# Electric Vehicle Charging Assessment and Deployment Plan

## Pioneer Valley, Massachusetts

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*This document has been prepared in cooperation with the Massachusetts Department of Transportation and the U.S. Department of Transportation. The views and opinions expressed herein do not necessarily state or reflect those of the Massachusetts Department of Transportation or the U.S. Department of Transportation.*

# Key Definitions

- **Charging Connector:** The device that plugs into a vehicle to transfer electricity. Multiple connectors and connector types can be available on one charging port, but only one vehicle will charge at a time.
- **Charging Infrastructure:** All the infrastructure required to support the charging of electric vehicles (EVs). This includes not just the electric vehicle supply equipment (EVSE), but also the necessary power supply systems, network connections, parking spaces, and other supporting facilities.
- **Charging Levels:** The standardized voltages used to recharge an EV's battery. The most common charging levels for EVs are Levels 1, 2, and 3, described as follows:
  - Level 1: Uses a 120-volt, AC plug and is commonly referred to as slow or trickle charging. Mobile Level 1 equipment comes standard with many vehicles and does not require additional installation. This type of charging is most commonly performed at the owner's home or locations where the time of stay spans multiple days.
  - Level 2: Uses a 240-volt, AC plug and necessitates the installation of home or public charging equipment, often requiring a dedicated 40-amp circuit. Level 2 charging stations are usually found in residential areas, public parking lots, workplaces, and commercial settings.
  - Level 3 (DC Fast): Voltage ranges between 200-volt and 600-volt DC, though it can climb to 1,000-volt DC. Level 3 (DC Fast) charging stations are generally associated with intracity, intercity, and interstate travel as well as time-sensitive users. They are typically located in commercial or industrial areas and along heavily traveled roads.
- **Charging Port:** The physical interface where the charging connector (i.e., plug) connects to an EV to allow for the transfer of electrical energy. A charging port provides power to charge a single EV at a time, though it may accommodate multiple connector types to support different EV standards.
- **Charging Station/Station Location:** The physical installation or site where one or more EVSE units are located. A charging station includes the physical setup of the site, including mounting poles, protection bollards, lighting, payment systems, and signage.
- **Electric Vehicle Supply Equipment (EVSE):** The equipment that facilitates the flow of electrical energy from an external power source to charge an EV, inclusive of the charging port; charging cable; power electronics for the conversion of electrical power from the external source to the correct voltage, current, and type (AC or DC); safety mechanisms (e.g., ground fault circuit interrupters, overcurrent protection, thermal monitoring, and surge protection); and user interface elements (e.g., displays and controls for managing and monitoring a charging session).

# 1

# Plan Overview and Background

Funded through a planning grant provided by the Massachusetts Department of Transportation and the U.S. Federal Highway Administration, the Pioneer Valley Planning Commission (PVPC), in collaboration with VHB, has prepared this comprehensive Electric Vehicle (EV) Charging Assessment and Deployment Plan (the Plan) for the Pioneer Valley Region – inclusive of communities within Hampshire and Hampden Counties. This strategic initiative is designed to support regional stakeholders, namely municipal governments, in ensuring the region's charging infrastructure can accommodate the expected increase in EV registrations by 2035.

This Plan encompasses a thorough evaluation of current infrastructure, an estimation of future electric vehicle supply equipment (EVSE) demand along with associated charging infrastructure needs, and the formulation of a community engagement strategy aimed at boosting awareness, overcoming challenges, and highlighting opportunities, with a pronounced emphasis on addressing barriers in disadvantaged communities. Together, these study elements informed the identification of optimal locations for the siting of public EVSE.

## Policy Context

In preparing for the assessment, various regulations, policies, and plans were reviewed to understand the context of Electric Vehicle Supply Equipment (EVSE) deployment in Massachusetts. Fundamentally, the Global Warming Solutions Act of 2008[1] underscores the State's commitment to combating climate change by setting ambitious targets for greenhouse gas (GHG) emissions reductions. Originally, the Act set targets of 25 percent below 1990 levels by 2020 and 80 percent by 2050. Informed by the *2050 Decarbonization Roadmap*,[2] these targets were updated in March 2021 by "An Act Creating A Next-Generation Roadmap for Massachusetts Climate Policy."[3] Massachusetts now aims to cut GHG emissions by 50 percent

[1] Massachusetts General Court. (2008). Global Warming Solutions Act of 2008. Massachusetts General Laws, Chapter 21N.

[2] Massachusetts Executive Office of Energy and Environmental Affairs. (2020). *2050 Decarbonization Roadmap*. Retrieved from https://www.mass.gov/doc/ma-2050-decarbonization-roadmap/download.

[3] Massachusetts General Court. (2021). "An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy." Chapter 8 of the Acts of 2021.

below 1990 levels by 2030, achieve a 75 percent reduction by 2040, and attain net-zero emissions by 2050. Strategies and policies designed to help the state achieve these reductions are outlined in the *Massachusetts Clean Energy and Climate Plan for 2025 and 2030*[4] and the *Massachusetts Clean Energy and Climate Plan for 2050*.[5]

As reported in the *2050 Decarbonization Roadmap*, transportation is the largest GHG-emitting sector statewide, with 60 percent of sector-based emissions coming from light-duty passenger cars, trucks, and SUVs. To address this issue, the *Massachusetts Clean Energy and Climate Plan for 2025 and 2030* set a target to have 900,000 EVs on the road by 2030, and as an adoptee of California's Advanced Clean Cars II legislation, Massachusetts plans to ban the sale of gas-powered vehicles by 2035.

Outlined below are additional key policies and programs that contributed to the planning context and informed this assessment.

## Electric Vehicle Infrastructure Coordinating Council (EVICC)

Established under "An Act Driving Clean Energy and Offshore Wind,"[6] the EVICC is pivotal in driving the transition to a sustainable transportation system in Massachusetts. The EVICC plays a crucial role in ensuring the state achieves its clean energy goals by promoting the widespread adoption of electric vehicles through strategic planning, policy guidance, funding allocation, technical support, public outreach, and equitable implementation.

The EVICC issued an initial assessment and recommendations to the State Legislature in August 2023.[7] This assessment, which evaluates the current and future demand for EVSE across the state, will be updated every two years. The initial assessment projects that by 2030, Massachusetts will have 970,000 electric vehicles on the road. To support this number, it is estimated that 45,000 public EVSE will be needed, consisting of 35,000 Level 2 charging ports and 10,000 direct current fast charging (DCFC) ports. This is in addition to the charging infrastructure required for single-family homes, multi-family properties, and workplace locations.

This Electric Vehicle Charging Assessment and Deployment Plan for the Pioneer Valley builds upon the methodology employed by the EVICC initial assessment to estimate future demand for public EVSE in the region.

## National Electric Vehicle Infrastructure (NEVI) Program

The National Electric Vehicle Infrastructure (NEVI) Formula Grant Program, established under the Bipartisan Infrastructure Law, provides funding to states for the deployment of DCFC infrastructure along designated Alternative Fuel Corridors (AFCs). Its primary goal is to ensure an interconnected national network of publicly available DCFC infrastructure, promoting a robust EV market and reducing GHG emissions nationwide.

4 Massachusetts Executive Office of Energy and Environmental Affairs. (2022). *Massachusetts Clean Energy and Climate Plan for 2025 and 2030*. Retrieved from https://www.mass.gov/info-details/massachusetts-clean-energy-and-climate-plan-for-2025-and-2030.

5 Massachusetts Executive Office of Energy and Environmental Affairs. (2020). *Massachusetts Clean Energy and Climate Plan for 2050*. Retrieved from https://www.mass.gov/info-details/massachusetts-clean-energy-and-climate-plan-for-2050.

6 Massachusetts General Court. (2022). "An Act Driving Clean Energy and Offshore Wind." Chapter 179 of the Acts of 2022. Retrieved from https://malegislature.gov/Laws/SessionLaws/Acts/2022/Chapter179.

7 Massachusetts Electric Vehicle Infrastructure Coordinating Council. (2023). *Initial Assessment to the General Court*. Retrieved from https://www.mass.gov/doc/evicc-final-assessment/download.

To receive NEVI funding, states were required to submit a plan to the Joint Office of Energy and Transportation outlining how it intends to close gaps in its DCFC infrastructure network along its AFCs. The Massachusetts Department of Transportation (MassDOT) submitted the *National Electric Vehicle Infrastructure (NEVI) Program Deployment Plan for Massachusetts* (MassDOT NEVI Plan) on August 1, 2022.[8] As is relevant to the Pioneer Valley, the MassDOT NEVI Plan identified gaps in the statewide DCFC network along I-90 West and I-91, and combining both demand and equity ranks, ranked I-90 West second overall and I-91 fourth overall for future DCFC deployments – both requiring 4 to 8 ports to meet demand and fill required 50-mile gaps.

## Pioneer Valley Electric Vehicle (EV) Charging Station Plan/Guide

In 2017, the PVPC published comprehensive guidance on developing and deploying EVSE in the Pioneer Valley region. The *Pioneer Valley Electric Vehicle (EV) Charging Station Plan/Guide*[9] outlined the then-current state of EV adoption and charging infrastructure, identified strategic locations for new installations, and offered a blueprint for future expansions to meet a projected increase in EVs by 2035. The guide emphasizes a holistic approach, considering factors such as geographic distribution, public accessibility, and equity, particularly focusing on addressing barriers faced by disadvantaged communities. By highlighting best practices, available funding opportunities, and policy recommendations, the document aimed to support local governments, businesses, and community organizations in fostering a robust EVSE network.

This Electric Vehicle Charging Assessment and Deployment Plan for the Pioneer Valley serves to update and expand upon the 2017 *Pioneer Valley Electric Vehicle (EV) Charging Station Plan/Guide*.

# Existing Public EVSE Inventory

This assessment leveraged the National Renewable Energy Laboratory (NREL) Alternative Fuels layer,[10] which is updated nightly by the U.S. Department of Energy (DOE), as the primary dataset to update the existing inventory of publicly available EVSE in the Pioneer Valley. As of August 28, 2024, this resource identified 280 existing charging stations. This dataset includes critical information such as street addresses, the number of Level 2 and DCFC ports, connector types, station status (available or temporarily unavailable), accessibility (public or private), and additional notes on location and service times. To ensure accuracy, validation was performed using third-party sources such as ChargePoint, FLO, and PlugShare to identify any planned or unlisted stations.

The process of inventorying existing and planned EVSE in the Pioneer Valley revealed a total of 287 stations. Of these, 258 are Level 2 stations, while 29 are DCFC stations. The total number of ports available is 764, with Level 2 ports accounting for 681. Among these, 679 use the J1772 standard and two use the NACS standard. DCFC ports added up to 83, comprising 39 CCS ports, 14 CHAdeMO ports (which were co-located with CCS), and 44 NACS ports. Of the total,

[8] Massachusetts Department of Transportation. (2022). *National Electric Vehicle Infrastructure (NEVI) Program Deployment Plan for Massachusetts*. Retrieved from https://www.mass.gov/doc/massdot-nevi-plan/download.

[9] Pioneer Valley Planning Commission. (2017). *Electric Vehicle Charging Station Plan/Guide*. Retrieved from https://www.pvpc.org/sites/default/files/doc-ev-charging-station-plan/guide3215.pdf.

[10] National Renewable Energy Laboratory. United States. U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy. (2024). "Alternative Fuel Stations." [API]. Retrieved from https://developer.nrel.gov/docs/transportation/alt-fuel-stations-v1/.

12 Level 2 stations and 34 associated J1772 ports are listed as private. Additionally, station accessibility for six Level 2 stations and 10 associated J1772 ports could not be verified.

**Figure 1-1** shows the distribution of the charging infrastructure, highlighting that most charging ports are situated within the urban boundary.

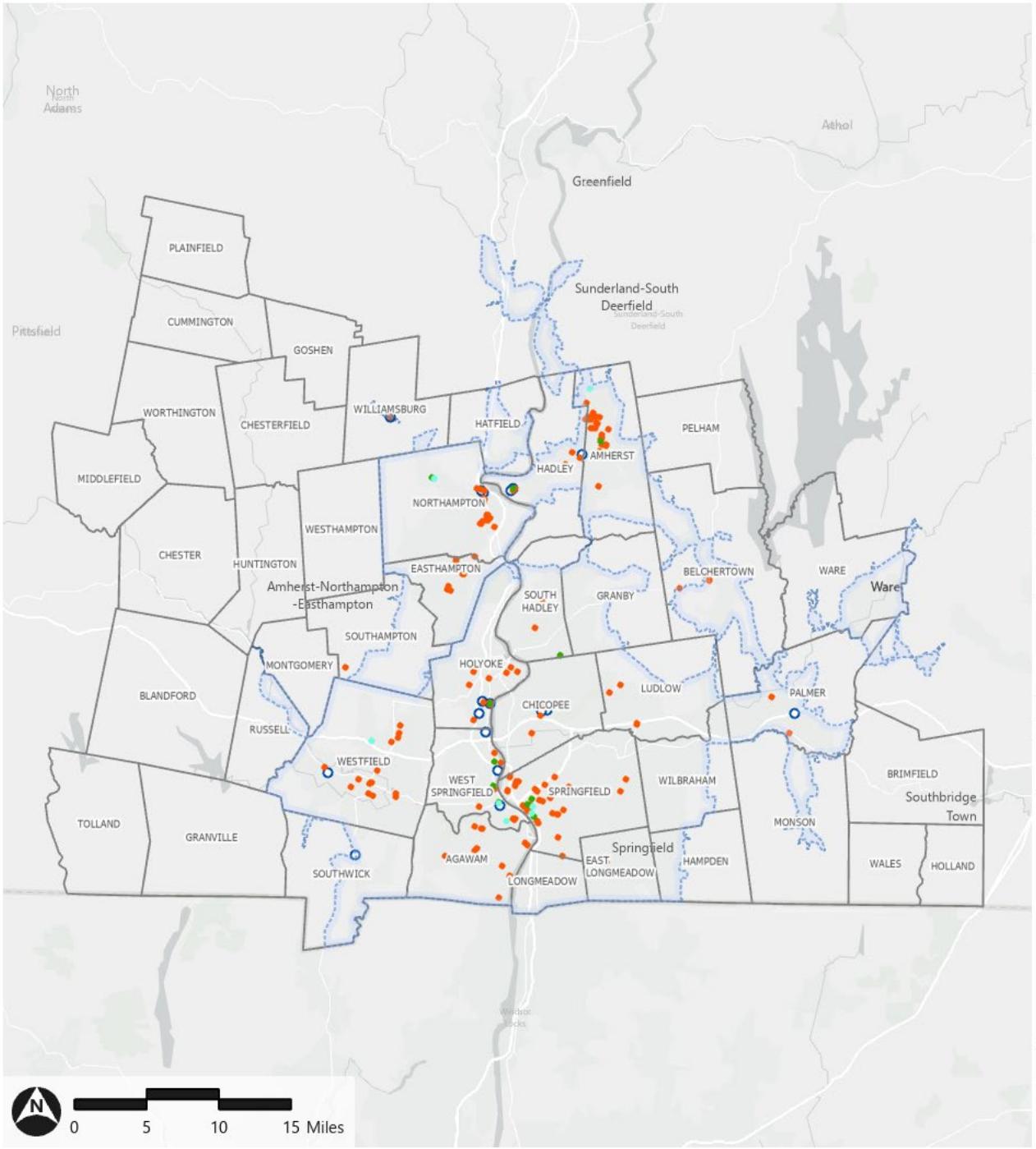
## Stakeholder Input

In mid-September 2024, PVPC and their consulting partner, VHB, held two virtual public meetings to gather community input on EVSE. Through breakout sessions, participants shared their current and future EV charging needs, discussed concerns, and proposed innovative ideas for EVSE deployments in the region. Key takeaways from these meetings included:

