



North Central Texas
Council of Governments



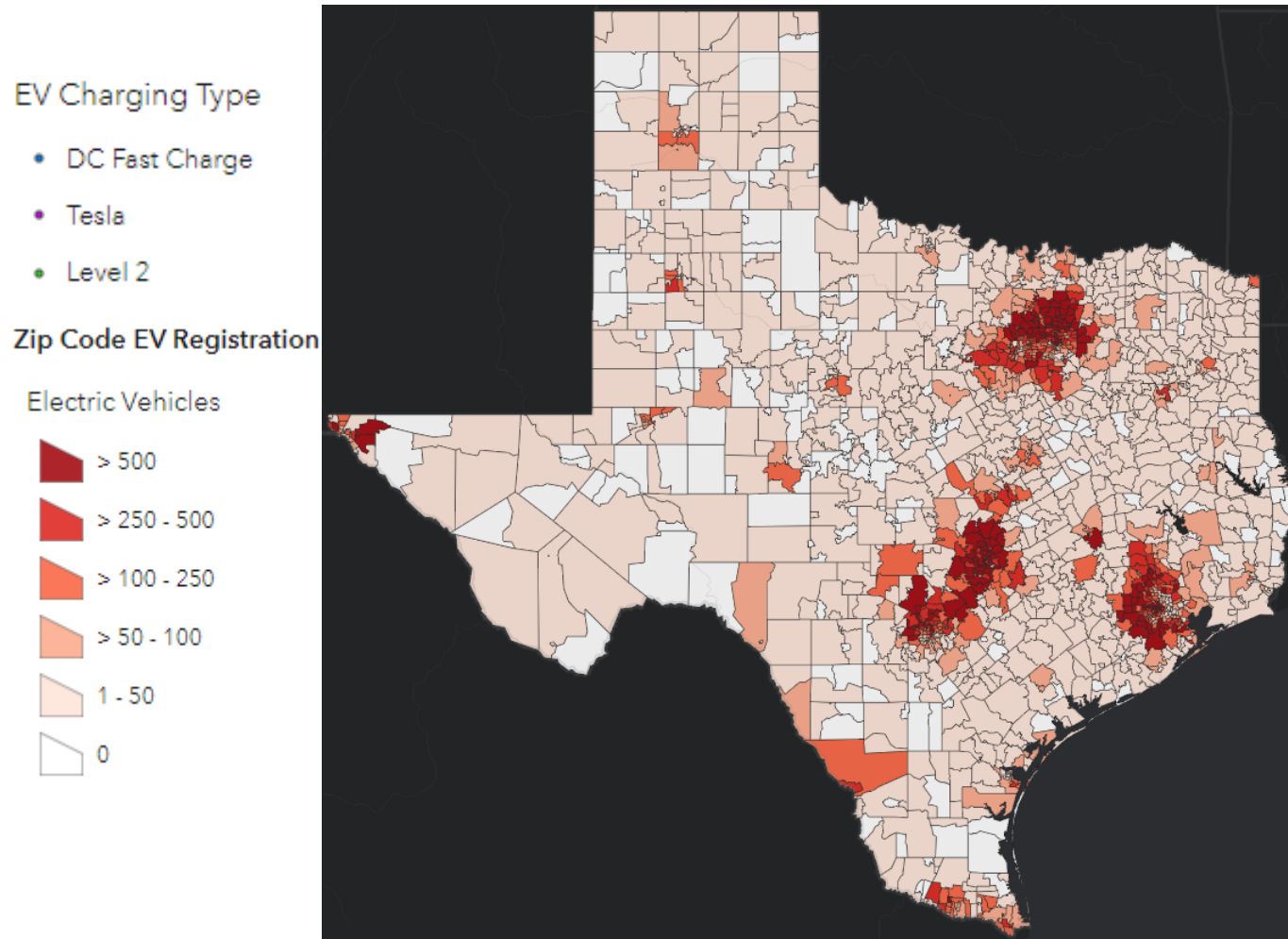
Dallas-Fort Worth
CLEAN CITIES

EV Infrastructure Planning & Implementation

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Public Works Roundup
August 22, 2024

