

Los Alamos County Fleet Conversion Plan and Community-Wide EV Charging Plan

October 2025





Agenda

1. Project Purpose
2. EV Fleet Conversion Plan
3. EV Charging Plan
4. Discussion



Project Purpose

1. Reduce greenhouse gas (GHG) emissions from the County fleet
2. Expand EV charging infrastructure
3. Engage County partners



New Mexico Clean Car Rule

The New Mexico Clean Car Rule sets low-emission and zero-emission standards for new cars and trucks sold in the state, starting in 2026.



Light Duty Vehicles

43%
by 2027

82%
by 2032

Trucks

15%
by 2027

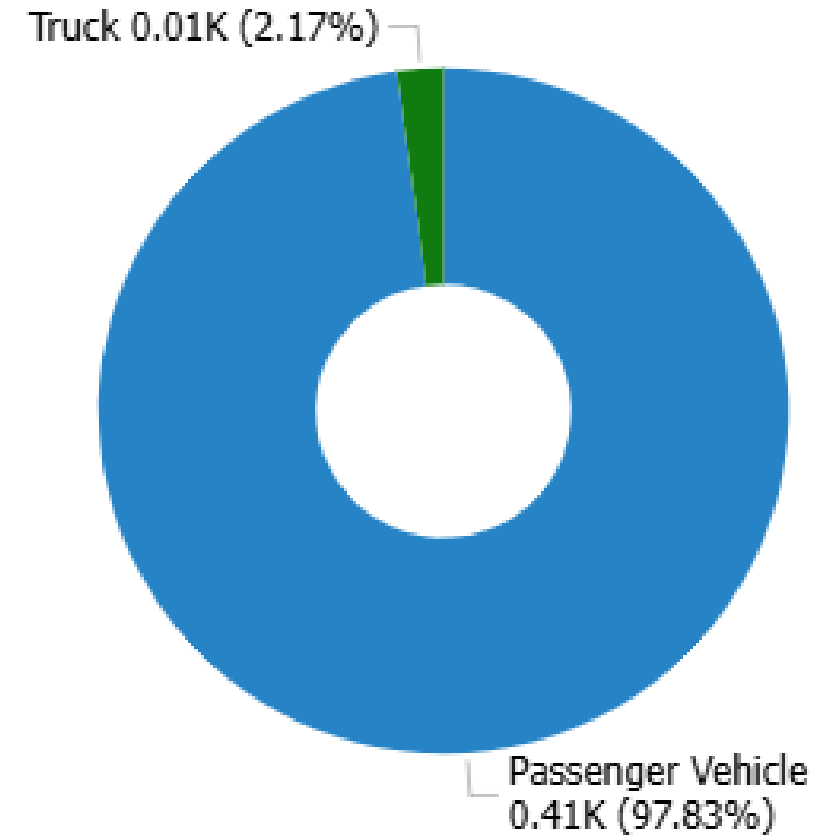
40%
by 2032



Existing Conditions

- **284 BEVs** on the Road
- **130 PHEVs** on the Road
- 30 EVs per 1000 people

EVs on the Road by Vehicle Type





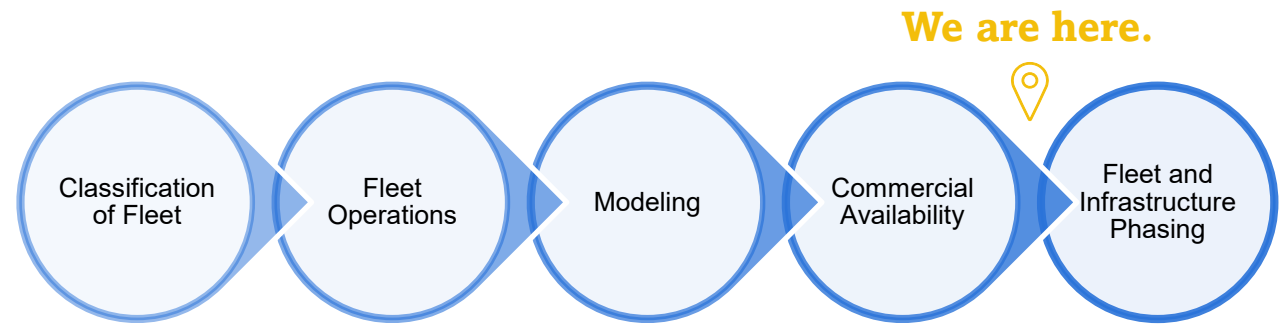
County Fleet Conversion Plan





County Fleet Conversion Plan

- Existing conditions
- Charging needs of the future fleet
- Vehicle replacement schedule (in progress)
- Facility assessment and infrastructure upgrades
- Greenhouse gas emissions (in progress)
- Capital and operating costs (in progress)
- **Task deliverable:** County Fleet Conversion Plan





Fleet Existing Conditions

Deep dive on:

- Facilities
- Departments
- Vehicles

Stantec Los Alamos County Existing Conditions

Fuel Type

All

Facility

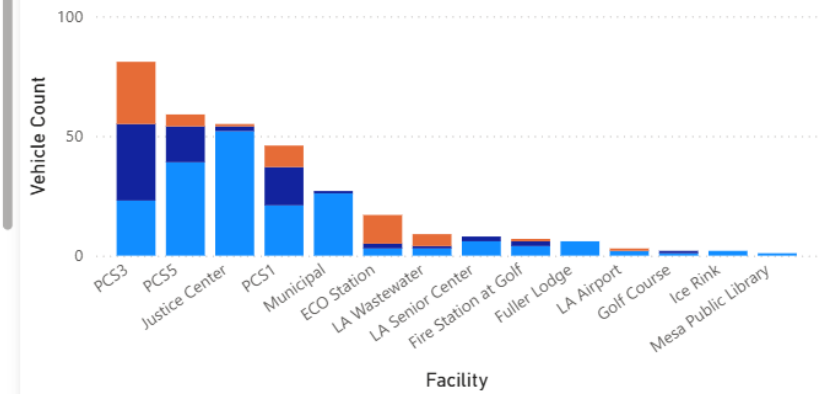
- ☐ Select all
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- ☐ ECO Station
- ☐ Fire Station at Golf
- ☐ Fuller Lodge
- ☐ Golf Course
- ☐ Ice Rink
- ☐ Justice Center
- ☐ LA Airport
- ☐ LA Senior Center
- ☐ LA Wastewater
- ☐ Mesa Public Library
- ☐ Municipal
- ☐ PCS1
- ☐ PCS3
- ☐ ----

Vehicle List

Vehicle Type	Number of Vehicles
Step Van	1
FREIGHTLINER / MT 55 Chassis	1
Cutaway	2
FORD / E-350	1
FORD / E-450	1
Van	3
CHEVROLET / Express	1
DODGE / Caravan/Grand Caravan	1
FORD / Transit	1
Double Cab	5
FORD / F-350	5
Cargo Van	6
CHEVROLET / Uplander	1
FORD / Transit	1
FORD CARGO VAN / Transit	1
FORD / E-350	3
Minivan	6
ELDORADO AMERIV / Grand Caravan	1
DODGE / Grand Caravan	5
Single Cab	11
AUTOCAR / ACX Xpeditor	1
FORD / F-450	1
ISUZU / NRR	1
FORD / F-550	2
FORD S/D / F-550	2
FORD / F-350	4
Sedan	14
CHEVROLET / Malibu	1
FORD / F-250	1
TOYOTA / Camry	1
FORD / Crown Victoria	2
FORD C-MAX / C-Max	2
FORD / Taurus	3
Total	323