- **General Comments and Experiences:** Participants expressed mixed satisfaction with the existing EV charging infrastructure. Strengths noted included the growing presence of charging stations and platforms like PlugShare that provide valuable information about charger status and maintenance. However, challenges included temperature impacts on charging efficiency, frequent blockages of charging spaces by non-EV vehicles, and the lack of enforcement at charging stations where internal combustion engine (ICE) vehicles frequently park in EV-only spots. The need for public education to demystify EV charging was emphasized.
- **Opportunities for Improvement:** Key opportunities discussed included improving signage, upgrading security to prevent vandalism, and ensuring regular maintenance for reliability. Participants stressed the importance of ensuring there is adequate infrastructure to meet future demands as EV adoption increases. Zoning ordinances should also address the distribution of charging stations as well as prevent the siting of EV charging hubs in residential areas.
- **Concerns Regarding Infrastructure and Usability:** Participants mentioned the frequent overuse and occasional malfunction of EVSE, particularly in high-traffic areas such as the I-90. The prevalence of Tesla-specific chargers poses challenges for non-Tesla EV owners. Participants called for standardized payment systems and streamlined approaches regardless of the EV manufacturer, highlighting that multiple apps for different charger networks add confusion and inconvenience.
- **Concerns of Non-EV Drivers:** Non-EV drivers, noting issues such as delays in charger installation and utility approval processes, cited these as barriers to their adoption of EVs. The installation of chargers in accessible locations with amenities but also increased enforcement to prevent ICE vehicles from occupying EV spaces were seen as necessary steps. Participants noted that rural areas of the Pioneer Valley, particularly hill towns, have unreliable cellular connectivity.
- **Prioritization for New EVSE Deployment:** Recommended locations for new EV charging stations included public facilities (libraries, town halls), supermarkets, travel interchanges, retirement communities, and rural areas with limited current infrastructure. A specific focus was on key travel routes like the MassPike and I-91 with suggestions to deploy DC fast chargers for their convenience compared to Level 2 chargers.

**Attachment A** provides the notes taken during each of the breakout group discussions held during the public meetings.

## Figure 1-1: Existing EVSE Inventory in the Pioneer Valley




*Source: VHB, Esri*

# 2

# Future EV Charging Demand

This Plan employed a comprehensive approach that integrates demographic data, land use patterns, environmental justice (EJ) considerations, and technological tools for strategic EV charging infrastructure planning. By focusing on high-density residential areas with limited private parking, the needs of garage orphans, who are less likely to have home charging options, are effectively addressed. Including EJ areas derived from MassDOT's Regional Environmental Justice "Plus" (REJ+) dataset supports marginalized communities in benefiting from the transition to electric mobility.

Analyzing commercial and employment centers considers the necessity for daytime charging opportunities, supporting drivers who may need to charge while at work or during shopping trips. Weighting factors offer a nuanced understanding of where charging infrastructure will have the greatest impact, balancing demand with equity.

Projecting future EV ownership, aligned with state policies and national trends, facilitates scalability and that the infrastructure will meet both current and future needs. The EV PRO-Lite tool that is available through the U.S. DOE's Alternative Fuels Data Center[11] provides data-driven estimates for the number of required charging ports, enhancing the accuracy of planning.

For DCFC, the drivetime analysis on AFCs is meant to ensure fast-charging options are available at regular intervals, easing range anxiety and supporting long-distance travel. Extending this analysis to community and rural areas promotes widespread benefits of EV adoption and prevents any communities from being underserved.

The emphasis on mapping and reporting enhances transparency and facilitates stakeholder engagement. Estimating energy demands addresses potential grid capacity challenges and promotes proactive solutions.

[11] U.S. Department of Energy. (n.d.). "EVI-Pro Lite Tool." Alternative Fuels Data Center. Retrieved September 26, 2024, from https://afdc.energy.gov/evi-x-toolbox#/evi-pro-ports

# Methodology

The following sections outline the process by which the project team projected future EV charging demand and associated electricity demand, as well as determined the proposed distribution of future EVSE within the Pioneer Valley.

## Level 1 and Level 2 EVSE Siting

To determine an optimal distribution of Level 1 and Level 2 charging ports within residential areas, commercial and retail zones, and employment centers across the Pioneer Valley, the project team followed this methodology:

1. **Analyze Census Data:** The first step in the process involved aligning U.S. Census block groups with the boundaries of the Pioneer Valley (i.e., Hampden and Hampshire Counties) to ensure the geographic relevance of the analysis. Next, comprehensive Census data for these block groups was extracted, including population density, housing types, and demographic information. This data forms the foundation for identifying areas with high potential demand for EV charging infrastructure within the Pioneer Valley boundaries.
2. **Identify Clusters of Multi-Family/High-Density Housing (i.e., Garage Orphans):** Next, the project team examined land use data from the statewide property tax parcel layer published by MassGIS[12] to identify multi-family residences and high-density housing areas (USE CODES 013, 102 to 109, 111 to 112, and 121 to 125).[13] These "garage orphans" lack private garages or dedicated parking spaces, making public charging infrastructure vital. Use codes were grouped to streamline the analysis and facilitate targeted infrastructure deployment.
3. **Identify Commercial/Retail Land Uses:** Similarly, the project team utilized the MassGIS statewide property tax parcel layer to identify commercial and retail centers (USE CODES: 300 to 302, 310 to 318, 321 to 326, 330 to 338, and 360 to 377) – likely destinations for drivers – and grouped for the same streamlining and targeted infrastructure deployment purposes.
4. **Identify Employment Centers:** Daytime population density data from ArcGIS Business Analysis Pro provided insights into areas with high business activity within the Pioneer Valley – hubs with more than 500 employees. These centers generate significant daily traffic and can benefit from workplace charging solutions. It was utilized to identify the overlap between high daytime population density and parcels designated for industrial and commercial office spaces (USE CODES: 304 to 306, 340 to 342, and 400 to 404).
5. **Assign Distribution Factors to Groupings:** Each land use grouping was evaluated against regional statistics, including housing density, commercial development intensity, and employee numbers. The project team then developed a weighting system (i.e., distribution factors) based on this evaluation to reflect the relative importance of each grouping on EV charging demand.

[12] Commonwealth of Massachusetts. (September 2024). "MassGIS data: Property tax parcels." Mass.gov. Retrieved September 26, 2024, from https://www.mass.gov/info-details/massgis-data-property-tax-parcels

[13] The University of Amherst was excluded from this analysis because it has prepared its own EVSE Deployment Plan (May 2024).

6. **Project EV Ownership (2035):** The project team pulled and analyzed historical and current local vehicle registration data from the Massachusetts Vehicle Census[14] to assess EV adoption rates within the Pioneer Valley region. Using historical trends, the regional EV ownership level in 2035 was forecasted.
7. **Estimate Charging Infrastructure Demand Using EV PRO-Lite Tool:** The U.S. Department of Energy's EV PRO-Lite tool was used to estimate the number of required charging ports based on the forecasted level of EV ownership in 2035. These estimates were then applied to the previously identified groupings, considering their assigned distribution factors.
8. **Charging Infrastructure Distribution and Geographic Prioritization:** The project team determined the necessary distribution of Level 1 and Level 2 charging ports by municipality, providing insight into specific community needs. However, to gain a more detailed perspective on the needs of multi-unit dwellings and public locations while ensuring equitable access to charging infrastructure across the region, the project team conducted a bivariate analysis. This analysis combined EV charging demand with REJ+ data to pinpoint priority locations at the block group level.

## DCFC EVSE Siting

Two analyses using Esri Geographic Information System (GIS) software were conducted to pinpoint areas lacking DCFC coverage within the Pioneer Valley. In urban areas, a 15-minute drive-time analysis from existing DCFC stations identified suitable locations for community-based charging. Meanwhile, in rural areas, a 10-mile road distance to DCFC stations was used to find appropriate charging locations. These different metrics reflect the varying population densities and transportation patterns of urban and rural settings.

A 15-minute drive time in an urban area was considered a reasonable distance because it encompasses a significant number of people within a relatively short distance and time. Further, using a drive-time analysis accounts for increased traffic and road complexity typical in urban settings, providing a realistic assessment of accessibility based on actual driving conditions. In rural areas, where the population is spread out over larger areas, measuring availability by a fixed distance is more practical because it accounts for the broader area people might need to cover to access services. This reflects the usually similar and less congested road networks and accounts for people accustomed to traveling longer distances to access amenities and services.

The results of the drive-time and road-distance analyses can then be compared to the demand outputs from the EVLite Tool, which the project team allocated by block group based on their respective multi-family housing density distribution factors. This helps to pinpoint priority areas for DCFC community charging stations.

Note that these analyses do not directly address the need for DCFC along AFCs within the Pioneer Valley, as this is adequately covered by the MassDOT NEVI Plan.

## Energy Demand

The project team evaluated how the additional charging infrastructure would affect local energy systems, thereby allowing for the identification of any necessary upgrades or considerations to

[14] Massachusetts Department of Transportation. (n.d.). "Massachusetts Vehicle Census." Retrieved September 26, 2024, from https://geodot-homepage-massdot.hub.arcgis.com/pages/massvehiclecensus

support the increased load. Using the EVI Pro-LITE Load Profile Tool, the team developed projected daily load curves based on the projected number of registered EVs in the Pioneer Valley. This tool provides daily projections for power demand from EVSE usage on a typical weekday and weekend day in 15-minute intervals.

## Future EVSE Demand

As the EV Pro-Lite tool is based on either statewide or Metropolitan Statistical Area (MSA) boundaries, this analysis began by assessing EV adoption trends sourced from the Massachusetts Vehicle Census for the Springfield MSA, inclusive of Hampden, Hampshire, and Franklin Counties.[15] Based on a review of vehicle registration data provided by the Vehicle Census, the MSA historical growth rates were applied to the most current data on EV registrations. The results indicate that the projected number of EVs in the Pioneer Valley will reach approximately 305,800 by 2035. This includes about 52,800 plug-in hybrid electric vehicles (PHEVs) and 253,000 battery electric vehicles (BEVs). This projection was then entered into the EVI Pro-Lite tool to estimate the EVSE demand by charging level and site type. **Table 2-1** summarizes the projected EVSE requirements for the Springfield MSA.

**Table 2-1: Breakdown of Projected EVSE Demand**

| | |
|---|---|
| ***Shared Private Charging Ports*** | |
| Multi-Unit Dwelling Level 1 Charging Ports | 823 |
| Multi-Unit Dwelling Level 2 Charging Ports | 2,032 |
| Private Workplace Level 2 Charging Ports | 15,410 |
| ***Total Shared Private Charging Ports*** | ***18,265*** |
| ***Public Level 2 Charging Ports*** | |
| Retail, Recreation Center, Healthcare Facility, Education Facility, Community Center, Transportation Facility, Neighborhood, and Office | 19,584 |
| ***Public DCFC Charging Ports*** | |
| Community | 1,511 |
| Ride-Hail | 94 |
| ***Total Public DCFC Charging Ports*** | ***1,605*** |

## Distribution of Shared Private Charging Ports – Multi-Unit Residential

The project team created a distribution factor based on the number of multi-unit dwelling units at the block group level relative to the overall density in the Pioneer Valley. Using this factor, the projected number of Level 1 and Level 2 charging ports for multi-unit dwellings (see **Table 2-1**) was apportioned to each block group. When aggregated to the community level, Springfield and Holyoke showed the highest projected requirements for both Level 1 and Level 2 charging ports.

[15] To ensure alignment with the methodology of the EV Pro-Lite tool, Franklin County was initially incorporated into the overall analysis. Total EVSE demand for the Springfield MSA were subsequently incorporated into the remainder of the methodology. However, findings pertinent to Franklin County were removed from this report to maintain focus on the Pioneer Valley.

**Figure 2-1** and **Figure 2-2** depict the projected demand for Level 1 and Level 2 charging ports at multi-unit dwelling units, respectively. For the full distribution, refer to **Attachment B**.

## Distribution of Public Level 2 Charging Ports – Commercial Properties

Similar to the distribution process for multi-unit dwelling charging ports, the project team created a distribution factor based on the square footage of commercial properties at the block group level relative to the overall commercial density in the region. Using this factor, the projected number of publicly available Level 2 charging ports for commercial properties was apportioned to each block group. As a result, the Cities of Springfield, West Springfield, and Westfield showed the highest projected requirements for publicly available Level 2 charging ports. **Figure 2-3** depicts the projected demand for publicly available Level 2 charging ports by block group. For the full distribution, refer to **Attachment B**.

## Distribution of Workplace Charging

By matching commercial office and industrial parcels to their respective daytime population densities at the block group level, a density percentage was calculated by dividing the daytime population density of each block group by the total daytime population density of all commercial office and industrial parcels within the region. The top 25 percent most densely daytime-populated block groups were identified, including areas in the Cities of Westfield, West Springfield, Springfield, Holyoke, and Chicopee, and the Town of Ludlow in Hampden County; and the Cities of Easthampton and Northampton and the Town of Amherst in Hampshire County.