Texas Electric Vehicle Adoption



Electric Vehicle (EV) Registration Data

dfwcleancities.org/evnt -> EVs and Texas

Region	August 2023	August 2024	Increase
Texas	211,055	296,534	41%
Dallas-Fort Worth (DFW)	78,045	108,526	39%
Austin	41,823	58,791	41%
San Antonio	20,332	26,753	32%
Houston	50,982	74,435	46%

Charging Sites Statewide (includes Tesla):

- 2,982 Level 2
- 526 DC Fast

afdc.energy.gov/stations

A photograph of a red car parked at a Blink EV charging station. The car is on the right side of the frame, and the charging station is on the left. A charging cable is connected to the car. The background shows a building with large windows and some greenery. The text "Upcoming EV Infrastructure Projects" is overlaid in the center of the image.

Upcoming EV Infrastructure Projects

Regional Investments in EV Charging

North Texas Reliable Electric Vehicle Infrastructure Project (NTx-REVI)

\$3.6 million award to repair and replace non-operational chargers in the DFW region

North Texas Equitable Electric Vehicle Infrastructure Project (NTx-EEVI)

\$15 million award that will fund up to 100 EV charging ports in the 16-county NCTCOG region

Texas EV Infrastructure Plan

TxDOT administering \$407 million over 5 years to build out EV charging infrastructure on alternative fuel corridors and in county seats, \$60 million of which will go to NCTCOG Metropolitan Planning Area (MPA)

Proposed NCTCOG EV Charger Site Selection

Program	NTx-REVI	NTx-EEVI	Texas EV Infrastructure Plan Phase 2 (Within MPA)
Potential Locations	List of eligible sites from FHWA	Areas where best sites are public sector properties	Areas where best sites are private sector properties
Priority Locations	<p>First Priority: Existing Direct Current Fast Charge (DCFC) sites or sites eligible to be upgraded to DCFC that meet selection criteria</p> <p>Second Priority: Level 2 sites that meet selection criteria</p>	<p>First Priority: Rural sites outside of the MPA located away from Texas EV Charging Plan Study Areas</p> <p>Second Priority: “Secondary Highways” not designated as corridors</p> <p>Third Priority: Additional DCFC sites based on community and local government input</p>	<p>First Priority: Medium-/Heavy-Duty (MHD) Charging hubs</p> <p>Second priority: DCFC sites needed along corridors</p> <p>Third priority: Additional unfilled gaps in access</p>

Electric Vehicle Charger Reliability and Accessibility Accelerator Program

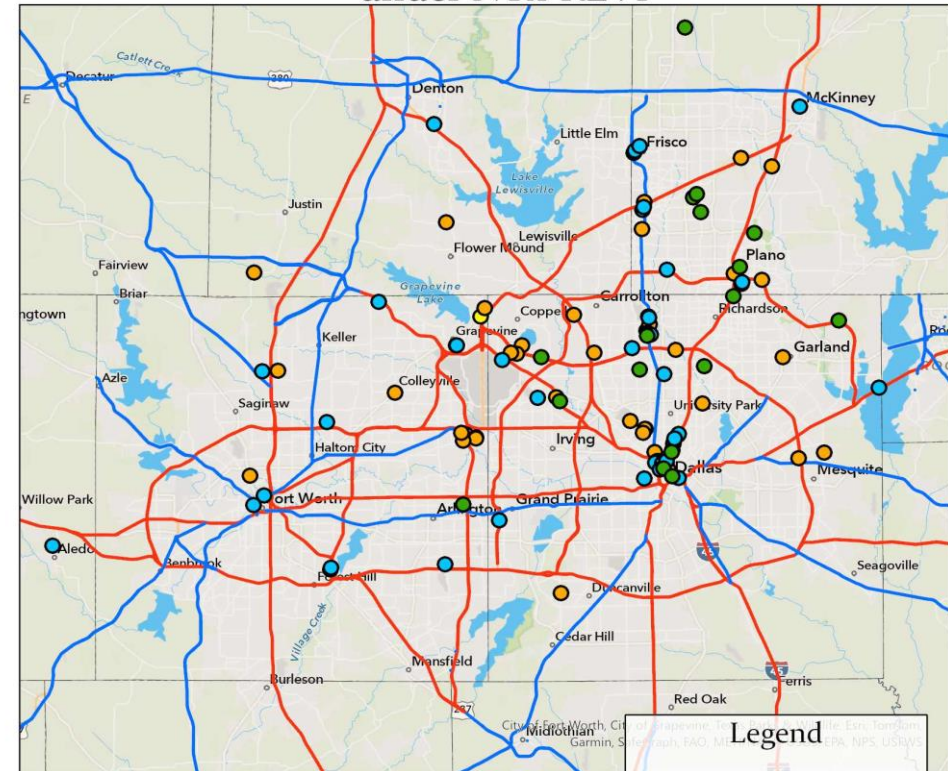
North Texas Reliable Electric Vehicle Infrastructure (NTx-REVI) Project