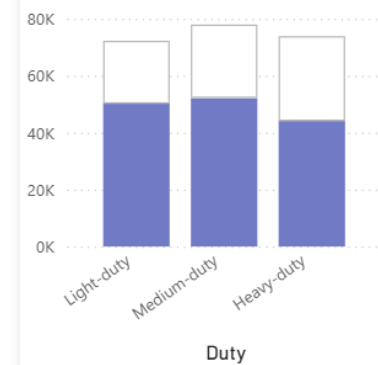
Vehicle Duty by Facility

Duty ● Light-duty ● Medium-duty ● Heavy-duty

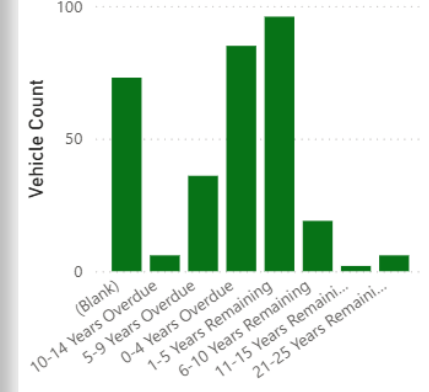


Remaining Mileage By Duty

Avg Current Mileage ● Avg Remaining ... ○

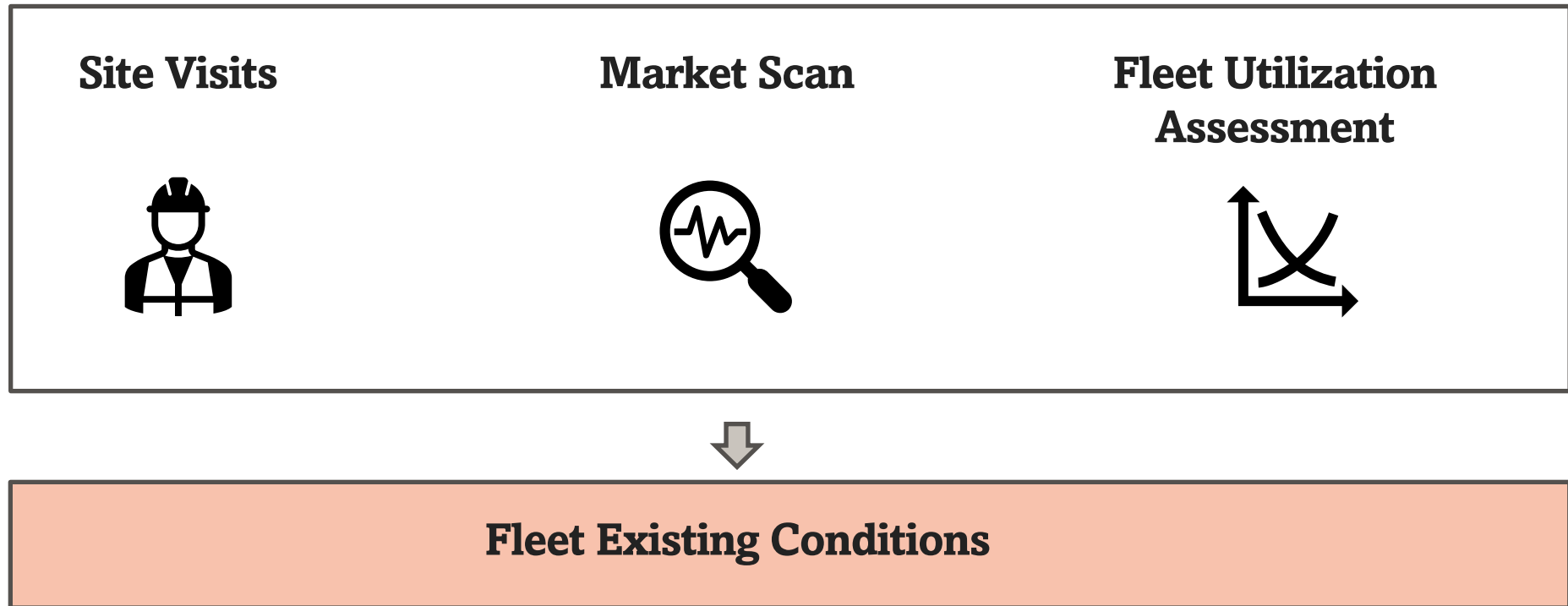


Years of Use Remaining





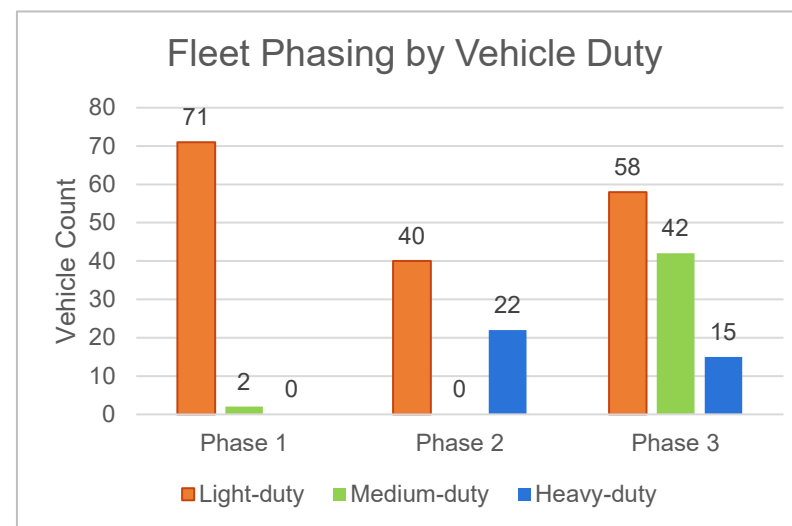
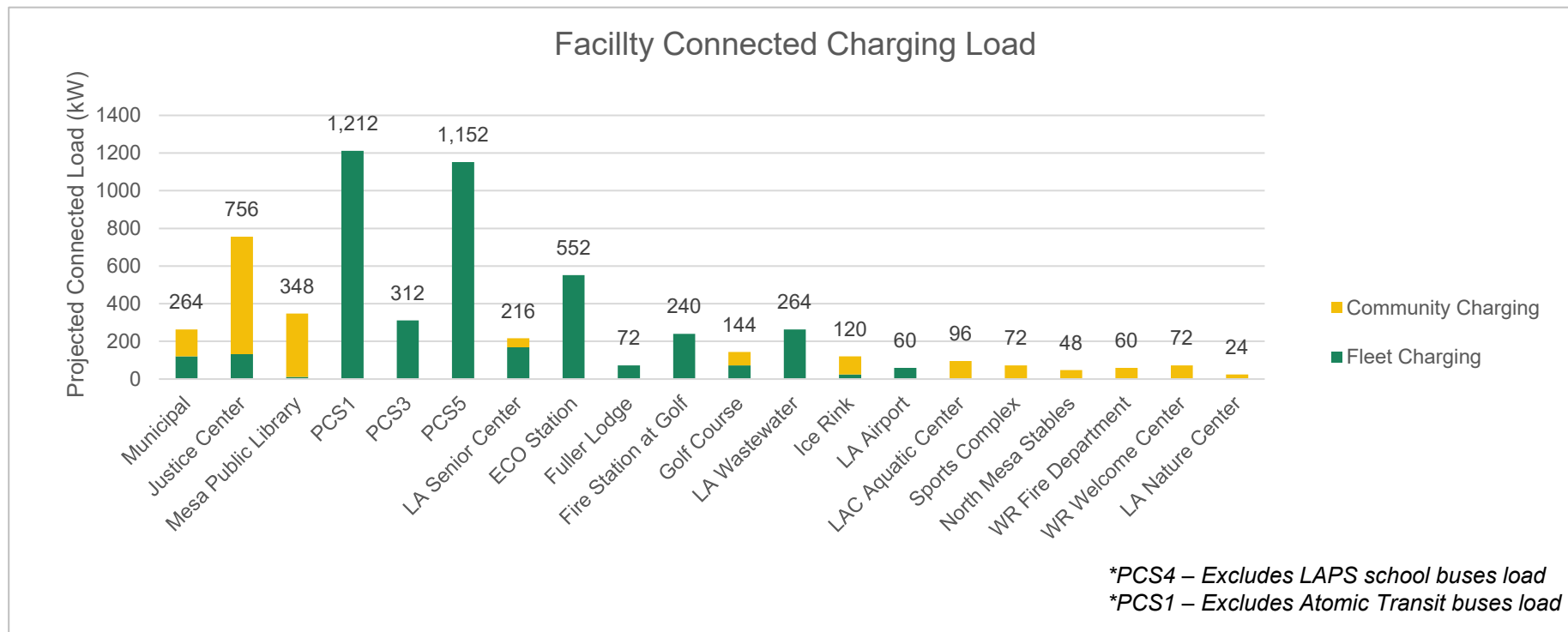
Completed Work