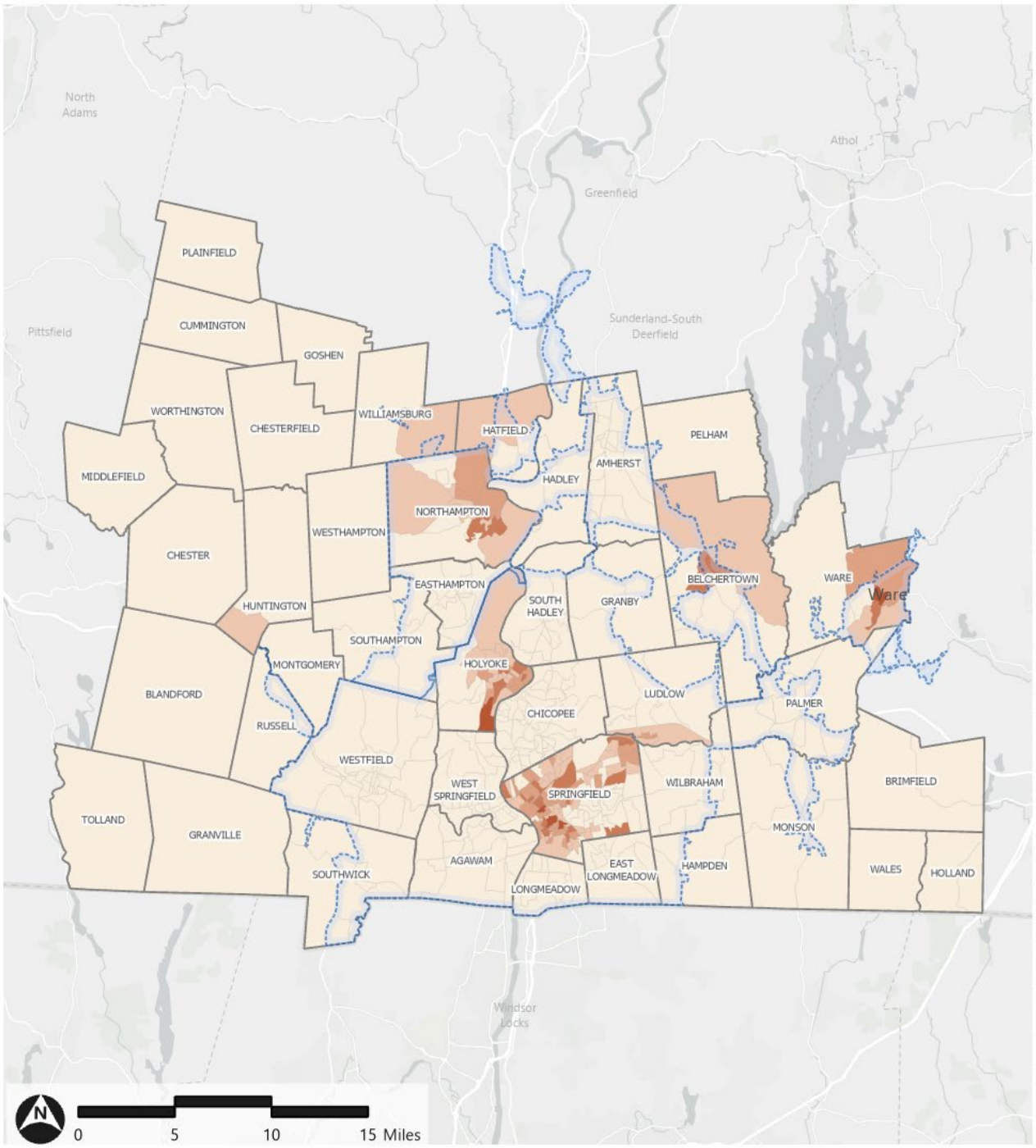
The projected number of Level 2 charging ports for private workspaces was then distributed among these high-density block groups based on their density factor. Consequently, the City of Springfield showed the highest projected requirements for private workplace Level 2 charging ports. **Figure 2-4** depicts the projected demand for private workplace charging by block group. For the full distribution, refer to **Attachment B**.

## Level 1 and Level 2 Deployment Prioritization

As previously mentioned, the project team conducted a bivariate analysis, incorporating both Level 1 and Level 2 charging port demand data along with the REJ+ index to better understand the demands of multi-unit dwellings and public locations, especially in terms of EJ concerns. These concerns included factors such as median household income, race and ethnicity, and limited English proficiency. The outcomes of this analysis enabled the team to pinpoint priority locations—specifically, block groups where there is a confluence of high charging demand and significant EJ concerns.

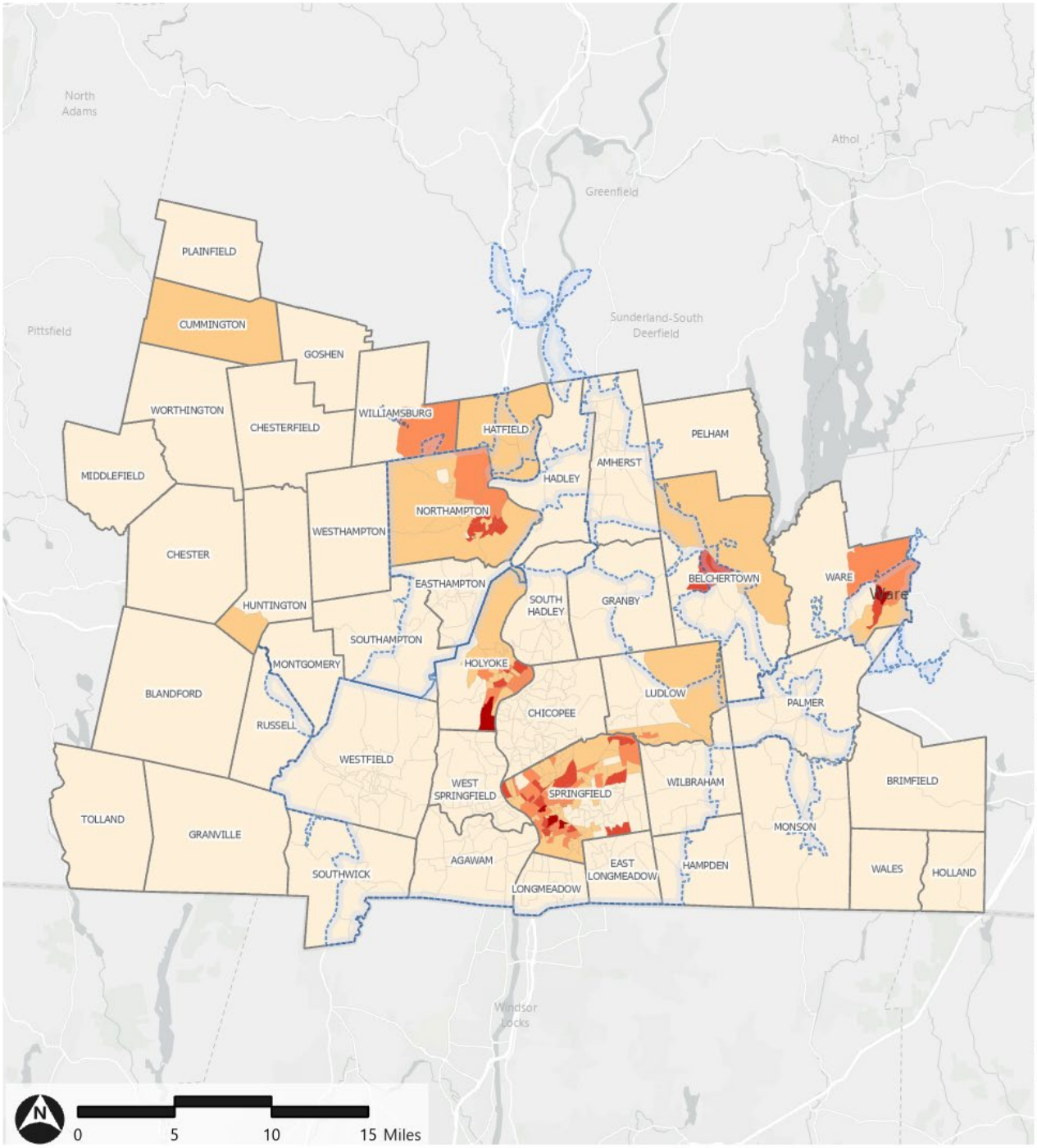
**Figure 2-5** illustrates the highest priority block groups for Level 1 and Level 2 EVSE deployment at multi-unit dwellings. Similarly, **Figure 2-6** demonstrates priority locations for Level 2 EVSE deployment at public locations. For the comprehensive ranking, refer to **Attachment C**. Municipalities within the region should use this ranking to inform their strategic planning and efforts for EVSE deployment.

