



Transit Studies Update

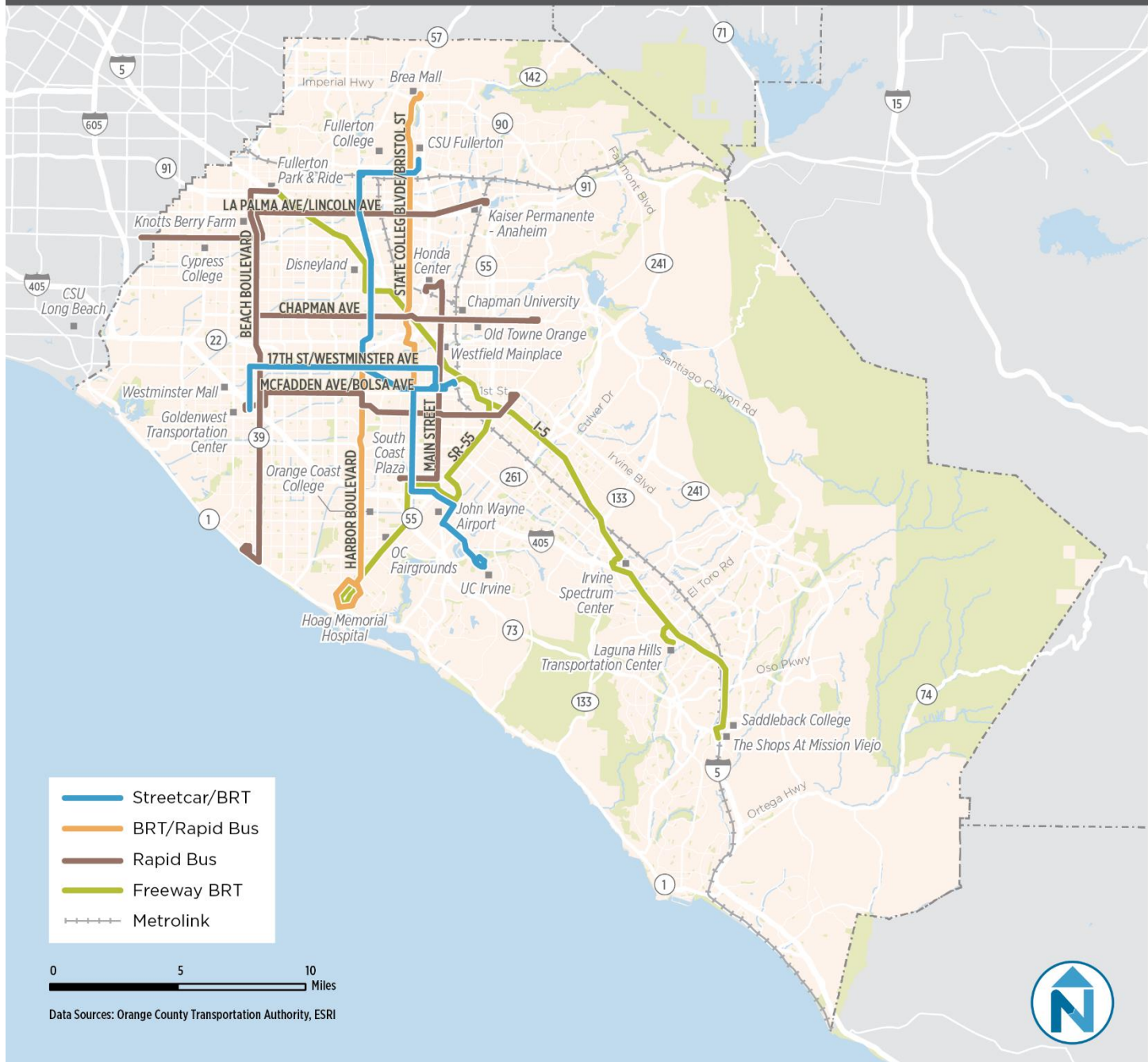
Background

- Transit Master Plan
 - Countywide Study of Long-Term Transit Needs
 - Input for Long-Range Transportation Plan
 - Guides Future Bus Service Recommendations
- Central Harbor Boulevard Transit Corridor Study
 - Detailed Evaluation of Transit Modes and Alignments to Improve Harbor Corridor



