS

Implementing the recommendations of the 2024 OC Transit Vision will require concerted effort and resources from OCTA. While many of the projects identified in this plan will take years to come to fruition, there are steps that OCTA can take immediately to begin moving the vision to reality. This chapter outlines a phasing strategy, costs and potential funding sources for implementing the 2024 OC Transit Vision.

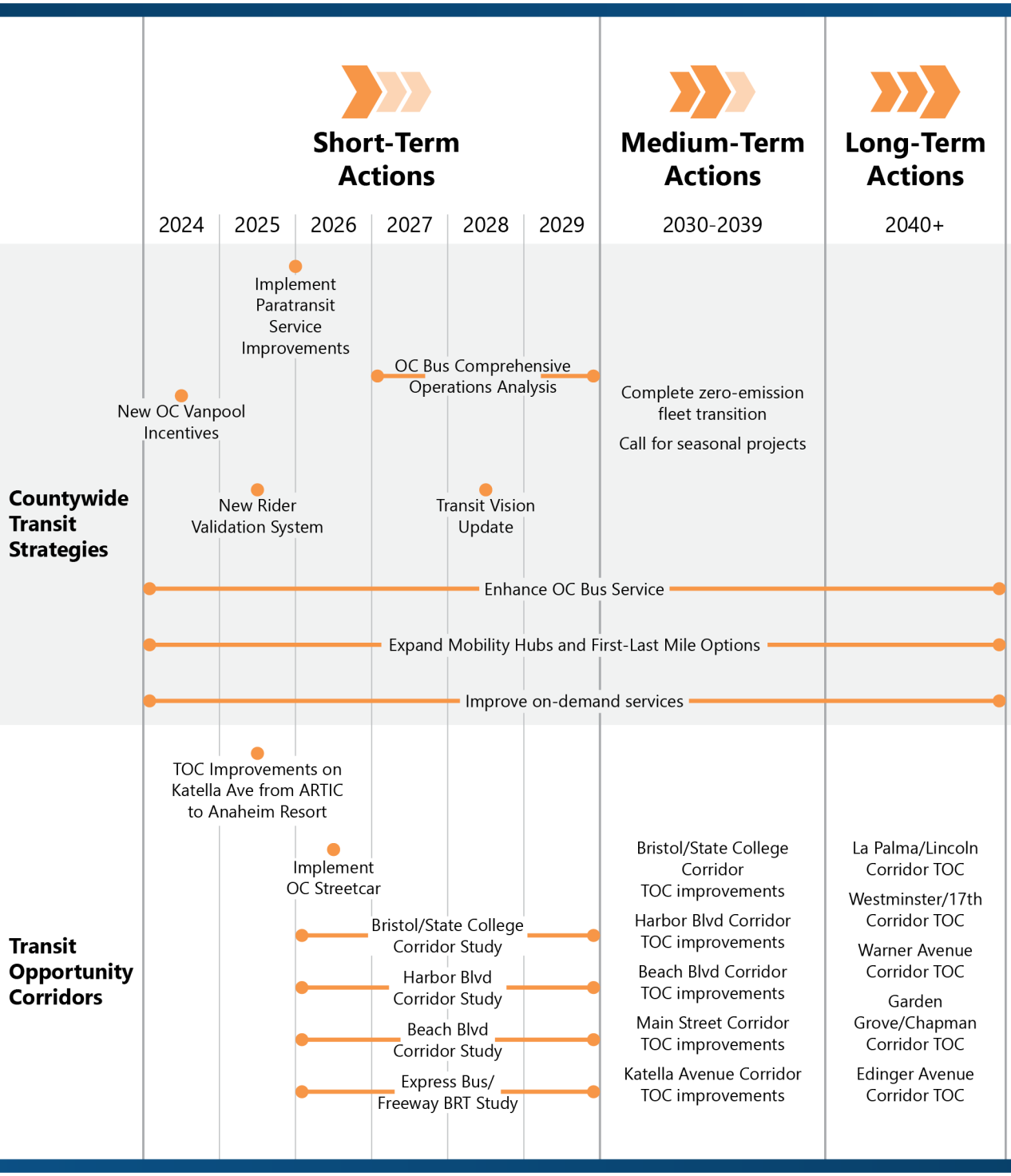
7.1 PHASING STRATEGY

The phasing strategy shown and described below addresses recommendations described in Chapters 4 and 5 of the 2024 OC Transit Vision.