Awarded \$3.6 million to repair, replace, or upgrade EV charging stations

230 eligible ports across 125 sites eligible based on FHWA definition

Will upgrade a subset of the eligible sites through a screening process and selection of sites from specific criteria

Unavailable Electric Vehicle Charging Stations under NTx-REVI*



*Some eligible stations removed based on feedback from charging station network operators

Project Details

Coordinate with host cities, charging station networks, and site hosts to determine appropriate repair/upgrade needs

Prioritize/Select Sites that:

- Provide 20% cost share
- Streamline NCTCOG administrative burden
- Are not in proximity to existing charging stations
- Increase access in key areas such as multi-family properties, grocery stores, and retail locations

All stations must comply with federal NEVI standards ([23 CFR Part 680](#))

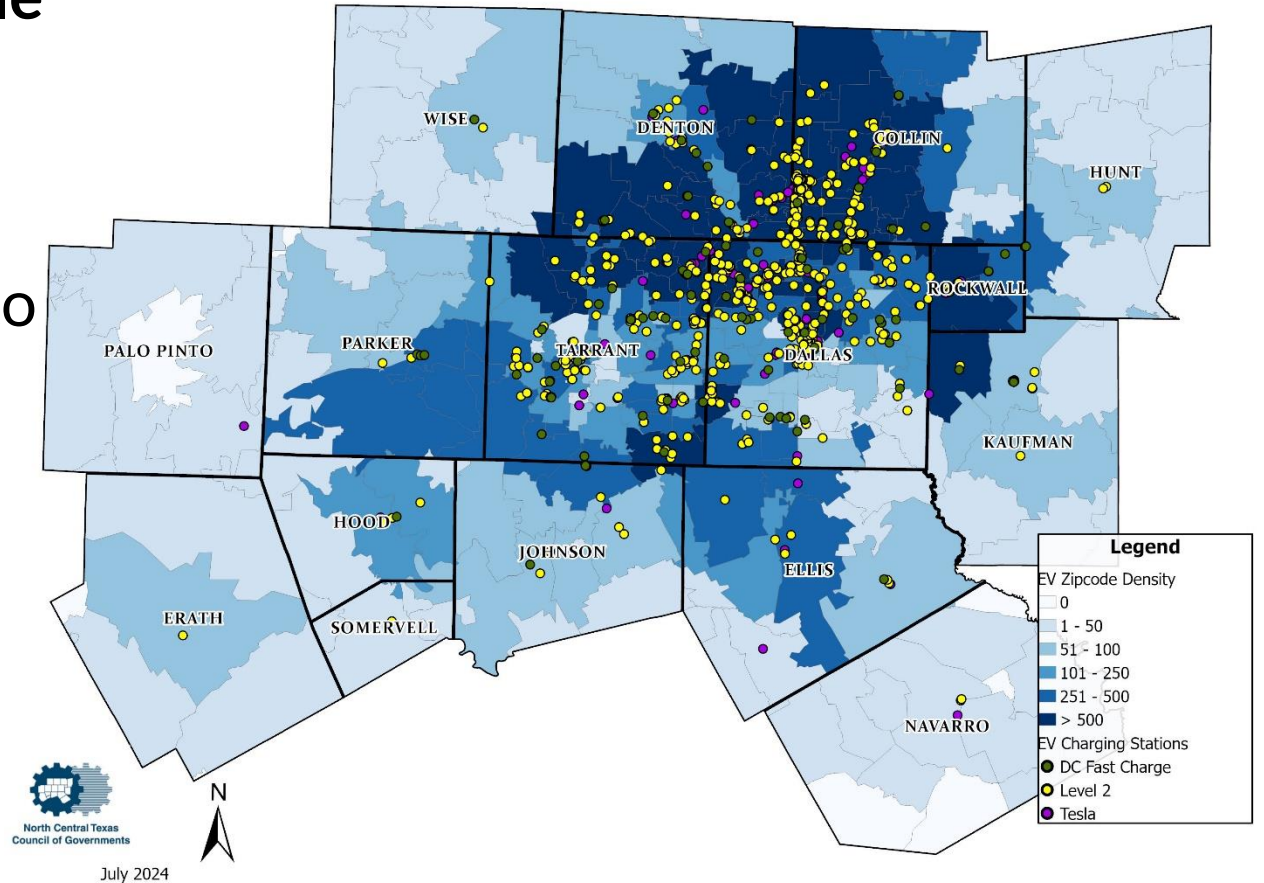
- Stations must be replaced like-for-like
- Exception: Level 2 stations within 1 mile of an alternative fuel corridor may be upgraded to a NEVI-compliant DCFC station

