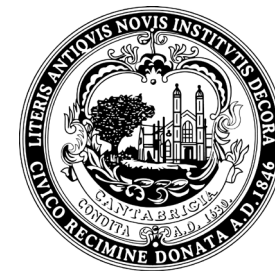


JANUARY 2022

CITY OF CAMBRIDGE

ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

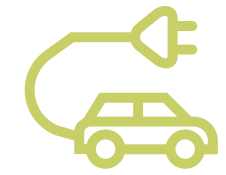
Planning for EV Chargers in Cambridge



CAMBRIDGE
CDD@344

COMMUNITY DEVELOPMENT DEPARTMENT
344 Broadway

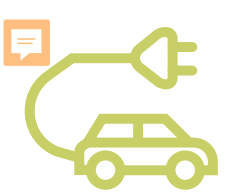




VIRTUAL MEETING INSTRUCTIONS

- Public participants are muted and cannot show webcam video
- Public participants can write questions or ask for assistance in Q&A window
 - Questions may be submitted by clicking the “Q&A” button at any time and project staff will address, as time allows, during discussion/comment periods
- Participants will be removed for inappropriate behavior
- **Technical support** – Charlie Creagh / ccreagh@cambridgema.gov

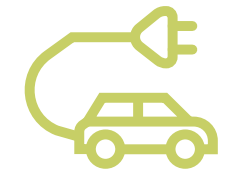




AGENDA

Welcome!

1. Background: Why Electric Vehicle Charging?
2. Efforts to Date
3. Pilot Program:
 - Tudor St
 - Norfolk St
 - Pemberton St
 - Upland Rd
4. Next Steps



BACKGROUND

Electric Vehicles (EV)

- **Hybrid (HEV):** Utilize both gasoline and rechargeable batteries
- **Plug-In Hybrid (PHEV):** Utilize both gasoline and plug-in rechargeable batteries
- **All Electric (BEV):** Utilize plug-in rechargeable batteries only



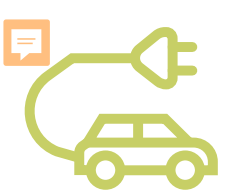
Toyota Prius, Honda Insight
Late 1990s - early 2000s



35 Make & Models available
today from Ford to Ferrari



Many makes / models available,
from Hyundai to Tesla



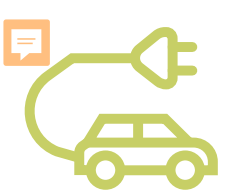
BACKGROUND

Electric Vehicle Supply Equipment (EVSE)

- AKA Charging Stations - are required to keep electric vehicle batteries charged
- Three types of chargers

Charger Type	Volts	Full Charge Time	Primary Uses
LEVEL 1	120V	12+ hours	Private residential in driveway
LEVEL 2	240V	3+ hours	Municipal and Private Parking Lots/Garages, Workplaces
LEVEL 3 DCFC (Direct Current Fast Charging)	400 - 900V	30 minutes	Institutional, Fleet

Pilot Program



BACKGROUND

Electric Vehicle Supply Equipment (EVSE)

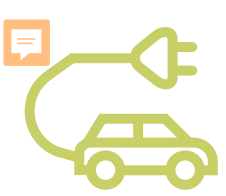
- Two main types of chargers:
 - Curbside Ground-Mounted (pilot program focus)
 - Curbside Pole-Mounted (future possibility)



Ground
Mounted



Pole
Mounted

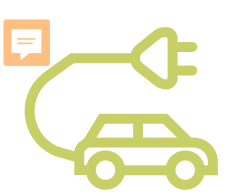


BACKGROUND

Electric Vehicle Supply Equipment (EVSE)



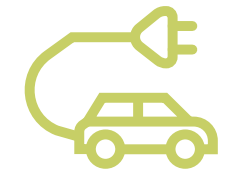
An electric vehicle being charged in Municipal Lot 8 at the corner of Green St and Pleasant St in Central Square



