Connected Vehicle and Autonomous Vehicle (CV/AV) Program and Test Facility

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WHO WE ARE

• The Contra Costa Transportation Authority (CCTA) is a public agency formed by Contra Costa voters in 1988 to manage the county’s transportation sales tax program and to lead the county’s transportation planning efforts.

• CCTA is responsible for maintaining and improving the county’s transportation system by planning, funding, and delivering critical transportation infrastructure projects and programs that connect our communities, foster a strong economy, increase sustainability, and safely and efficiently get people where they need to go.
MEASURE C

- Passed by voters in 1988, Measure C provided for a half-cent on the dollar sales tax for twenty years (through March 2009) to pay for an ambitious list of transportation projects and programs.

- Measure C was estimated to generate $1 billion over 20 years for a BART extension, freeway improvements, better bus service, enhanced bicycle facilities and more transportation options for senior citizens and people with disabilities.
In November 2004, 71% of Contra Costa voters approved Measure J. The measure provided for the continuation of our county’s half-cent transportation sales tax until 2034, and will provide approximately $2.7 billion for countywide and local transportation projects and programs for the life of the measure.
WHAT WE DO

- **BUSES** Invest in a reliable, comfortable and convenient bus network

- **LOCAL STREETS** Smooth traffic flow on major roads and invest in neighborhood improvements such as repairing potholes and road surfaces

- **PEDESTRIAN** Make improvements to sidewalks, crosswalks, trails, and paths

- **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** Make improvements to BART service and stations, such as extensions to new routes and parking at stations

- **HIGHWAYS** Complete Contra Costa’s highway system, and improve air quality and noise protection along these corridors

- **CARPOOL/RIDESHARE** Implement programs aimed at reducing 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
Transportation has evolved
Model T
Automotive Safety is Improving

C-ACC
Cooperative Adaptive Cruise Control

Vehicle-to-Vehicle communication

System detects the lane lines and steers when needed.
Connectivity Evolution Facts:

Third Largest Mobile Device

- **1990**: 14M
- **2000**: 400M
- **2010**: 1.8B
- **2020**: 5.0B

Source: http://www.internetlivestats.com/internet-users/#trend
International Business Machines Corporation (IBM) 157.81 (-2.96 (-1.84%)) NYSE - As of 4:02PM EDT
After Hours: 157.81 ↑+0.49 (0.31%) 05:51pm EDT
Microsoft vs. FB
14 Month
Connected Trucks
Magnetic Assisted Guidance System

Eugene, Oregon
How cities have evolved
City 2.0
City 5.0

Data Driven Mobility

Sensible & Digital City

Intermodal Innovations
City 5.0 Environment

- Smart Energy
- Smart Water
- Smart Integration
- Smart Buildings
- Smart Mobility
- Smart Public Services
SMART Mobility in Contra Costa County

I-80, SR-4 ICM/ATM

Charging Station

DSRC

CV/AV

Connected Shared Autonomous Vehicle

SMART MOBILITY @ CCTA

smart corridor

INTERSTATE 80
INTEGRATED CORRIDOR MOBILITY

CONTRA COSTA TRANSPORTATION AUTHORITY
Introducing GoMentum Station
Connected Vehicle and Autonomous Vehicle (CV/AV) Program and Test Facility
Vision

Create a hub for CV/AV transportation innovation in Contra Costa - called the GoMentum Station Program - where technology, innovation and commercialization converge.
Overarching Goals

- Economic Growth & Job Creation
- Efficient Mobility
- Enhanced Safety
- Healthier Environment

21st Century Transportation
Overarching Goals

Economic Growth and Job Creation
Overarching Goals
Enhanced Safety

Overarching Goals

- Adaptive Cruise Control
- Emergency Breaking
  - Pedestrian Detection
  - Collision Avoidance
- Lane Departure Warning
- Traffic Sign Recognition
- Cross Traffic Alert
- Park Assist
- Blind Spot Detection
- Rear Collision Warning
- Surround View
- Park Assistance

Legend:
- Long-Range Radar
- Lidar
- Camera
- Short/Medium Range Radar
- Ultrasound
Overarching Goals

www.sceeri.com
Over 5000 acres with 2100 acres available for testing
Over 20 miles of paved roadways including a 7-mile long spine road for high speed testing
Two 1400-ft. long tunnels ideal for testing guidance, sensors & communications technologies
Freeway underpasses and variable roadway geometrics
Land features such as hills and slopes and various roadway surfaces allowing for multiple test scenarios
Railroad crossings and tracks to enable real-world testing
Several parking lots for testing by multiple users
SDV

Shared Driverless Vehicles
GoMentum Station and EasyMile announce exclusive agreement to launch Shared Driverless Vehicles in North America

First Deployment after testing at GoMentum Station will be Bishop Ranch
Autonomous Transit

- Autonomous 12-passenger vans serving as shuttles to BART and other destinations
- Testing to begin at Bishop Ranch business park
Internationally recognized centers of excellence, fully integrated within institutions of higher learning, that serve as a vital source of leaders who are prepared to meet the nation’s need for safe, efficient and environmentally sound movement of people and goods.
Invitation to attend
2nd Annual Summit
April 21, 2016
In Concord, California

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Thank you!

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