Short-Term Actions (2025–2029)

- **OC Vanpool Incentives (2025)**—Actively promote the increase in vanpool subsidies from $400 to $600. Emphasize the cost savings and environmental benefits of vanpooling to encourage greater participation. Expand outreach efforts to employers, particularly in areas with limited transit options. Highlight the advantages of vanpool programs for employee recruitment, retention, and reduced parking demand. Continue collaborating with Caltrans to expand the priced managed lane network on freeways.
- **Rider Validation System (2025)**—Implement a modern RVS and fare capping mechanism to incentivize transit usage, simplify the fare payment process, and ensure that riders pay no more than a daily or weekly maximum, regardless of the number of trips taken.
- **TOC Improvements on Katella Ave. (2025)**—Extend OC Bus Rapid Route 553 from ARTIC to the Disneyland Resort. Explore a future expansion south to UC-Irvine. Monitor ridership demand and assess any infrastructure upgrades to improve speed and reliability.
- **Paratransit Service Improvements (2025–2026)**—Procure and implement new software to integrate all OC ACCESS services under a single platform. This will streamline operations, improve efficiency, and enhance the overall customer experience.
- **OC Streetcar (2026)**—Develop and implement a comprehensive plan to connect the future OC Streetcar with existing bus service. After OC Streetcar is implemented, conduct a thorough analysis of operational performance, ridership patterns, and transit connections. Identify system improvements and explore the feasibility of extending the streetcar to other high-demand areas.
- **OC Bus Comprehensive Operations Analysis (2027–2029)**—Develop a plan to build upon the success of the MBC Plan through further optimization of the OC Bus service network.

- **Transit Vision Update (2028)—**The OC Transit Vision and existing TOC recommendations will be updated to incorporate new studies or changes in travel demand. This update will also recommend additional corridor studies.
- **Transit Opportunity Corridor Studies (2026–2029)—**Analyze the top three corridors identified in the 2024 OC Transit Vision to identify potential service improvements. Focus on increasing frequency, extending service hours, and implementing bus priority measures to enhance efficiency and rider convenience. The top three corridors to be studied include:
  - Bristol St./State College Blvd.
  - Harbor Blvd.
  - Beach Blvd.
- **Express Bus/Freeway BRT Study (2026–2029)—**Conduct a comprehensive study to analyze regional travel demand, remote work trends, and the feasibility of implementing express bus or freeway BRT service. This study should inform future service planning and investment decisions.
- **Enhance OC Bus Service (2025–2029+)—**Prioritize implementing the MBC Plan to improve the efficiency and connectivity of the bus network. This will involve optimizing routes and schedules to reduce wait times and improve transfer opportunities. In addition to MBC, identify opportunities to enhance the passenger experience and route efficiency along Harbor Blvd. by implementing transit signal priority for OC Bus routes and operational improvements to shorten travel times. Complete the Transit Optimization Study in 2025 with a list of priority transit chokepoints and potential investments to improve speed and reliability. Conduct a Bus Stop Safety and Accessibility Study (2025–2026) to inform upgrades that improve safety and accessibility for all passengers.
- **Expand Mobility Hubs and First-Last Mile Options (2025–2029+)—**Commission a study to prioritize a list of previously identified 27 mobility hubs and develop concrete implementation strategies. This study will streamline planning efforts and ensure the effective deployment of mobility hubs to integrate transportation options and enhance connectivity. Coordinate with active transportation projects to improve connections to bus stops and transit centers.
- **Improve On-Demand Services (2025–2029+)—**Continue monitoring the performance of OC Flex, gather data on ridership, customer satisfaction, and operational efficiency. Use this information to make informed decisions about service adjustments or expansions. Partner with cities through Project V to consider areas where local services may be expanded (see Medium-Term Actions).


