



Source: OCTA



Transit Vision **SUMMARY REPORT**



FEBRUARY 2018

Prepared for the Orange County
Transportation Authority by:



In collaboration with:





OC TRANSIT VISION SUMMARY REPORT

CONTENTS

1	Why an OC Transit Vision	3
2	High-Quality Transit for Orange County	13
3	Transit Vision Recommendations	25
4	Transit Action Plan	35

The OC Transit Vision is a 20-year plan for enhancing and expanding public transit service in Orange County.





Source: Jonathan Riley

1

Why an OC Transit Vision

The OC Transit Vision is a 20-year plan for enhancing and expanding public transit service in Orange County. The Vision identifies near-term and long-term projects and programs that can make transit a more compelling travel option for Orange County residents and visitors.

The Vision recognizes that transit is important for Orange County, both today and in the future. Transit can provide a sustainable, accessible, and affordable mobility option that serves different markets and travel needs in a variety of ways.

This chapter focuses on transit's role in the county as well as highlights of existing OCTA service and key transit challenges. The Vision is informed by extensive public engagement and input from thousands of Orange County residents. The plan's recommendations are built on an analysis of where investments are needed, tailoring them to support fast, frequent, and reliable transit service throughout the county.

WHY A TRANSIT MASTER PLAN?

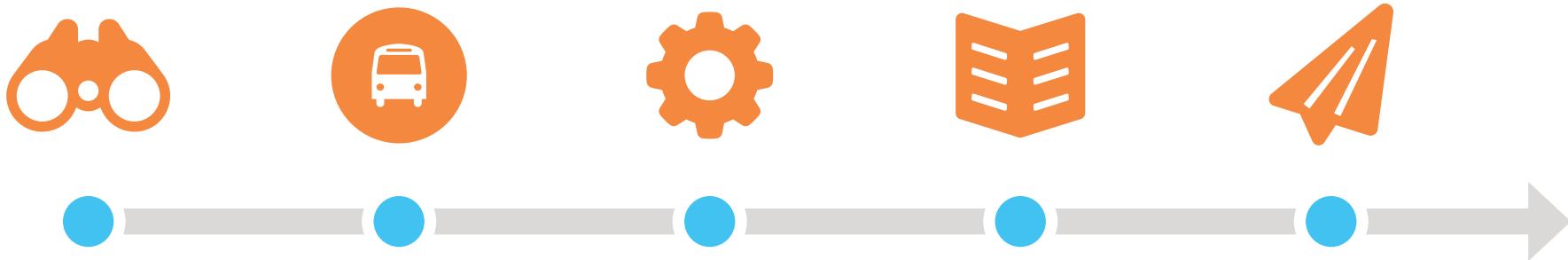
The OC Transit Vision is a 20-year plan for creating a great transit system in Orange County. While OCTA has previously developed long-range plans for transit as part of its regularly updated Long-Range Transportation Plan, this is a transit-specific, long-term plan.

Why develop a vision for transit in Orange County?

Because the county is growing quickly and major changes have been taking place in the transportation landscape—with more of both on the horizon. OCTA, in turn, has had

to look at the transit services it provides from the ground-up to be relevant for these changing times. Emerging technologies and cultural and policy shifts have all forced transit providers like OCTA to evolve. This OC Transit Vision is an effort by OCTA to be both more responsive and proactive in addressing the changing transit market.

The Transit Vision features five elements to help improve transit service today and in the coming decades:



Vision and Goals

The plan establishes a vision and goals and defines a framework for future transit investments.

Transit Corridors

The plan identifies the most promising corridors for major future investments in high-quality transit.

Strategies

The plan makes recommendations in areas ranging from existing fixed-route bus services to paratransit service and new types of service, such as on-demand “microtransit” service.

Policy Guidance

The plan offers transit policy guidance to cities, developers, and other partners who support transit service and are important stakeholders in creating an effective and efficient transit system.

Plan for Action

The plan concludes with an action plan laying out the next steps for OCTA, including recommended phasing of these recommendations.

WHY IS TRANSIT IMPORTANT FOR THE OC?

Transit is critical for Orange County both today and in the future because it ...



1 SUPPORTS A HEALTHY ENVIRONMENT



2 ATTRACTS TALENT AND MAKES ORANGE COUNTY MORE COMPETITIVE



3 SUPPORTS ACCESSIBILITY, AFFORDABILITY, AND MOBILITY BEYOND THE AUTO



4 SUPPORTS SUSTAINABLE GROWTH



5 CONTRIBUTES TO ACTIVE, HEALTHY LIFESTYLES



6 MAKES ORANGE COUNTY A BETTER PLACE TO VISIT



7 BOOSTS THE REGION'S ECONOMY

WHAT IS TRANSIT LIKE TODAY?

OC Bus is OCTA's largest and most visible service, providing 65 routes and serving 43 million passengers annually throughout Orange County (2016). OC Bus also provides service to major events and destinations, as well as vanpools and ACCESS service for those with disabilities.

OCTA's **Bravo!** comprises two rapid bus lines, providing service that is faster and more reliable, convenient, and attractive than local bus service. Stops serve only the busiest locations, such as transfer points and major destinations.

Scheduled to open in 2020, 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 Garden Grove, intersecting with existing Bravo! routes to form a key transit connection.

Orange County is served by both **Amtrak Pacific Surfliner** and **Metrolink** regional/commuter rail lines. The LOSSAN rail corridor is a north-south rapid transit spine connecting the county to Los Angeles and San Diego. **LA Metro** operates service connecting to 10 OC Bus routes within Orange County. Agencies in neighboring counties also provide limited connections to Orange County transit services.

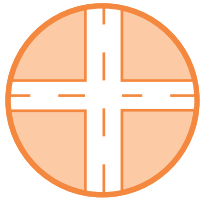
More locally, numerous communities offer a variety of circulators, shuttles, and rideshare products.



WHAT ARE THE KEY TRANSIT CHALLENGES?

The OC Transit Vision informs—and is informed by—many other efforts, including the current update to OCTA’s Long-Range Transportation Plan. Additionally, the analysis and recommendations described in the OC Transit Vision

build on work completed in the early stages of this planning process, specifically the State of OC Transit report. The key challenges for transit in Orange County are shown on this page.



Few Key Corridors

The majority of existing OC Bus ridership is concentrated in a few key corridors.



Peak Concentration

OC Bus service is concentrated during peak periods.



Select Number of Hubs

OC Bus service is focused on a select number of hubs, including destinations and connection points.



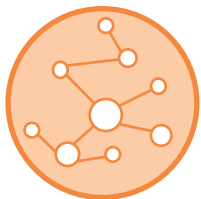
Declining Ridership

OCTA has begun taking steps to address recent ridership declines.



Funding Limitations

Limited funding has constrained ridership growth.



Overall Network

The overall transportation network of Orange County can make operating transit service challenging.



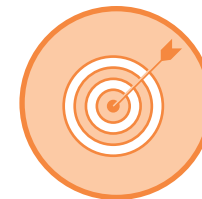
Land Uses and Demographics

Land uses and demographics in Orange County present both challenges and opportunities for effective transit service.



Mixed Long-Term Trends

Long-term trends offer a mixed message.



GHG Reduction Targets

Increased transit use can support greenhouse gas reduction targets.



Template for Growth

The future OC Streetcar and Bravo! lines provide a template for ridership growth.

HOW HAVE WE INVOLVED THE COMMUNITY?



Source: OCTA

Stakeholder Engagement

The project team led four focus group discussions and conducted interviews with nearly 20 groups and individuals representing a broad cross-section of the Orange County community.



Source: Arellano Associates

Interactive Surveys

The project team conducted four interactive online surveys to solicit feedback regarding the existing transit system and proposed OC Transit Vision recommendations.

Citizens Advisory Committee, Elected Officials, and Planning Directors Meetings

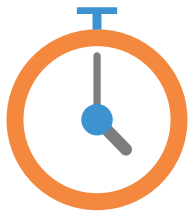
The project team met quarterly with the OCTA Citizens Advisory Committee and participated in two workshops with county elected officials and planning directors.



Source: OCTA

WHAT IS THE COMMUNITY SAYING ABOUT TRANSIT?

