

# OC Streetcar Project Update and Approval of Vehicle Acquisition Strategy

# Project Update

Environmental Clearance	March 2015
Begin Design	February 2016
30 Percent Design	May 2016
60 Percent Design	December 2016
90 Percent Design	April 2017
Full Funding Grant Agreement	September 2017
Begin Vehicle Manufacturing	January or September 2017*
Construction Bid Advertisement	November 2017
Begin Construction	March 2018
Begin Testing/Start-Up	June 2020
Begin Revenue Service	December 2020

\*Depends on Type of Contract

# OC Streetcar Vehicle Procurement

- Key driver in project schedule
  - 30-month duration from Notice to Proceed (NTP) to first vehicle
  - 40-month from NTP to operations
- Federal Requirements
  - Americans with Disabilities Act (ADA)
  - Fixing American Surface Transportation (FAST) Act - Buy America
- Marketplace
  - Five carbuilders delivering in the United States (US)
  - Small order
  - US < ten percent of global market for low-floor Light Rail Vehicles (LRV)

# Procurement Types

- Joint Procurement
  - Projects with similar schedules
  - Tempe and Sacramento
  - Specialized vehicle requirements
- New Procurement
  - Built to Orange County Transportation Authority (OCTA) specification
  - Small order could limit competition/impact price
- Exercise Unassigned Options “Piggybacking” (preferred based upon work to date)
  - Schedule/cost advantages
  - Live with other’s design
  - Federal Transit Administration (FTA) guidelines – no “Cardinal” vehicle design changes

# Unassigned Options

- Portland
  - Siemens S70, 70 percent low-floor
  - Built in Sacramento, CA
  - Houston, San Diego, Atlanta
  - Portland version single-ended



# Unassigned Options

- Cincinnati
  - CAF Urbos III, 100 percent low-floor
  - Built in Elmira, NY
  - Kansas City, Cincinnati
  - Confirm operation at 45 mph
- Houston
  - CAF Urbos 70, 70 percent low-floor
  - Built in Elmira, NY



# What We Learned

- Availability
  - All have options available- contracts expire:
    - Houston November 2016
    - Portland April 2017 (may close out sooner if no option assignment)
    - Cincinnati February 2018
- Timing
  - Portland /Houston require NTP prior to Full Funding Grant Agreement (FFGA)
  - New procurement following FFGA
- Base Price
  - All are essentially the same (within five percent)
  - Below current budget estimate

# What We Learned

- Urban Fit
  - Portland/Houston are 70 percent low-floor LRVs
  - Cincinnati is 100 percent low-floor, 17' shorter
- Capacity (total/seated)
  - Portland – 177/66
  - Houston – 153/56
  - Cincinnati – 115/29
- Level of Changes
  - Portland – requires most change/single-cab
  - Houston – fewer changes turning radius
  - Cincinnati – fewest changes/confirm ability to operate at 45 mph



# Recommended Approach

## Pursue Unassigned Options

- Conduct Site Visits
  - View / ride each vehicle
  - Contrast “partial” vs. “100 percent” low-floor
  - Consider urban fit issues of full-size LRV
  - Discuss agencies’ experiences with operation and maintenance/carbuilder
- Understand contract terms
  - Consult with FTA on Buy America and level of design changes
- Best-Value Evaluation and Selection Process
  - Cost of base vehicle with changes
  - Credibility of on-time delivery
  - Quality and public appeal
  - Technical differences – utility to OCTA

# Proposed Vehicle Strategy