Charging and Fueling Infrastructure Community Program

North Texas Equitable Electric Vehicle Infrastructure Project (NTx-EEVI)

Awarded \$15 million to build EV charging stations on public property to provide up to 100 charging ports regionwide and create specialized technical teams to streamline implementation

Currently Available Electric Vehicle Chargers in the NCTCOG Region



Project Objectives

At least 50% of ports in Justice40 Areas

Emphasize FHWA Focus Areas:

- Rural communities
- Low- and moderate-income neighborhoods
- Underserved communities
- Areas with low ratio of private parking to households
- Areas with high ratio of multiunit dwellings to single family homes
- Justice40 environmental justice areas
- Multimodal hubs and shared-use fleets and services
- Fleet vehicles that operate in communities

Complement planned and future infrastructure investments by the public and private sectors



Texas EV Infrastructure Plan

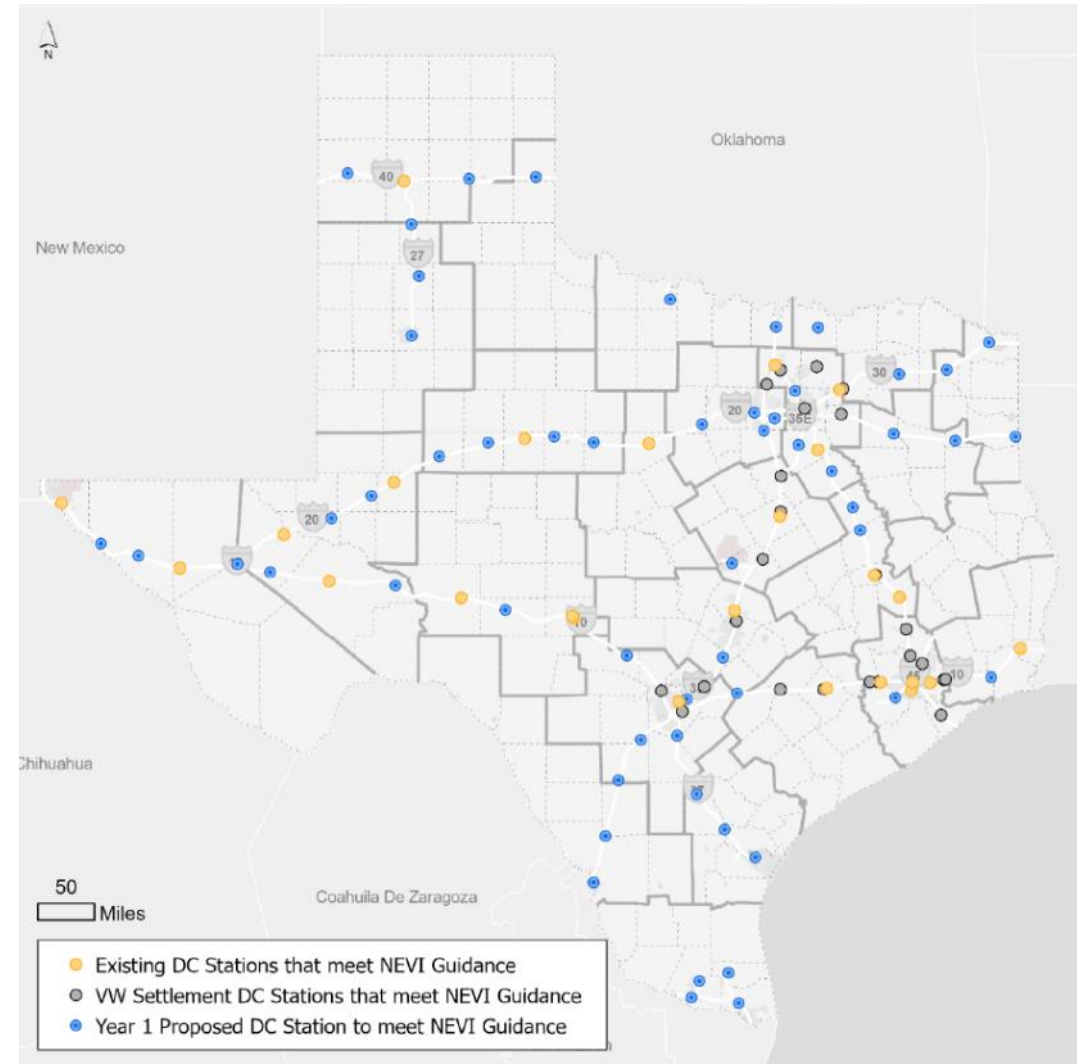
Phase 1: Install DC fast charging in recommended study areas along designated corridors

