



WEBINAR: *GET TO KNOW THE RTC*

Learn about transit programs, electric and hydrogen buses, and how to ride with RTC!



Deb Reardon

Regional
Planning
Manager



Nathan Goldberg

Manager of
Transportation
Planning



Roger Johnson

Manager of Zero
Emissions Fleet
Technology



Thursday, November 30

12 - 1 PM

publicinput.com/cleancities





GET TO KNOW THE RTC



THURSDAY, NOVEMBER 30, 2023

OVERVIEW

- Clean Cities Introduction
- Presentations
- Q&A



Nathan Goldberg
Manager of Transportation
Planning



Roger Johnson
Manager of Zero Emissions
Fleet Technology



**Deborah
Reardon, AICP**
Regional Planning Manager

- National network through the US Department of Energy
- Goal:
 - Reduce petroleum fuels
 - Approved alternative fuels
 - Idling reduction
- Purpose:
 - Reduce dependence on foreign oil
 - Provide cleaner air
 - Lower greenhouse gas emissions
- 75 Coalitions in the United States
 - ...but (UNTIL RECENTLY!) no representation in Nevada
- Clark County is currently working towards a designation- and has earned an apprentice designation into the Clean Cities network!



HOW TO PARTICIPATE?

Quarterly Stakeholder Meetings

Online Programming

In-Person Events

Join a Working Group

Opportunities to support, present & host





THANK YOU!