Across these various engagements and from the thousands of people who shared their feedback, a number of priorities emerged. People expressed particular support for the following improvements to transit in Orange County:



1

Faster and more frequent transit that is time-competitive with driving, such as rapid transit in the core of the county or express bus serving trips over long distances

am
pm

2

Longer hours of operation, and more frequent service during off-peak periods, including mid-day on weekdays, evenings, and weekends



3

High-capacity or rapid transit modes (rail or bus rapid transit) serving the busiest corridors



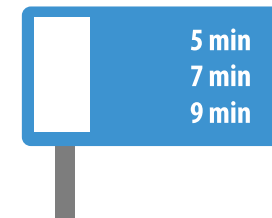
4

Easier connections to, from, and between transit routes, including improvements to walking and biking access as well as park-and-rides



5

More seasonal and special event services, similar to the existing beach community trolleys, OC Fair Express, and Angels Express



6

Real-time information and enhanced amenities at transit stops and stations to improve the customer experience

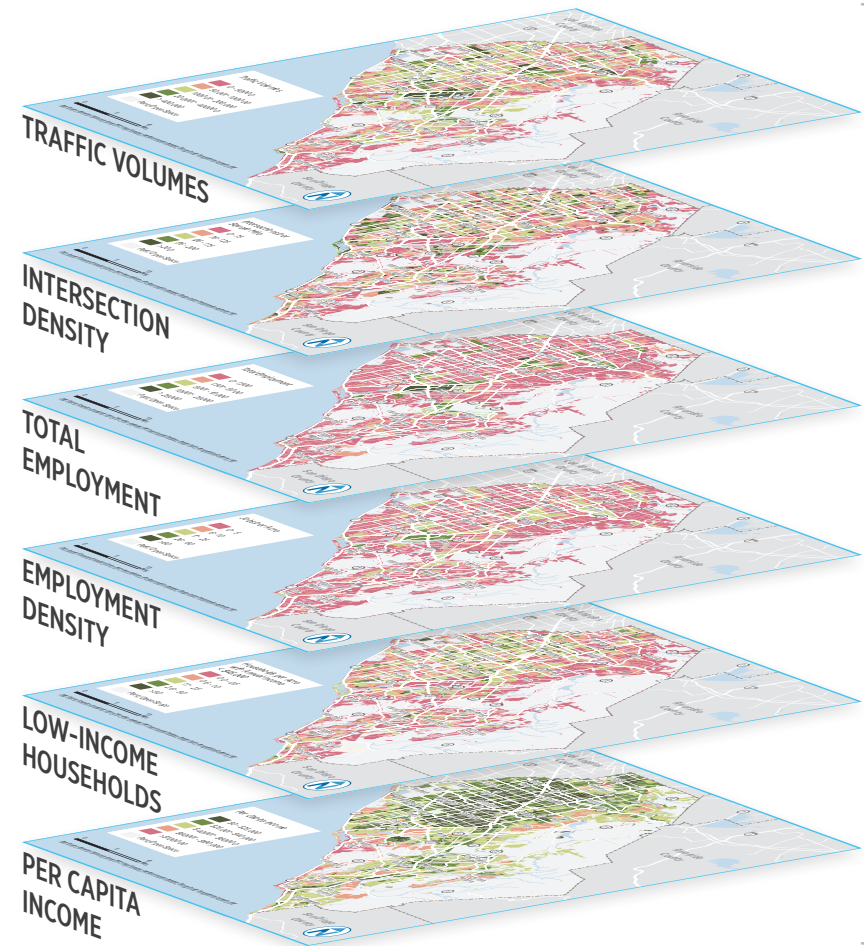
WHERE ARE INVESTMENTS NEEDED?

The population of Orange County is nearly 3.2 million people, making it the third most populous county in the state. Over the next two decades Orange County's population is expected to grow to approximately 3.5 million people, representing an increase of 10 percent between 2015 and 2040. Likewise, total jobs are forecasted to grow from 1.6 million to almost 1.9 million, an increase of 17 percent between 2015 and 2040.

To understand where transit investments are needed both today and in the future, the OC Transit Vision looks at travel patterns and demand for service by considering the following factors:

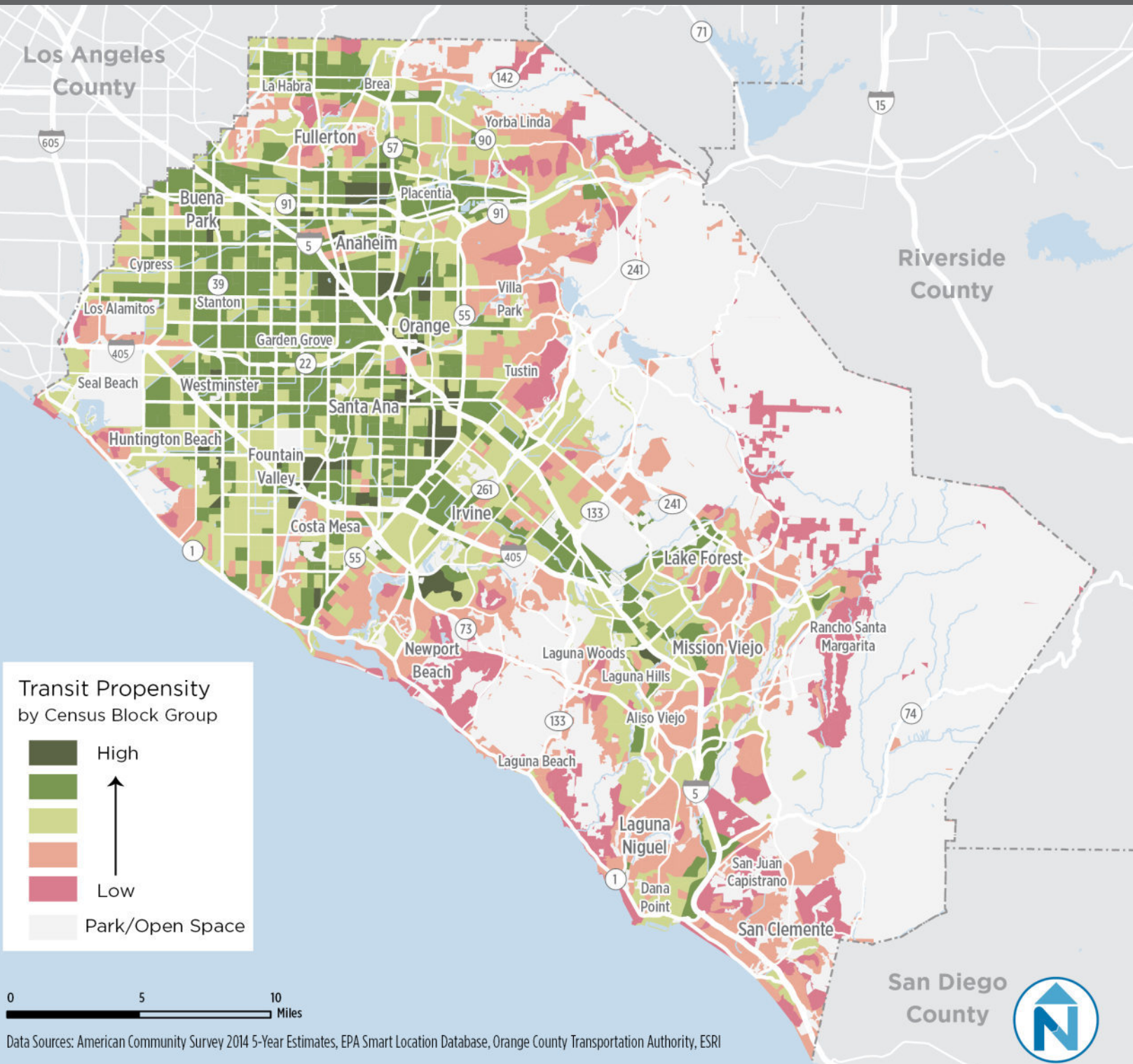
- **Land use and the built environment**, including current and future land uses, current and future population and employment density, and major trip generators (colleges and universities, for example)
- **Demographics**, including age, income, and auto ownership
- **Travel patterns and transit demand**, including origins and destinations for all modes as well as an assessment of future transit demand

Based on extensive data analysis, the following six factors best predict Orange County locations with a high concentration of people likely to use transit:



Note: Transit propensity is the likelihood that an individual will use transit. It is based on a range of factors, from the quality of available transit to demographics and surrounding land use.