- 84 study areas
- 11 within the 12-County (MPA)
- 1 Each in Navarro and Palo Pinto Counties

Objective is 1 station with at least 4 CCS and NACS (Tesla) connectors every 50 miles

Phase 1 re-opening for 34 additional sites on September 16

Plan documents and materials posted
[Texas electric vehicle planning \(txdot.gov\)](https://www.txdot.gov/texas-electric-vehicle-planning)



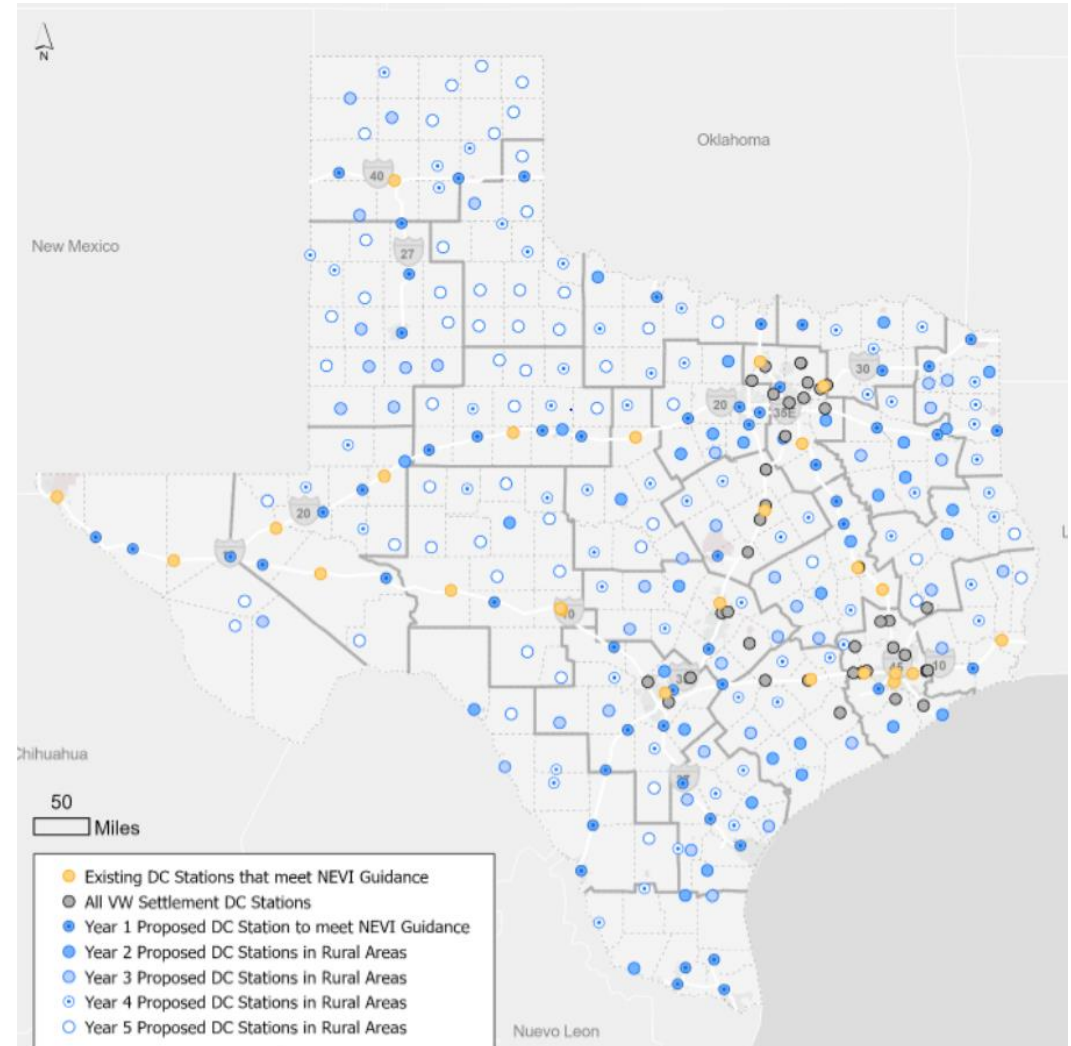
Source: TxDOT Texas EV Charging Plan Story Map: [Texas Electric Vehicle Infrastructure Plan \(arcgis.com\)](https://arcgis.com)