Short-Term Actions
Medium-Term Actions
Long-Term Actions
2024
2025
2026
2027
2028
2029
2030-2039
2040+
Countywide Transit Strategies
Implement Paratransit Service Improvements
OC Bus Comprehensive Operations Analysis
New OC Vanpool Incentives
Complete zero-emission fleet transition
Call for seasonal projects
New Rider Validation System
Transit Vision Update
Enhance OC Bus Service
Expand Mobility Hubs and First-Last Mile Options
Improve on-demand services
Transit Opportunity Corridors
TOC Improvements on Katella Ave from ARTIC to Anaheim Resort
Implement OC Streetcar
Bristol/State College Corridor Study
Harbor Blvd Corridor Study
Beach Blvd Corridor Study
Express Bus/ Freeway BRT Study
Bristol/State College Corridor TOC improvements
Harbor Blvd Corridor TOC improvements
Beach Blvd Corridor TOC improvements
Main Street Corridor TOC improvements
Katella Avenue Corridor TOC improvements
La Palma/Lincoln Corridor TOC
Westminster/17th Corridor TOC
Warner Avenue Corridor TOC
Garden Grove/Chapman Corridor TOC
Edinger Avenue Corridor TOC

Medium-Term Actions (2030–2039)

- **Call for seasonal projects (2030)** Actively pursue partnerships with cities to expand local transit service through Project V. Collaborate with communities to identify areas where services can fill gaps in the existing transit network and provide greater accessibility for residents.
- **Zero-Emission Bus Transition (2039)** Accelerate the transition to a 100 percent zero-emission bus fleet. Secure funding and infrastructure necessary to support the deployment of electric or other ZEBs.
- **Transit Opportunity Corridor Implementation (2030–2039)** The following list includes rapid bus or BRT transit corridor projects that may be implemented in the midterm based on project development and funding availability:
  - Bristol St./State College Blvd.
  - Harbor Blvd.
  - Beach Blvd.
  - Main St.
  - Katella Ave.

Long-Term Actions (2040+)

- **Transit Opportunity Corridor Implementation (2040+).** Based on project development and performance, these rapid bus or BRT transit services are recommended for long-term implementation if funding is available:
  - La Palma Ave./Lincoln Ave.
  - Westminster Blvd./17th St.
  - Warner Ave.
  - Garden Grove Blvd./Chapman Ave.
  - Edinger Ave.

7.2 COSTS

The following are estimated capital costs for the TOC projects and estimated changes in annual revenue hours required to operate services in each TOC, (including changes to existing services in the corridor).

Capital Costs

Capital costs for TOC projects were estimated on a per-mile basis specific to each mode (Table 5). Per-mile costs were derived from alternatives in OCTA's Central Harbor Boulevard Transit Corridor Study (2017 dollars) and escalated to 2024 dollars.

Table 5 Estimated Capital Cost Per Mile, by Mode (Year 2024 Dollars)

Mode	Cost per mile
BRT	$18,706,000
Rapid bus	$5,192,000

Based on the cost per mile above, the capital costs of BRT and rapid bus were estimated for each TOC project (Table 6). These estimates are conceptual—based solely on mode and, in most cases, project length—and would be refined through project development and design.

Table 6 Estimated Capital Cost Per TOC for BRT and Rapid Bus (Year 2024 Dollars)

Corridor Name	Length (one-way miles)	BRT Total Cost	Rapid Bus Total Cost
State College-Bristol	20.1	$375,990,600	$104,359,200
Harbor Blvd.	16.0	$299,296,000	$83,072,000
Beach Blvd.	17.0	$318,002,000	$88,264,000
Main St.	11.5	$215,119,000	$59,708,000
Katella Ave.	16.8	$314,260,800	$87,225,600
La Palma-Lincoln	18.8	$351,672,800	$97,609,600
Westminster-17th	17.9	$334,837,400	$92,936,800
Warner Ave.	13.8	$258,142,800	$71,649,600
Garden Grove-Chapman	9.9	$185,189,400	$51,400,800
Edinger Ave.	12.2	$228,213,200	$63,342,400

The total estimated capital cost of implementing all TOCs ranges from approximately $800 million for rapid bus to $2.9 billion for BRT.