Nicole Wargo

Fellow, Clark County Department of Environment and Sustainability

Director, Southern Nevada Clean Cities Coalition

Nicole.Wargo@ClarkCountyNV.gov



SCAN ME

Serving the
Southern Nevada Community



Who We Are



Transit



Bicycling



Planning



**Roadway
Funding**



**Traffic
Management**

Regional Overview



Clark County covers 8K sq. miles



45M visitors



2.3M residents



1 K miles of bike facilities

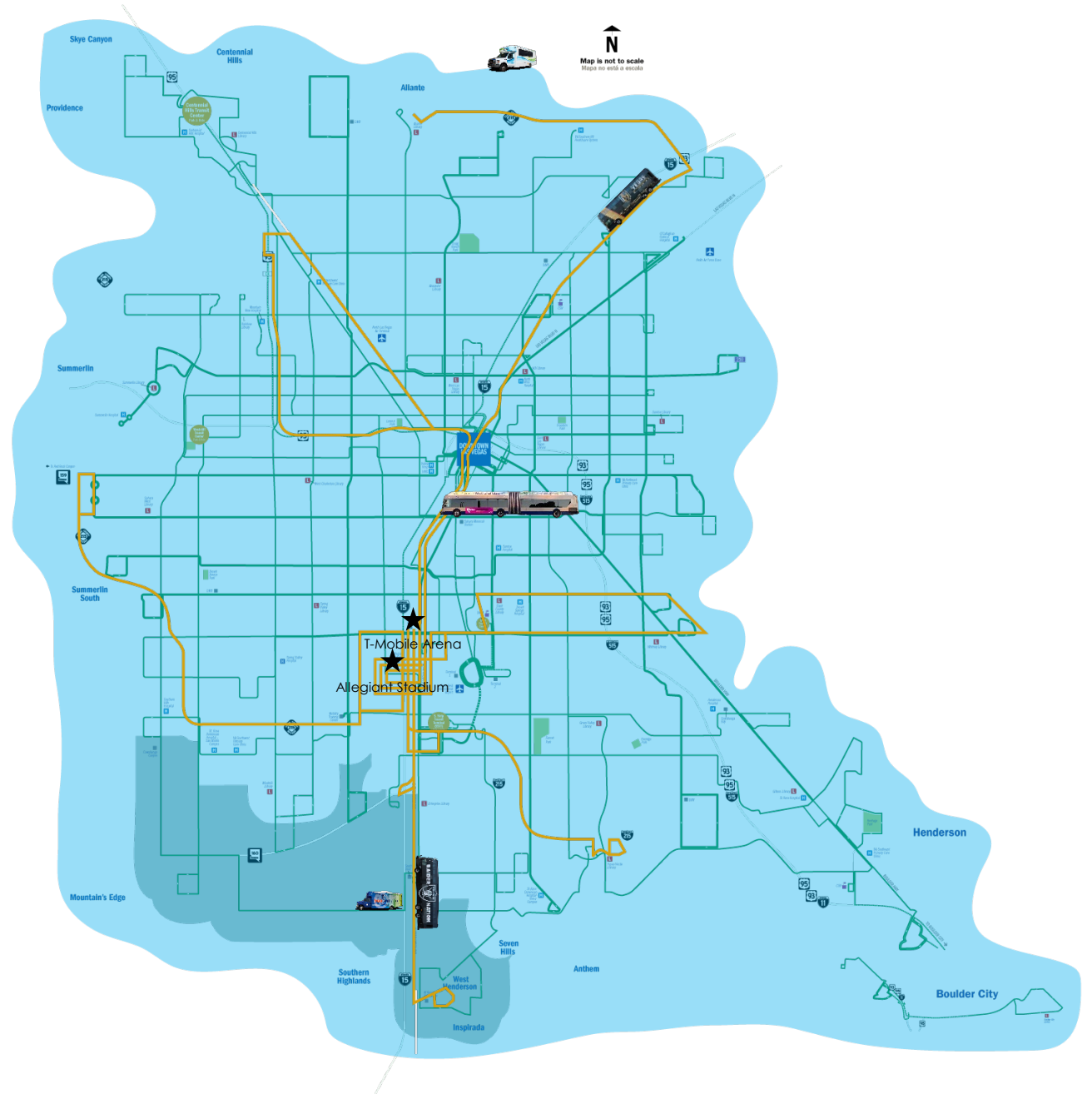


~7K miles of roadway

Transit



Transit System Map



RTC-OnDemand

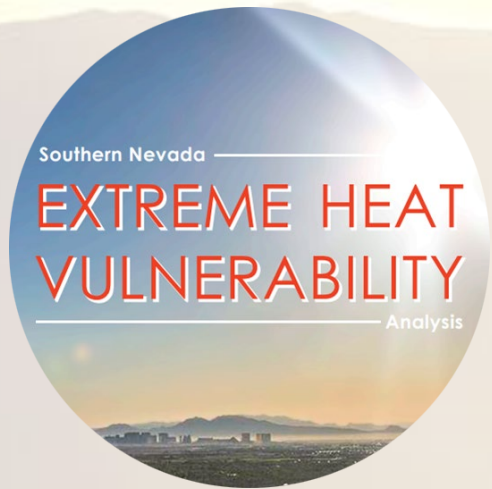


Transit Service for Sports Fans

Game Day Express



Extreme Heat



**Extreme Heat
Vulnerability Analysis**