Texas EV Infrastructure Plan

Phase 2: (2 parallel approaches)

1. Build infrastructure in rural county seats
 - NCTCOG counties impacted: Erath, Hood, Hunt, Johnson, Kaufman, Palo Pinto, Somervell, and Wise
2. Work with Metropolitan Planning Organizations (MPOs) to add more infrastructure in urbanized areas
 - MPOs recommend type and locations
 - NCTCOG 12-County MPA: \$60 Million allocation

Plan documents and materials posted
[Texas electric vehicle planning \(txdot.gov\)](https://www.txdot.gov/texas-electric-vehicle-planning)



Source: TxDOT Texas EV Charging Plan Story Map: [Texas Electric Vehicle Infrastructure Plan \(arcgis.com\)](https://www.txdot.gov/texas-electric-vehicle-planning)

Preliminary NCTCOG Approach to Phase 2

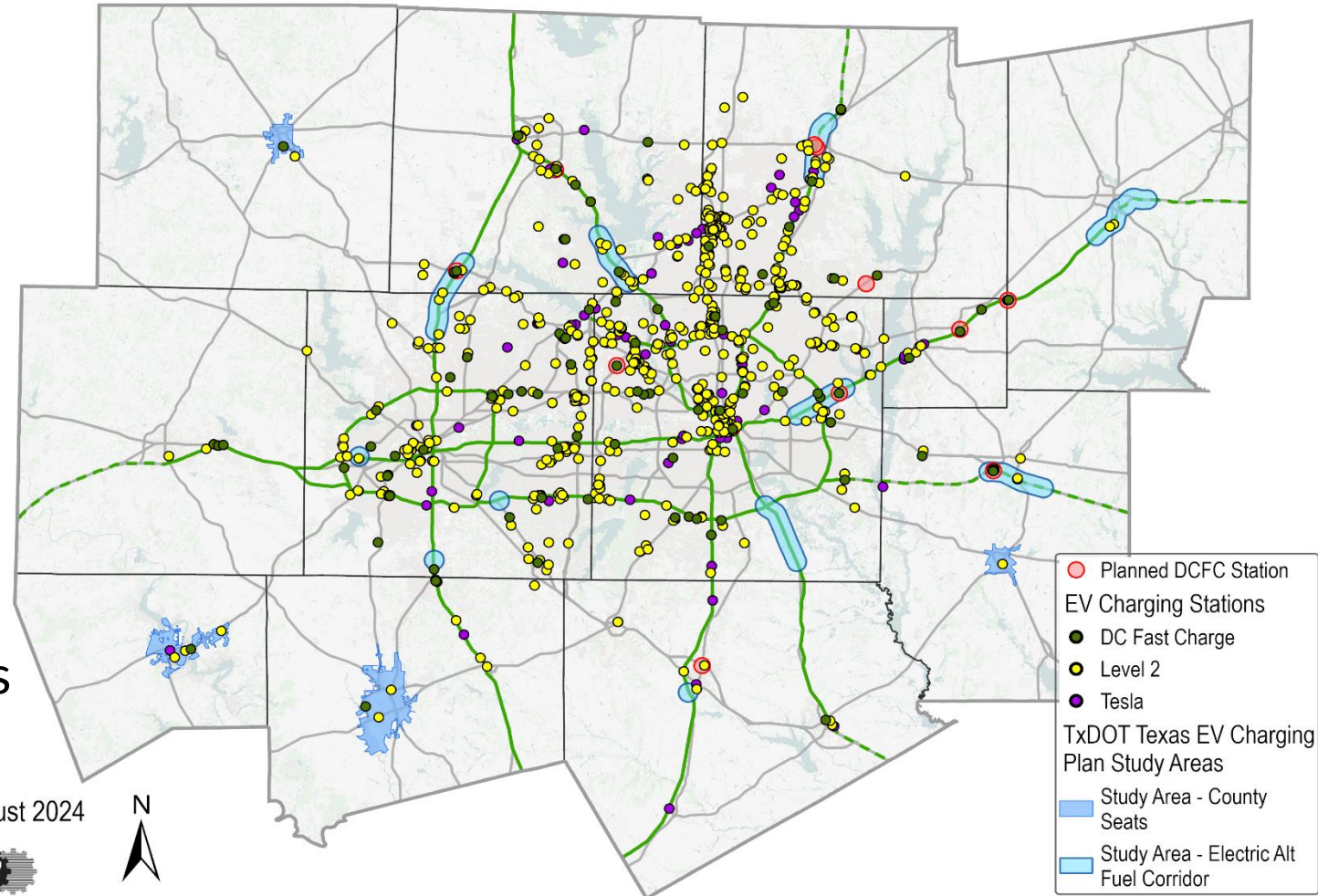
Step 1: MHD charging hubs