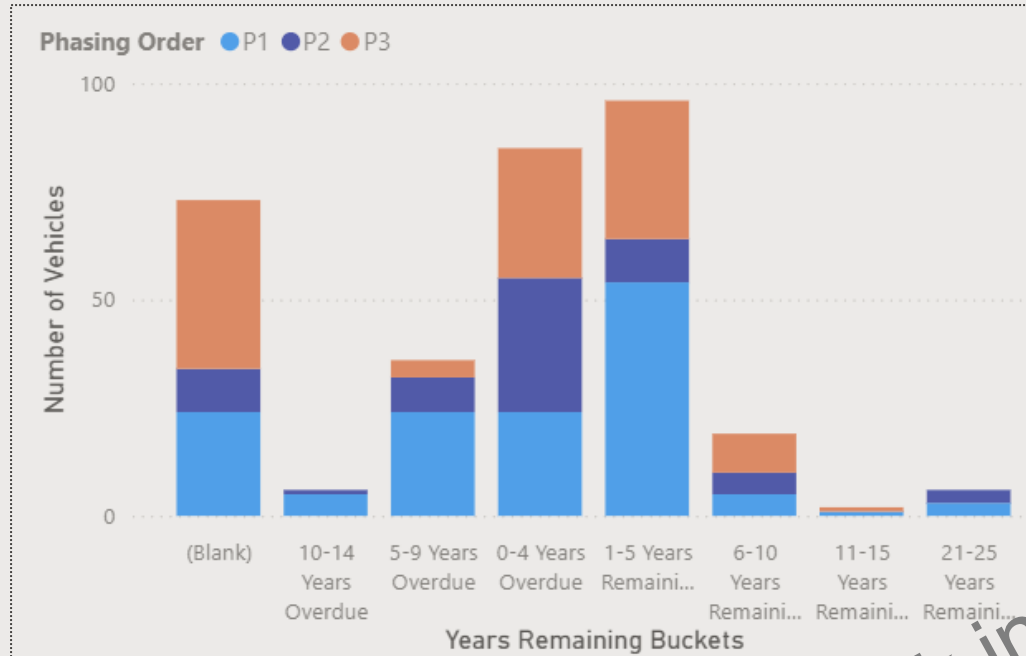
Projected Load

- Does not consider existing site capacity.
- Projected load is in addition to existing or planned chargers.

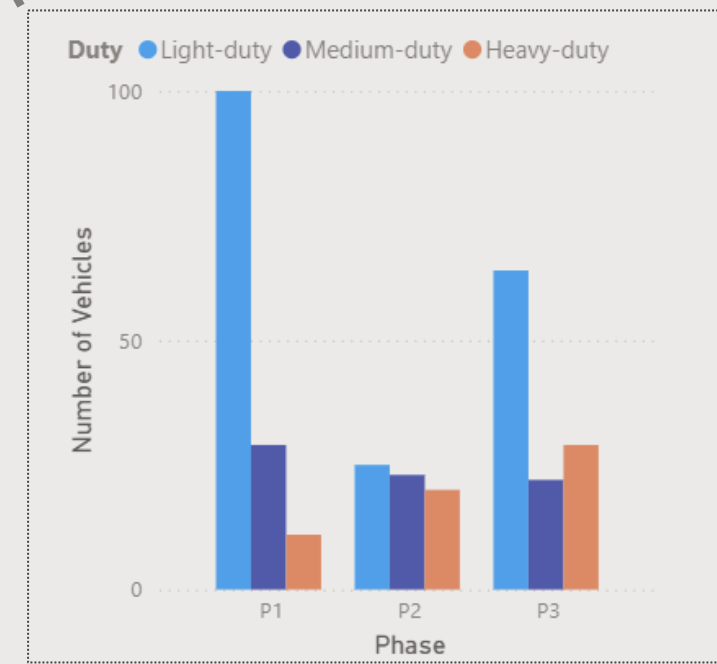


Next Steps

- Vehicle replacement schedule (in progress)
- Greenhouse gas emissions (in progress)
- Capital and operating costs (in progress)
- Draft and Final County Fleet Conversion Plan



Example: Work in Progress



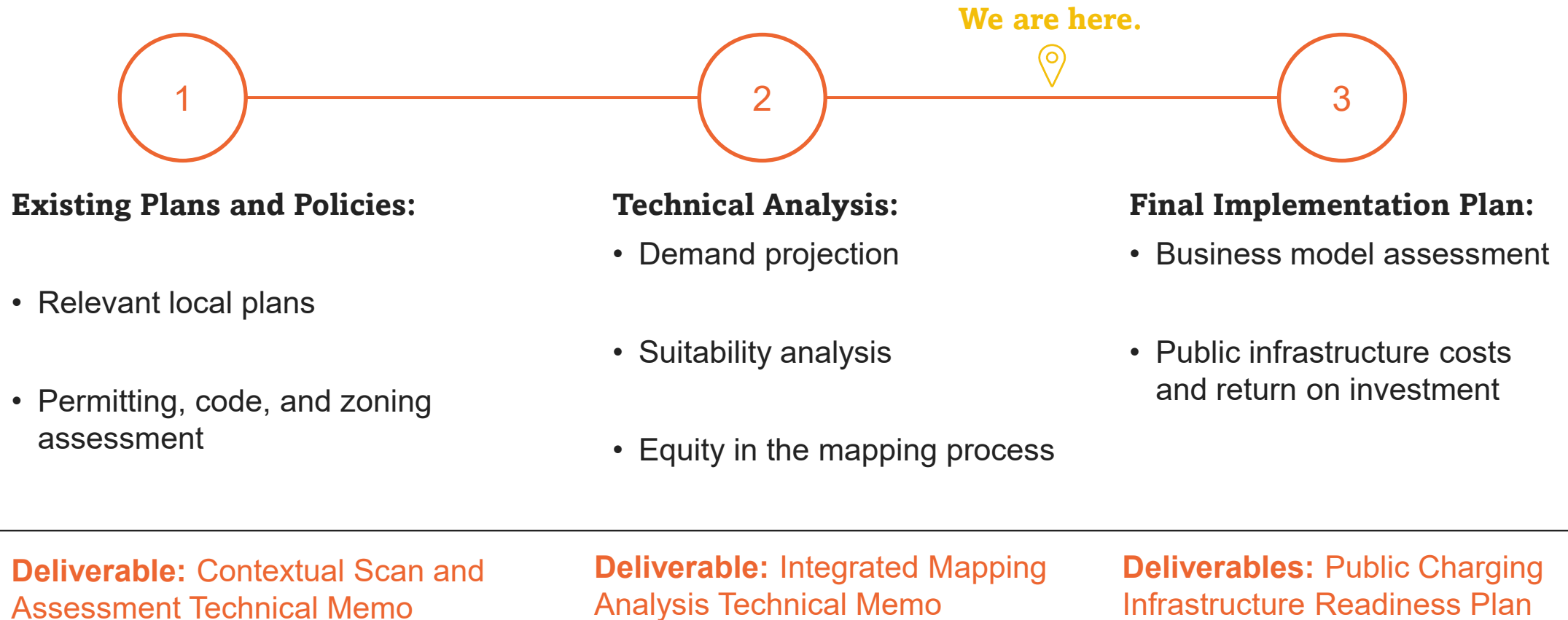


Community- Wide EV Charging Plan



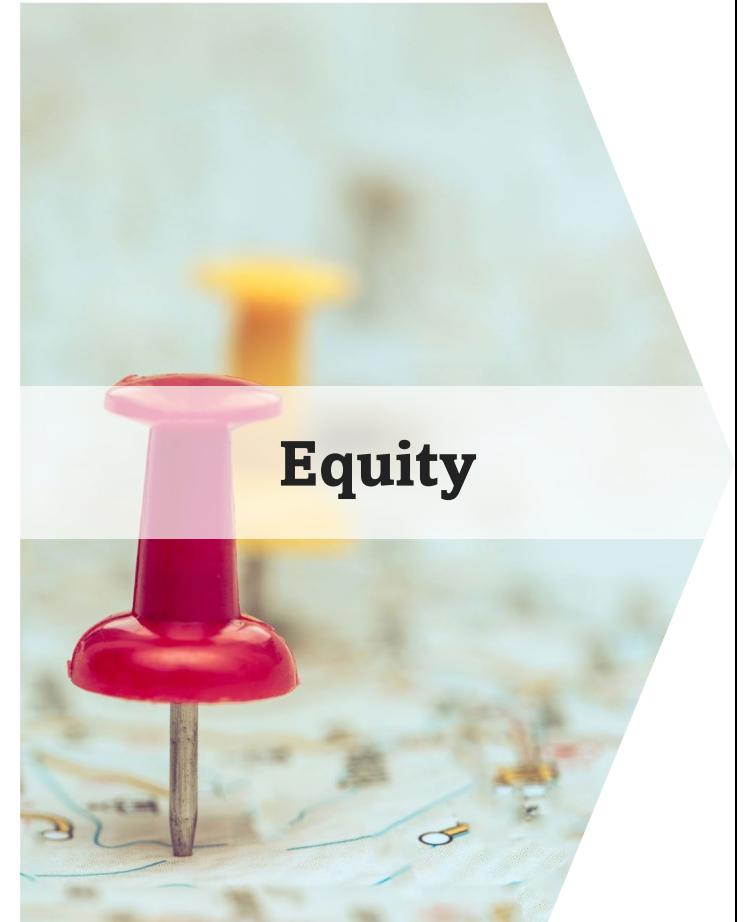


Community-Wide EV Charging Plan





What are we looking for in an ideal charging network?