BACKGROUND

Transportation Fuel Transition

- Transition underway from fossil fuel-powered motor vehicles to electric vehicles
- State mandate to move to all EV car sales by 2035
- In March 2021: 122,000 EVs sold, setting monthly US record
- Transition driven by
 - Environmental concerns / Local air quality
 - Lower cost to own and operate
 - State and federal incentives (see [Cambridgema.gov/ElectricVehicles](https://www.cambridgema.gov/ElectricVehicles) for more information on incentives)



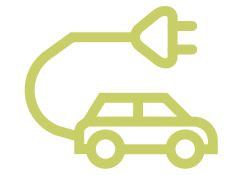
BACKGROUND

City Role

- Goal to be carbon neutral by 2050
- City has installed charging infrastructure on public property to support the adoption of EV
- Help break down barriers to EV adoption
 - Many households do not have access to a driveway
- Pilot program to install four EV chargers on residential streets

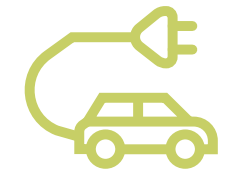


CITY
EFFORTS
TO DATE



CITY EFFORTS TO DATE

- City analyzed EV charging needs
- City is encouraging all new large parking facilities to equip 25% of parking with access to EV charging
 - Expecting this to become permanent in 2022
- EV chargers have been installed in most municipal parking facilities