**Urban Heat Island
Mapping**

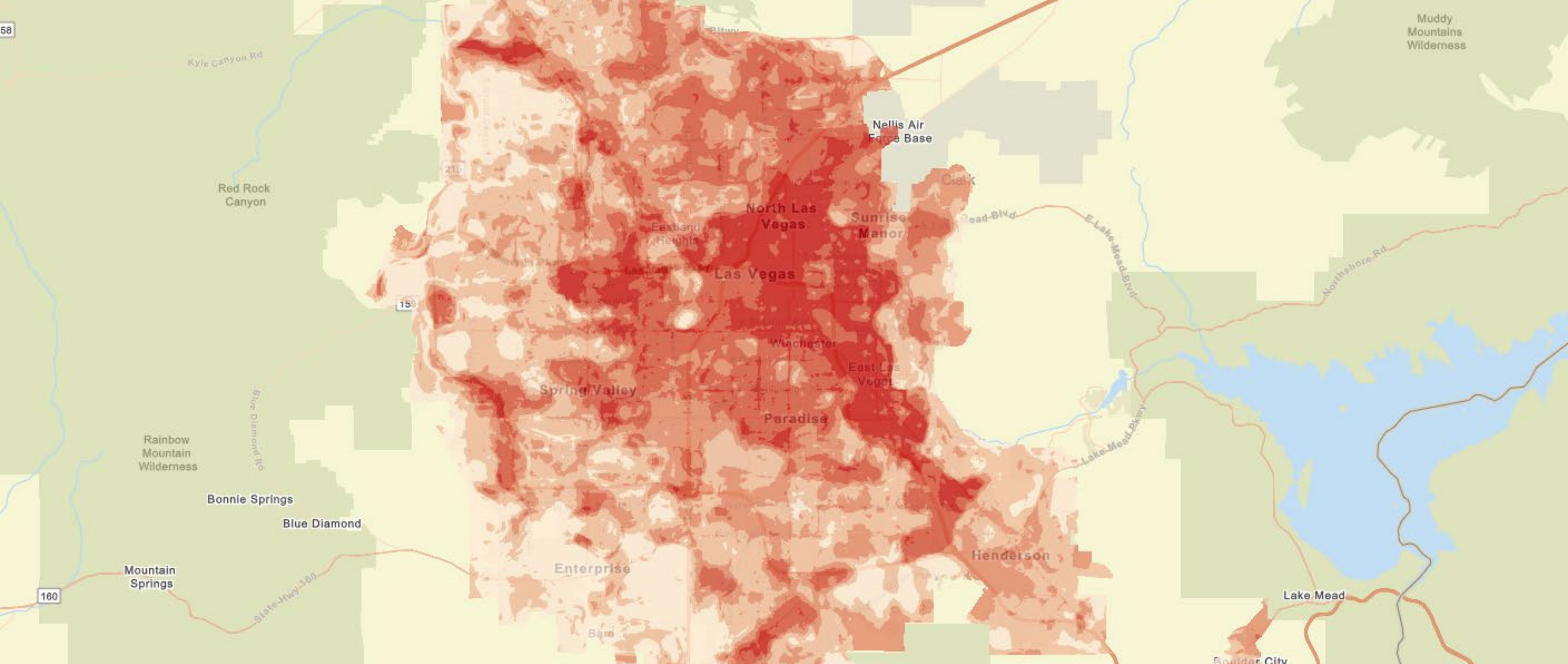


**Extreme Heat &
Public Transit Survey**



**Cool Pavement
Research**

Extreme Heat



RTC Slimline Bus Shelter



PERSPECTIVE RENDER



RTC

RTC of Southern Nevada

Roger Johnson

Manager of Zero Emission Fleet Technology

Johnsonr@rtcsonv.com



Current RTC Fleet



445

Fixed Route Vehicles



430

Paratransit Cutaway Vehicles

Current RTC Fleet



88%

CNG
Fleet



CNG quick fill
less than 15
minutes

24/7

Operational
requirements

350

Miles of range
with CNG

Zero Emission Plan



2020 development of Zero Emission Bus Rollout Plan

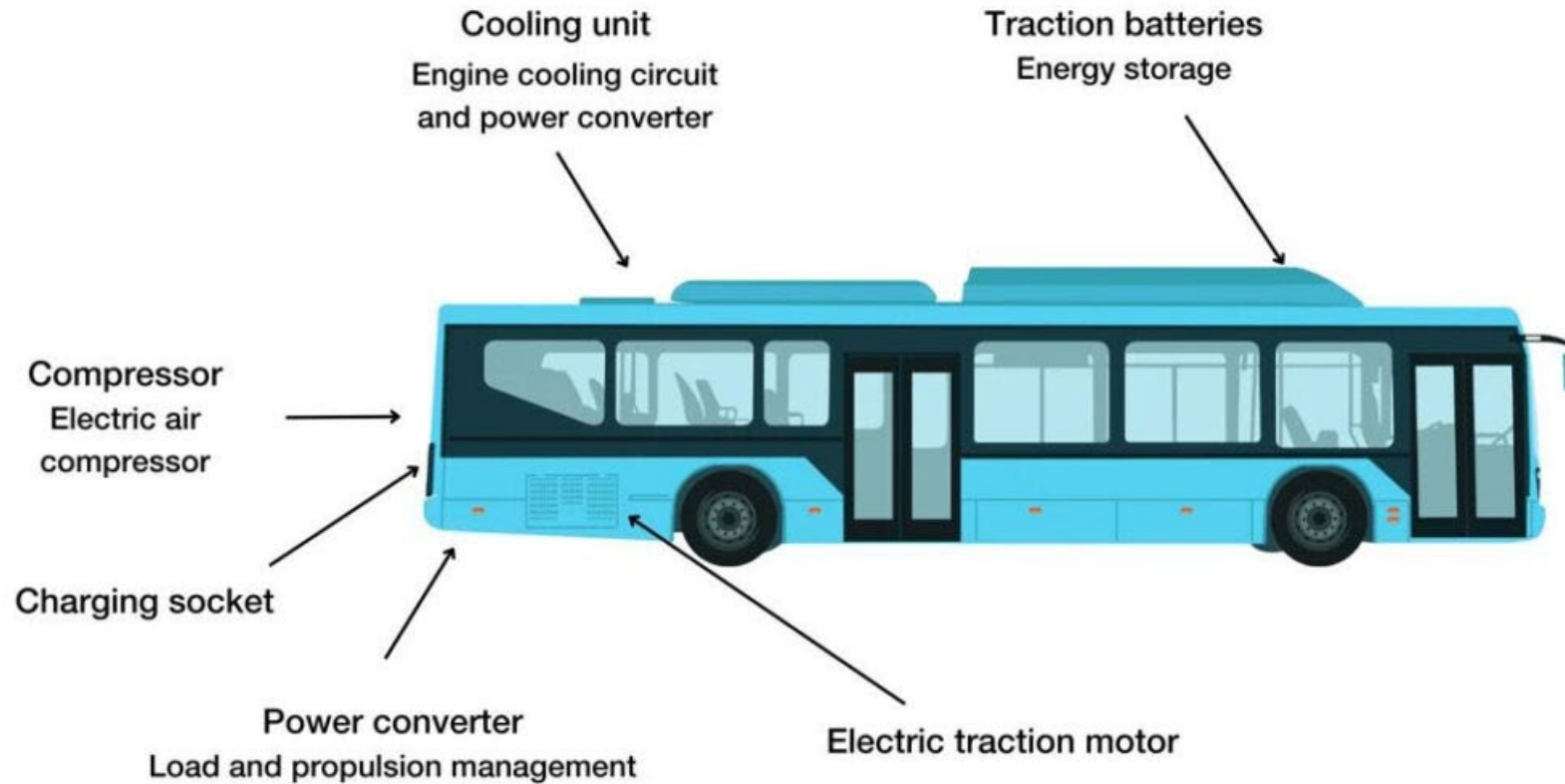
2
40ft hydrogen fuel cell electric buses

