



# busworld<sup>®</sup> academy

NORTH AMERICA | JAN. 13-14, 2020

POWERED BY





# Addressing Equity, Accessibility, Inclusivity, Acceptance and Service Quality of Automated Mobility Solutions

Presented by Jack Hall, PE  
ITS CV/AV Program Manager  
Contra Costa Transportation Authority



**busworld.**  
academy

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
transportation  
authority

POWERED BY



AMERICAN BUS ASSOCIATION

# Contra Costa County, California

## Location

Eastern suburb of the San Francisco Bay Area



## Population

1 Million+



## Thriving Commerce

Businesses headquartered in Contra Costa County include:



## Diverse

Demographically, economically and geographically



busworld.  
academy

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
transportation  
authority

POWERED BY





# Who We Are

- CCTA is a public agency formed by voters in 1988 to manage the county's transportation sales tax program and to lead transportation planning efforts.
- We are responsible for maintaining and improving the county's transportation system by delivering critical transportation infrastructure projects to safely and efficiently get people where they need to go.
- Managing entity of autonomous vehicle (AV) testing site: GoMentum Station.



**busworld.**  
academy

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
**transportation**  
authority

POWERED BY



# What We Do



## **PEDESTRIAN**

Make improvements to sidewalks, crosswalks, trails, and paths



## **LOCAL STREETS**

Smooth traffic flow on major roads and invest in improvements such as repairing potholes and road surfaces



## **BUSES**

Invest in a reliable, comfortable and convenient bus network



## **SAFE ROUTES TO SCHOOLS**

Focus on programs and projects aimed at bicycle and pedestrian safety for K-12 students



## **FERRIES**

Expand the Bay Area ferry system by looking to ferries as an alternate commute method between West County and San Francisco



## **BICYCLE**

Invest in safe routes and infrastructure improvements for bicyclists



## **BART**

Improve BART service and stations, extend routes and increase parking at stations



## **HIGHWAYS**

Complete Contra Costa's highway system, and improve air quality and noise protection along these corridors



## **CARPOOL/RIDESHARE**

Implement programs to reduce traffic congestion by encouraging carpooling and ridesharing



## **PROGRAMS FOR SENIORS AND PEOPLE WITH DISABILITIES**

Enhance transit options to improve mobility for seniors and people with disabilities



**busworld.**  
**academy**

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
**transportation**  
**authority**

POWERED BY



**AMERICAN BUS ASSOCIATION**

# Benefits of Automation



**Safety**



**Mobility +  
Access**



**Efficiency +  
Environmental  
Sustainability**



**Economic +  
Societal  
Benefits**



**busworld.  
academy**

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
transportation  
authority

POWERED BY



# Automated Driving System (ADS) Demonstration

## GOALS

- **Advance safety** of automated driving systems
- Facilitate data collection to **support rulemaking and development of ADS safety performance standards**
- Provide unprecedented **mobility choices to transportation-challenged, underserved communities**
- **Expand shared mobility options**



# Rossmoor First Mile/Last Mile Shared Autonomous Vehicles

Walnut Creek, California

- Increase transit accessibility for the **elderly** community using shared autonomous vehicles (SAVs)
- Data gathered will be used to **develop safety performance measures**



