Central Harbor Boulevard Transit Corridor Study

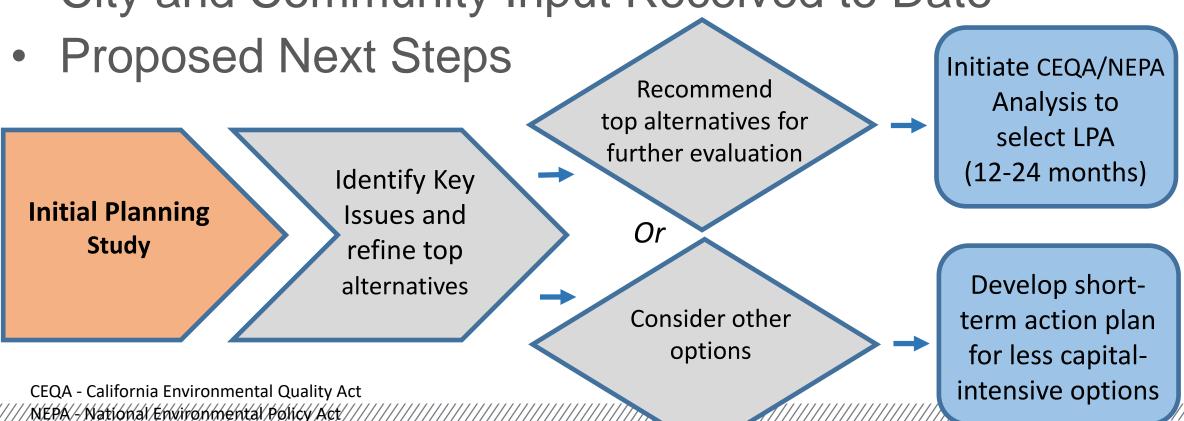


Today's Update

LPA/Locally/Preferred/Alternative

Performance Results for the 12 Alternatives

City and Community Input Received to Date



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Study Phases and Schedule

- Purpose and Need
- Outreach 1
- Alternatives Development
- Outreach 2
- Alternatives Evaluation
- Draft Final Report
- Final Report

August 2015 - December 2016

February - April 2016

February 2016 - April 2017

February - April 2017

April - September 2017

December 2017

Early 2018

Mode/Feature Options

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: \$\$\$\$

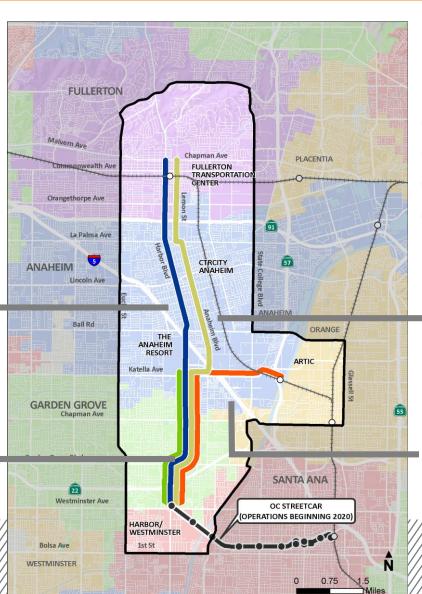
12 Conceptual Alternatives

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						
		Transit Performance	Land Use	Connectivity	Constraints	Choice/User Experience	Cost Effectiveness	Total Score ²
Н3	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 + Anheim-Lem Enhanced Bus	7	11	11	11	7	11	57
L3	Anaheim-Lemon Enhanced Bus*	10	10	9	11	5	11	56
К3	Katella + Harbor Hybrid	9	11	11	10	9	7	56
H4	Harbor Enhanced Bus*	9	10	10	13	4	9	55
¹ Operates in a de	dicated transit lane for at least 50% of the							
² Due 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.								

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Technical Evaluation Summary

- Higher-capacity, higher-visibility modes offer significant ridership benefits and travel time improvements
 - Rapid streetcar, streetcar, and bus rapid transit
- Top five scoring alternatives:
 - H3 Harbor Rapid Streetcar
 - H2 Harbor Long Streetcar
 - H5 Harbor BRT
 - L1 Anaheim-Lemon Streetcar
 - L4 Anaheim-Lemon BRT

Technical Input on Alternatives

Key technical issues identified by city staff:

- Dedicated transit lanes
- Current and future street capacity (Master Plan of Arterial Highways)
- Center-running alignments with center stations not supported
- Anaheim-Lemon as a viable transit corridor
- Underlying changes to bus service south of Westminster Avenue
- Consideration of complete streets concepts/avoidance of impacts to bike lanes