Transit Master Plan

POTENTIAL TRANSIT MODES



Corridor Evaluation- Modes

Corridor	Limits	Rapid Streetcar	Bus Rapid Transit (BRT)	Rapid Bus
Harbor Boulevard/ Santa Ana Boulevard	California State University, Fullerton to Santa Ana Regional Transportation Center	✓	✓	
Westminster Avenue/ Bristol Street	Goldenwest Transportation Center to UC Irvine	✓	✓	
Harbor Boulevard (South)	17 th Street/Westminster to Hoag Hospital Newport Beach		✓	✓
State College Boulevard	Brea Mall to Downtown Santa Ana		✓	✓
Beach Boulevard	Fullerton Park-and-Ride to Downtown Huntington Beach			✓
Main Street	Anaheim Regional Transportation Intermodal Center to South Coast Plaza Park-and-Ride			✓
La Palma Avenue/Lincoln Avenue	Hawaiian Gardens to Anaheim Canyon Station			✓
Chapman Avenue	Hewes Street to Beach Boulevard			✓
McFadden Avenue/Bolsa Street	Goldenwest Transportation Center to Larwin Square			✓
Interstate 5 Freeway	Fullerton Park-and-Ride to Mission Viejo/Laguna Niguel Station		✓	
State Route 55 Freeway	Santa Ana Regional Transportation Center to Hoag Hospital		✓	

Board Feedback on Potential Next Steps

- **Connecting John Wayne Airport to Anaheim Resort**
 - Private providers meeting existing need
 - Westminster Avenue – Bristol Street Line Connection
 - Work with JWA on short-term connection improvements
- **Connecting Orange County to Los Angeles Metro Rail**
 - Connections considered and did not screen well
 - Work with Metro on cross-county transportation study
 - Monitor Metro project development
- **Geographic Equity**
 - 20 of 34 cities containing 78% of the population would have at least one Transit Opportunity Line
 - Plan includes recommendation for other transit options
 - Revisit plan in five years with update land-use and demographics

DRAFT: Short-Term Action Plan

- Implement OC Flex Microtransit Pilot Zones (2018)
- Issue Project V Call for Seasonal and Special Event Services (2018)
- Develop and Implement Strategies for Incremental Improvements to Existing and Future Rapid Bus (Bravo!) Routes (2018-2019)
- Analyze Regional Bus-Rail Connections as Part of Upcoming Los Angeles–Orange County Transportation Study (2018-2019)
- Conduct Transit Corridor Study of Bristol Street from Initial OC Streetcar Alignment to South Coast Metro Area (2018-2020)
- Implement Beach Boulevard Rapid Bus (2019)
- Expand OC Flex (2019, pending successful pilot)
- Conduct Freeway BRT Network Study (2019-2020)
- Begin Operations of Initial OC Streetcar Service and Implement Bus-Rail Interface Plan (2020)
- Improve Service on Bus Routes to meet Transit Investment Framework Guidelines (Ongoing)

DRAFT: Mid/Long-Term Recommendations

■ Mid-Term Recommendations (2023-2032)

- Main Street rapid bus
- OC Flex expansion
- La Palma Avenue/Lincoln Avenue rapid bus
- I-5 Freeway BRT
- Westminster Avenue/Bristol Street streetcar extension or BRT from Goldenwest Transportation Center to UC Irvine
- State College Boulevard BRT or rapid bus

■ Long-Term Recommendations (2033+)

- Harbor Boulevard/Lemon Street/Anaheim Boulevard streetcar extension, or BRT from Westminster Avenue to Cal State Fullerton
- Harbor Boulevard South BRT or rapid bus
- McFadden Avenue/Bolsa Street rapid bus
- Chapman Avenue rapid bus
- SR-55 Freeway BRT

Next Steps

- Finalize Plan with Board Feedback
- Communicate final recommendations to public and stakeholders
- Implement short-term recommendations as resources permit
- Consider recommendations in upcoming Long-Range Transportation Plan process

Central Harbor Corridor Update

Modes/Features

Enhanced Bus



- Shares lanes with other cars
- Receives priority at traffic signals and uses bypass lanes at intersections
- Includes state-of-the-art stops with ticket machines
- Carries around 70 people
- Project Cost: \$

Bus Rapid Transit



- Includes all Enhanced Bus features, but travels on a dedicated bus-only lane
- Carries around 120 people in a longer, 60-foot bus
- Project Cost: \$\$

Streetcar



- Shares lanes with cars but travels on its own track embedded in the road
- Powered by overhead wires
- Includes modern stops with ticket machines and allows riders to board from front or rear doors
- Carries up to 150 people (3x as much as regular buses)
- Project Cost: \$\$\$