TRANSIT PROPENSITY



- In Orange County, most areas of high and medium-high transit propensity are located in the urban core of North/Central County, most notably in Santa Ana and Anaheim. There are, however, areas of relatively high propensity throughout Irvine and south along the I-5 corridor.
- Lower-income individuals and households—those more likely to rely on transit—are highly concentrated in the urban core of North/Central County.
- The Irvine Business Complex boasts the largest concentration of jobs in Orange County. However, it is located in an especially auto-oriented part of the county and does not currently generate significant transit ridership.
- Wealthier, auto-centric communities along the coast, to the east, and in much of South County demonstrate lower levels of transit propensity.



Improving transit service and expanding travel options in Orange County requires a multifaceted approach that relies on partnerships between OCTA and the county's jurisdictions.





Source: Jonathan Riley

2

High-Quality Transit for Orange County

Improving transit service and expanding travel options in Orange County requires a multifaceted approach that relies on partnerships between OCTA and the county's jurisdictions. This chapter outlines a vision and goals for transit in Orange County and describes key considerations in planning, designing, and implementing that vision.

Most high-quality transit service—including much of the service OCTA currently provides—follows basic design principles. These include direct connections that serve a variety of destinations, as well as improvements that help to increase transit speed and minimize delay. OCTA's Transit Investment Framework applies these principles by matching land use, demographic, and access characteristics to different types and levels of service.

This chapter also introduces investments that can be made to improve OC Bus, focusing on vehicles, transit priority, and stops and stations. However, investments in service and transit capital projects will only be successful if land use, demand management, and transit-supportive policies and programs are in place across the county.

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



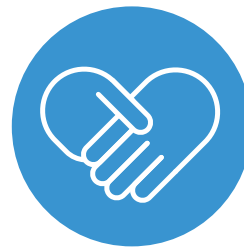
CONNECT

Connect Orange County's people and places with effective transit



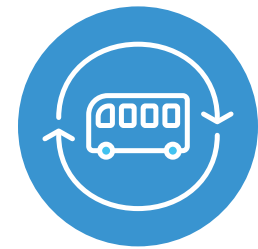
SIMPLIFY

Make transit easier to use and more convenient



COLLABORATE

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



SUSTAIN

Create a system that is resilient over the long term

HOW DO WE DESIGN HIGH-QUALITY TRANSIT?

To support the characteristics of high-quality service, transit designers try to follow a handful of simple rules. OCTA has taken the initiative to update its system, including through its OC 360 network restructuring, to ensure that its routes adhere to these best practices in transit route and network design.



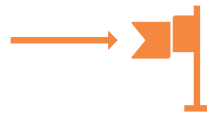
High-Quality Transit Service ...



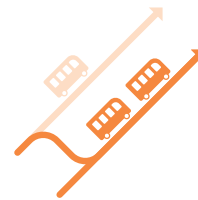
IS DIRECT



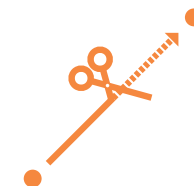
SERVES A VARIETY OF DESTINATIONS



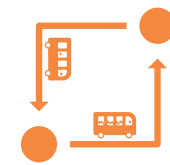
TERMINATES AT STRONG ANCHORS



AVOIDS DUPLICATION



AVOIDS ROUTES THAT ARE TOO LONG



BALANCES DEMAND IN EACH DIRECTION

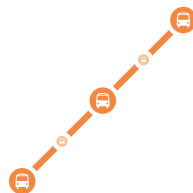


BUS ONLY

OPERATES IN RIGHTS-OF-WAY THAT MINIMIZE DELAY



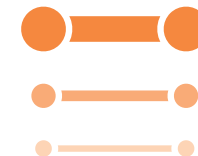
MINIMIZES TRANSFER PENALTIES



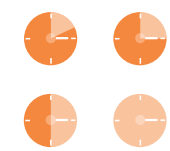
BALANCES SPEED AND ACCESS WHEN LOCATING STOPS



PROVIDES A HIGH-QUALITY WAITING ENVIRONMENT



MATCHES SERVICE LEVELS TO DEMAND



MAKES SCHEDULES EASY TO REMEMBER

HOW SHOULD WE INVEST IN TRANSIT SERVICE?

















The OC Transit Vision includes a Transit Investment Framework built on the goals that serves two primary purposes:


























- To guide OCTA in allocating operating resources for bus service and in allocating capital resources for bus and rail projects
- To guide Orange County cities and other agencies in developing transit-supportive land use, street design, and other transportation policies

The Investment Framework’s Service Allocation Guidelines for fixed-route bus operations and other non-paratransit services open to the general public are based on land use, equity, and access characteristics of transit corridors.



The graphic to the right explains the corridor characteristics and service guidelines for each category of OCTA fixed-route bus service as well as the characteristics of corridors requiring either non-traditional transit solutions or lacking the demand to justify public investment.

Service guidelines are not absolute requirements. Few corridors have characteristics consistent with just one category, and OCTA must allocate service based on other factors as well, including productivity, equity, and funding.

Service Category	Peak Frequency <small>Buses per hour</small>	Base Frequency <small>Buses per hour</small>	Weekday Span	Weekend Span
MAJOR			5 AM to 12 AM 	6 AM to 12 PM 
LOCAL			5:30 AM to 8:30 PM 	7 AM to 7 PM 
COMMUNITY			5:30 AM to 8:30 PM 	7 AM to 7 PM 
OTHER <small>Explore alternatives to OCTA fixed-route bus service</small>	N/A	N/A	N/A 	N/A 
NO TRANSIT <small>Publicly-funded service should likely not be provided</small>	N/A	N/A	N/A 	N/A 

Service Category	Population Density	Employment and Enrollment Density	Other Trip Generators		Traffic Volumes	Density of Low-Income Residents	Transit Connectivity		Intersection Density
	People per acre	Jobs or postsecondary students per acre	Hospitals Served	OR Major Retail Served	Average combined ADT at all major intersections	Low-income people per acre			Intersections per square mile
MAJOR	10 or more  +	8 or more  +	5 or more  +	OR 5 or more  +	100,000 +	2 or more  +	2 or more  +	AND 5 or more  +	100 +
LOCAL	5 to 10 	4 to 8 	2 to 5 	OR 2 to 5 	Less than 100,000	1 to 2 	1 or fewer 	AND 1 to 4 	Any
COMMUNITY	Fewer than 10 	Fewer than 8 	1 or more  +	OR 1 or more  +	Less than 100,000	Any	1 or fewer 	AND 1 to 4 	Any
OTHER Explore alternatives to OCTA fixed-route bus service	Fewer than 5 	Fewer than 4 	Any	Any	Any	Any	Any	Any	100
NO TRANSIT Publicly-funded service should likely not be provided	Fewer than 3 	Fewer than 2 	None	None	Any	Fewer than 2 	None	None	Fewer than 100

 Hospital with 50 or more beds
 Retail center with 50 or more stores

 Connection with Metrolink station, transit center, or park-and-ride
 Connection with Major OCTA route

WHAT INVESTMENTS CAN IMPROVE OC BUS?

Capital investments in existing bus service fall into three categories: vehicles; transit-priority improvements to the right-of-way; and major improvements to stops and stations (including operational improvements and enhanced passenger amenities).

Some of these can be implemented by OCTA; others, such as transit priority and operational improvements, would require partnerships with local jurisdictions and other agencies such as Caltrans.

Vehicles

New vehicles can help to improve the current fleet in terms of capacity, emissions, reliability, maneuverability, comfort, and brand identity, among other factors.

- A** Vehicle capacity, and the related issue of overcrowding
- B** Comfort, both aboard vehicles and while waiting at stops
- C** Vehicle and station branding, to enhance awareness of specialized and premium services such as BRT

Transit Priority

Transit priority improvements to the right-of-way help to improve transit speed and reliability.