First Public Engagement Overview

May 12, 2025: Public Visioning Session & Virtual Engagement

- Focus: Community Priorities for EV Infrastructure in Los Alamos County
- Themes: Charging availability, affordability, accessibility, equity, and visitor support

May – June 2025: Community Survey

- 516 Responses
- Topics: Demographics, travel behavior, barriers to EV ownership, charging priorities, preferred sites



Public Comment & Survey Takeaways

Concerns About Public
Investment in EVs

Enthusiasm About
Widespread Charging





Public Comment & Survey Takeaways

Charging Availability & Convenience

- **More fast chargers** needed, especially near grocery stores, dining, shopping
- **Compatibility** across vehicle types is important

Affordability & Accessibility

- Keep **charging costs** close to residential electricity rates
- Concerns about **government investment**
- **Equity** concern for Residents without garages/multifamily housing

Preferred Charging Locations

- **Top:** Grocery stores, libraries, visitor centers, parks, trailheads
- Support for **tourism** and economic activity
- Shared residential charging is seen as less useful



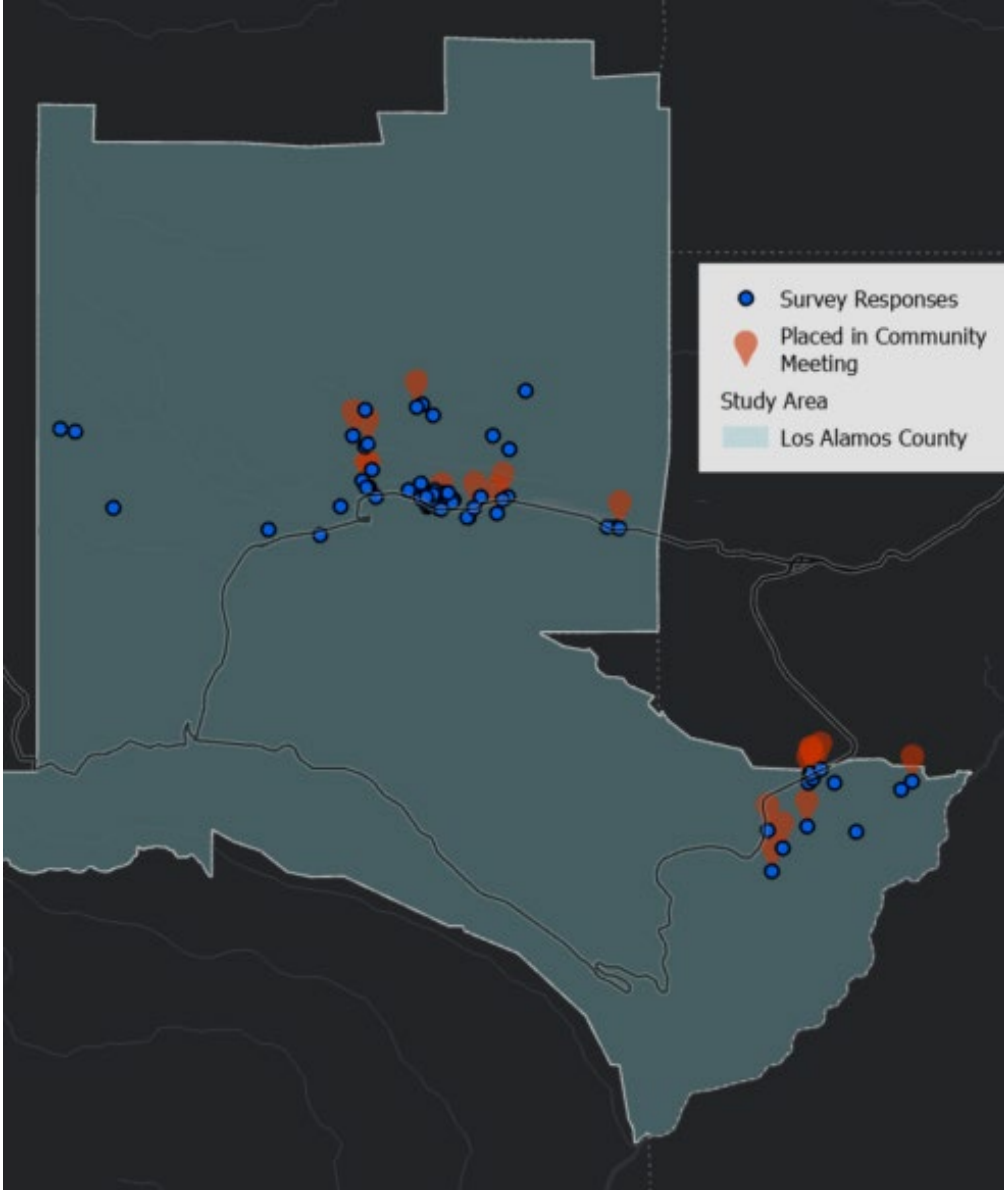
Barriers & Priorities

Barriers to EV Ownership

Barrier	Response
Range anxiety/long-distance travel	27%
High purchase costs	15%
Reliability concerns	13%
Limited charging access at home or on errands	11%

Charging Network Priorities

Priority	Response
Reliable equipment	19%
Widespread availability	17%
Ease of use: Payment & Wayfinding	15%
Low cost, safe, equitable access	11%



Charging Preferences & Locations

Charging Preferences

Priority	Response
Home Charging	56%
Highway fast charging	50%
Workplace charging	33%
Destination Charging	28%