Annual Operating Costs

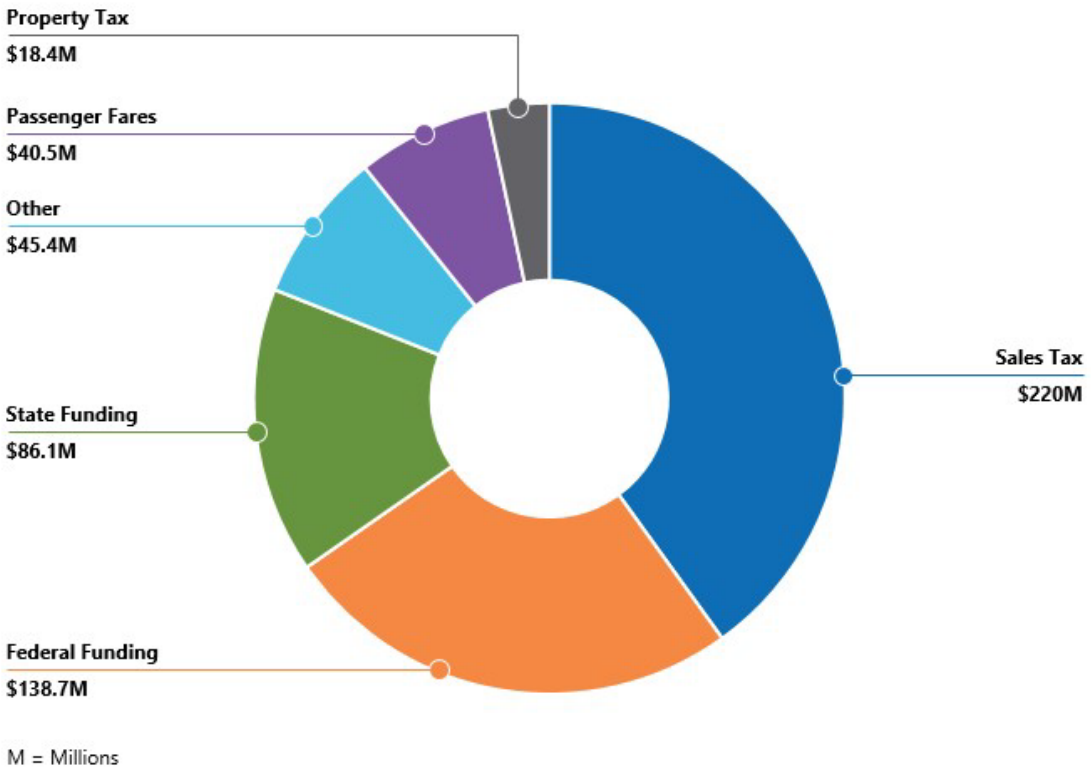
To estimate changes in annual operating costs associated with the 2024 OC Transit Vision TOC recommendations, we calculated the annual revenue hours required to operate all TOC conceptual service plans and changes to the existing OC Bus network. Arterial TOCs were assumed to operate every 10–15 minutes during weekdays, while "complementary" existing local services would be reduced somewhat (generally to every 30 minutes), and "redundant" services would be eliminated. Additional hours of operation for all TOCs would range from 350,000 to 400,000 depending on the TOC mode and reconfiguration of local services.

To calculate the cost per revenue hour for all TOCs, we used the existing OCTA cost of $206.65 per revenue operating hour. In total the 2024 OC Transit Vision TOC recommendations are projected to increase annual operating costs by between $73 million and $83 million (2024 dollars).

7.3 FUNDING

Many of the less-costly recommendations in this report, such as expanding community circulators, could be funded using existing OCTA sources such as the Measure M county sales tax (existing sources of OCTA revenue are shown in Figure 41). However, the more expensive recommendations, such as the TOCs, would require a mix of sources, including federal funds such as those used for the OC Streetcar project. In many cases, partnerships with other agencies (and in some cases, private partners) will be needed.

Figure 41 OCTA Bus and Paratransit Revenues (2023)



One important consideration in discussing funding options is the reliability of different funding sources for transportation projects. Many funding sources are formula-based, while other competitive grant programs are merit-based or discretionary. The sections below identify potential funding sources for transit projects and match these sources to the projects and programs recommended as part of the 2024 OC Transit Vision.

Transit Capital and Operating Funding Sources

A list of potential funding sources to implement the 2024 OC Transit Vision recommendations is provided below. The list is from 2024 sources and is subject to change. The funding streams and programs connected to them may have different end dates, so it is important to continuously update these potential sources as new

notice of funding opportunities are issued, laws are passed, or bonds are issued. A good source to seek competitive grant programs is www.grants.gov.