- D** Business, Access, and Transit (BAT) lanes prohibit general-purpose travel except for right turns and access to businesses
- E** “Queue jumps” or short bus lanes at intersections (often right-turn lanes) allow buses to proceed in advance of traffic using a transit-only signal
- F** Transit priority signals give buses an advance or longer green light at intersections
- G** Changes to signal timing can benefit transit operations

Stops and Stations

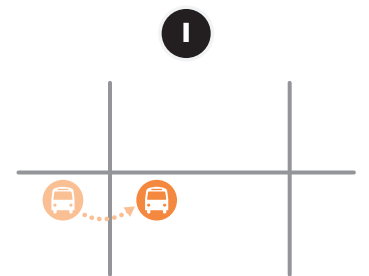
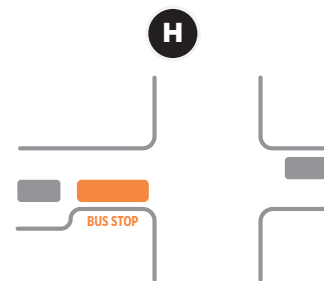
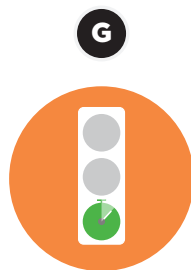
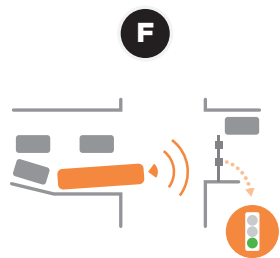
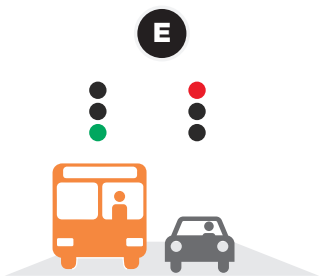
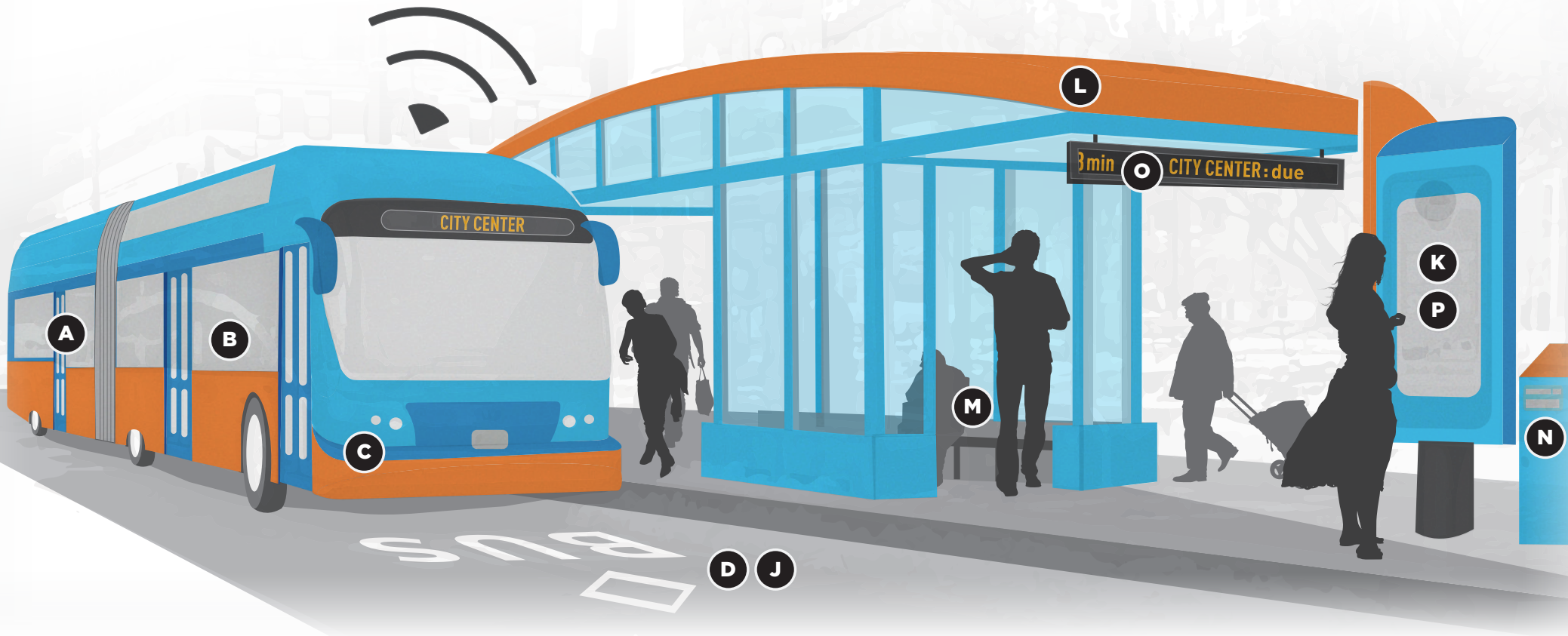
Improvements to stops and stations include operational improvements that make transit faster and more reliable and enhanced passenger amenities that improve the experience for customers.

OPERATIONAL IMPROVEMENTS

- H** “Bulb-out” or curb extension stops allow buses to stop in the travel lane, eliminating the need to merge back into traffic
- I** Relocation of stops can improve operations
- J** Removal of parking spaces at or near stops allows buses to access the curb
- K** Off-vehicle fare collection and all-door boarding speeds passenger loading

PASSENGER AMENITIES

- L** Shelters at additional stops, and additional or larger shelters at the busiest stops
- M** Seating at additional stops, and more seating at the busiest stops
- N** Trash cans at additional stops
- O** Real-time arrival information displays at stops
- P** Maps, schedules, and other information at additional stops



WHAT IS HIGH-CAPACITY TRANSIT?

Transit modes are described in detail in the State of OC Transit report. The following four modes appear most feasible for Orange County and were evaluated as part of the OC Transit Vision.



Rapid Streetcar

Rapid streetcar is a hybrid of streetcar and light rail, with wider stop spacing than typical streetcars. The western segment of the OC Streetcar between Santa Ana and Garden Grove, which will operate in an off-street right-of-way with widely spaced stops, fits the definition of rapid streetcar.



Bus Rapid Transit

BRT is a high-quality bus service that uses dedicated lanes and operates much like rail. Operational and design elements that set BRT apart from traditional local bus service include off-board payment, level boarding, wider stop spacing, traffic signal priority, higher capacity vehicles, specialized branding, and more frequent service.



Rapid Bus

Rapid Bus is very similar to BRT, but does not operate in dedicated transit lanes. Instead, most service operates in mixed traffic with targeted measures to provide transit priority, such as queue jump lanes and signal priority. OCTA operates two Bravo! rapid bus routes on the Harbor Boulevard and Westminster/17th Street corridors.



Freeway BRT

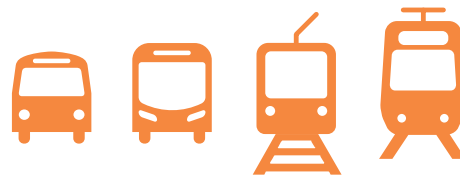
Freeway BRT operates along freeways, either in regular traffic lanes, in high-occupancy vehicle (HOV) or managed lanes, or along the shoulders. Freeway BRT routes could use either existing transit hubs near freeways or new stations in the freeway right-of-way.

WHEN IS HIGH-CAPACITY TRANSIT WARRANTED?

The OC Transit Vision helps to answer the question of where rapid streetcar, BRT, or other high-capacity transit lines might make sense in Orange County. In general, the following thresholds are appropriate when considering high-capacity transit capital investments:

- Corridors with population densities greater than 15 people per acre (9,600 residents per square mile) and/or employment densities greater than 15 employees or students per acre (9,600 jobs/students per square mile)
- Corridors in which existing service has all seats full (i.e., peak loads greater than 1.0) and peak headways of 12 minutes or less

In Orange County today, the busiest OC Bus routes feature both high loads and, in some cases, on-time performance that could be improved by investments in high-capacity transit. A number of major corridors in the north-central core of Orange County appear to be at or near these thresholds. Many of these corridors feature other major trip generators identified in the Service Investment Guidelines, including large retail centers, hospitals, and other destinations.