Step 2: Identify priority “secondary highways” on the National Highway System; recommend study areas to meet NEVI corridor criteria

- High-volume corridors within urbanized areas
- Major inter-regional connectors (US 287, US 175)

Step 3 (pending availability of funds): Identify study areas to address community charging

Currently Available and Planned Electric Vehicle Chargers in the NCTCOG Metropolitan Planning Area



August 2024





EV Parking Planning & Codes

EV-Ready Building Codes and Standards

International Code Council:

International Energy Conservation Codes (IECC) - Updated May 2024

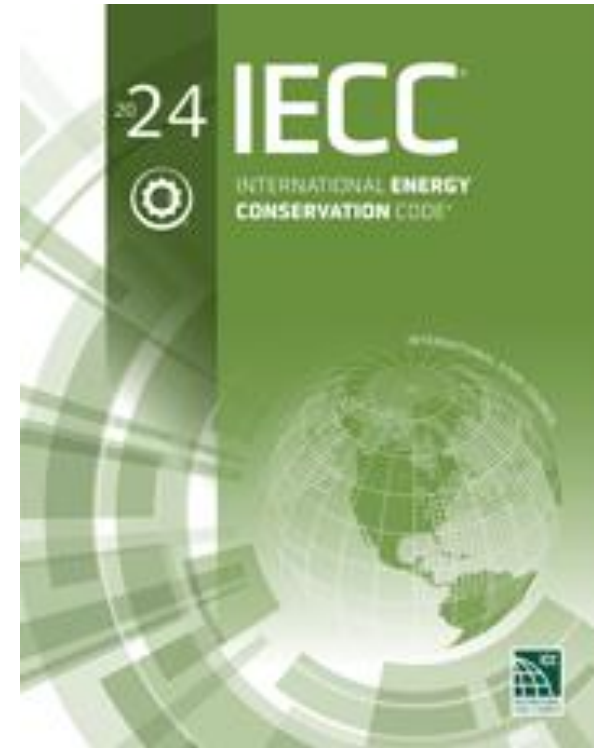
- Minimum parking space requirements for EV Capable, EV Ready, and EVSE Spaces*
- System capacity and circuit capacity requirements
- Commercial: Appendix CG Electric Vehicle Charging Infrastructure
- Residential: Appendix RE Electric Vehicle Charging Infrastructure