## Figure 2-1: Multi-Unit Dwellings – Level 1 Charging Demand by Block Group



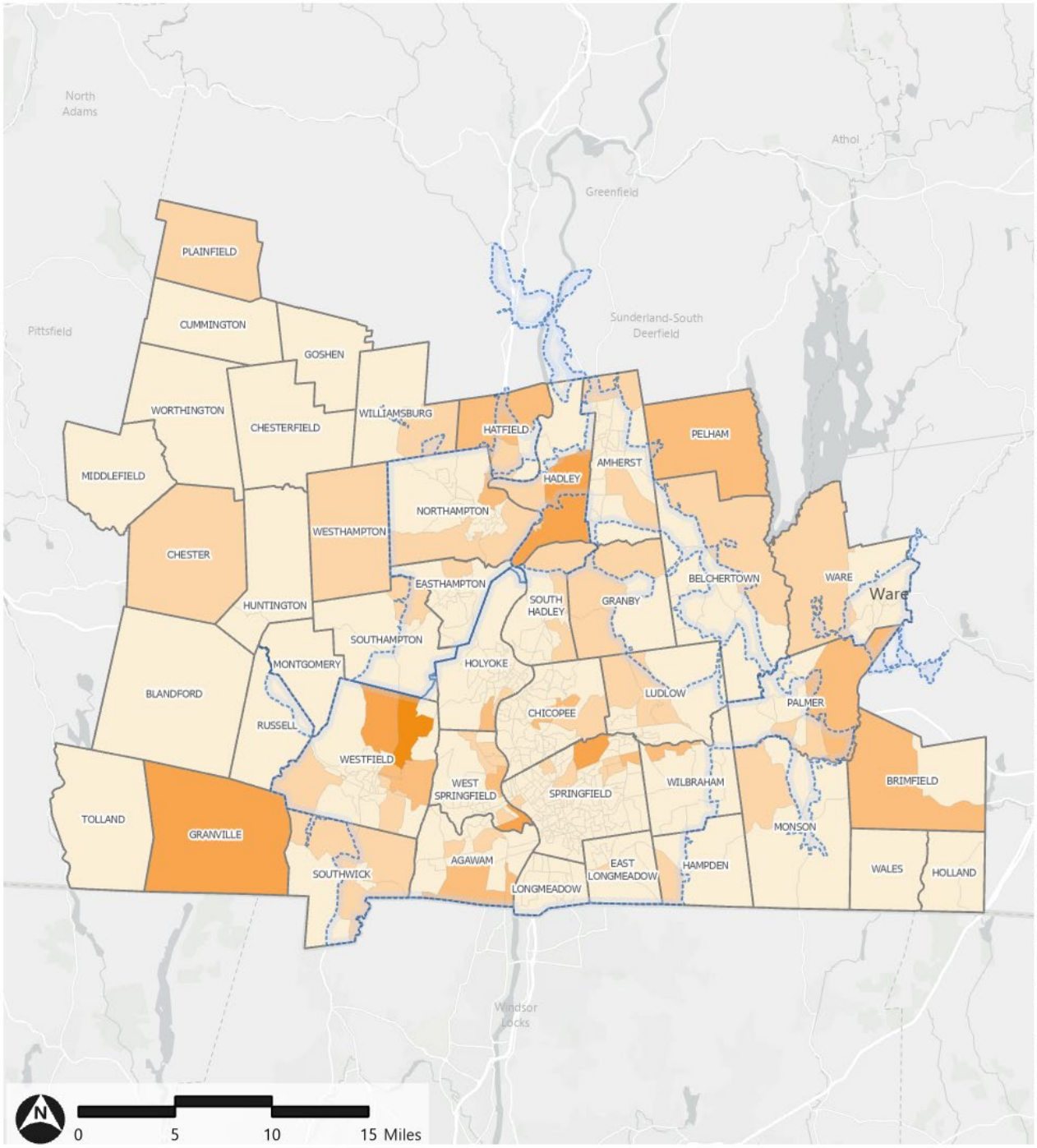

*Source: VHB, Esri*

## Figure 2-2: Multi-Unit Dwellings – Level 2 Charging Demand by Block Group



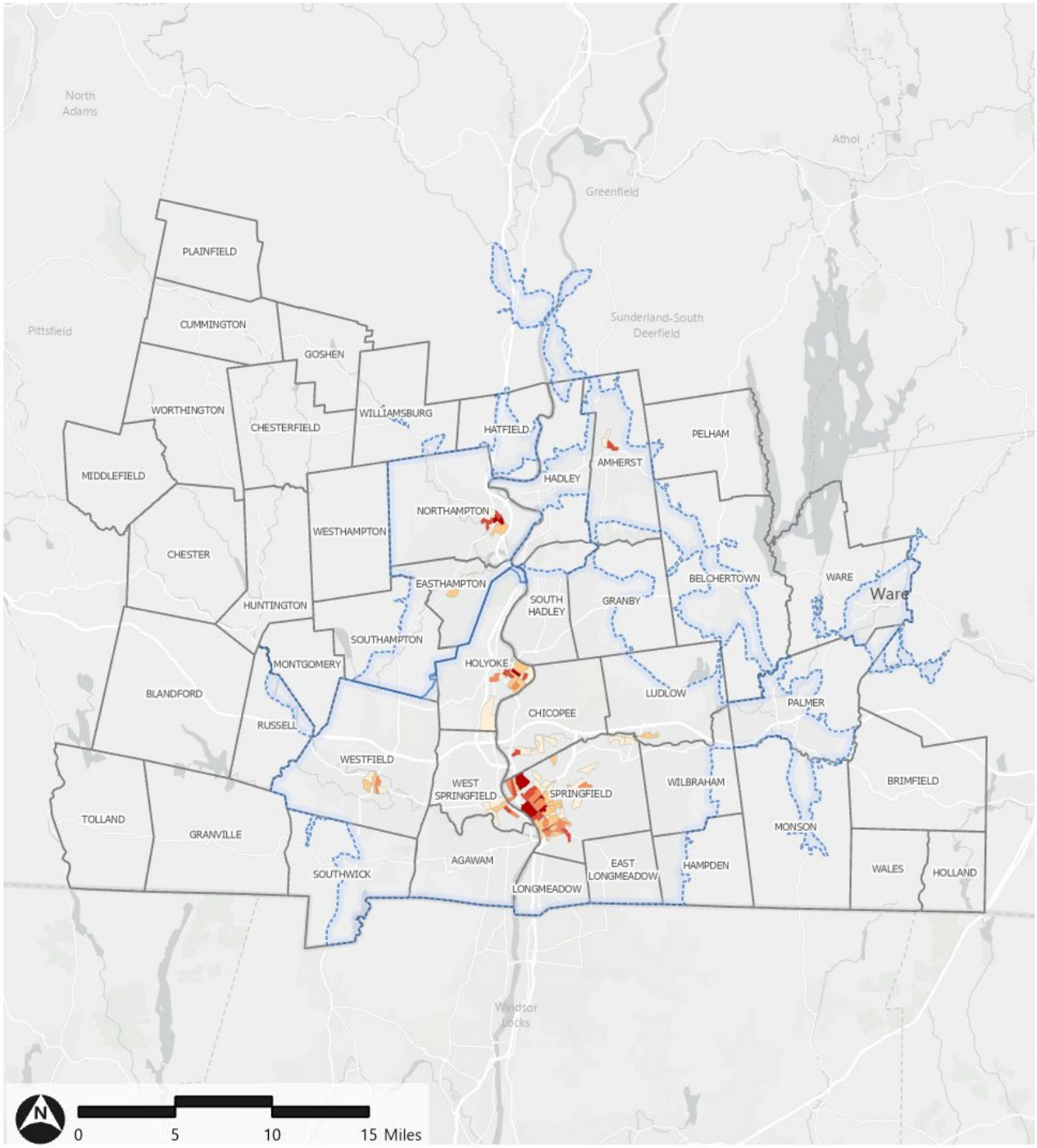

*Source: VHB, Esri*

## Figure 2-3: Public – Level 2 Charging Demand by Block Group



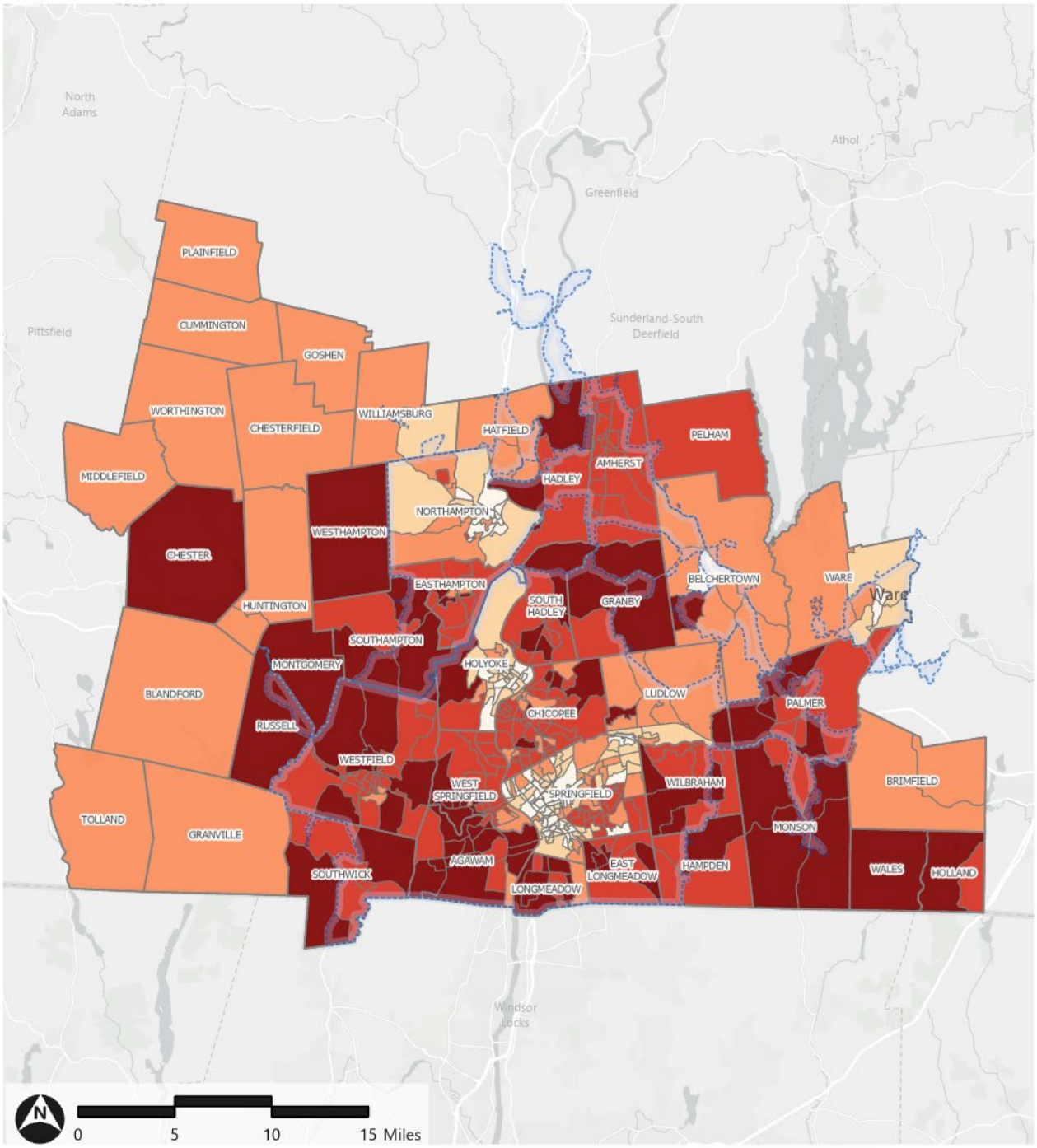

*Source: VHB, Esri*

## Figure 2-4: Private Workplace – Level 2 Charging Demand by Block Group



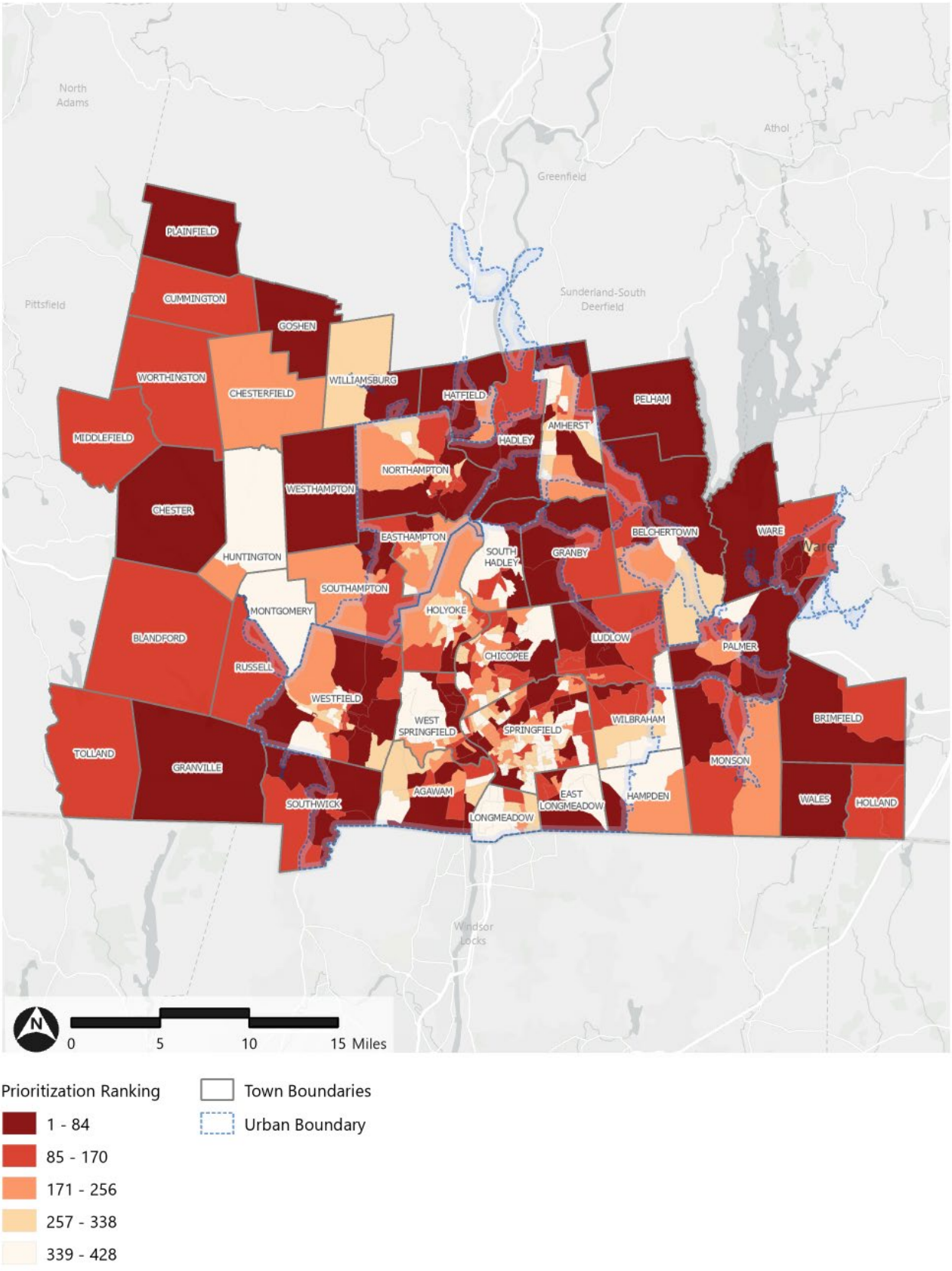

*Source: VHB, Esri*

## Figure 2-5: Priority EVSE Deployment Locations - Multi-Unit Dwellings Level 1 and Level 2 Charging Ports




*Source: VHB, Esri*

## Figure 2-6: Priority EVSE Deployment Locations – Public Level 2 Charging Ports




*Source: VHB, Esri*

## Distribution of Public DCFC Infrastructure

The process for allocating DCFC ports began by classifying each block group within the Springfield MSA as either rural or urban, based on the overlap between urban area boundaries and the total area of each block group. Initially, the census-defined urban area boundary was overlaid onto the block groups of the Springfield MSA. Following this, the percentage of each block group's area that overlapped with the urban boundary was calculated. Block groups where the urban overlap was less than 20 percent were classified as rural. To ensure precision, certain block groups underwent an additional manual review using aerial images to verify their classification accurately.

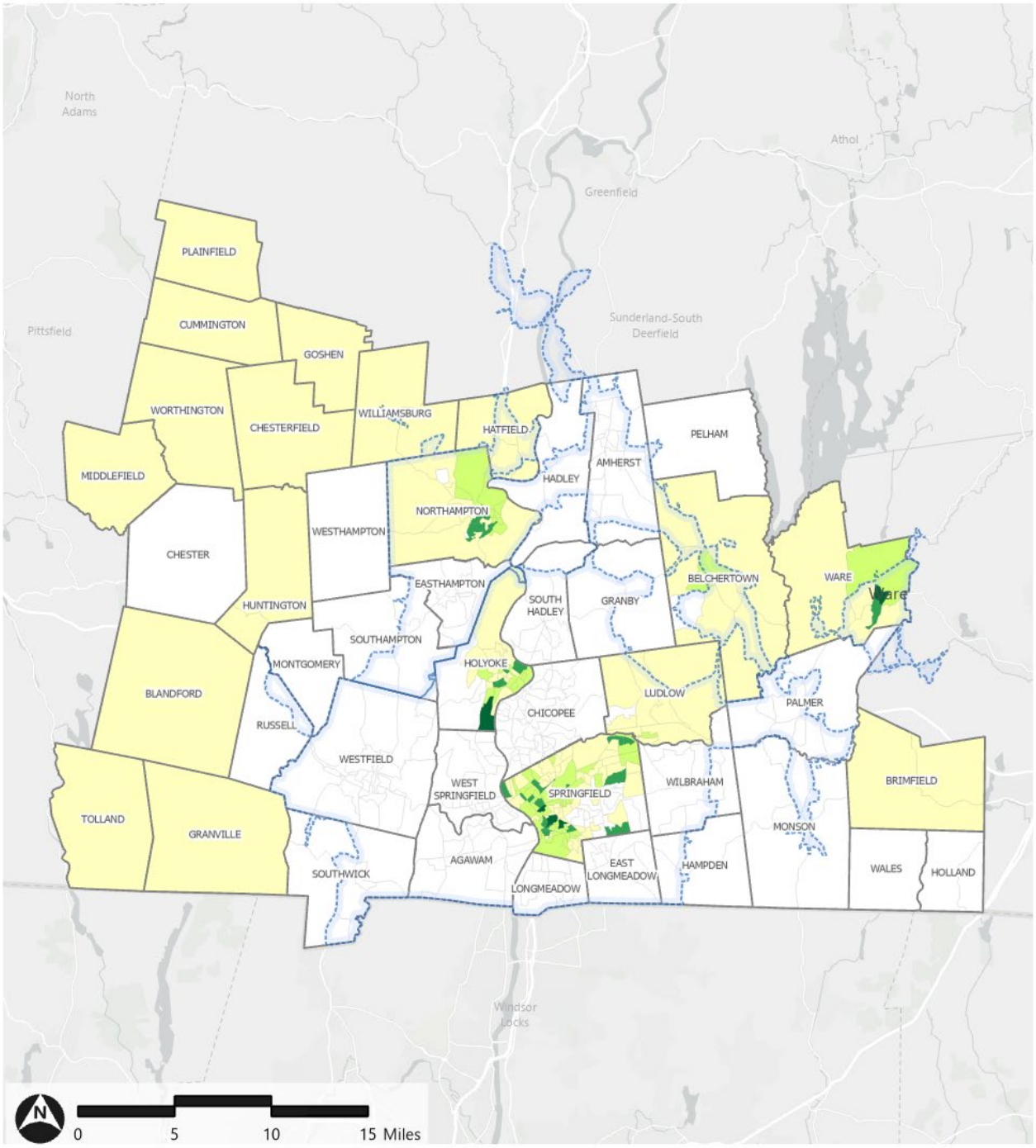
The allocation of DCFC ports was determined using a density measurement of multi-dwelling units, similar to the methodology employed for Level 1 and Level 2 analyses. This distribution factor ensured a consistent and equitable allocation based on the potential density of garage orphans—residents without immediate access to home charging. Using this approach, the projected demand for 1,511 "Community" DCFC ports was initially distributed proportionally across all block groups within the MSA. This count excluded the DCFC ports assigned to "Ride-Hail" users, as such operations are less prevalent in rural areas due to lower population densities and there is reduced demand for such services compared to urban environments. To provide redundancy and ensure minimum service levels in rural areas, any rural block group that received only one DCFC port through the initial allocation process was adjusted to have two ports.