Evaluating hydrogen fuel cell and battery electric

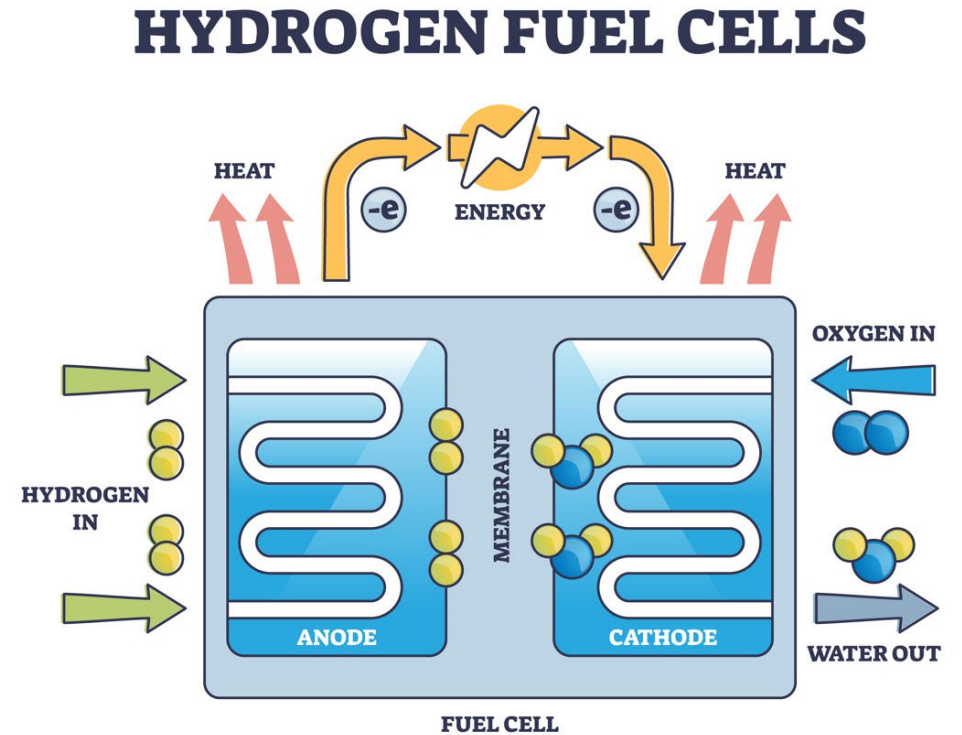
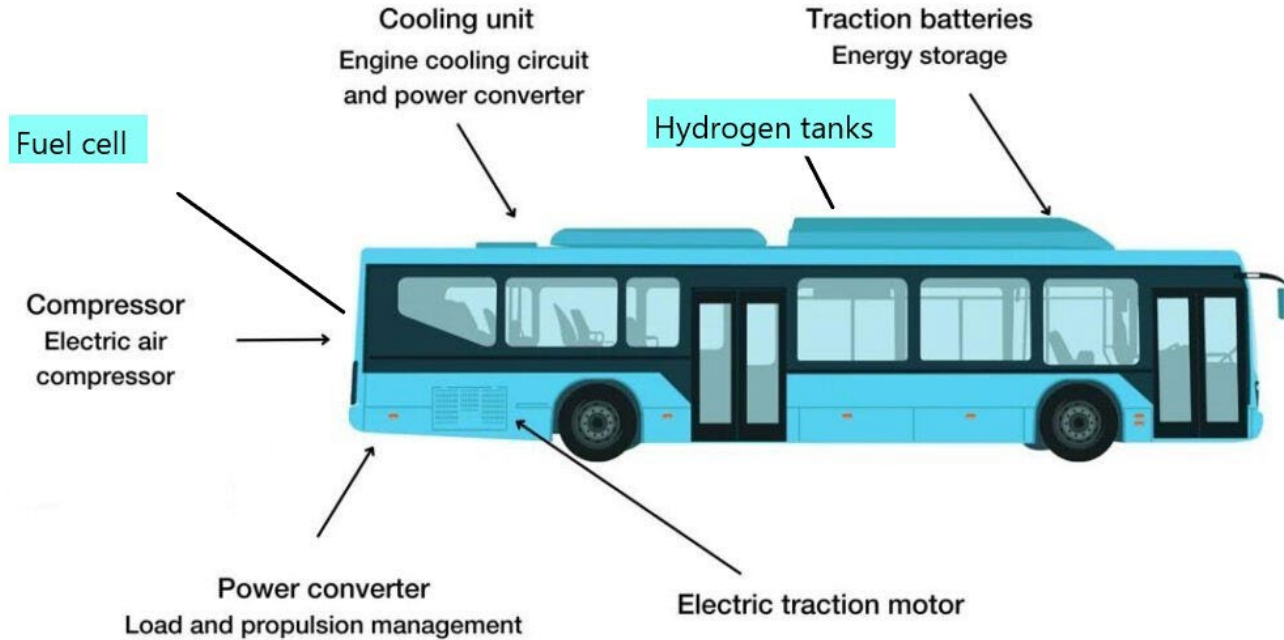
Path to zero emissions by 2050 as funding allows

4
40ft battery electric buses

Battery Electric Bus



Hydrogen Fuel Cell Bus



Hydrogen Fuel Cell Bus



- **FY20 Low-No Emission Grant**
 - Partners with New Flyer, Ballard Power Systems
 - Two 40ft hydrogen buses
 - Development of liquid hydrogen station
- **Infrastructure completion vs bus arrival challenge**
- **Temporary support with hydrogen gas supply and dispensing**
- **Buses in service since June 2023**
 - Performing as expected
 - Economy of 7-8 m/Kg
 - Range of 225-250 miles

Hydrogen Gas Fueling Station



- ✓ Gaseous Hydrogen Supply
- ✓ No compression equipment
- ✓ Self contained
- ✓ Simple permitting
- ✓ Fuel time up to 40 minutes
- ✓ Gaseous hydrogen requires more storage than liquid