CITY EFFORTS TO DATE

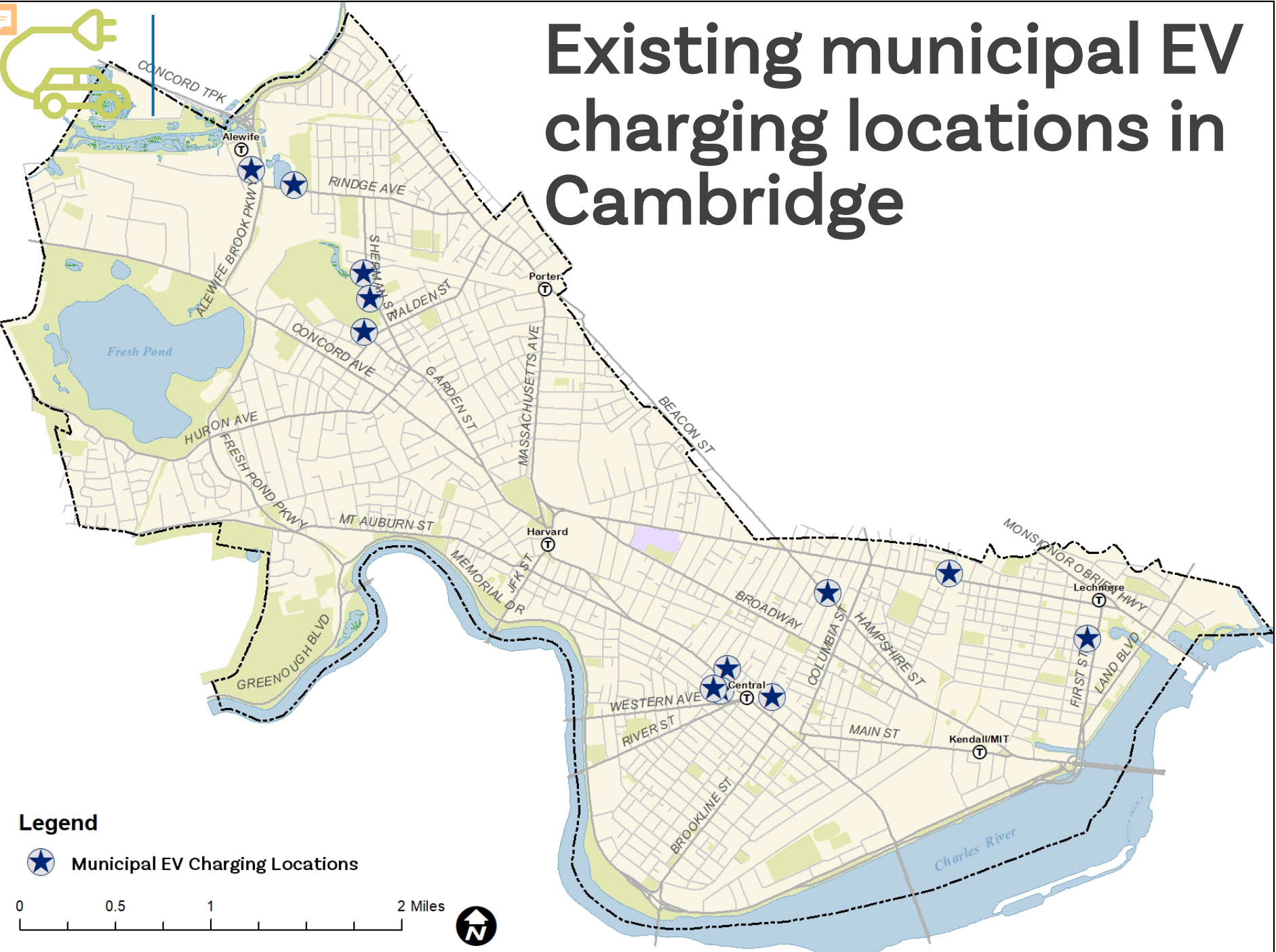
EV Charging Locations in Cambridge

- The City has installed 17 charging stations (capacity of 31 vehicles)
- Most are dual-head chargers
- Located at a variety of municipal parking lots and facilities
- Many publicly accessible EV chargers in private lots