The total number of DCFC charging ports allocated to rural block groups was then summed and subtracted from the overall projected DCFC port count of 1,605 (i.e., "Community" plus "Ride-Hail"). The remaining DCFC port count was then allocated across the urban block groups using an urban area-specific multi-unit dwelling density distribution factor. **Figure 2-7** reveals the results of the overall DCFC distribution analysis, while the suggested minimums for DCFC ports by block group and municipality within the Pioneer Valley can be found in **Attachment D**.

**Figure 2-8** shows the results of a 15-minute drive-time analysis from existing DCFC stations, highlighting where future community-based charging is suitable in urban areas. **Figure 2-9** displays regions within a 10-mile road distance to a DCFC station, indicating appropriate locations for future community-based charging in rural areas. These analyses pinpoint underserved zones where DCFC infrastructure is urgently required, particularly highlighting the challenges faced by rural residents due to longer travel distances and less direct road networks.

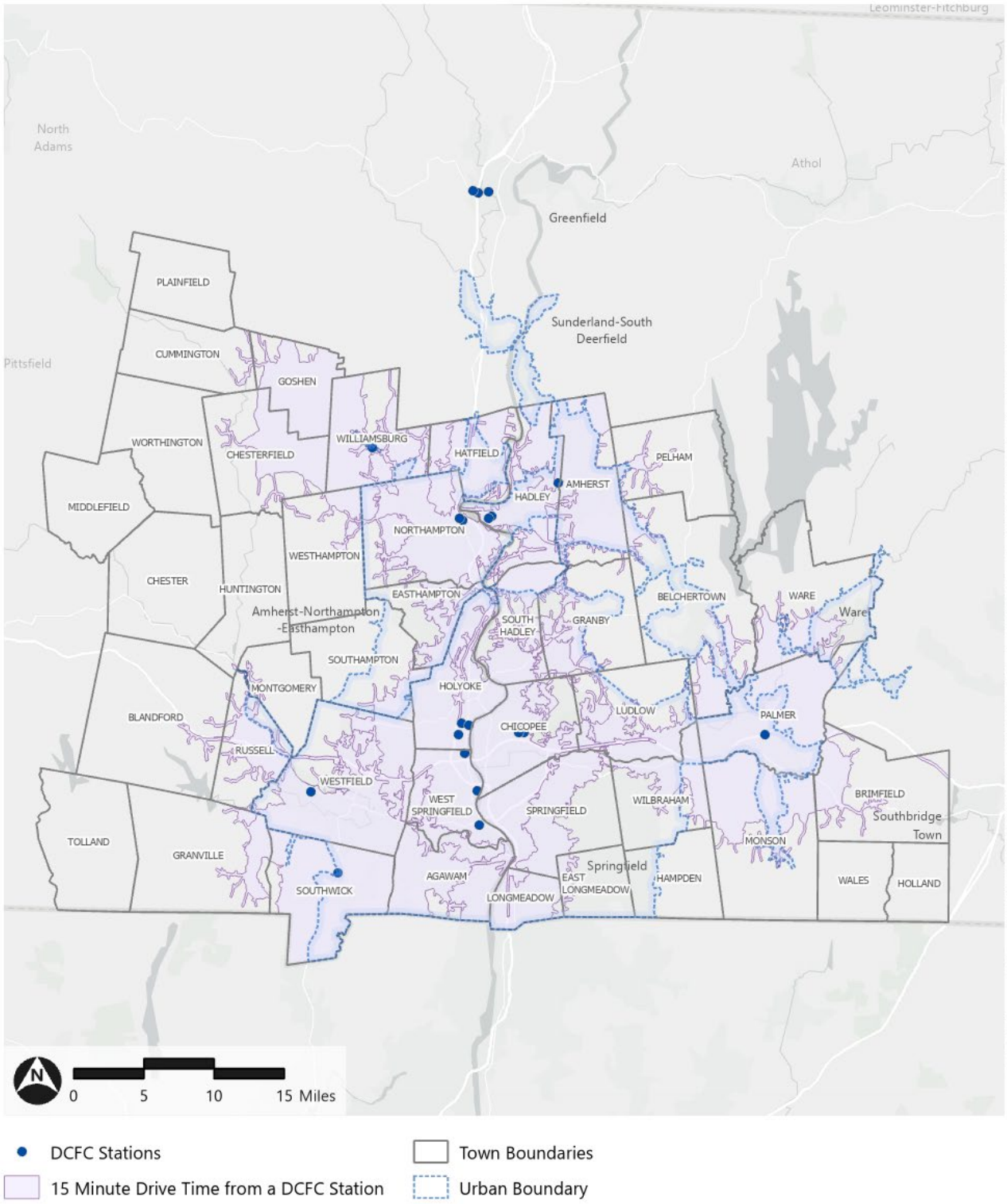
A comprehensive review of **Figures 2-7** through **2-9** offers critical insights for strategically prioritizing the placement of DCFC stations across the Pioneer Valley. Collectively, these insights support the development of a targeted and balanced DCFC distribution plan, fostering equitable DCFC infrastructure across both urban and rural settings.

## Figure 2-7: EVSE Deployment Locations – DCFC Charging Ports



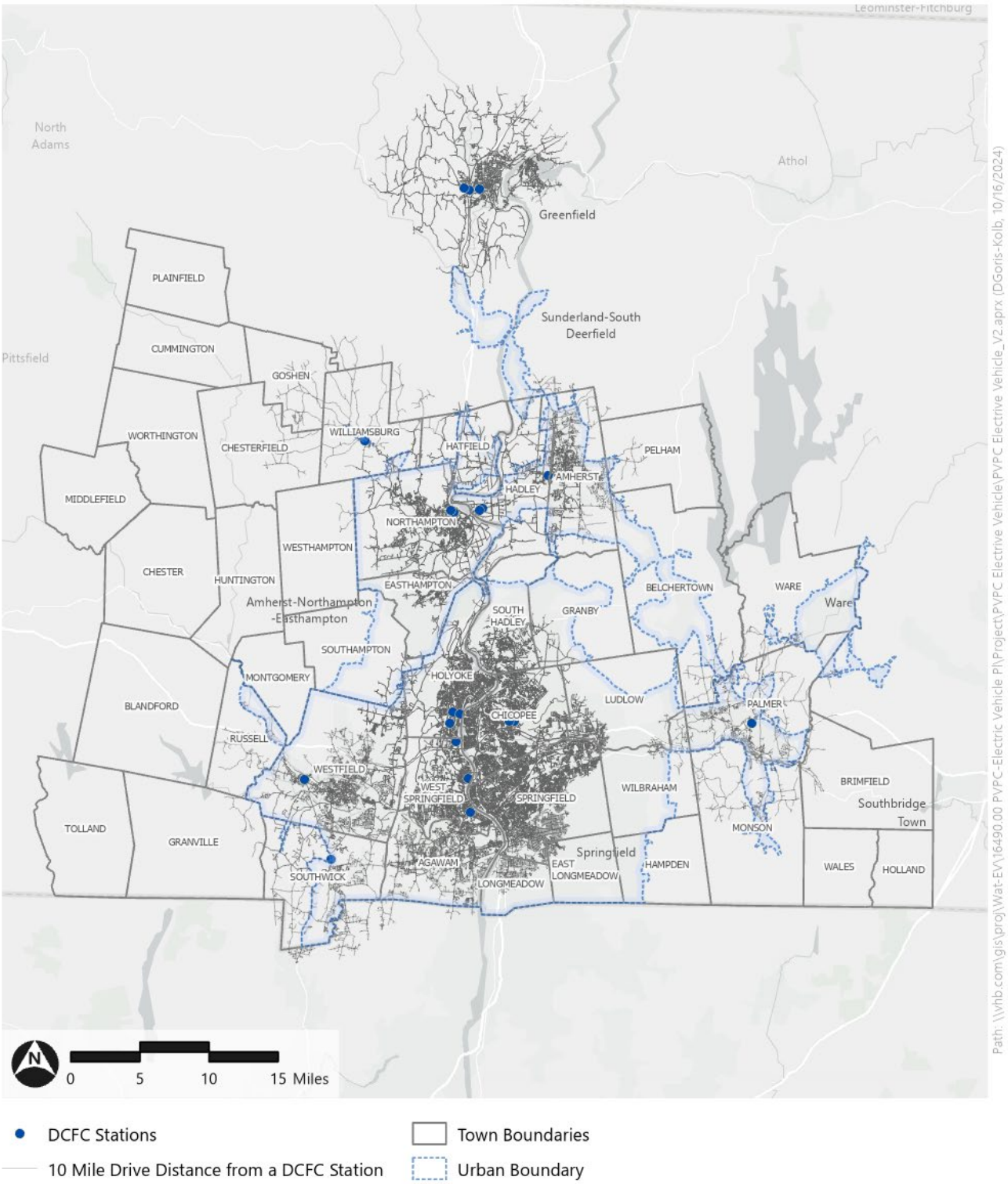

*Source: VHB, Esri*

## Figure 2-8: 15-Minute Drive-Time Analysis Results – DCFC Charging Ports




*Source: VHB, Esri*

## Figure 2-9: 10-Mile Road-Distance Analysis Results – DCFC Charging Ports




*Source: VHB, Esri*

# Implications for the Regional Electrical Grid

Using the EVI Pro-LITE Load Profile Tool, the project team projected the peak 15-minute load on a typical weekday to be about 277 Megawatts (MW), occurring around 9:15 AM – generally when people start their day, businesses open, and activities increase. The largest contributor to this peak load is Level 2 workplace charging (150 MW). **Figure 2-10** depicts the projected daily load curve for a typical weekday.

On a typical weekend day, the peak 15-minute electrical load is projected to be about 225 MW, occurring around 6:30 PM. This timing coincides with when people typically return home, turn on lights, cook dinner, and use other electrical devices. Although home charging is a significant contributor to the peak load at 93 MW, it is not the greatest contributor. Public Level 2 charging, accounting for 98 MW, is the primary driver of the peak load. This pattern suggests that many EV owners prefer the convenience of or rely on public Level 2 charging after their afternoon and evening activities. **Figure 2-11** depicts the projected daily load curve for a typical weekend day.

Note that these estimates include the electricity load associated with single-family charging infrastructure, the distribution of which is outside the scope of this study. It also assumes that DCFC charging rates would be capped at 150 kW.

These load profiles provide critical insights for improving grid management, infrastructure upgrades, and developing effective demand response programs. **Chapter 3**, *Supporting Recommendations* identifies strategic initiatives and investments that can help balance the load, optimize grid performance, and enhance the overall EV charging experience.