Battery Electric Bus



- ✓ 4 Battery Electric Buses
- ✓ November 2023 in service
- ✓ 160 miles of range
- ✓ 2.5 kWh per mile

Battery Electric Bus Charging



150 kW Depot chargers



Level 3 DC Fast charging



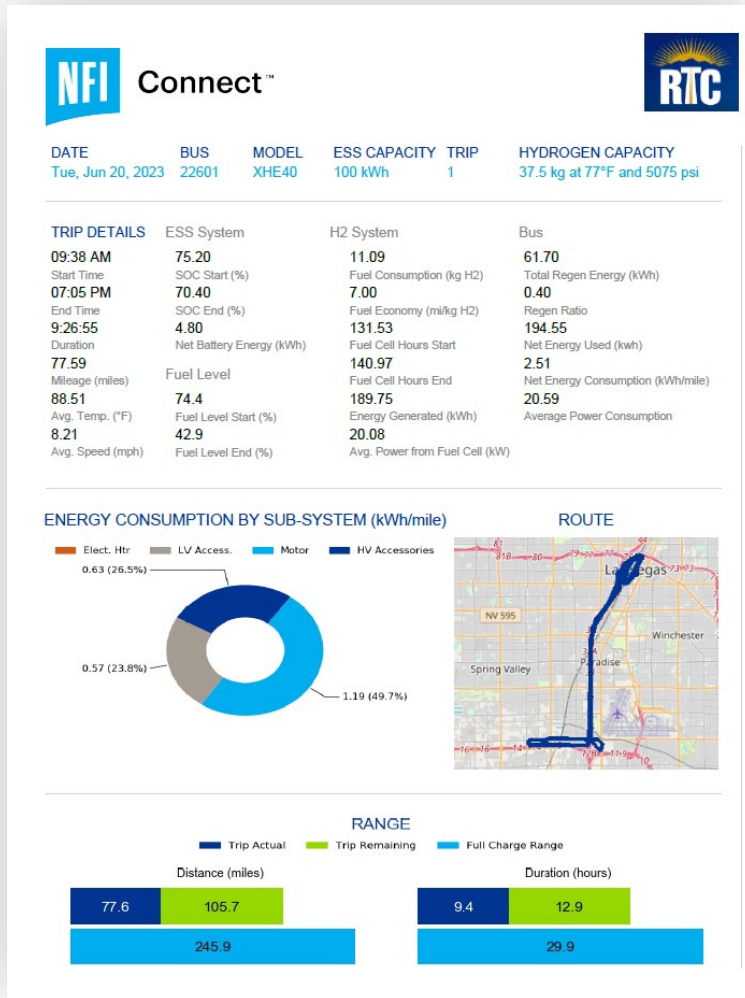
3.5 Hour charge time

Operating and Training



- ✓ Vendor and Manufacturer training
- ✓ Personal protective equipment
- ✓ High voltage safety
- ✓ Fueling and charging
- ✓ Emergency response

Research and Trending



Evaluate performance



Analyze and trend data



Telematic reports

Looking Forward



Construction of hydrogen liquid station

- ✓ Supporting up to 15 buses
- ✓ Completion in 2024

7 New Flyer 60ft hydrogen buses on order

- ✓ Arriving 4th quarter 2024

Evaluating the energy requirements for additional battery electric buses

Thank you

Roger Johnson

Manager of Zero Emission Fleet Technology

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METROPOLITAN PLANNING ORGANIZATION

Planning Future Mobility for Southern Nevada





What is an MPO?

An MPO is a **federally-designated and funded forum** created to **coordinate** the planning and decision-making processes related to **regional transportation**.