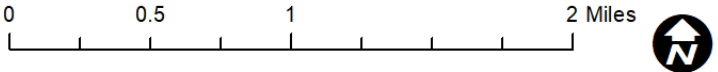


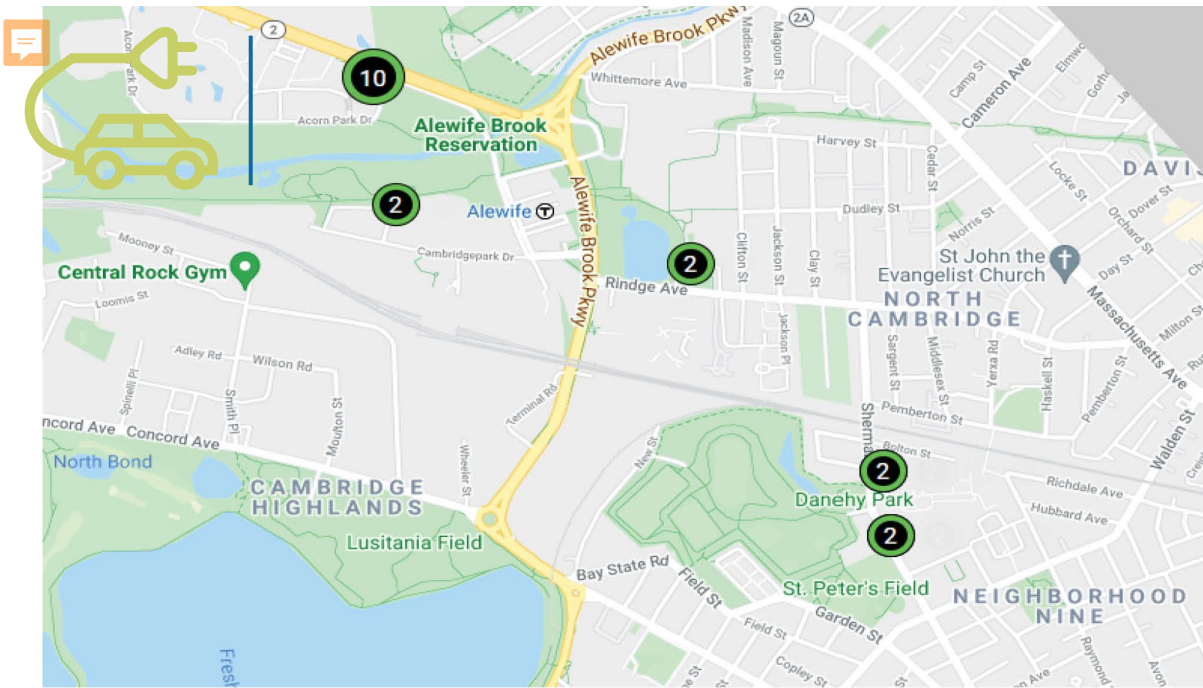
Lot 8 EV Charger

Existing municipal EV charging locations in Cambridge

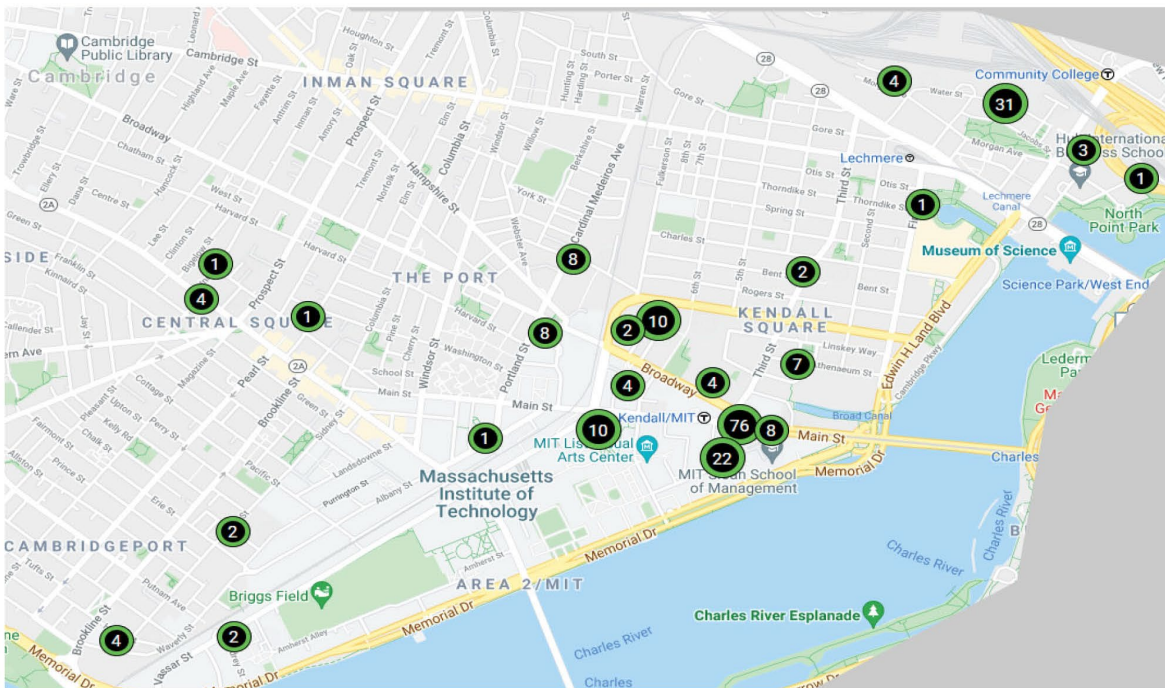
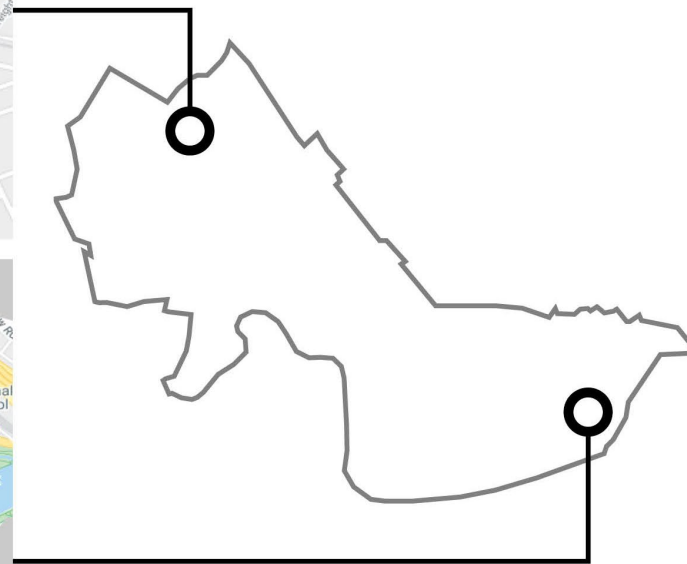