**Figure 2-10: Projected Typical Weekday Energy Load from EVSE**

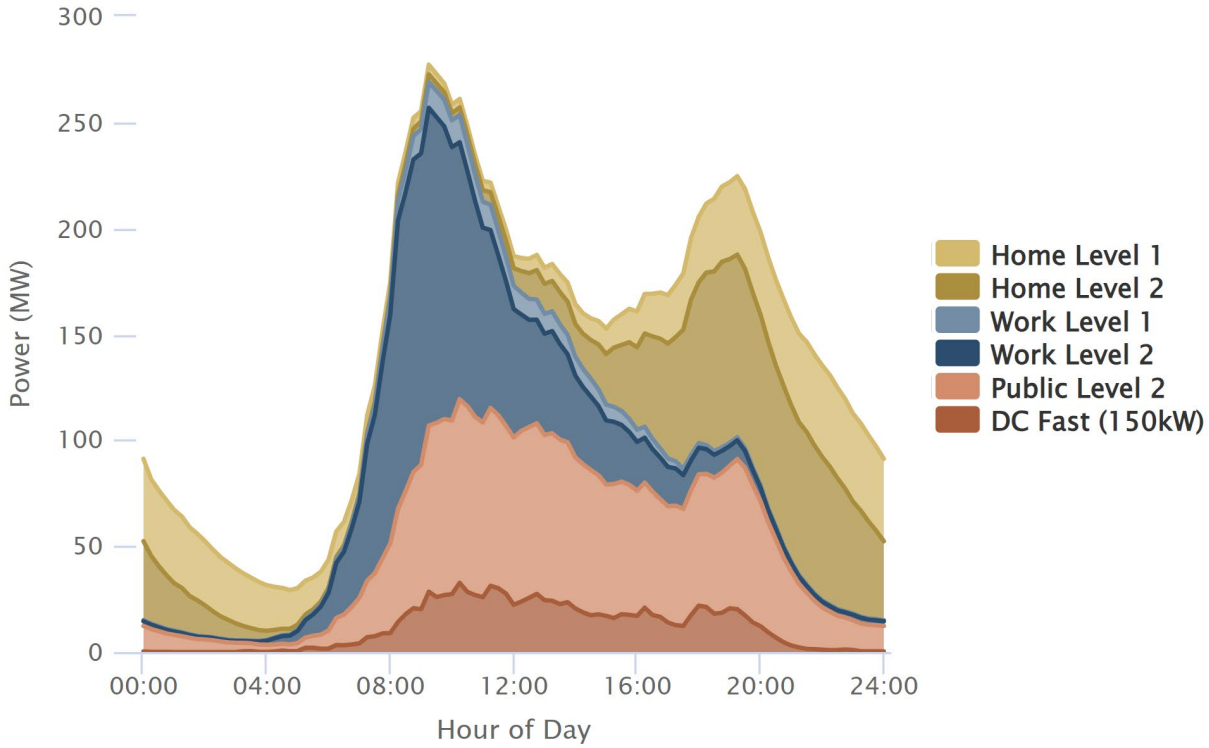
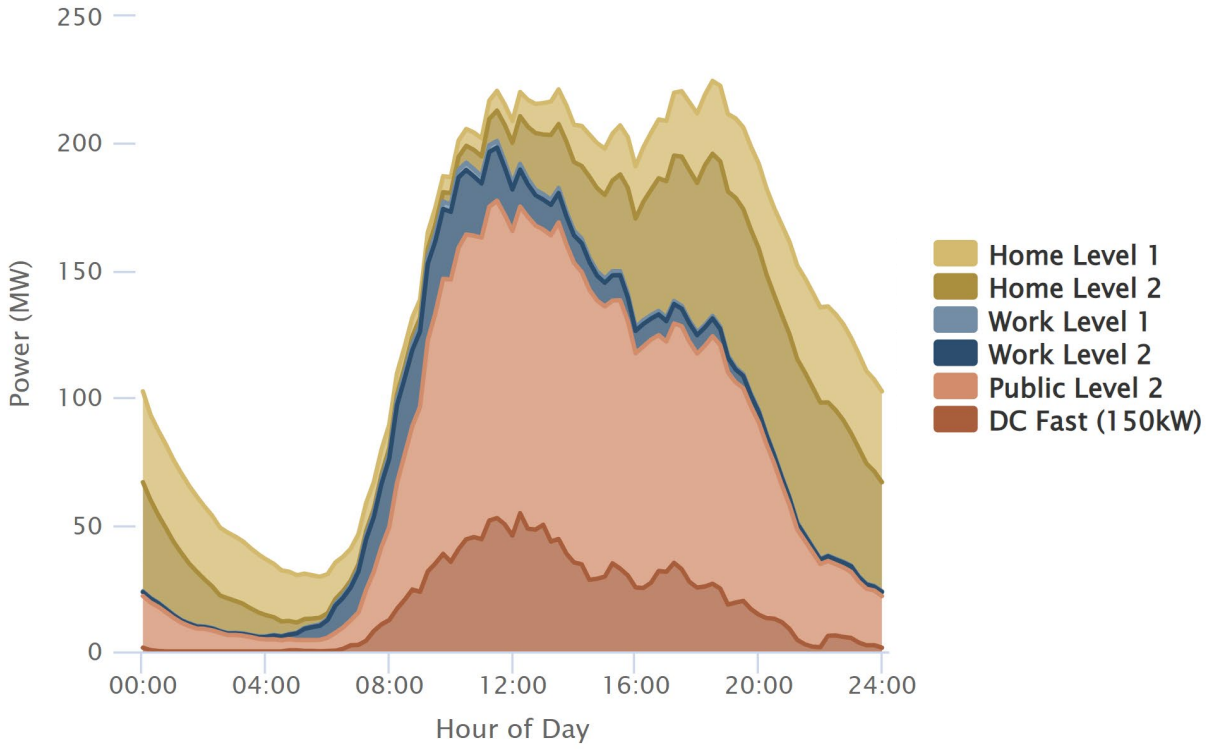


**Figure 2-11: Projected Typical Weekend-Day Energy Load from EVSE**



# 3

# Supporting Recommendations

As the shift to EVs gains momentum, it is essential to address the logistical and social challenges associated with EVSE deployment. This chapter outlines comprehensive recommendations across several key areas of EVSE deployment, crucial for optimizing user experience while fostering equity and accessibility. The sections covered include enhancing user experience, improving access for EJ communities, garage orphans, and rural communities, addressing the unique needs of vehicles for hire, and supporting enhanced accessibility. These recommendations aim to build a robust and inclusive charging infrastructure for the Pioneer Valley that caters to a diverse range of stakeholders and ensures a seamless transition to electric mobility.

## User Experience

The following sections discuss recommendations aimed at enhancing user experience by maximizing uptime, ensuring reliable customer service, and establishing standards.

### Maximizing EVSE Uptime

- **Regularly Scheduled Inspections:** To keep EVSE working reliably, they should be inspected regularly. Frequent maintenance and scheduled check-ups are crucial to ensure proper functionality. Inspections should also occur after events like severe weather or power outages. Regular inspections and documentation help address issues early, maintaining high uptime for the charging units.
- **Collect Data on Uptime and Downtime:** Data on uptime and downtime should be collected and made transparent. Regular collection within a standard framework helps identify uptime and downtime trends, ensuring smooth operation. Tracking downtime and its causes can pinpoint persistent issues for resolution. A record of service outages and repairs for each station aids in monitoring. Transparency in data collection provides the community with an accurate view of the system's performance.

- **Communicate Best Charging Practices:** Effective communication of best charging practices to EV drivers through signage or other materials can not only encourage the proper use of charging stations but also significantly support the maintenance and longevity of EVSE. Such communication should convey best practices in damage prevention (e.g., how to properly connect/disconnect charging cables and connectors) and prompt reporting of issues and malfunctions.

## Smooth and Predictable Customer Experience

- **Host a Reliable EVSE Locator Web Map:** Building upon the geospatial inventory of EVSE in the Pioneer Valley developed as part of this plan, PVPC should maintain and regularly update an interactive EVSE web map on its website. This map will be an essential resource, allowing residents and visitors to easily locate charging stations, plan trips, and support the broader adoption of EVs by providing information about regional charging infrastructure.
- **Implement Software Updates:** To ensure stations operate effectively, software updates should be conducted as soon as they become available. Awareness of upcoming updates and a clear update schedule will help maintain each EVSE and ensure they function as designed. Software updates often include bug fixes that can enhance EVSE uptime.
- **Enter Into a Service Agreement:** By entering into a service agreement with an EVSE manufacturer or a third-party provider, station operators would benefit from reliable software updates, inspections, and repairs conducted by EV charging specialists. These specialists offer routine and scheduled maintenance, as well as additional services when a charging station becomes inoperable. Regular servicing and timely repairs by EV charging experts will ensure the system remains reliable for consumers.

## Standards and Permitting

- **Adopting an EVSE Ordinance:** Communities within the Pioneer Valley should consider adopting a local EVSE ordinance to ensure comprehensive regulation and oversight within the region. The ordinance could outline requirements for the installation, maintenance, and operation of EVSE stations, as well as mandate regular inspections to ensure compliance with safety and performance standards. Through this ordinance, Pioneer Valley can set a precedent for other regions in Massachusetts to follow, fostering a more robust and well-regulated network of EV charging stations across the Commonwealth. A model EVSE zoning bylaw is provided in **Attachment E**.
- **Explore Enforcement Mechanisms to Prevent "ICEing":** In addition to clear signage and pavement markings, to prevent ICE vehicles from occupying dedicated EV charging spots, municipalities can pass local ordinances specifically prohibiting non-EV vehicles from parking in designated EV charging spots with clear penalties for violations. Such ordinances should be coupled with regulator patrols by parking enforcement officers, utilizing ticketing and towing for violations where appropriate.

# Improving Access

The following sections outline methods to improve access to EVSE, particularly for EJ communities, garage orphans – those who lack access to off-street parking and therefore face

challenges with home charging, and residents in rural areas, where EV charging infrastructure is currently limited or nonexistent.

## EJ Communities

- **Prevent the Emergence of an EV Divide**: The primary consumers of electric vehicles (EVs) are currently not members of EJ communities. This disparity has led to an emerging trend known as the "EV Divide," where only certain residents can afford and maintain EVs. To address this issue and promote equitable access to charging infrastructure, communities in the Pioneer Valley should strategically place charging stations to ensure they are accessible to all demographic groups. Ensuring EV charging infrastructure in EJ communities will promote charging equity and lower barriers to entry.

  Communities in the Pioneer Valley should refer to mapping tools and data, such as MassDOT's REJ+ dataset, to identify and provide EVSE access to disadvantaged communities. EJ communities should receive charging infrastructure access that exceeds Justice40 commitments—a federal goal to ensure that at least 40 percent of benefits from a program go to historically disadvantaged communities.
- **Develop Equitable Payment Options:** To make EV charging affordable and accessible to EJ communities, programs could be implemented to reduce the financial burden of EV charging. Strategies could include adapting existing programs like Metro Boston's Blue Bikes reduced cost for SNAP beneficiaries or Valley Clean Air Now's Universal ZEV Equity Charging Card for Pioneer Valley's EV charging infrastructure. Additionally, reduced-cost charging infrastructure could be located within commercial areas of EJ communities.
- **Varied Methods of Charging Station Communication:** Communicating the location of EV charging infrastructure through a diverse range of modes—such as signage, online platforms, brochures, and other media—increases accessibility to charging stations. Multiple forms of media would reach those who are not digitally connected and provide various means to communicate charging incentives. These materials should also be translated into languages commonly spoken in EJ communities.
- **Community Engagement:** To effectively communicate EV charging programs and incentives, there should be robust community engagement through targeted outreach and educational campaigns. Outreach and educational efforts must be tailored to reflect the specific demographics of each community.

## Addressing Garage Orphans

- **Curbside Charging Infrastructure:** One primary solution to increasing EVSE access for "garage orphans" is the development of curbside charging infrastructure. This infrastructure would be installed on streets where garage orphans park their vehicles overnight, providing convenient access to charging in urban and densely populated areas. The focus would be on ensuring that these stations are easy to access and situated near residential areas where off-street parking is limited. This approach enables garage orphans to charge their vehicles overnight like homeowners with garages.
  - Municipalities play a critical role in promoting and facilitating curbside charging. Local governments are encouraged to collaborate with utility companies and private partners to roll out curbside stations, potentially offering incentives or streamlining the permitting process to make installations easier and faster. Municipal leadership is seen as essential

for identifying ideal locations for these stations, ensuring that they are equitably distributed in areas where residents are most affected by the lack of off-street parking.

- The City of Boston, which is partnering with private companies to install and operate curbside EV charging ports, serves as a case study. The City's program aims to ensure that every resident lives within a 5-minute walk of an EV charging station. Boston is looking at two models: license the right-of-way (public/private partnership) and public ownership at City assets. More information on this program can be found here https://www.boston.gov/departments/transportation/curbside-ev-charging.

› **Parking and Charging Rights:** Municipalities in the Pioneer Valley could introduce regulations that ensure that garage orphans have the right to charge their EVs in their residential areas. This "right to charge" policy would make it easier for renters and those in multi-unit dwellings to install charging infrastructure where feasible. For those living in condominiums or rental properties with shared parking, the policy would encourage landlords and property managers to provide access to charging solutions.

› **Charging Hubs in Urban Areas:** In addition to curbside charging, the creation of centralized charging hubs in urban neighborhoods is recommended. These hubs would be strategically placed in areas where residents without private parking could gather to charge their vehicles. They would likely feature fast chargers, allowing users to quickly top up their vehicles without the need to park overnight. These hubs could be located near transit stations, parks, or shopping centers, providing multiple benefits to the community.

› **Incentives and Rebates:** Municipalities in the Pioneer Valley could offer incentives or rebates to encourage the installation of EV chargers in areas where garage orphans reside. These incentives could target both individual EV owners and businesses or organizations willing to host chargers in public spaces. This could make charging more affordable and accessible for those who might not otherwise have the means to install or use charging infrastructure.

› **Electric Carsharing and Ride-Hailing:** Another approach involves promoting electric carsharing services, where garage orphans could access EVs without owning one. By using shared EVs through a network of accessible charging stations, residents in urban areas would have the benefits of electric transportation without the need to worry about installing their charging infrastructure. Supporting the electrification of ride-hailing services like Uber and Lyft also helps garage orphans, as they rely more on these services for transportation.

## Access in Rural Communities

Rural communities face a separate set of challenges than their urban counterparts, such as long driving distances, low population density, and fewer existing public charging stations.

› **Targeted Public Funding for Rural Charging Stations:** Public investments are essential to ensure that rural residents have access to EVSE, even if these stations may not experience the high usage levels seen in urban areas. Rural charging stations are crucial for providing reliable infrastructure along long driving routes and in small towns, allowing rural residents to adopt EVs with confidence and without suffering from range anxiety.

› **Strategic Placement of Charging Stations Along Major Routes:** Many rural residents depend on long-distance travel for work, shopping, and other daily activities. To cater to these needs, it is recommended to strategically place charging stations along major highways and frequently used routes by rural drivers. These locations should ideally feature

fast chargers to minimize charging time for long-distance travelers, ensuring that EV drivers have access to reliable charging infrastructure during road trips.

- **Addressing Low Utilization and Economic Viability:** In rural areas, some charging stations may have low utilization due to the lower density of EVs. To address this challenge, it is recommended that rural charging infrastructure be supported through public funding or partnerships with utility companies. This support ensures that stations remain financially viable, even with lower traffic. Shared ownership or operational models, involving local governments or cooperatives, can also be explored to sustain these charging stations.
- **Leveraging On-Site Renewable Energy:** To address the grid infrastructure challenges in remote areas, charging station owners/operators should explore the use of on-site renewable energy sources, such as solar panels, to power rural EV charging stations. This approach can reduce the need for costly grid upgrades in areas where electrical infrastructure may not be robust enough to support high-power EV charging stations. Pairing these charging stations with energy storage solutions could further help manage energy demand and ensure reliable service in rural regions.
- **Addressing Limited Network Connectivity:** In areas facing poor network connectivity, several options exist to ensure EVSE units are capable of communication and payment processing. Several of these options include deploying satellite-based communication systems, establishing dedicated private cellular networks, installing signal boosters or repeaters to enhance existing cellular signals, implementing dual connectivity options (wired and wireless) to create redundancy, and utilizing edge computing for on-device processing of real-time data. As relevant, the compatibility of these options should be considered during site design and the EVSE procurement process.