Modeling Site Suitability

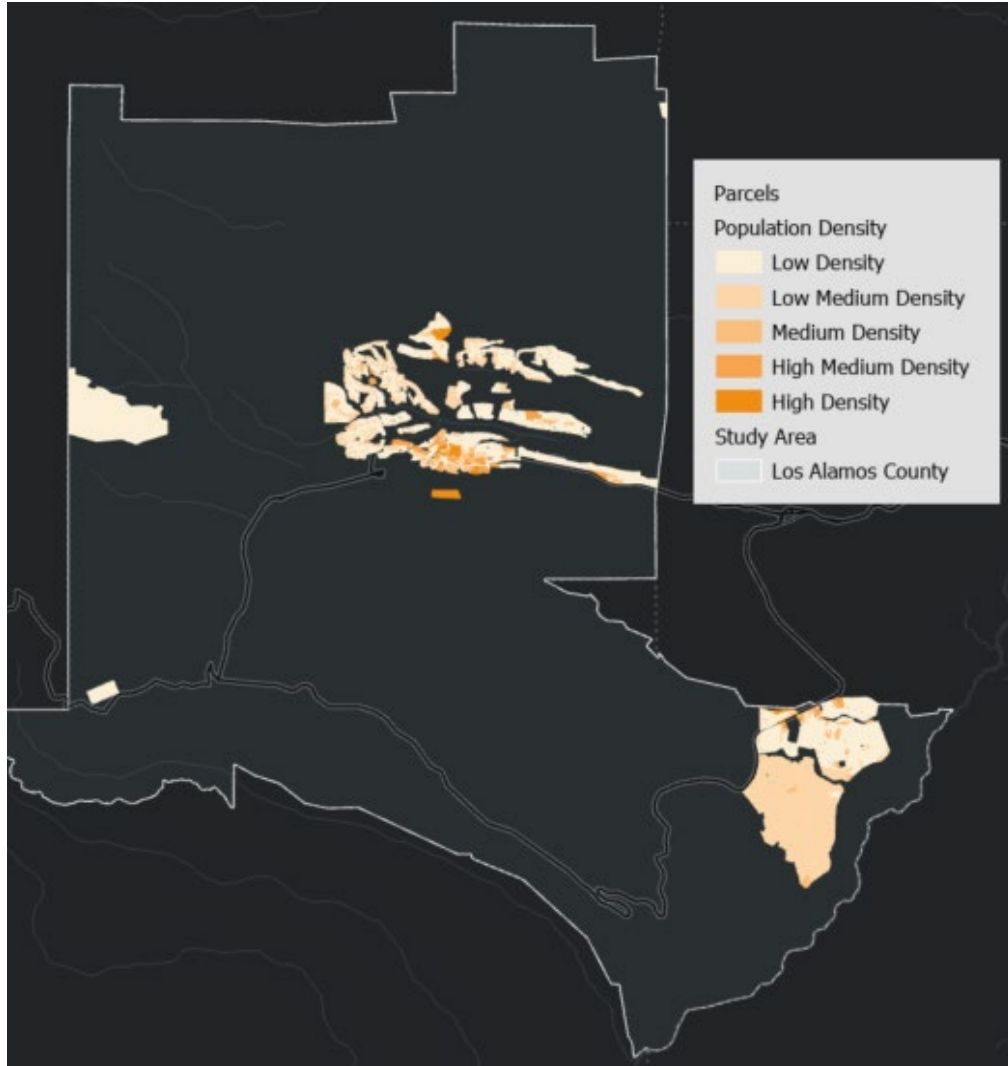




Where Should We Put Chargers?

Site Optimization is driven by several key questions:

- Where do people park their EVs?
- Where do people drive their EVs?
- Where do residents want chargers?
- What areas are less preferable for chargers?
- What areas make sense for chargers?

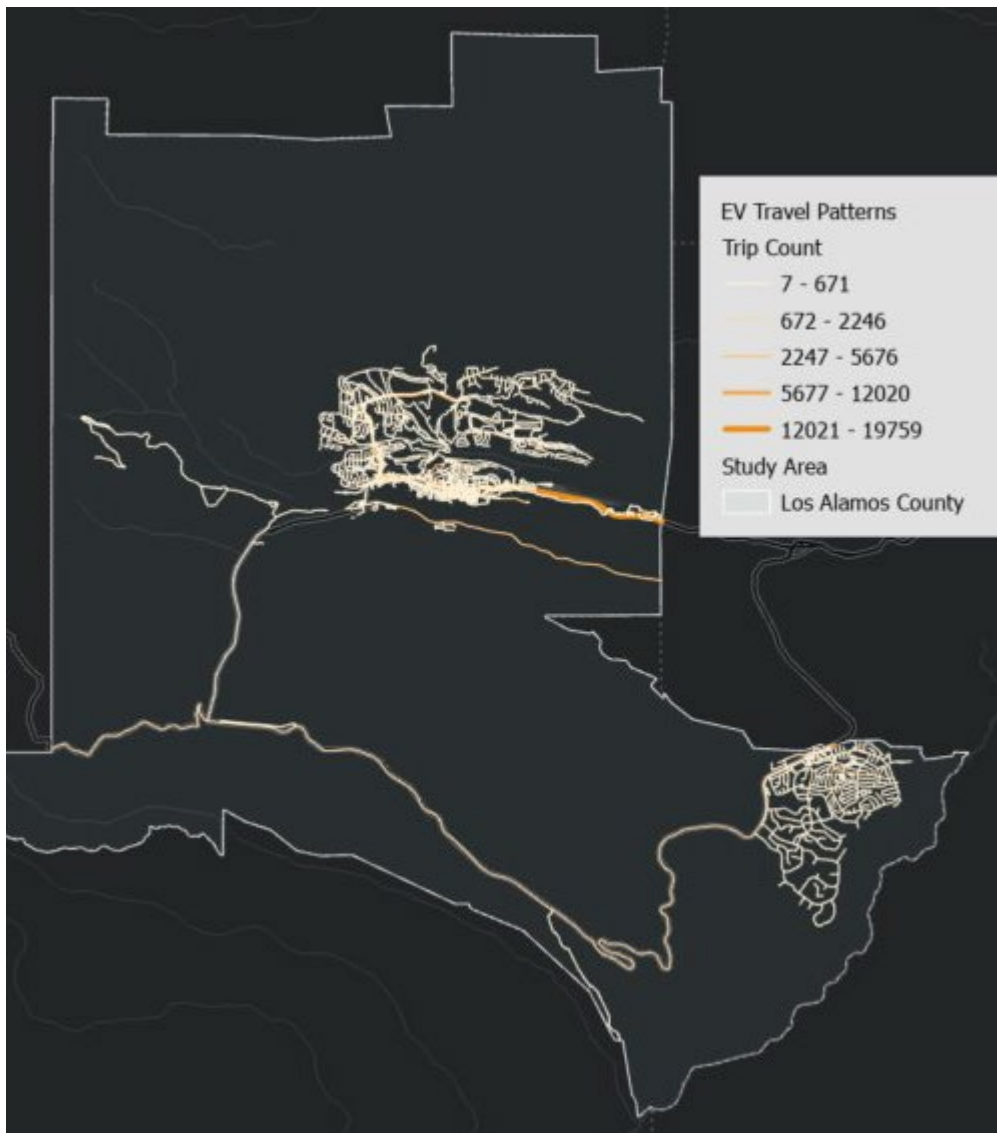


Where Do People Park Their EVs?

People park their EVs at home.

Population density is derived from:

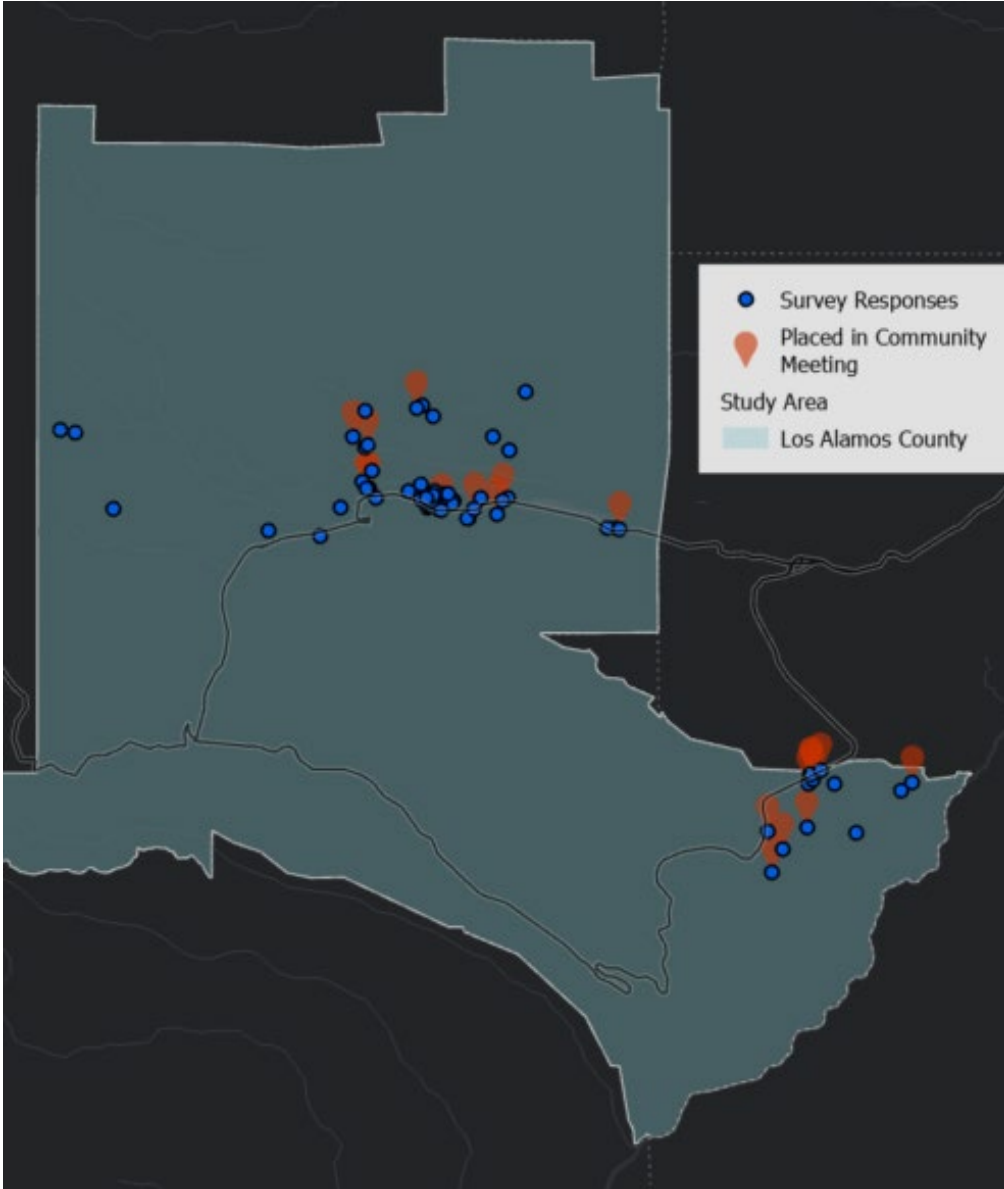
- Zoning Codes
- Parcel Ownership
- Parcel Size