Legend
★ Municipal EV Charging Locations





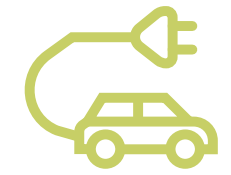
Publicly accessible EV charging stations



https://na.chargepoint.com/charge_point



PILOT PROGRAM

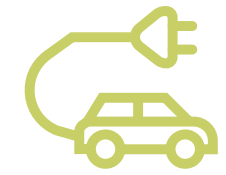


PILOT PROGRAM

Locating EV Chargers

- Pilot is to install chargers at four locations in primarily residential areas
- Locations focus on residents without driveways
- Using existing electric boxes in nearby parks
- Spreading out locations within the city

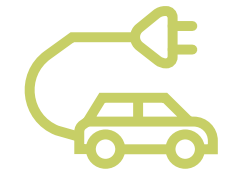




PILOT PROGRAM

Who Can Use EV Chargers?

- Pilot charging spots will be in residential permit zones and open to all Cambridge permit and visitor pass holders
- Cost will be \$0.189 per kWh drawn, plus \$0.15 per hour
 - ~\$10 for a full charge depending on the car
- Signage will indicate only for active charging

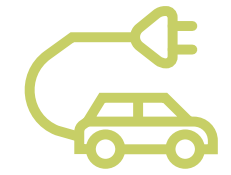


PILOT PROGRAM

Pilot Location: The Port

- Norfolk Street
 - Between Harvard Street and Broadway
 - Level 2 charger for 2 vehicles at a time
 - Residential permit parking regulation remains



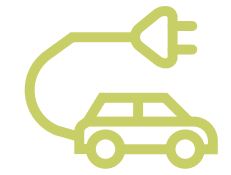


PILOT PROGRAM

Pilot Location: Cambridgeport

- Tudor Street
 - Between Sidney Street and Brookline Street
 - Level 2 charger for 2 vehicles at a time
 - Residential permit parking regulation remains



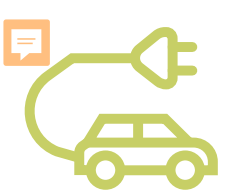


PILOT PROGRAM

Pilot Location: North Cambridge

- Pemberton Street
 - Between Yerxa Road and Haskell Street
 - Level 2 charger for 2 vehicles at a time
 - Residential permit parking regulation remains



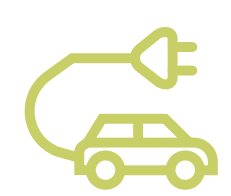


PILOT PROGRAM

Pilot Locations: Neighborhood Nine

- Upland Road
 - Between Newell Street and Raymond Street
 - Level 2 charger for 2 vehicles at a time
 - Residential permit parking regulation remains





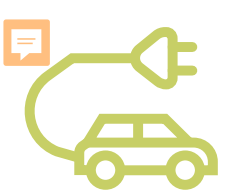
PILOT PROGRAM

Pilot Locations: similar installations



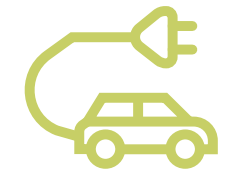


NEXT
STEPS



NEXT STEPS

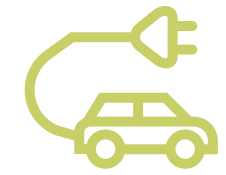
- Finalize construction plans for pilot locations
- Installation planned for spring/summer 2022
- Construction notices will be posted and sent to email list
- Sign up for notifications of current installations and future EV charging info at:
 - CambridgeMA.gov/ElectricVehicles



NEXT STEPS

Future EV Planning

- Draft ordinance requiring new development to include 25% of parking spaces with Level 2 chargers and all other parking spaces to be EV-ready
- Incorporate EV chargers into major street reconstruction projects (River Street)
- Next few months: release online public input map to solicit ideas for desirable EV charger locations
- Next round of installations (likely spring 2023): 6-8 additional EV charging stations in residential neighborhoods



THANK YOU



CAMBRIDGE
CDD@344

COMMUNITY DEVELOPMENT DEPARTMENT
344 Broadway

COMMUNITY DEVELOPMENT DEPARTMENT

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