## Accessibility Requirements and Enhancements

To ensure that EV charging stations comply with the Americans with Disabilities Act (ADA) and meet the needs of all users, the following recommendations focus on strategies to support physical accessibility, ease of use, and equitable placement of chargers to accommodate individuals with mobility challenges. As applicable, these recommendations have been incorporated into the Model EVSE Zoning Bylaw included in **Attachment E**.

- **ADA-Compliant Charging Spaces:** Depending on the site, a specific number of EV charging spaces, but no less than one, must comply with ADA accessibility standards. These spaces should be wide enough to accommodate wheelchair users and include curb cuts for easy access. Charging stations should be situated in locations with clear, unobstructed pathways leading from the charger to nearby amenities or building entrances. These pathways should be wide, flat, and free from obstacles like landscaping or signage that could impede access for individuals with disabilities.
- **Charger Placement and Reachability:** To accommodate individuals with mobility challenges, the physical placement of EV charging equipment is crucial. Chargers must be installed at a height that is reachable for wheelchair users, ensuring that the controls and charging connectors are within ADA guidelines. Additionally, the length and weight of the charging cables should be manageable for individuals with limited mobility or strength. Using lightweight, retractable cables or storing them in easily accessible housing can enhance ease of use, particularly for people with disabilities.

- **Clear Signage and Instructions:** To enhance accessibility in the charging process, publicly accessible EVSE should be designed with clear, well-marked signage. These signs should indicate which spaces are accessible and provide easy-to-read instructions on how to use the charging equipment. The signage should be positioned at a height and use a font size that is legible from a seated position.
- **Usability of Payment Systems:** To ensure accessibility, payment systems at EVSE should be designed with consideration for users with disabilities. Card readers, keypads, and touchscreens must be positioned within easy reach and usability for individuals with limited mobility or dexterity. Additionally, offering alternative payment methods like mobile apps or contactless payments can provide greater flexibility for users who might find traditional payment terminals challenging to use.
- **Prioritizing Accessible Stations in Public Charging Networks:** To improve access to public EV charging infrastructure, the installation of accessible EVSE should be prioritized in high-traffic public areas, such as shopping centers, hospitals, and public transportation hubs. This ensures that people with disabilities have convenient access to charging stations in locations they frequently visit. Future development policies should also prioritize the placement of accessible EV charging stalls before non-accessible ones.
- **Maintenance and Reliability of Accessible Chargers:** To ensure ADA-compliant EVSE are always functional and usable, regular inspections of EV charging stations are recommended to maintain ADA compliance and operational integrity. This includes checking the condition of pathways, ensuring that signage is visible and clear, and confirming that the charging equipment is in good working order. The uptime for ADA-compliant EVSE should be rigorously monitored to guarantee that people who rely on accessible charging options can confidently plan their charging needs without fearing malfunction. Installers, maintenance workers, and designers involved in deploying EVSE that is ADA-compliant should receive training on ADA compliance and accessibility to ensure the needs of people with disabilities are considered at every stage of installation and operation.
- **Public Outreach and Awareness:** To raise awareness of accessible EV charging options in the Pioneer Valley, public information campaigns should be launched and coordinated. These campaigns need to inform drivers with disabilities about the availability of ADA-compliant chargers and provide guidance on how to locate them. Integrating information about accessible EV chargers into mobile apps and navigation tools would allow users to easily find ADA-compliant stations along their routes. Collaborating with organizations that advocate for people with disabilities can help ensure that accessible charging stations meet community needs and that outreach efforts are effective.

## Addressing Electrical Grid Constraints

The following sections outline opportunities to reduce the daily load or otherwise limit associated stress on the electrical grid due to regional EV charging demands.

- **On-Site Solar Photovoltaics (PV):** Integrating solar PV with EV charging stations can significantly reduce stress on the electrical grid by generating local energy, particularly during peak demand hours. Additionally, pairing solar PV with energy storage solutions can provide a buffer during low solar generation periods or high grid demand, enhancing grid resilience. Onsite solar also offers potential economic benefits by lowering operational costs.

- **Smart Charging:** EVSE units with communication capabilities can be configured to dynamically adjust charging rates based on real-time data, such as grid demand and the availability of renewable energy.
- **Demand Response Programs:** As discussed in the next chapter, several utilities in the Pioneer Valley have or are planning to implement demand response programs for EV charging infrastructure. These utilities request reductions in electricity consumption during peak times in exchange for financial incentives. EVSE units can be remotely requested to temporarily reduce or delay charging. Further coordination with utilities will be required.
- **Load Aggregation:** Combining the charging demand of multiple EV charging stations into a single, controllable aggregated load can be managed as a virtual power plant, providing grid services such as demand response, peak shaving, load shifting, and even supply capacities back to the grid under certain conditions.
- **Bidirectional Charging (i.e., Vehicle-to-Grid):** The Pioneer Valley could benefit from exploring bidirectional charging technology as it becomes more prevalent, i.e., compatible EVSE and EVs, and utility and regulatory requirements are met. This technology allows EVs to not only charge but also send electricity back to the grid or power a building. For residents in densely packed urban areas, bidirectional charging offers a unique way to integrate EVs into their daily energy use, addressing some of the space constraints associated with traditional charging infrastructure.
- **Time-of-Use Charging:** Operators of EVSE can apply variable consumption charges to encourage EV owners to charge during off-peak hours (i.e., early morning or late night).

# 4

# Potential Funding Opportunities

The deployment of EVSE is crucial for the widespread adoption of EVs. However, the cost of establishing, operating, and maintaining this infrastructure can be a significant barrier for municipalities and their key stakeholders, including businesses and property owners. To overcome this obstacle, a strategic approach to leveraging financial incentives that reduce initial costs and ensure long-term sustainability is imperative.

This chapter explores the various financial incentives available to support EVSE deployment in the Pioneer Valley. It provides an overview of federal, state, and utility-based programs designed to alleviate the financial burden associated with these projects. By understanding and utilizing these financial resources, stakeholders can more effectively plan and implement EVSE projects, advancing the transition to a sustainable transportation future while ensuring equitable access across diverse communities.

## Federal Funding

- **Charging and Fueling Infrastructure Grant Program:** Provides funding to strategically deploy publicly accessible EVSE. The Community Charging and Alternative Fueling Grant (Community Program) supports the installation of EVSE in publicly accessible locations such as public roads, schools, parks, and parking facilities. Meanwhile, the Charging and Alternative Fuel Corridor Grants (Corridor Program) focuses on deploying charging infrastructure along designated AFCs.
  - **Administering Entity:** U.S. Department of Transportation/Federal Highway Administration (FHWA)
  - **Eligible Sectors:** States or Political Subdivisions of States, Metropolitan Planning Organizations, Units of Local Government, Special Purpose Districts, or Public Authorities with a Transportation Function
  - **Website:** https://www.transportation.gov/rural/grant-toolkit/charging-and-fueling-infrastructure-grant-program

- **Alternative Fuel Vehicle Refueling Property Tax Credit:** Provides a credit of up to 30 percent (up to $100,000 [Corporate] or up to $1,000 [Personal]) for both Level 2 (Corporate and Personal) and DCFC equipment (Corporate only).
  - **Administering Entity:** Internal Revenue Service
  - **Eligible Sectors:** Commercial, Industrial, Local Government, Nonprofit, Cooperative Utilities, State Government
  - **Website:** https://www.irs.gov/credits-deductions/alternative-fuel-vehicle-refueling-property-credit

## State Funding

- **National Electric Vehicle Infrastructure (NEVI) Formula Grant Program:** Distributes federal funding (roughly $63 million over 5 years) for the construction and operation of DCFC stations along AFC corridors in the state. MassDOT is currently engaged in the siting, design, and permitting of locations, as well as finalizing contracts with private entities.
  - **Administrative Entity:** MassDOT
  - **Eligible Sector(s):** N/A
  - **Website:** https://www.mass.gov/massdot-nevi-plan
- **U.S. Environmental Protection Agency Diesel Emissions Reduction Act (DERA) Funding:** Offers funding for projects that reduce diesel emissions in the Commonwealth. Qualifying purchases include verified idle reduction technologies, engine replacements with zero-tailpipe emission power sources, and zero-emission vehicles and equipment replacements. One EVSE per procured vehicle is allowed. Application evaluation criteria and parameters emphasize projects serving EJ communities.
  - **Administrative Entity:** Massachusetts Department of Environmental Protection (MassDEP)
  - **Eligible Sector(s):** Local Government, State Government, Public Colleges and Universities
  - **Website:** https://www.mass.gov/how-to/apply-for-a-diesel-emissions-reduction-act-dera-electric-solicitation-grant
- **Massachusetts Electric Vehicle Incentive Program (MassEVIP) – Multi-Unit Dwelling (MUD) and Educational Campus Charging Program:** A rolling grant program that covers 60 percent of hardware and installation costs for Level 1 or Level 2 EVSE, up to $50,000 per address.
  - **Administrative Entity:** MassDEP
  - **Eligible Sector(s):** Multi-Family Residential (Fiver or More Units), Educational Campuses (At Least 15 Students On-Site)
  - **Website:** https://www.mass.gov/how-to/apply-for-massevip-multi-unit-dwelling-educational-campus-charging-incentives
- **Massachusetts Electric Vehicle Incentive Program (MassEVIP) – Public Access Charging (PAC) Program:** A rolling grant program that covers up to 100 percent of hardware and installation costs for Level 1 or Level 2 EVSE at government-owned locations and up to 80 percent of hardware and installation costs for Level 1 or Level 2 EVSE for all other locations. Incentives are capped at $50,000 per address.

- **Administrative Entity:** MassDEP
- **Eligible Sector(s):** Multi-Family Residential (five or more units), Educational Campuses (at least 15 resident students)
- **Website:** https://www.mass.gov/how-to/apply-for-massevip-public-access-charging-incentives

› **Massachusetts Electric Vehicle Incentive Program (MassEVIP) – Workplace and Fleet Charging Program:** A rolling grant program that covers up to 60 percent of hardware and installation costs for Level 1 or Level 2 EVSE, up to $50,000 per address.

- **Administrative Entity:** MassDEP
- **Eligible Sector(s):** Commercial (with more than 15 employees)
- **Website:** https://www.mass.gov/how-to/apply-for-massevip-workplace-fleet-charging-incentives

› **Massachusetts Electric Vehicle Incentive Program (MassEVIP) – DC Fast Charging Program:** A rolling grant program that covers hardware and installation costs for DCFC (up to 100 percent at government-owned locations, up to 80 percent at non-government-owned locations, and up to 60 percent at educational campuses). Incentives are capped at $50,000 per address.

- **Administrative Entity:** MassDEP
- **Eligible Sector(s):** Commercial (with more than 15 employees)
- **Website:** https://www.mass.gov/how-to/apply-for-massevip-direct-current-fast-charging-incentives

## Utility/Private Incentives

› **NextZero:** A Massachusetts Municipal Wholesale Electric Company (MMWEC) program for municipal utility customers, offering an efficient, innovative, and equitable approach to residential and commercial/industrial decarbonization. Supported by this program, customers may be eligible for a free or discounted Level 2 EVSE depending on the municipal utility.

- **Administrative Entity:** Chicopee Electric, Holyoke Gas & Electric, Russell Municipal Light Department, South Hadley Electric Light Department
- **Eligible Sector(s):** Residential, Commercial
- **Website:** https://nextzero.org/

› **Holyoke Gas & Electric Energy Conservation Loan Program:** Provides financial assistance of up to $20,000 at 0% interest for the implementation of qualifying energy efficiency and electrification projects, including the installation of Level 2 EVSE.

- **Administrative Entity:** Holyoke Gas & Electric
- **Eligible Sector(s):** Residential, Commercial
- **Website**: https://www.hged.com/residential/ee-home/recp/default.aspx, https://hged.com/commercial/ee-business/cecp/default.aspx

› **Eversource Residential EV Charging Program:** Offers residential customers rebates for home charging installations. Rebates are capped at $1,700 for single-family homes and $2,700 for multi-family buildings (2 to 4 units).

- **Administrative Entity:** Eversource
- **Eligible Sector(s):** Residential
- **Website:** https://eversourcemaev.clearesult.com/

› **Off-Peak Electric Vehicle (EV) Charging Incentive:** Issues a bill credit to residential customers – those not already participating in the National Grid Demand Response Program – who utilize off-peak hours for charging their electric vehicles.

- **Administrative Entity:** National Grid
- **Eligible Sector(s):** Residential
- **Website**: https://www.nationalgridus.com/electric-vehicle-hub/Programs/Massachusetts/Off-Peak-Charging-Program

› **Eversource Commercial EV Charging Program:** Covers up to 100 percent of make-ready infrastructure costs to support the installation of Level 2 and DCFC EVSE, as well as offers rebates on the EVSE themselves. Increased rebates are available for locations within EJ communities.

- **Administrative Entity:** Eversource
- **Eligible Sector(s):** Commercial, Local Government, Multi-family Residential (Greater than 4 units)
- **Website**: https://www.eversource.com/content/business/save-money-energy/clean-energy-options/electric-vehicles/business-ev-charging-rebates

› **EV Home Charger Managed Charging (Coming Soon):** Customers will be able to earn rewards by enrolling their home EVSE in managed charging, where EV charging will be prioritized for times when there is less demand on the electric grid.

- **Administrative Entity:** Eversource
- **Eligible Sector(s):** Residential
- **Website**: https://www.eversource.com/content/residential/save-money-energy/clean-energy-options/electric-vehicles/ev-charger-managed-charging

› **National Grid Electric Vehicle Charging Station Program:** Covers up to 100 percent of make-ready infrastructure costs to support the installation of Level 2 and DCFC EVSE, as well as offers rebates on the EVSE themselves. Increased rebates are available for locations within EJ communities.

- **Administrative Entity:** National Grid
- **Eligible Sector(s):** Commercial, Local Government, Schools, Multi-family Residential (Greater than 4 units)
- **Website**: https://www.nationalgridus.com/MA-Business/Energy-Saving-Programs/Electric-Vehicle-Charging-Station-Program

› **Off-Peak Electric Vehicle (EV) Charging Incentive:** Issues a bill credit to residential customers who utilize off-peak hours for charging their electric vehicles.