“Rapid” Streetcar



- Includes all Streetcar features, but uses a dedicated streetcar-only lane
- Faster than a regular streetcar or bus
- Project Cost: \$\$\$\$

12 Conceptual Alternatives

HARBOR LONG

- H-2: Harbor Long Streetcar
- H-3: Harbor Rapid Streetcar
- H-4: Harbor Enhanced Bus
- H-5: Harbor Bus Rapid Transit (BRT)

HARBOR SHORT

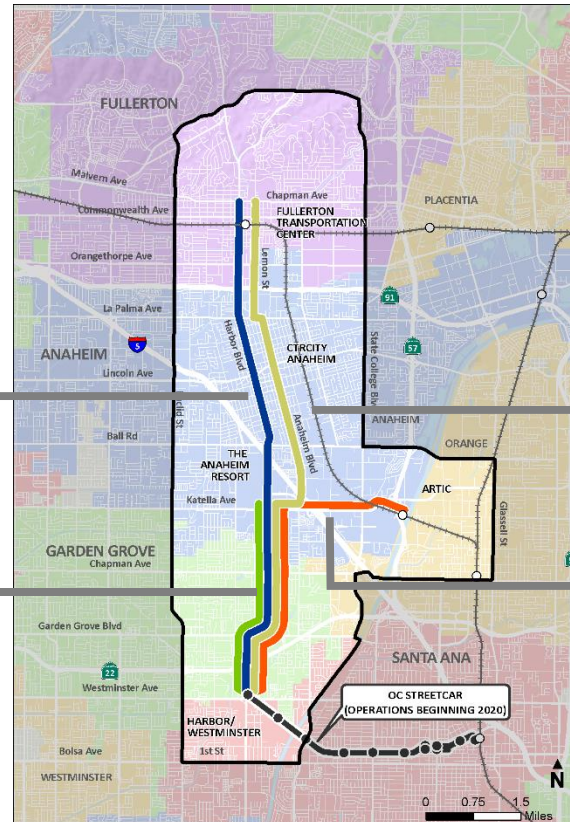
- H-1: Harbor Short Streetcar

ANAHEIM/LEMON

- L-1: Anaheim/Lemon Streetcar
- L-2: Anaheim/Lemon Rapid Streetcar
- L-3: Anaheim/Lemon Enhanced Bus
- L-4: Anaheim/Lemon BRT

KATELLA

- K-1: Katella Streetcar
- K-2: Katella+ Anaheim/Lemon Enhanced Bus
- K-3: Katella + Harbor Hybrid



Evaluation Criteria

- Transit Performance (20%)
- Land Use (15%)
- Connectivity (18%)
- Constraints (15%)
- Mode Choices/User Experience (17%)
- Cost-Effectiveness (15%)
- City and Community Input (Qualitative)

Evaluation Scores

ALTERNATIVE	DESCRIPTION	Average Score						Total Score ²
		Transit Performance	Land Use	Connectivity	Constraints	Choice/User Experience	Cost Effectiveness	
H3	Harbor Rapid Streetcar ¹	18	11	14	7	14	11	74
H2	Harbor Long Streetcar	17	11	12	10	14	10	73
H5	Harbor BRT ^{1*}	17	11	12	8	12	14	73
L1	Anaheim-Lemon Streetcar	17	10	12	8	13	8	68
L4	Anaheim-Lemon BRT ^{1*}	14	11	12	6	12	12	66
L2	Anaheim-Lemon Rapid Streetcar ¹	15	10	14	5	14	8	65
K1	Harbor-Katella Streetcar*	16	11	10	11	12	6	65
H1	Harbor Short Streetcar*	17	9	8	13	10	8	64
K2	Katella + Anaheim-Lem Enhanced Bus	7	11	11	11	7	11	57
L3	Anaheim-Lemon Enhanced Bus*	10	10	9	11	5	11	56
K3	Katella + Harbor Hybrid	9	11	11	10	9	7	56
H4	Harbor Enhanced Bus*	9	10	10	13	4	9	55

¹Operates in a dedicated transit lane for at least 50% of the alignment.

²Due to rounding, the total scores may not equal the sum of the category scores.

*Extends to MacArthur Boulevard, consistent with existing Bravo! Route 543 service area.

Next Steps

- Offer council presentations to each of the corridor cities for further input
- Continue to work with corridor cities technical staff to identify key issues for any subsequent efforts
- Finalize the report and incorporate feedback received from the cities, stakeholders, and public; and report feedback to the Board of Directors