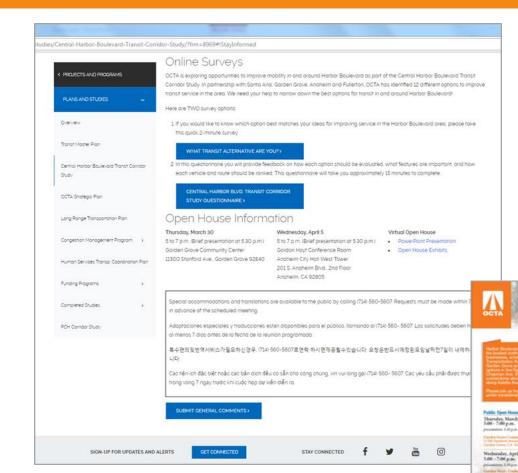
Council Input on Alternatives

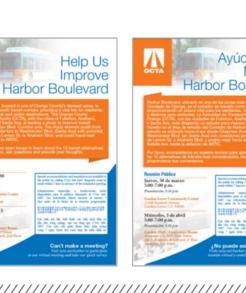
- Fullerton –Requested a council presentation for January 2018
- Anaheim Adopted Resolution in January 2017 stating opposition to a streetcar system
- Garden Grove Council presentation provided in February, and general support for the study was noted
- Santa Ana Council presentation provided in April, and general support for the study was noted

Community Input



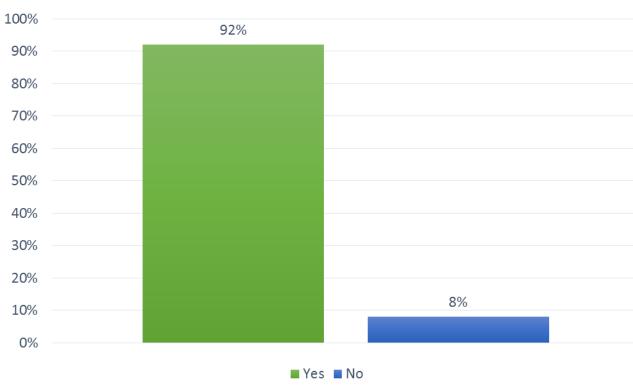




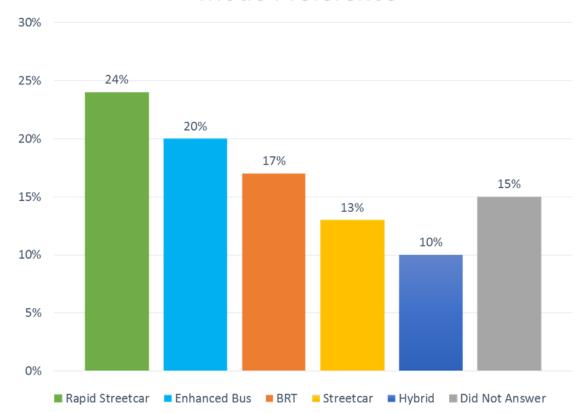


Online Survey

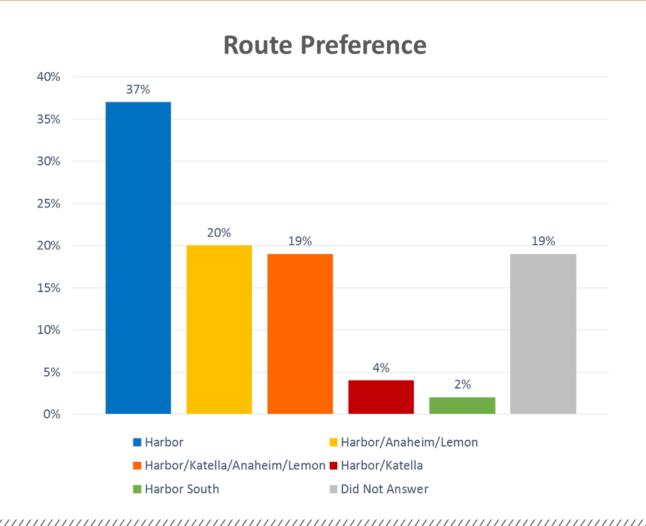
Improvements to Transit Desired



Mode Preference



Online Survey



Most Preferred Transit Characteristics

Frequency of Service (68%)

Hours of Operation (49%)

Overall Travel Time (41%)

Stop Locations (29%)

Cost to Ride (28%)

Real-Time Information (24%)

Next Steps

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