**busworld.**  
academy

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
transportation  
authority

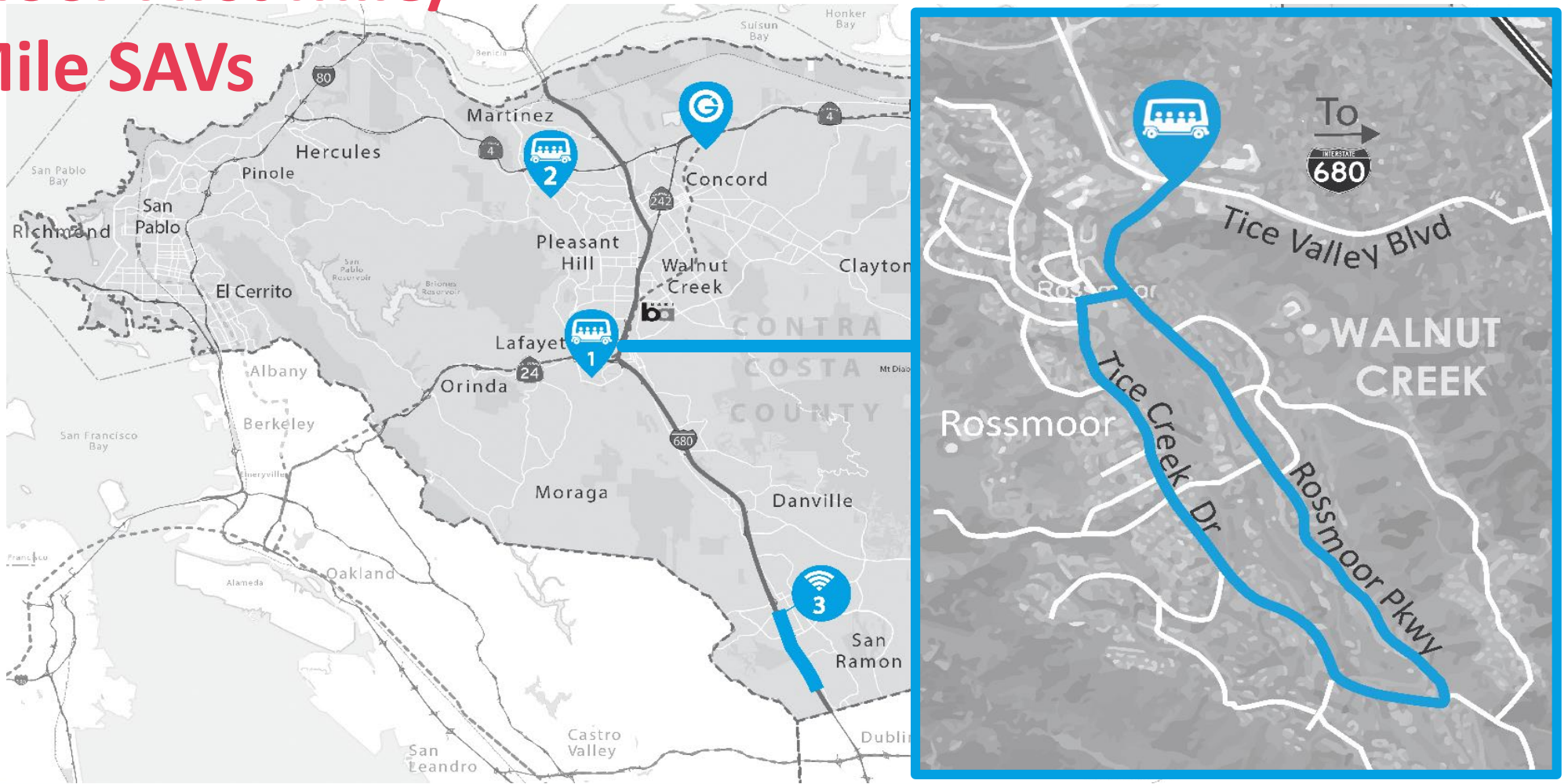
POWERED BY



AMERICAN BUS ASSOCIATION



# Rossmoor First Mile/ Last Mile SAVs



**busworld.**  
**academy**

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
transportation  
authority

POWERED BY



AMERICAN BUS ASSOCIATION

## Rossmoor First Mile/Last Mile SAVs

- **Level 4 low-speed SAV shuttles** (up to 25mph)
- **Fixed route SAV service** with multiple stop locations
- **User interface** able to identify desired stop, Q'STRAIT automated securement and restraint systems



**busworld.**  
academy

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
transportation  
authority

POWERED BY



# County Hospital Accessible Transportation

Martinez, California

- **On-demand, wheelchair accessible, autonomous vehicle (AV) shuttle service**
- **Provide accessible transportation to public health facility to improve quality of life and address medical appointment absenteeism**
- **Gather Data to advance ADS safety performance standards**