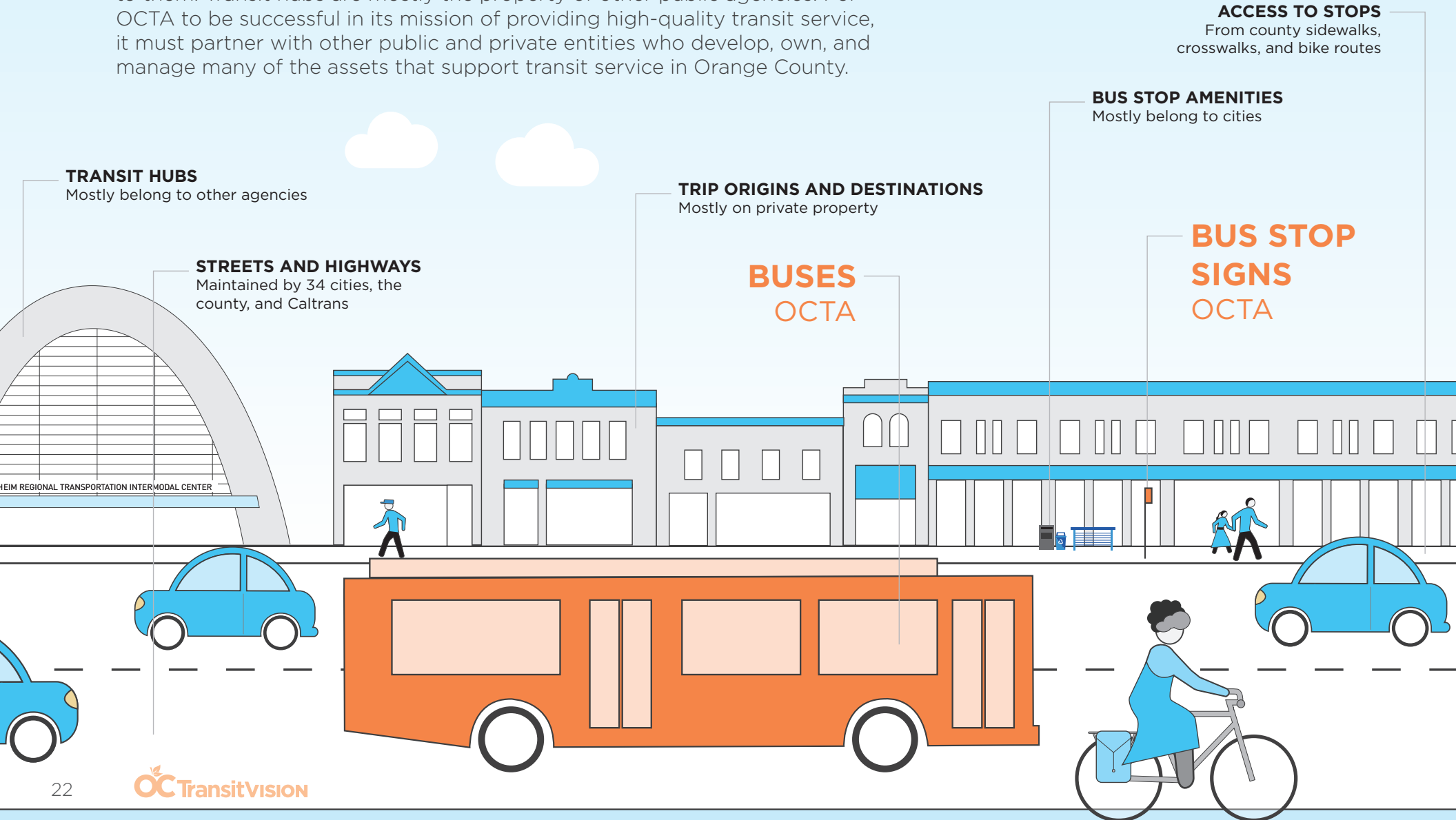


Consider high-capacity transit when transit corridors have:



HOW CAN OCTA PARTNERS SUPPORT TRANSIT?

OCTA's vehicles operate on streets and highways maintained by the county's 34 cities, the county itself, and Caltrans. 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. For OCTA to be successful in its mission of providing high-quality transit service, it must partner with other public and private entities who develop, own, and manage many of the assets that support transit service in Orange County.

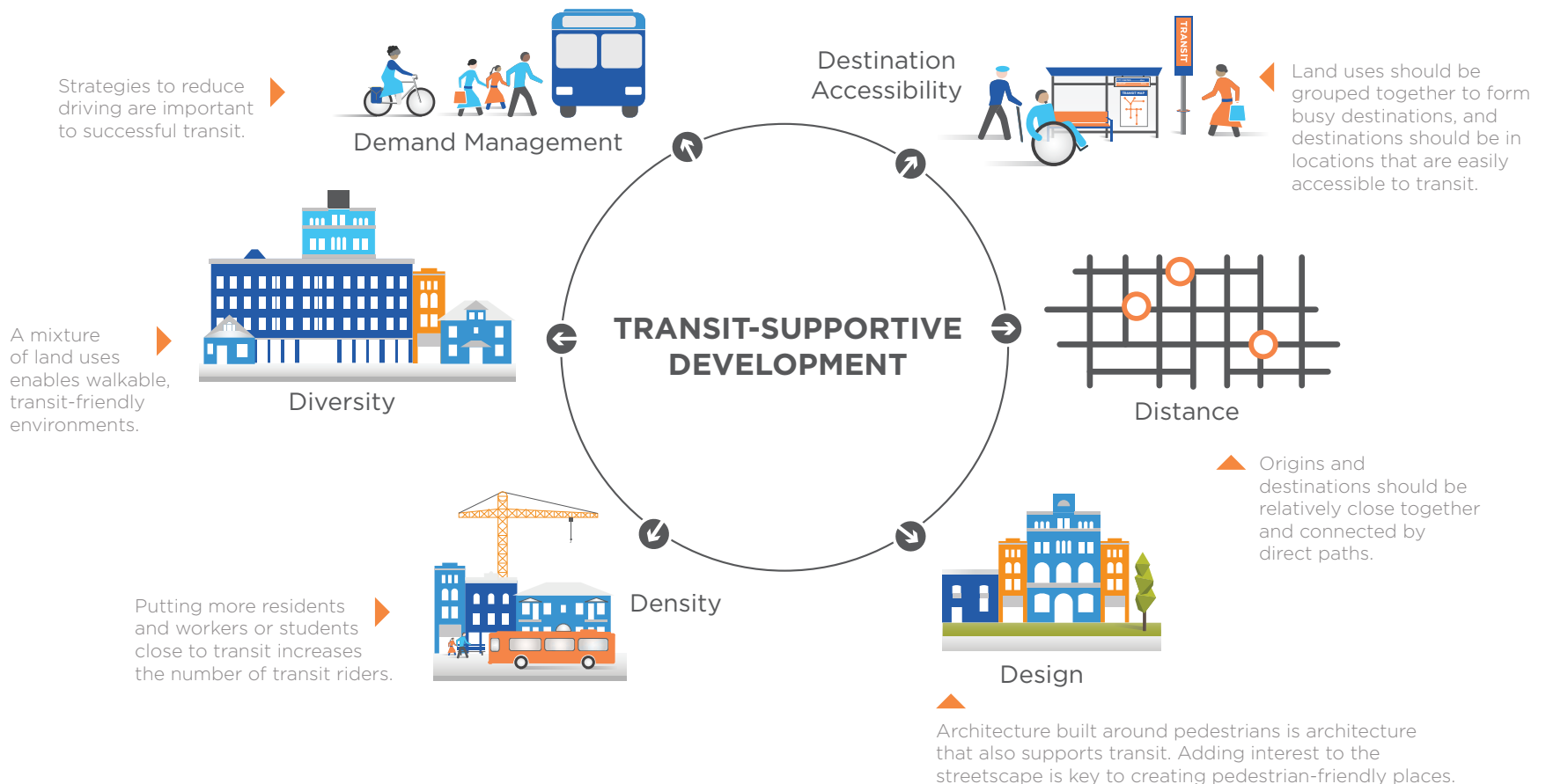


WHAT ARE TRANSIT-SUPPORTIVE LAND USES AND POLICIES?