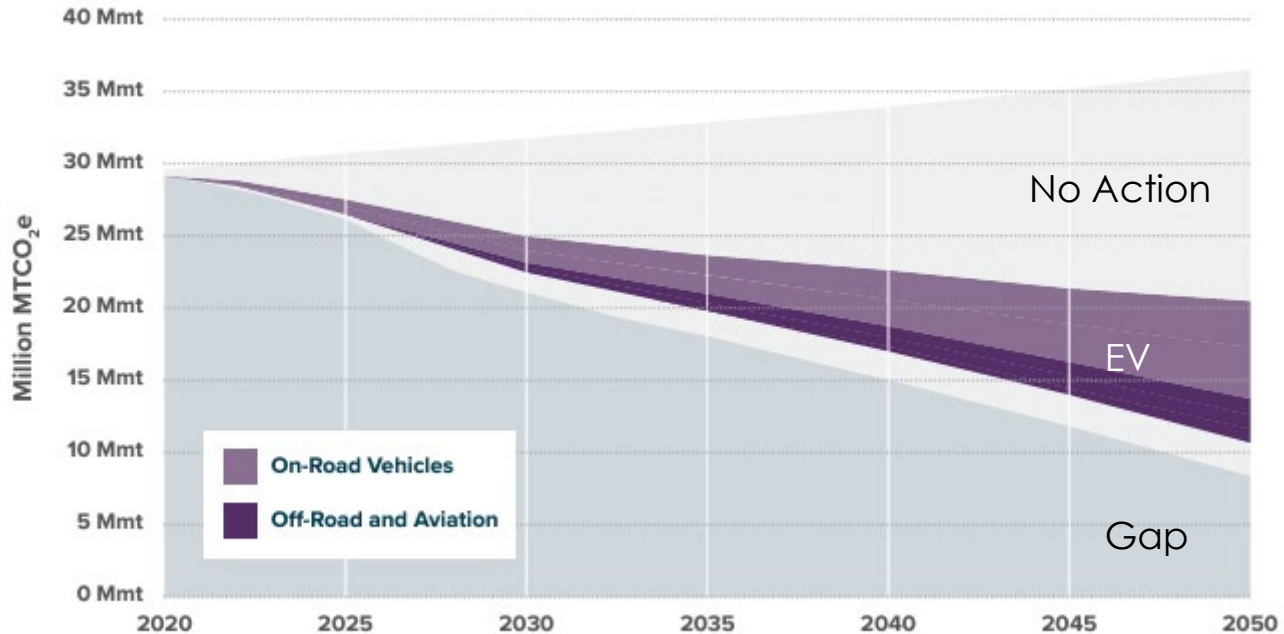


Why do MPOs matter?

1. Access to federal transportation dollars
2. Stakeholder and community engagement for shared vision
3. Prioritization of scarce federal funds
4. Increasingly broadening scope

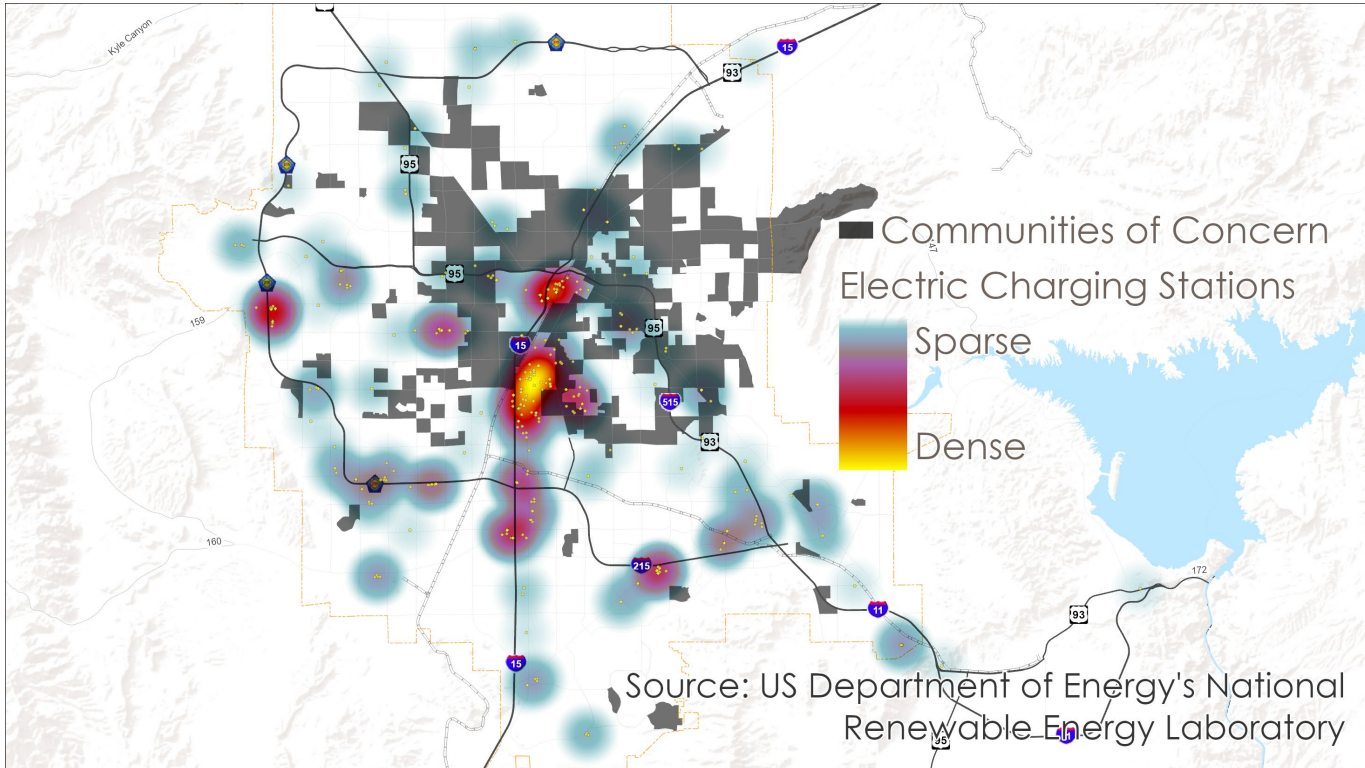


Electric Vehicle GHG Impact and Gap



Source: All-In Clark County Community Sustainability & Climate Action Plan (2023)