**busworld.**  
academy

NORTH AMERICA | JAN. 13-14, 2020



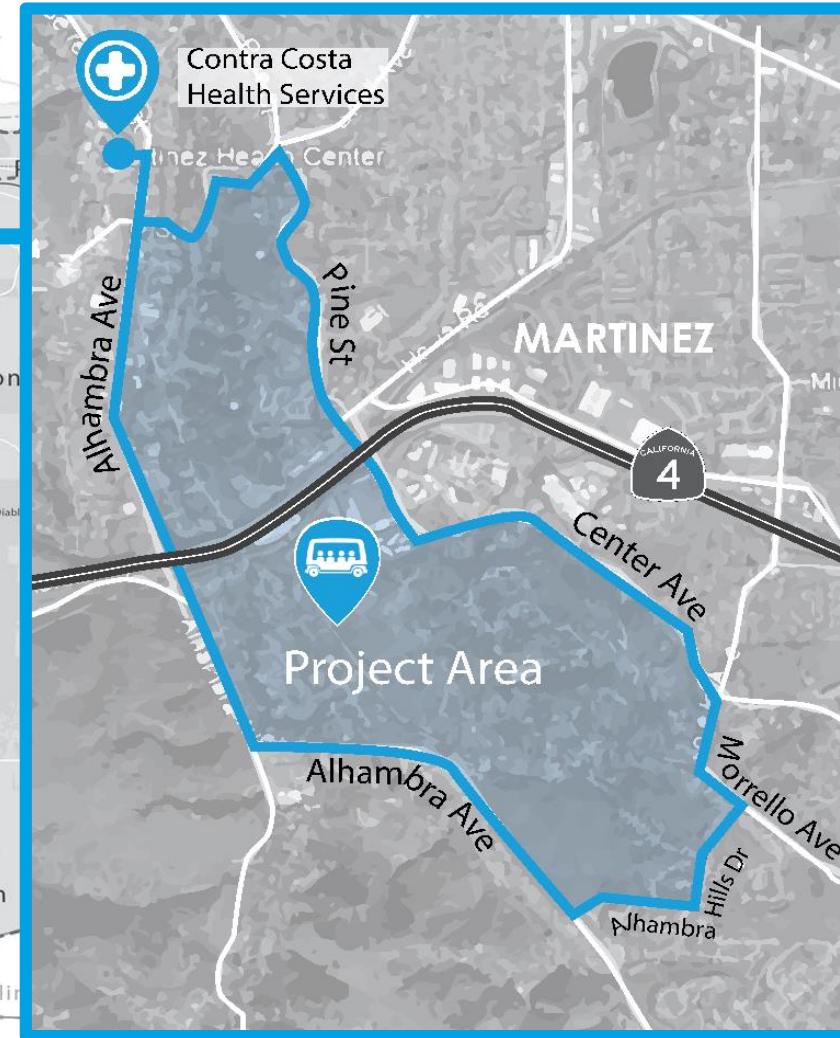
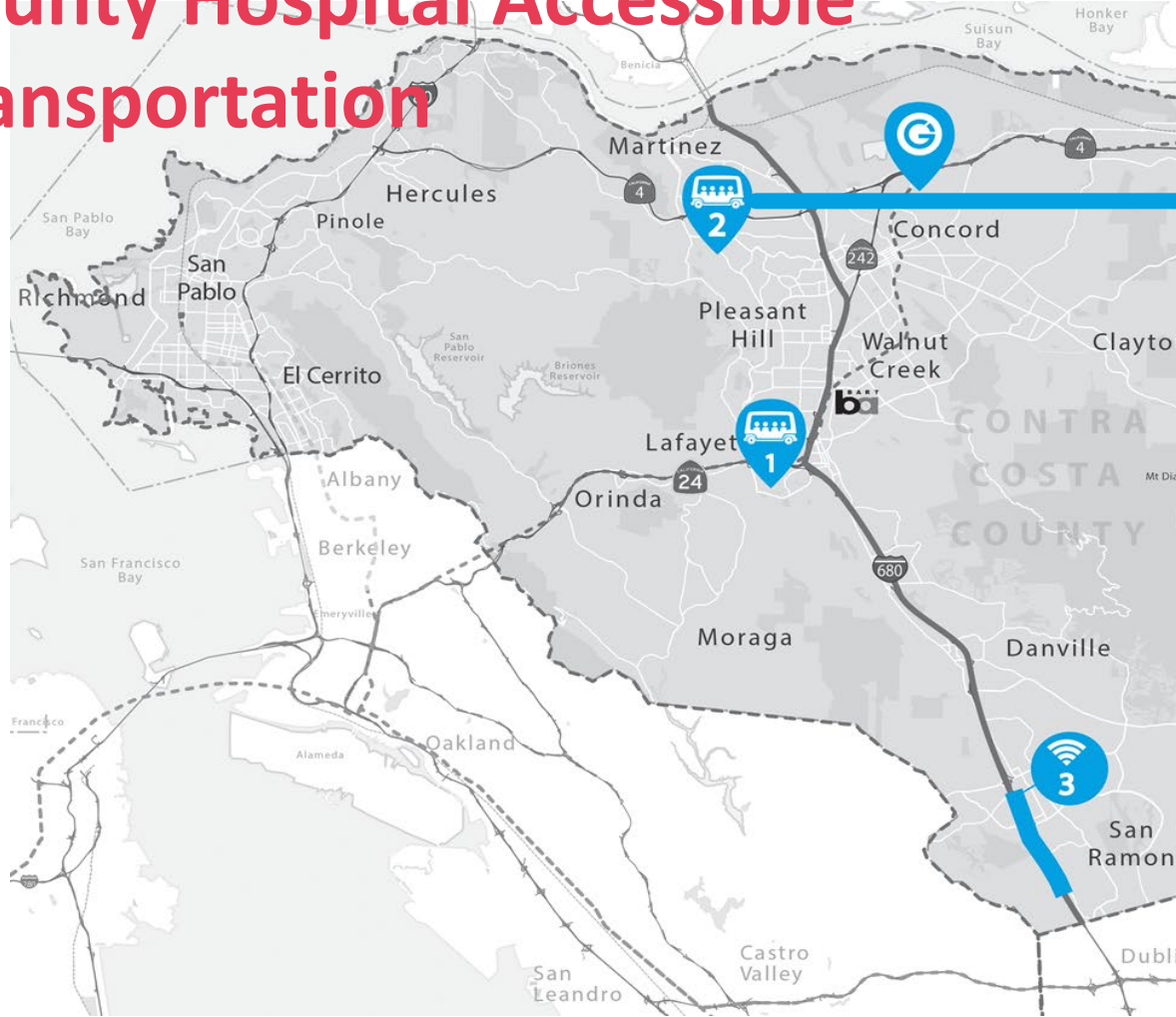
CONTRA COSTA  
transportation  
authority

POWERED BY





# County Hospital Accessible Transportation



**busworld.**  
**academy**

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
transportation  
authority

POWERED BY



AMERICAN BUS ASSOCIATION

# County Hospital Accessible Transportation

Martinez, California

- **Level 3, Level 4 medium speed shuttles** (up to 50mph)
- **Smartphone app and dial-a-ride service**
- **Q'STRAIT automated securement and restraint systems**
- **Optional wearable device** for seniors and minimally ambulatory individuals



**busworld.**  
academy

NORTH AMERICA | JAN. 13-14, 2020



CONTRA COSTA  
transportation  
authority

POWERED BY



# Increased Accessibility, Opportunity

Studies show that **COMMUTE TIME IS THE KEY FACTOR** in social mobility, more so even than factors related to crime or education.\*



*\*Transportation Emerges as Crucial to Escaping Poverty, NY Times May 2015*



**busworld.**  
academy

NORTH AMERICA | JAN. 13-14, 2020

POWERED BY



AMERICAN BUS ASSOCIATION





Thank you



CONTRA COSTA  
transportation  
authority