When considering the relationship between transit, buildings, and neighborhoods, it is useful to think in terms of the “6 Ds.” Each of these is essential to building transit-friendly environments.

Cities, developers, and other entities can support transit by adopting policies and establishing programs to encourage transit use, walking, biking, and

ridesharing. Collectively, these policies are referred to as transportation demand management (TDM) or parking demand management. A demand-management-based approach reduces the need for single-occupant vehicle trips, making it easier to take trips in other ways. It also more efficiently and proactively manages limited parking and road supply.



The OC Transit Vision offers recommendations for improving transit throughout Orange County.





Source: OCTA

3

Transit Vision Recommendations

The OC Transit Vision offers recommendations for improving transit throughout Orange County, both in the higher transit demand areas of North County and in the lower transit demand areas of South County. 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.

This chapter introduces recommendations focused on specific corridors and routes as well as new types of services and programs that can be provided countywide. Collectively, these recommendations form a transit vision that will support the next 20 years of growth and development in Orange County.

WHAT TRANSIT STRATEGIES ARE RECOMMENDED?

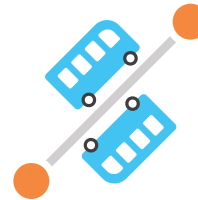
The recommendations of the OC Transit Vision acknowledge that different types of services are needed in different parts of the county. Higher capacity, fixed-route transit (like rapid streetcar and bus rapid transit [BRT]) has great potential for success in Orange County's denser, more walkable areas. At the same time, service in the lower density, more suburban areas of the county should focus on key connections to jobs, including OC Flex service connected to Metrolink stations and Freeway BRT to move people along the county's growing high occupancy vehicle network.

The OC Transit Vision offers something for everyone, whether improvements to existing OC Bus routes, enhancements to ACCESS paratransit service, new high-capacity transit corridors, expanded seasonal and special event services, pilot "microtransit" (or on-demand) service, more trips on Metrolink, or future connections to Los Angeles County. The recommendations shown in the map on the following page capture the key investments identified through the OC Transit Vision. Additional information about each of these can be found in the following sections.



Transit Opportunity Corridors

Transit Opportunity Corridors have the potential for investment in high capacity transit, such as bus rapid transit (BRT) or rapid streetcar.



Fixed-Route Recommendations

Fixed-route recommendations include improvements to Bravo!, local OCTA routes, special event service, and bus-rail connections.



Strategies for Other Types of Mobility

Strategies for other types of mobility include paratransit and other demand-response services, like OC Flex and OC Vanpool.

TRANSIT RECOMMENDATIONS



0 5 10 Miles
Data Sources: Orange County Transportation Authority, ESRI



Seasonal and special event services



OC Vanpool expansion



Paratransit enhancements

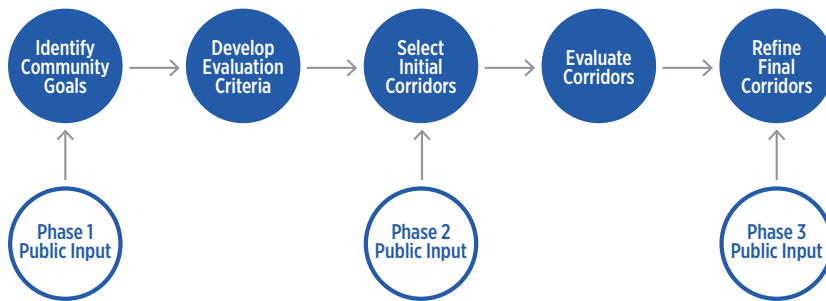


Service upgrades to meet new standards

WHAT ARE 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 investment in higher-quality service such as rapid streetcar or bus rapid transit (BRT). Eleven such corridors were identified, and two of these were found to be prime candidates for near- to medium-term investment.

Transit Opportunity Corridors were selected based on community input and technical evaluation.



- Initial public input helped to determine shared community goals for transit in the OC.
- The goals helped to shape the TOC evaluation criteria.
- A second round of public input—including an interactive online survey in which respondents could see corridors on a map and vote for their preferred options—helped to select an initial set of TOCs for evaluation.
- The TOC evaluation used criteria based on OC Transit Vision goals and transit planning best practices.
- The community was then given the opportunity to review the recommended corridors. This ensured that the final set of corridors reflected both analytical rigor and public preferences.

Rapid Streetcar or BRT

- NORTH HARBOR**
 Between Cal State Fullerton and the Santa Ana Regional Transportation Center, primarily via North Harbor (and including the OC Streetcar alignment)
- 17TH/WESTMINSTER & BRISTOL**
 Between the Goldenwest Transportation Center and the University of California, Irvine, via 17th/Westminster and Bristol (including short segments of Main and the OC Streetcar alignment and serving South Coast Plaza, the Irvine Business Complex, and John Wayne Airport)

BRT or Rapid Bus

- SOUTH HARBOR**
 South Harbor between 17th/Westminster and Hoag Hospital Newport Beach
- BRISTOL & STATE COLLEGE**
 Bristol and State College between the Brea Mall and Downtown Santa Ana

Rapid Bus

- BEACH**
 Beach between the Fullerton Park-and-Ride and Downtown Huntington Beach
- LA PALMA & LINCOLN**
 La Palma and Lincoln between Hawaiian Gardens and Anaheim Canyon Station
- MCFADDEN & BOLSA**
 McFadden and Bolsa from Goldenwest Transportation Center to Larwin Square
- MAIN**
 Main between ARTIC and the South Coast Plaza Park and Ride
- CHAPMAN**
 Chapman from Hewes to Beach

Freeway BRT

- INTERSTATE 5**
 Freeway BRT on I-5 from the Fullerton Park-and-Ride to Mission Viejo/Laguna Niguel Station
- STATE ROUTE 55**
 Freeway BRT on SR-55 from the Santa Ana Regional Transportation Center to Hoag Hospital Newport Beach

TRANSIT OPPORTUNITY CORRIDORS BY POTENTIAL MODE



The modes shown in this map are those that the OC Transit Vision's high-level analysis suggested could be viable. These were identified to understand order-of-magnitude costs, which can vary between modes. However, the mode for these corridors has not been finalized. A more detailed project development process will be needed to finalize the mode selection. This is a required step to obtain federal funding and takes a transportation improvement from concept through construction.

- Rapid Streetcar/BRT
- BRT/Rapid Bus
- Rapid Bus
- Freeway BRT
- - - Metrolink



Data Sources: Orange County Transportation Authority, ESRI

Next Steps

Conduct **corridor studies for the North Harbor/Santa Ana and Westminster/Bristol corridors.** Studies are already underway in the Harbor corridor and should begin on Bristol in the next five years.

Introduce **Bravo! service on the Route 29/Beach corridor.** Over the medium term add Bravo! service to the Main corridor, and others. Upgrade these and existing Bravo! routes to improve speed and passenger amenities.

Study potential **Freeway BRT corridors including I-5, SR-55, and I-405.** This would identify the most promising corridors and begin to shape the infrastructure and operational characteristics of Freeway BRT.



WHAT ARE THE FIXED-ROUTE RECOMMENDATIONS?

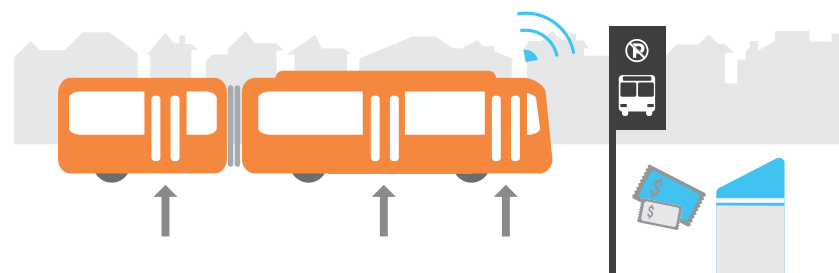


Service Investments

Continue to upgrade OC Bus routes to meet the headway and span standards in the Investment Guidelines.