**EV Travel Data from Replica*

Where Do People Drive Their EVs?

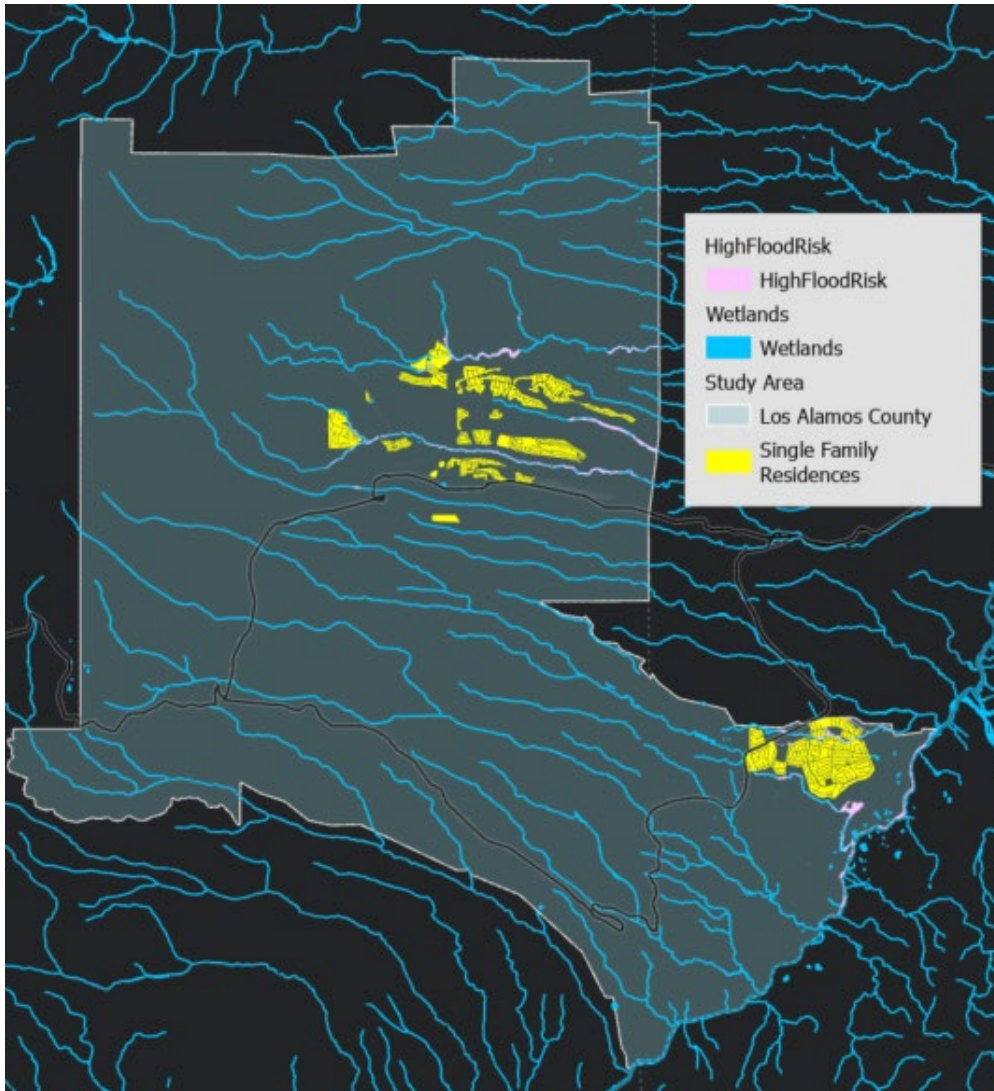
EV Travel Patterns help us understand the need for charging.



Where Do People Want Chargers?

Data collected during:

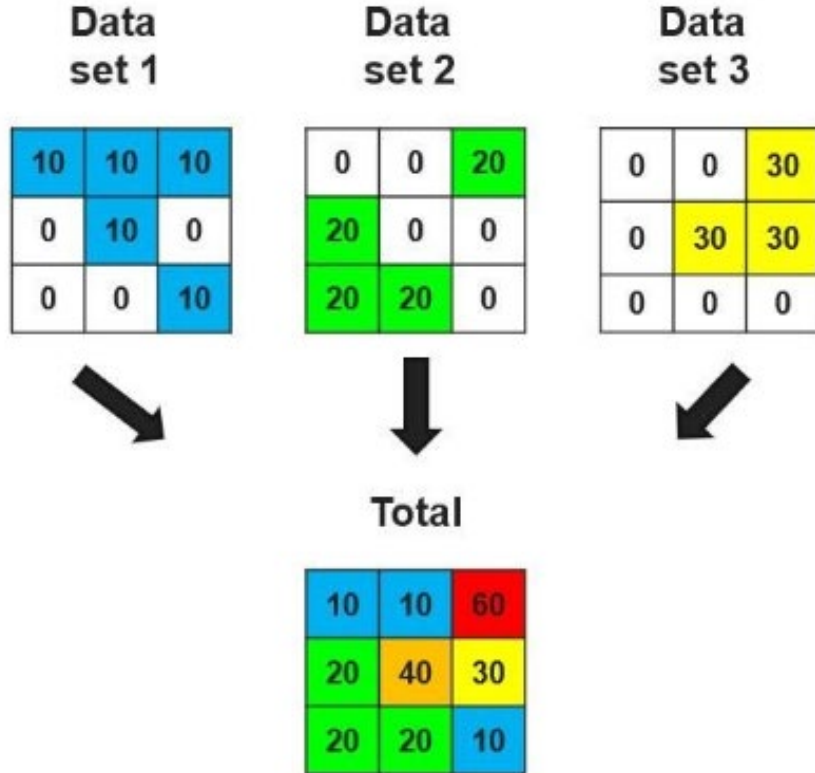
- *Public Engagement Meeting*
- *Public Survey*



What Areas are Less Preferable for Public Chargers?

Some areas are excluded:

- *Areas with high flood risk*
- *Exempt Federal Land*
- *Private Residences (for shared chargers)*



What Areas Make Sense for Chargers?

- We find optimal charging locations by merging all the input data sets.
- Different scenarios weigh each data layer differently.