Local Governments encouraged to integrate 2024 IECC into building and parking requirements

- Help your community be EV ready
- Earn points toward Charging Smart designation

dfwcleancities.org/evreadiness

*EVSE Space was formerly referred to as EV-Installed



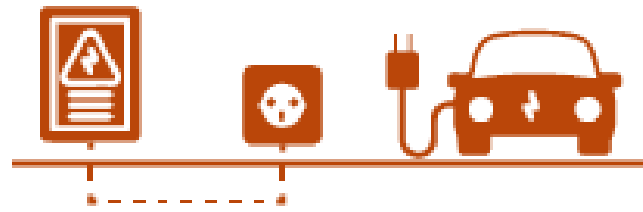
Graphics Source: International Codes Council

EV Parking Infrastructure Specifications



EV CAPABLE SPACE

Electrical Panel Capacity +
Conduit



EV READY SPACE

EV Capable
+ Installed Full Circuit



EVSE SPACE

Install EV Charging
Station

Graphics Source: Southwest Energy Efficiency Project

4x-6x
more expensive

The cost to install EV Ready infrastructure during post-construction compared to new construction. Source: [Alternative Fuels Data Center](#)

EV-Ready Building Codes and Standards

Residential - Appendix RE Electric Vehicle Charging Infrastructure



New one- and two-family dwellings and townhouses with a designated attached or detached garage or other on-site private parking provided adjacent to dwelling unit

- Provide one EV Capable Space, EV Ready Space or EVSE Space per dwelling unit



New R-2 occupancies or allocated parking for R-2 occupancies in mixed-use buildings

- Provide EV Capable Space, EV Ready Space or EVSE Space for 40% of the dwelling units or parking spaces, whichever is less

EV-Ready Building Codes and Standards

Commercial - Appendix CG Electric Vehicle Charging Infrastructure

Occupancy	EVSE Space	EV Ready Space	EV Capable Space
Group A	10%	0%	10%
Group B	15%	0%	30%
Group E	15%	0%	30%
Group F	2%	0%	5%
Group H	1%	0%	0%
Group I	15%	0%	30%
Group M	15%	0%	30%
Group R-1	20%	5%	75%
Group R-2	20%	5%	75%
Group R-3 and R-4	2%	0%	5%
Group S exclusive of parking garages	1%	0%	0%
Group S-2 parking garages	15%	0%	30%

Charging Smart

Supports local governments in achieving equitable EV-readiness goals

No-cost structured technical assistance and designation program

Streamlines planning, permitting, and inspections for EV infrastructure deployment

How to Participate

- Join our local cohort of peer cities
 - Progress to designation together
- Reach out to cleancities@nctcog.org
- Learn more at <https://www.dfwcleancities.org/charging-smart>



Electric Vehicle Battery Fires

EV fires due to lithium-ion (Li-ion) battery fire – not common but must be planned for

- Training needs
- Equipment needs
- Compromised batteries are a hazard; need specialized hazmat disposal

NCTCOG/DFWCC Role

- Support and promote regional first and second responder training
- Provide resources on best practices and training
- What do you need from us? What can we do to help?

Resources

- [Energy Storage Safety for Electric Vehicles | Transportation and Mobility Research | NREL](#)
- [Alternative Fuels Data Center: Electric Vehicle Safety Training Resources for First and Second Responders \(energy.gov\)](#)

Get Involved with DFWCC

Contact us at cleancities@nctcog.org for any questions on fleet electrification, funding opportunities, or other inquiries



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Upcoming webinars and events posted regularly at dfwcleancities.org/events

Past event presentations and recordings available

Sign up for our weekly email list
dfwcleancities.org/getinvolved



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