All Major routes—OCTA’s services in its busiest corridors—should operate at least every 15 minutes during peak periods, and until midnight seven days a week. This will ensure that most OCTA passengers can take transit trips at the busiest times without having to consult or plan around schedules, with service available 18+ hours a day. The expanded hours of service will make OCTA’s core services a viable option for all types of trips, serving people well beyond the 9-to-5 commuter market.

The guidelines also call for Local routes to operate every 30 minutes throughout the day. This ensures most OCTA services are at least reasonably convenient and potentially attractive to large numbers of passengers, rather than functioning only as basic lifeline services for those with no other travel options.

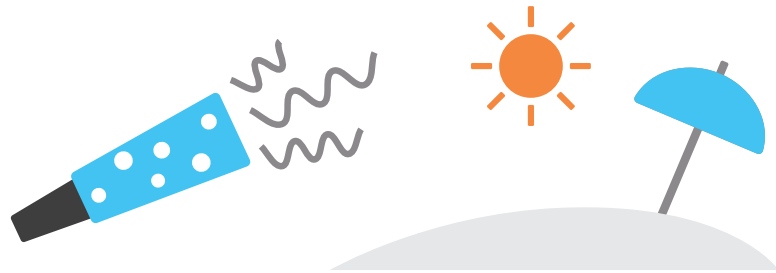


Bravo! Upgrade Strategy

In addition to introducing Bravo! rapid bus service in additional Transit Opportunity Corridors, incrementally upgrade existing and new Bravo! Routes towards BRT over time.

Bravo! Route 543 was introduced in the Harbor Boulevard corridor in 2013, and Route 560 followed in the 17th Street/Westminster corridor in 2016. Both have proven successful, attracting riders with faster, more reliable service.

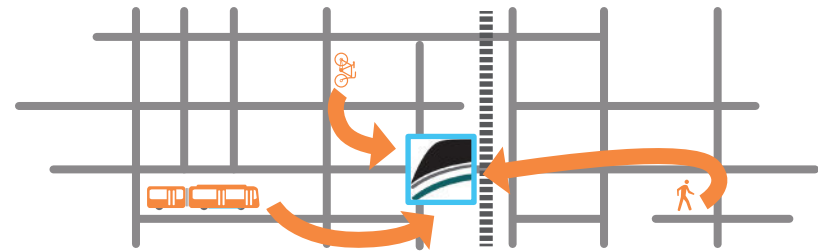
OCTA should improve its existing Bravo! service, upgrading it over time from rapid bus to more robust BRT service. Because both rapid bus and BRT consist of packages of improvements, upgrades can be made incrementally, as funding allows. Initial steps could include introduction of off-board fare payment, all-door boarding, and transit signal priority. In the long term, OCTA should consider queue jumps, improved shelters, and priority transit lanes on the highest ridership corridors.



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). A Measure M2 Project V Call-for-Projects in 2018 should focus on additional opportunities for seasonal and special event services that reduce local congestion.



LOSSAN/Metrolink Improvements

Support improvements to Orange County rail service planned by Metrolink and other partner agencies. Proceed with existing plans to improve station access and to reduce the number of at-grade road crossings.

The LOSSAN (Los Angeles-San Diego-San Luis Obispo) 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.

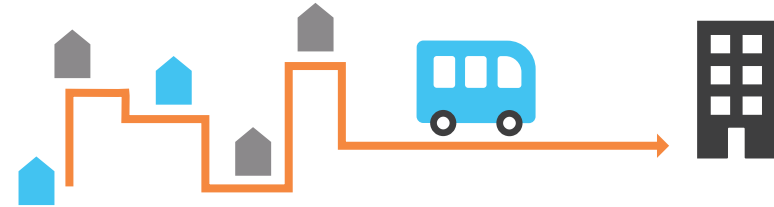
HOW ELSE CAN MOBILITY BE IMPROVED?



OC Flex

OCTA will soon introduce on-demand “microtransit” service in limited areas as part of a pilot program. Assuming the pilot is successful, this service could be expanded to locations throughout the county.

OC Flex customers will use a smartphone app or call to reserve a vehicle that should arrive within 15 minutes. It will also be a shared-ride service, meaning that vehicles may stop along the way to serve other passengers. In a broad sense, OC Flex will resemble on-demand, shared-ride services offered by transportation network companies (TNCs) such as Uber and Lyft. However, OC Flex will be available to those without smartphones, cash payments will be accepted, vehicles will be fully wheelchair-accessible, and drivers will be trained by OCTA. Fares will also be lower than those charged by TNCs. Initially, service will be available seven days a week, until mid-evening.



OC Vanpool Expansion

OCTA’s existing program to incentivize employee vanpools could expand in a number of ways, including in conjunction with continued expansion of the county’s high-occupancy vehicle lane network.

OCTA’s commuter vanpool program is already quite popular: there are approximately 530 vanpools in the county with daily combined ridership of several thousand passengers—more than many OC Bus routes. Vanpooling is an essential component of the transportation system in Orange County, even more so because it reduces traffic congestion during peak periods.



Paratransit Enhancements

Costs for ACCESS paratransit services have been rising and will likely continue to rise. To keep the program sustainable, OCTA will need to further existing efforts to manage demand.

OCTA has begun taking steps to manage demand, including continued support of senior mobility programs; expanding cooperative agreements; expanding the same-day taxi program; and reviewing fares. Going forward, the following additional steps are recommended:

- 1 Develop and promote economical supplementary services to provide customers with disabilities added convenience or flexibility not available on ADA paratransit.
- 2 In addition to the existing same-day taxi service and cooperative agreements with senior day programs, explore opportunities to provide paratransit using OC Flex. Monitor developments in the ability and willingness of TNCs like Uber and Lyft to participate in programs for people with disabilities while meeting regulatory requirements.
- 3 Track technology developments with the potential to increase the efficiency of ADA paratransit while maintaining or improving customer experience.

Implementing the recommendations of the OC Transit Vision will require concerted effort and resources from OCTA.





Source: Jonathan Riley

4

Transit Action Plan

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

Implementing the recommendations of the 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—including costs and funding sources—for implementing the OC Transit Vision.



Source: OCTA



Source: OCTA

HOW DO WE MOVE TO ACTION?

The projects outlined in the OC Transit Vision are grouped into three timeframes for implementation: short-term (2018-2022), mid-term (2023-2032), and long-term (2033+). This phasing approach recognizes the project development process for major capital investments, such as the OC Streetcar, 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 implementing Bravo! service on additional corridors, expanding service on existing routes, piloting new on-demand services, and advancing studies along high-priority Transit Opportunity Corridors (including Freeway BRT on I-5 and SR-55), OCTA can take immediate steps to make transit more frequent, fast, and reliable for Orange County residents and visitors.