Electric Vehicle Infrastructure Planning

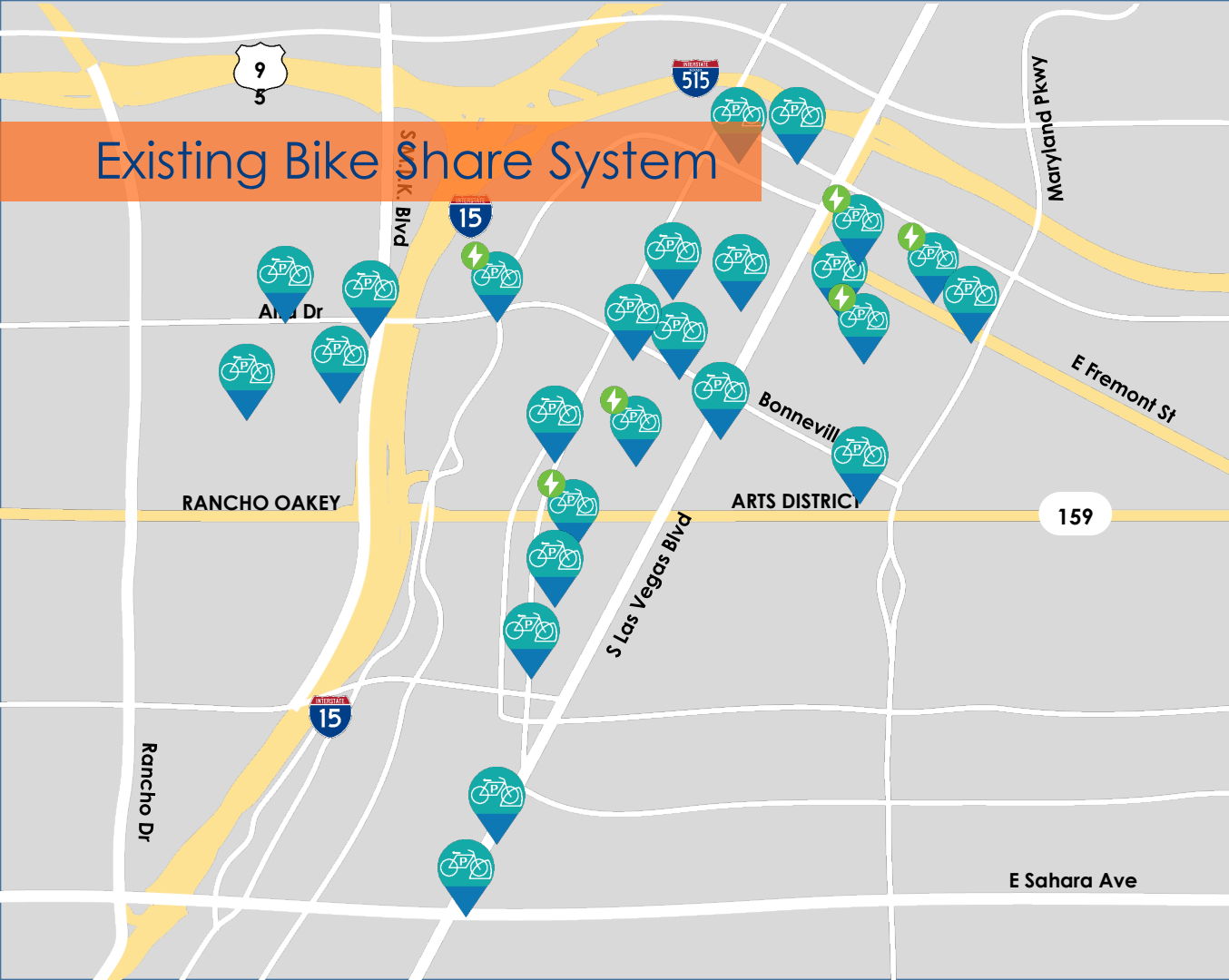




Bicycling



Existing Bike Share System



BIKE SHARE

25
stations

100
classic bikes

10
electric bikes

Launched in
Oct 2016

Southern Nevada Strong

is a regional plan and collaboration
for a resilient and sustainable Southern Nevada
community.