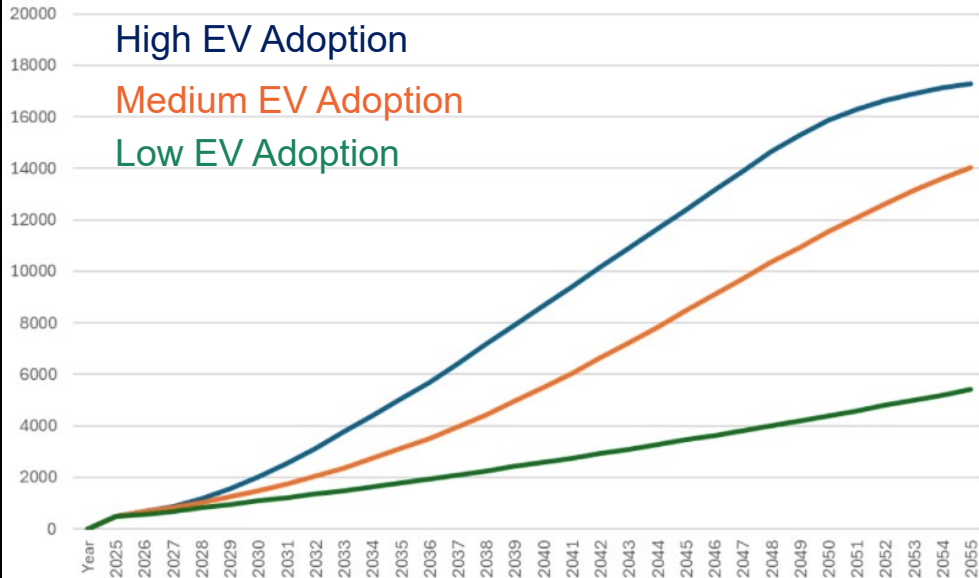


Each **data set** is weighted differently depending on the **scenario** being evaluated:

- Mixed-Use Zoning
- Single-Family Zoning
- Multi-Family Zoning
- Commercial Zoning
- Topography and Flood Risk
- EV Travel
- Recreational Land
- Parking Lots
- Private Land
- Public Land
- Community Feedback Locations
- Downtown Cores
- Circuit and Feeder Locations

Site Suitability Scenarios

- Scenario 1: Home Charging
- Scenario 2: County-Owned Charging
- Scenario 3: Shared Level 2 Charging
- Scenario 4: Fast Charging

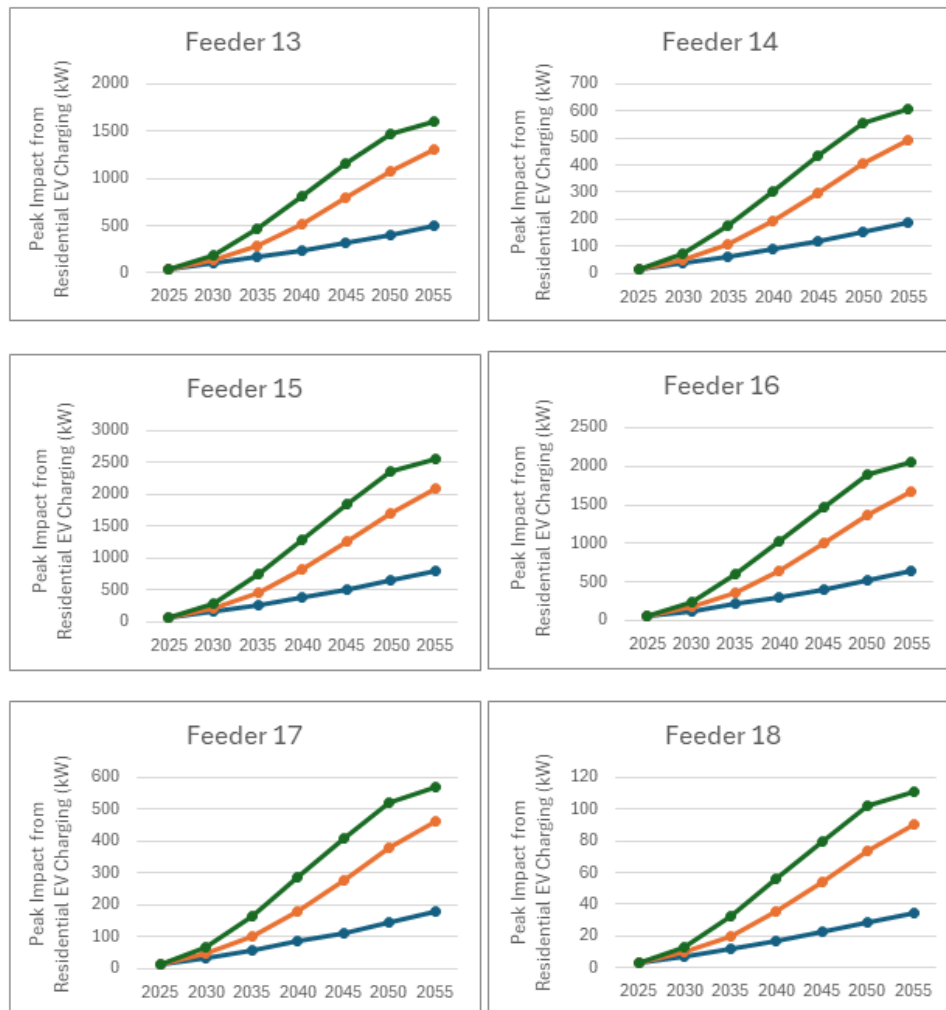


Scenario 1: At-Home Charging

- At-Home Charging use is forecasted based on population density
- Areas with more people are assumed to have more EVs
- Adoption Rates are based on small communities similar to Los Alamos.