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



Capital Costs

UP TO **\$2.6B**

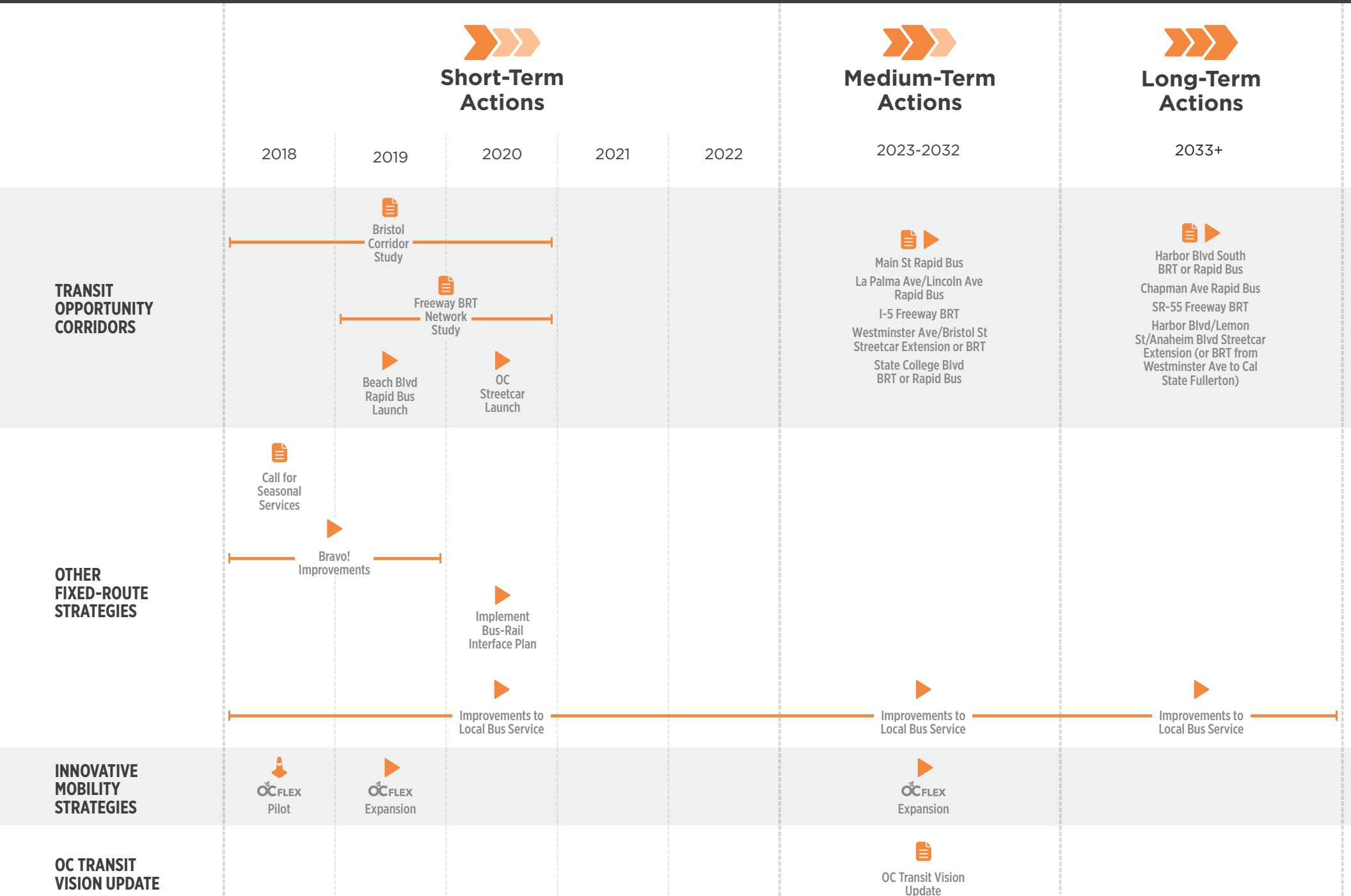
TOTAL CAPITAL COST IF ALL CORRIDORS IMPLEMENTED WITH HIGHEST COST MODE



Revenue Hours

+480K

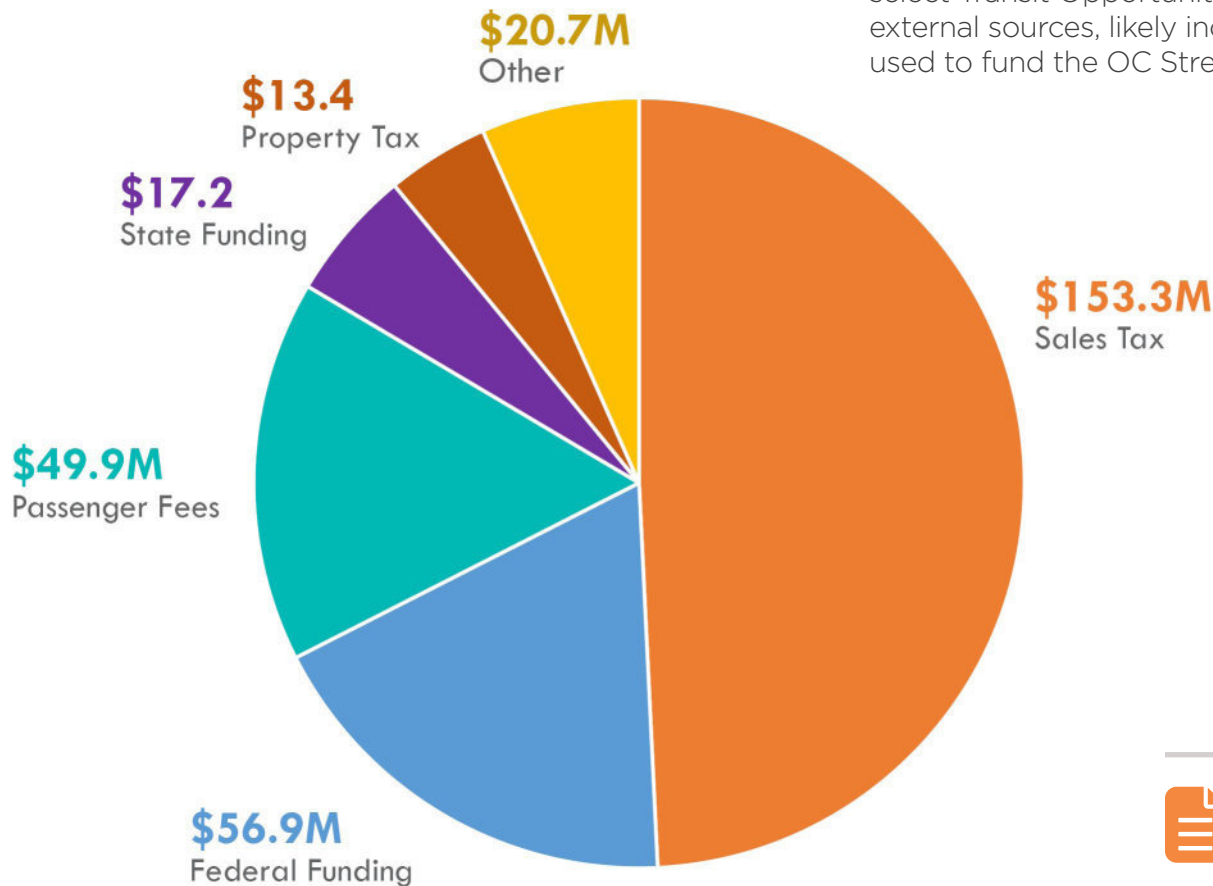
NET CHANGE IN REVENUE HOURS FOR FULL IMPLEMENTATION OF ALL MASTER PLAN SERVICE RECOMMENDATIONS



HOW DO WE FUND THE VISION?

Over the last decade, limited funding has constrained OCTA's ability to grow service and avoid fare increases. However, by investing resources in areas of high transit demand and developing creative approaches for serving lower demand areas, OCTA has been able to increase service on some of its busiest routes within its existing resources.

In 2016, OCTA's bus and paratransit revenues totaled \$311.4 million. This includes a mix of internal and external sources, including somewhat unpredictable federal and state funding. Many of the OC Transit Vision recommendations could be funded at least in part using existing sources; for example, the OC Flex pilot program is being funded with existing internal resources. However, many recommendations—in particular those related to large capital projects such as select Transit Opportunity Corridors—would require a mix of external sources, likely including federal funding such as that used to fund the OC Streetcar project.



For much more on potential funding sources, see the State of OC Transit report.

WHERE DO WE GO FROM HERE?

The OC Transit Vision builds on the transit service and programs that are working well in Orange County today and sets a vision for “compelling and competitive transit service that expands transportation choices for current riders, attracts new riders, and equitably supports immediate and long-term mobility” in the county.

The OC Transit Vision provides a near-, mid-, and long-term roadmap for making transit an increasingly popular choice for travel to, through, and within Orange County. The plan identifies specific actions and investments that will help OCTA achieve the goals set forth and prioritizes which steps to take immediately.

The Vision is built on 18 months of research, analysis, and conversations with Orange County residents and visitors. The recommendations are data-driven and are targeted to different needs and markets throughout the county. High-capacity transit projects are focused in areas of Orange County with a high propensity for transit use, while on-demand services are recommended for areas where fixed-route transit historically has been less successful. This combination of approaches means that the OC Transit Vision offers something for everyone—and tailors mobility options to match markets and the communities OCTA serves.

Looking to OCTA’s past successes, and to the good work happening in the county and region today, the OC Transit Vision helps Orange County chart a path to becoming a home for transit services that provide enhanced mobility for all residents and visitors.





OC TransitVISION