Regional Goals

Improve Economic
Competitiveness &
Education

Increase
Transportation
Choice

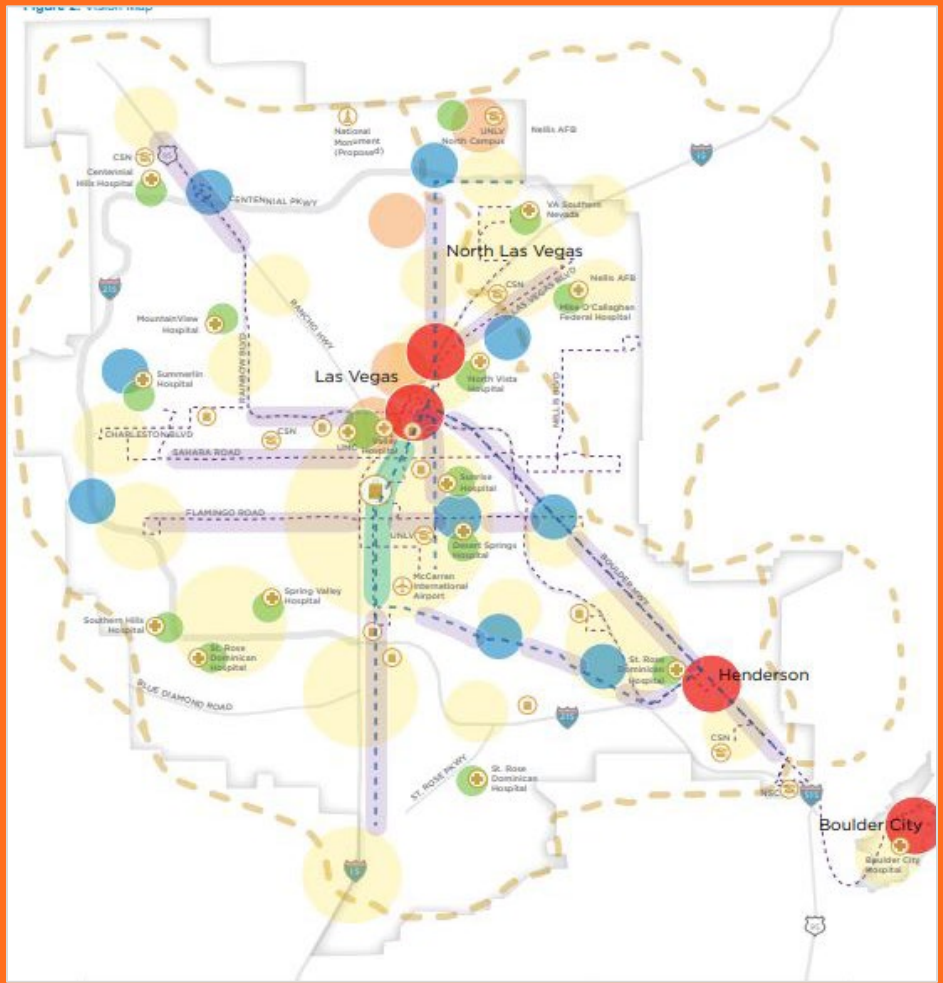
Invest in Complete
Communities

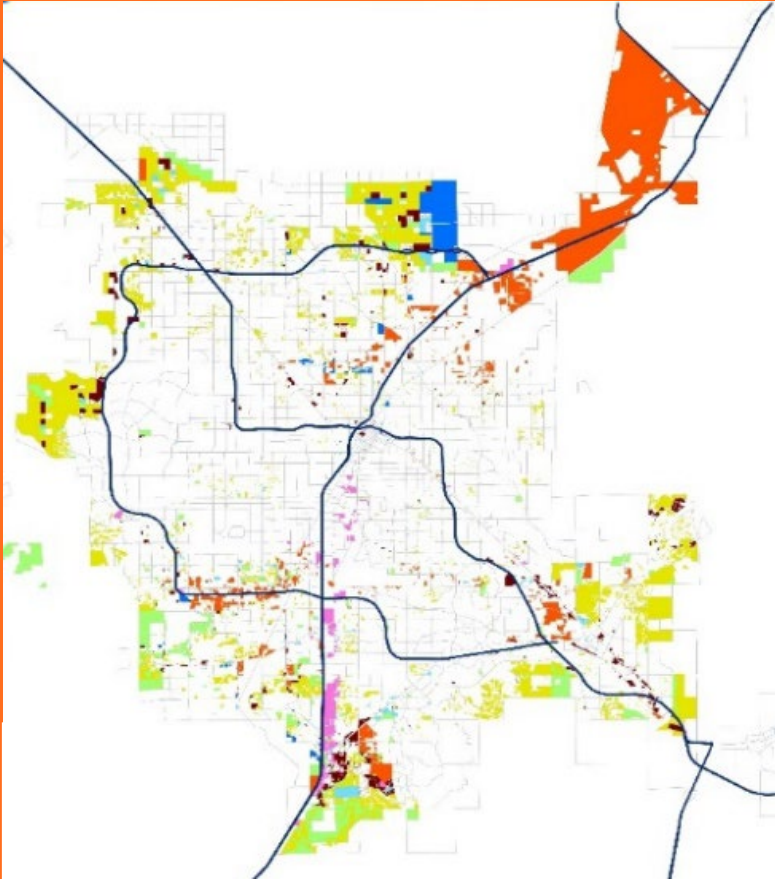
Build Capacity for
Implementation



SOUTHERNNEVADASTRONG

OUR VALLEY. OUR VISION. OUR FUTURE.







Upcoming: SOUTHERN NEVADA STRONG UPDATE



Engage



Infill Opportunities



Housing and Jobs Analysis



Scenario Planning



Action Plan



Thank You!



SOUTHERNNEVADASTRONG

OUR VALLEY. OUR VISION. OUR FUTURE.

Deb Reardon

Regional Planning Manager

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Going All-Out for an All-In education!



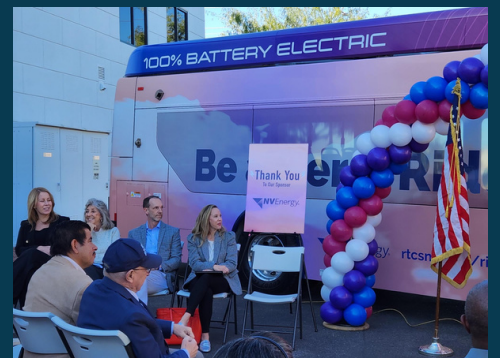
@SustainClarkCounty



AllinClarkCounty.com/Involvement/EducationProgram



DES
DEPARTMENT OF ENVIRONMENT
AND SUSTAINABILITY





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QUESTIONS?

STAY INVOLVED!

rtcsonv.com

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