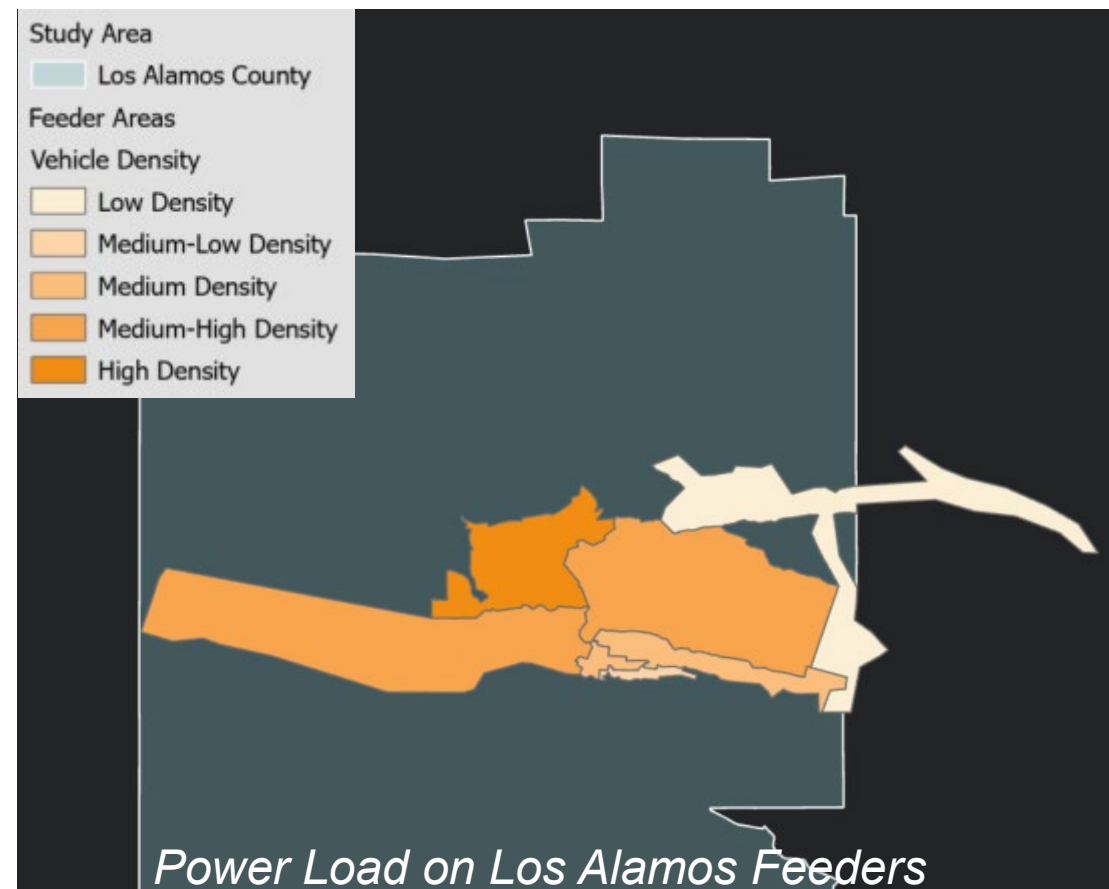


Power Load on Los Alamos Feeders over time



- Low EV Adoption
- Medium EV Adoption
- High EV Adoption

Scenario 1: At-Home Charging

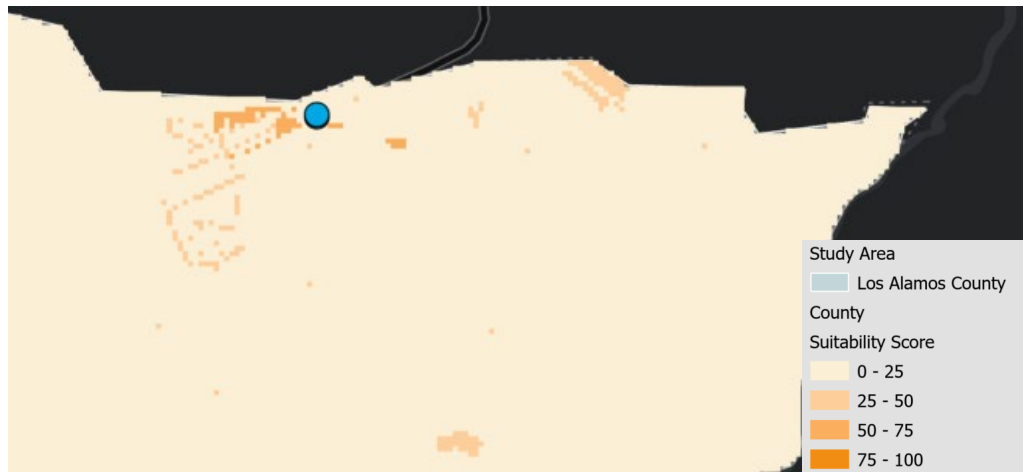




Los Alamos



White Rock



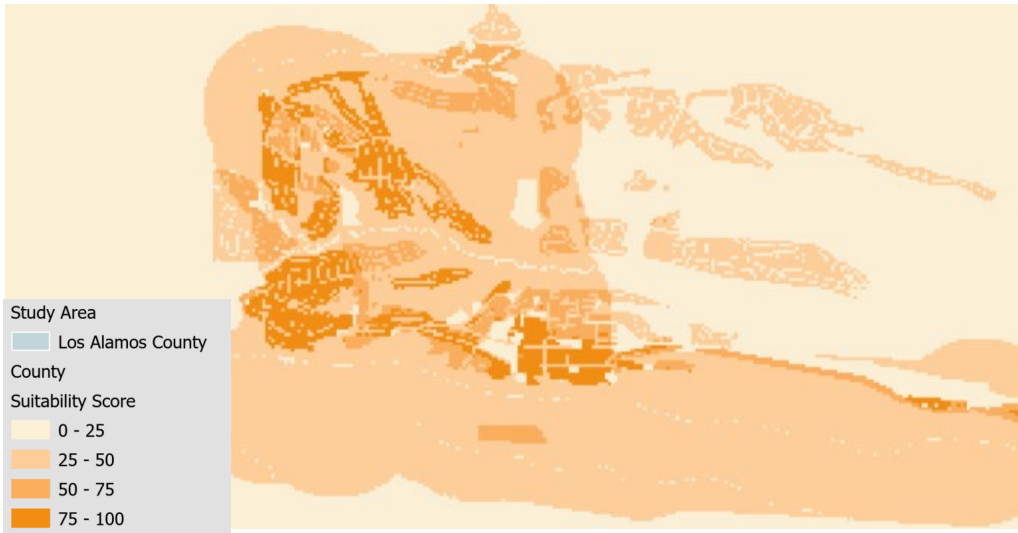
Scenario 2: County-Owned Charging

- County-owned charging prioritizes downtown cores
- Only County-owned land is considered
- Informed by public comment
- Proposed Charging Locations:

Municipal	LAC Aquatic Center
Justice Center	LA High School
Mesa Public Library	Sports Complex
LA Senior Center	North Mesa Elementary
Golf Course	Los Alamos Nature Center
LA Wastewater	WR Welcome Center
Ice Rink	WR Fire Department



Los Alamos



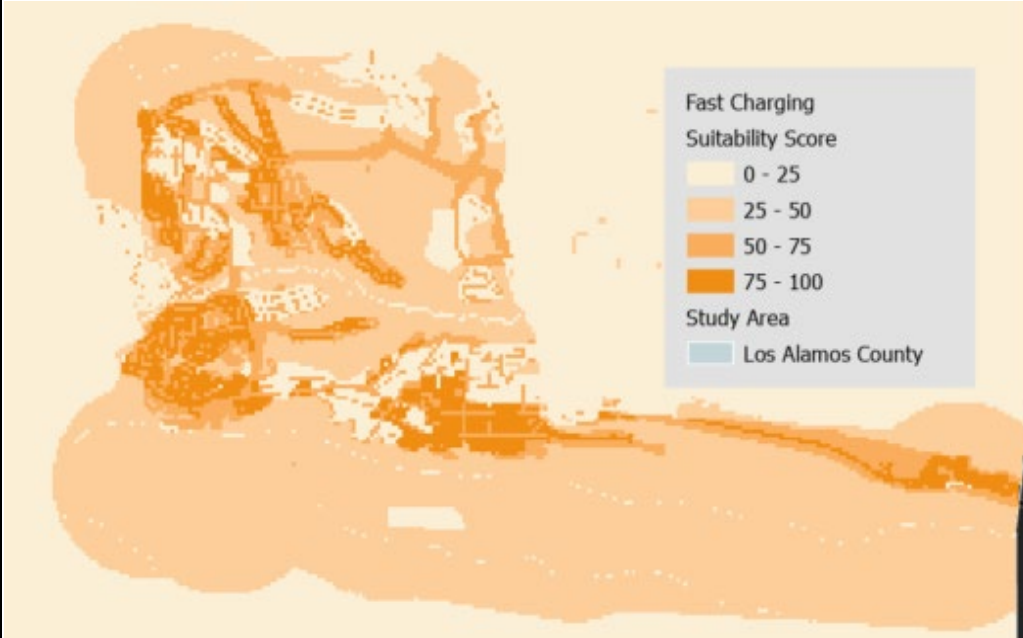
White Rock



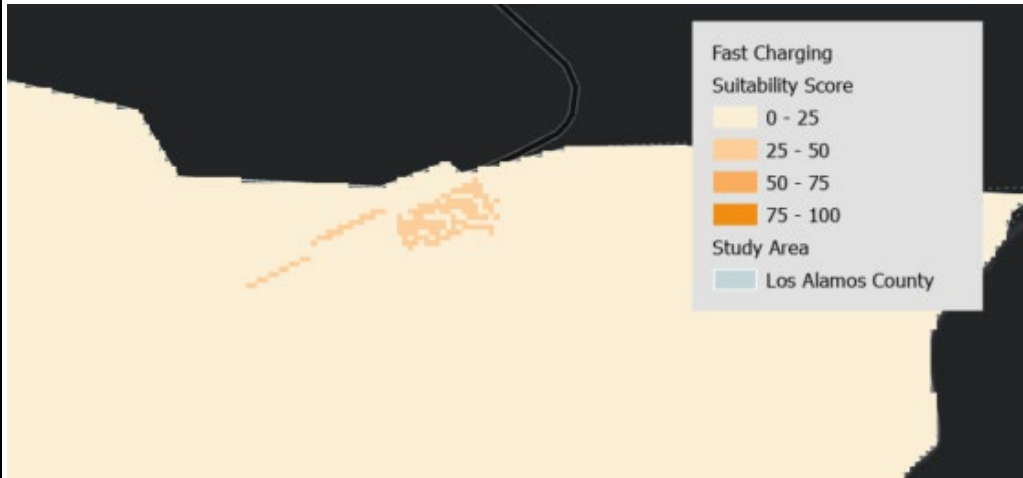
Scenario 3: Shared Level 2 Charging

- Multi-family housing and commercial areas are prioritized
- Only privately-owned land is considered

Los Alamos



White Rock



Scenario 4: Fast Charging

- Multi-family housing and commercial areas are prioritized
- Both county-owned and privately-owned land is considered
- EV Traffic Volumes and Feeder Capacity are weighted highly
- Highways score highly



Site Suitability Results

These maps:

- Inform the specific locations where chargers will be installed
- Reveal future energy needs
- Forecast County electrical capacity



Next Steps

- Integrate feedback from community meetings into draft
- Submission of **Draft Plan**
- Presentation of Draft Plan to County Council
- Presentation of Draft Plan Board of Public Utilities



General Questions

We welcome your feedback.