Federal Sources

- Environmental Protection Act Brownfields Program
- The Federal Transit Administration (FTA) Section 5309 Capital Investment Grant (CIG) Program, including:
  - New Starts projects
  - Small Starts projects
  - Core Capacity projects
- FTA Section 5307 Urbanized Area Formula Grants
- FTA Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities funds
- FTA Section 5337 State of Good Repair
- FTA Section 5339 Bus and Bus Facilities
- FTA All Station Accessibility Program
- FTA State of Good Repair and Rail Vehicle Replacement Program
- The Federal Highway Administration (FHWA) Surface Transportation Block Grant Program (STBG)
- The FHWA Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- United States Department of Transportation (U.S. DOT) Better Utilizing Investments to Leverage Development (BUILD) Grant Program
- U.S. DOT National Infrastructure Project Assistance Grants Program (Mega)
- U.S. DOT Nationally Significant Multimodal Freight and Highway Projects (INFRA)
- U.S. DOT Neighborhood Access and Equity Grant Program
- U.S. DOT Low Carbon Transportation Materials Program
- U.S. DOT Strengthening Mobility and Revolutionizing Transportation (SMART) Grants
- U.S. DOT Safe Streets and Roads for All
- U.S. DOT Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Program

State Sources

- Caltrans Sustainable Transportation Planning Grants
- Cap and Trade Programs
  - Transit and Intercity Rail Capital Program

  - Low Carbon Transit Operations Program
- State Infrastructure Bank
- The Transportation Development Act (TDA)
  - Local Transportation Funds
  - State Transit Assistance
- State Transportation Improvement Program
- Senate Bill 1 (SB1) Competitive Grants
- Senate Bill 125Ad

Regional, County and Local Sources

- Southern California Association of Governments (SCAG) Grant Opportunities
  - Sustainable Transportation Planning Grants
  - Regional Infrastructure Acceleration Program
- OC Go (Measure M)—Future Sales Tax Measure
- Motor Vehicle Fuel/Gas Taxes
- AB 2766 Motor Vehicle Subvention Program
- Real Estate Transaction Fees
- Community Facilities District
- Developer Fees and Agreements
- Real Estate Transfer Fees
- Rental Car and Hotel Taxes
- Commercial Parking Taxes
- Parking Benefit District
- General Obligation Voter-Approved Bonds
- Other Local Sources, including:
  - Alcoholic Drinks in Bars
  - Payroll Taxes
  - Tolls

Private Sources

- Community Benefit District/Business Improvement District

- Value Capture
- Naming Rights
- Public-Private Partnerships (P3s)

Potential Funding Sources for OC Transit Vision Recommendations

Transit Opportunity Corridors

In recent years, the primary sources of Federal funding available to support major transit capital projects, including rail and bus rapid transit lines, have been the following:

- FTA's merit-based CIGs Program, including the New Starts and Small Starts programs for larger and smaller projects, respectively.
- FHWA formula-based CMAQ grants distributed to states and localities.

Approximately one third of the cost of the OC Streetcar project was covered by a New Starts grant, with a larger portion coming from the state cap-and-trade program and the remainder coming from CMAQ and local Measure M sales tax revenues (specifically Measure M's Project S funding category for fixed-guideway projects).

One emerging option for funding major transit capital projects is "P3s" or public-private partnerships. P3s can be structured in various ways, but they typically reduce up-front cost and risk for public agencies in exchange for longer-term concessions. Some transit projects in other parts of the country have been partly financed using alternative forms of private financing such as assessment districts and other forms of value capture.

OC Bus Investments

Increased levels of fixed-route bus service would require additional funding from operating-related sources such as FTA Section 5307 grants and State TDA sales tax revenues.

On-Demand Services

Depending on the program guidelines and goals, and combined with local agency funding, these projects could be funded using Measure M's Project V funding category for local projects.

Metrolink/LOSSAN Improvements

The regional rail upgrades described in Chapter 5 would be the combined responsibility of all the agencies that make up the Metrolink Joint Powers Authority. Measure M funding could be used for this purpose as well as access and other improvements such as grade separations. However, the Measure M funding is constrained and the changes described in Chapter 5 would deplete the Measure M funding quickly. More state and federal funding is needed to deliver the improvements outlined in Chapter 5.

OC Vanpool Expansion

Expansion of the OC Vanpool program could take two forms: 1) an expanded subsidy from existing sources; or 2) *de facto* expansion of the program through expansion of Orange County's managed lane network, which is being funded through non-transit sources.

Paratransit Enhancements

FTA Section 5310 and TDA funds are primary sources of funding for paratransit services such as OCTA's ACCESS.

Additional Studies

A number of grant programs are available to support planning efforts, including programs like SCAG Sustainability Planning Grants and Caltrans Transportation Planning Grants.

Multimodal Access Improvements

Multimodal access to transit stops can draw on a variety of funding sources depending on mode. Support is available from both state and federal sources.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