- **Administrative Entity:** National Grid
- **Eligible Sector(s):** Residential
- **Website**: https://www.nationalgridus.com/electric-vehicle-hub/Programs/Massachusetts/Off-Peak-Charging-Program

# Attachment A

## Public Meeting Notes

**Electric Vehicle Charging Assessment and Deployment Plan for the Pioneer Valley Region**

Virtual Public Engagement Session – Breakout Room Notes (September 11, 2024 and September 12, 2024)

Notes By: *VHB*

| **Questions** | **General Comments** |
|---|---|
| **1. If you are an EV driver, what has been your experience with EV charging in the Pioneer Valley – what is your level of satisfaction? What are the strengths and opportunities for improvement?**<br>o *Can't count on charging being available. Proves there is not enough.*<br>o *At home charging -do not have to rely on public charging. Nearly all residents live in apartments – they count on on-street parking. What are the incentives and ways to provide public charging on the street?*<br>o *Non-EVs taking EV charging spaces. PHEVs that have lower range tend to leave their vehicles idling upon charge completion.*<br>o *I-90 Turnpike – Stations not working.*<br>o *Issue is really overuse rather than malfunctioning*<br>o *Tesla owners have less of an issue with charging speeds*<br>o *Need multiple applications*<br>o *Chevy Volt – the challenge of traveling cross country, not yet compatible with Tesla chargers*<br>o *Need one streamlined approach no matter the manufacturer. Too much overlap of similar services but through several avenues that get confusing and difficult/frustrating to use*<br>o *Weather conditions affect the efficiency of charging*<br>o *Identify the main connectors and focus the deployment of chargers there first. (Mass Pike and 91)*<br>o *Notice the gap between NY and MA. Long stretch where there are few stations (Blandford specifically, where there is a rest stop, both west and eastbound – no chargers there). There are only 3-4 chargers west of Springfield.*<br>o *A barrier that currently seems to exist in Western MA seems to be gaps in utility incentives to install chargers. Eversource and National Grid have incentives, but other utility companies may not.*<br>o *When traveling, I will plan where I do a Level 3 charge. There's an EVgo station that's been out of commission at a Dunkin Donuts in West Springfield. And air compressor is right next to it, so that can block the charger when that's in use. Other stations, such as one at a car dealership, have no amenities around. Reinforce the need for chargers between Boston and Pioneer Valley.* | o *City (Easthampton): Does the municipality need to own charging equipment per grant requirements? What about proprietary networks?*<br>o *Planning for charging stations can be difficult and time-consuming. Amenities need to be considered.*<br>o *Free stations at MGM (Level 2) – Are they accessible, are they working, and are they used? The issue is there is no enforcement. Many spaces are blocked with non-EVs.*<br>o *Increase charger awareness – public education; demystifying chargers; also helps support integration with the community. Signage on the charger may help.*<br>o *PlugShare as a useful platform for understanding the charging lay of the land (e.g., charger maintenance, status, is it online, etc.)*<br>o *Ensuring regular maintenance – not only accessible but reliable*<br>o *When everybody has an EV, will there be enough infrastructure?*<br>o *You can have your private charger and market it to the public*<br>o *Ensure that local zoning ordinances consider EV distribution and mitigate charging hubs in residential areas – mitigate commercial use on residential property; how can zoning prevent this?*<br>o *In addition to having adequate infrastructure, EVs should be affordable*<br>o *Level 3 should be the standard for most scenarios* |

- *Apps also may show incorrect or inaccurate information. Frustration of showing (or not showing) broken or down chargers. Especially for the NACS chargers which are harder to find. There needs to be more accountability on the EV charger operator or owner to keep this data accurate.*
- *MGM garage has lots of Level 2 chargers, but EV users may get blocked out from those spaces – lack of parking enforcement*
- *Blocked spaces - Friendly way to (restrict? persuade?) ICE vehicles from using EV spaces*

**2. If you are a non-EV driver, what is your perception of EV charging in the Pioneer Valley? What concerns do you have about charging that may be preventing you from purchasing an EV in the future?**

- *Coming from Ashfield, we want some installations here. But all of the things you've mentioned apply. Main impediments: delays by Eversource and other utilities for installation.*
- *We've seen charger installation projects take a year plus. I've seen projects where we've pushed Eversource in March and still haven't heard anything. There are maps that show feeder capacity but it takes them forever. Perhaps too many applications at once.*

**3. What general or specific locations would you prioritize for new EV charging stations? Are there locations where you think stations should not be installed?**

- *Curbside and lamp posts*
- *See them where the gas stations are*
- *Public facilities (e.g., libraries)*
- *Supermarkets*
- *Travelers – near the interchanges*
- *Retirement communities, larger apartment communities*
- *Churches (places with empty parking lots)*
- *Rural areas (e.g., Russell, MA – there's nowhere in town to put a charging station). If folks were to have an EV, they'd need an at-home charger*
- *Public sites should be prioritized (e.g., Town Halls, public parking lots, etc.)*
- *Look for more places along key travel routes*
- *Other Routes – 91 (not many places to pull off) some on the rest areas; deploy as many as possible in public spaces*
- *Prioritize urban developments over green/blue spaces*
- *Consider EVSE siting – is their additional aboveground infrastructure that impacts the viewshed?*
- *Rest areas would also be a good area*
- *Need to ensure it won't negatively affect residents due to noise pollution*
- *Chargers as tools for economic development*
- *Issue with vandalism at public chargers – security? Theft from chargers as well in hopes that parts are worth something.*
- *At least two chargers that have two plugs each*
- *Feels backward that subsidies for cars came first and not the infrastructure and then making the cars affordable and getting them out on the road.*
- *Consistency in payment options and regulation – keeping the market but more overhead on the standardization of how things can be carried out.*
- *Adding the consideration and identification of the tourism economy and locations where tourists go. Catering to them as well.*
- *Looking for standardization of the infrastructure on the market in general.*

- *More shopping centers with charging stations*
- *Rt 2 (near Shelburne Falls) – businesses around here would install if there were resources for them – and Rt 9*
- *Parks - North Riverfront Park doesn't seem to prioritize chargers there, but they would be well utilized. Forest Park has chargers but aren't often used.*
- *On and off ramps – Level 3 chargers*
- *Basketball Hall of Fame – lots of amenities around there so it'd be a perfect place for chargers*
- *Westover, Westfield Barnes, Northampton Airport - major industrial growth areas, consider chargers there for employees*
- *Northampton – regional destination; fire department, bank, Thorn's Parking Garage has Level 2 (free parking for an hour in the latter), but need more Level 3 chargers in the City*
- *Holyoke Mall – Rivian put in some CCS chargers. Need to be on the Rivian network to use them?*
- *Springfield to Boston corridor should be a focus. One of the primary charging points is Auburn Mall, but requires a dangerous street crossing to get to amenities.*
- *Car dealerships – some restrict charging to customers : EVConnect at the Volkswagen – may be semi-private; High speed connectors at Ford dealership. Would be nice if dealerships didn't restrict access.*
- *Education institutions - DC Fast charger at Greenfield Community College (GCC)*
- *Grocery stores - Big Y (Greenfield) currently has a Level 2 charger. Hadley Whole Foods needs chargers in the complex.*
- *Overnight parking garages/lots*
- *Workplaces -- Saw a change in culture since the pandemic: fewer people coming into the office. May be a challenge in how you'd address the need at a place of employment. But still have lots of commuters from Hartford to Springfield.*

***4.*** **Are there any specific local factors that need to be considered for the placement of EV charging stations (e.g., high tourist traffic, seasonal weather)?**

- *Apartment complex density – almost only DT Springfield*
- *Rural communities – Level 3 charging hubs (see Ware – considered an urban cluster; Belchertown – thriving community)*
- *Dual benefits – deploy EV chargers with solar (renewable energy capacity – example of West Hampton)*
- *How to upgrade and connect to the electric grid?*
- *Need to ensure that EV chargers don't adversely impact communities (e.g., neighborhoods burdened by increased noise pollution)*
- *Important to have chargers in rural areas*
- *Looking for funding to make at-home charging more accessible*
- *Located at nature trails and parks as well.*
- *Ski areas: Berkshire East (Franklin County), Catamount, Butternut*

***5.*** **What site features (e.g., lighting, surveillance) and amenities (e.g., shopping options, restrooms) at charging stations would be most important to you?**

- *Bathroom; Good Coffee; Snacks; Safety Enhancements*
- *There's a tourism economy in the region; considering how to support these destinations which can incentivize business*
- *High power chargers for locations where there are less amenities/attractions*

- *Regular maintenance needs to be integrated to ensure reliable functionality.*
- *Restroom*
- *Dining*
- *Green space – consider pets*
- *Noted different experiences when using different vehicles: Tesla puts chargers in amenity-rich spaces, and other manufacturers may put chargers in non-amenity-rich spaces*

***6.*** **What types of chargers do you prefer (e.g., Level 2, fast chargers) and why?**

- *Level 3 chargers; Good funding for Level 3 chargers*
- *Level 2 - Pricing for Level 2 is lower*
- *Fast chargers make a huge difference on trips, especially long-distance*
- *Emphasis on dual port chargers*
- *Fast charging should be a baseline – part of this should be driven by location (e.g., on the key route vs. shopping center)*
- *Need fast chargers!!! At least one per station.*
- *Try to navigate around the increase in cost for a fast charger.*
- *Fast charger should be a baseline*
- *Charging speed should be based on location*
- *Rarely use Level 2, opt for Level 3*

***7.*** **What payment options would you prefer for using an EV charging station (credit/debit card, mobile payment, subscription services)?**

- *Multiple Apps is an issue*
- *Similar to gas stations – you should not need an account*
- *Ensure that charging is affordable currently and into the future*
- *Charging companies have increased charging prices when a battery is getting full*
- *Companies should streamline payment as this inconveniences the users (similar to Tesla accessibility)*
- *Fast chargers are more expensive – how to optimize these rates such that it's not a financial burden to users while ensuring that chargers are not unnecessarily occupied (Car on charger without need)*
- *Consistency of payment (one-stop shop); equipment is standardized*
- *Looking for cost analyses in what gasoline costs v charging at home what is the increase in electric*
- *Apple Pay, credit card, replenishable charge card*
- *Paying or navigating a touch screen can be hard, some are damaged*
- *What about QR codes? Scan QR code with phone, put in credit card. If Apple Pay is accepted, that's one thing. But fully typing in a credit card may be a barrier (think of extreme weather).*

*8.* What future technologies or advancements in EV charging would you like to see (e.g., faster charging times, wireless charging)?

- *Same as examples*
- *Ports in front or the back – cable system needs to accommodate multiple locations*
- *Interchangeable batteries*

- *If you do primarily charge at home overnight, what happens when a family wants multiple EVs? How does that impact capability?*
- *Standardization of technology – everyone should have the option to choose a Level 2 vs. Level 3 from one station*
- *Will pay extra to reserve a spot. Don't always want to subscribe to get that service.*

***9.*** **Are there any other considerations or suggestions you have regarding the development of EV charging infrastructure in the Pioneer Valley?**

- *Hill towns that don't have high-speed internet; reliable cell service*
- *Tie the locations to tourism*
- *School parking lots*
- *Need to gauge the situation and implementation plan for what the future looks like when everyone has an EV charger. Mapping growth is just like population.*
- *Have low expectations for Level 2. I would expect a clean shiny working machine for Level 3. There should be a dedicated service team on that.*

# Attachment B

## EVSE Demand Distribution: Levels 1 and 2

# Attachment B: EVSE Demand Distribution: Levels 1 and 2

| | | | Multi-Unit Dwellings | | | |
|---|---|---|---|---|---|---|
| BlockGroupID | TownName | County | Level 1 Chargers | Level 2 Chargers | Public Level 2 Chargers | Private Workspace Level 2 Chargers |
| 250138132054 | AGAWAM | HAMPDEN | - | - | 340 | - |
| 250138132082 | AGAWAM | HAMPDEN | - | - | 210 | - |
| 250138132071 | AGAWAM | HAMPDEN | - | - | 105 | - |
| 250138132061 | AGAWAM | HAMPDEN | - | - | 57 | - |
| 250138132063 | AGAWAM | HAMPDEN | - | - | 31 | - |
| 250138132091 | AGAWAM | HAMPDEN | - | - | 29 | - |
| 250138132051 | AGAWAM | HAMPDEN | - | - | 18 | - |
| 250138132093 | AGAWAM | HAMPDEN | - | - | 10 | - |
| 250138132073 | AGAWAM | HAMPDEN | - | - | 11 | - |
| 250138132062 | AGAWAM | HAMPDEN | - | - | 9 | - |
| 250138132072 | AGAWAM | HAMPDEN | - | - | 7 | - |
| 250138132081 | AGAWAM | HAMPDEN | - | - | 5 | - |
| 250138132042 | AGAWAM | HAMPDEN | - | - | 4 | - |
| 250138132052 | AGAWAM | HAMPDEN | - | - | 3 | - |
| 250138132041 | AGAWAM | HAMPDEN | - | - | 2 | - |
| 250138132053 | AGAWAM | HAMPDEN | - | - | - | - |
| 250138132092 | AGAWAM | HAMPDEN | - | - | - | - |
| 250158208011 | AMHERST | HAMPSHIRE | - | - | 131 | - |
| 250158203001 | AMHERST | HAMPSHIRE | - | - | 116 | - |
| 250158205007 | AMHERST | HAMPSHIRE | - | - | 37 | - |
| 250158205003 | AMHERST | HAMPSHIRE | - | - | 19 | 243 |
| 250158207001 | AMHERST | HAMPSHIRE | - | - | 17 | - |
| 250158208012 | AMHERST | HAMPSHIRE | - | - | 14 | - |
| 250158205001 | AMHERST | HAMPSHIRE | - | - | 8 | - |
| 250158205004 | AMHERST | HAMPSHIRE | - | - | 7 | 82 |
| 250158203005 | AMHERST | HAMPSHIRE | - | - | 8 | - |
| 250158206001 | AMHERST | HAMPSHIRE | - | - | 8 | - |
| 250158207003 | AMHERST | HAMPSHIRE | - | - | 5 | - |
| 250158208014 | AMHERST | HAMPSHIRE | - | - | 2 | - |
| 250158205005 | AMHERST | HAMPSHIRE | - | - | 2 | - |
| 250158208013 | AMHERST | HAMPSHIRE | - | - | 1 | - |
| 250158204001 | AMHERST | HAMPSHIRE | - | - | - | - |
| 250158205006 | AMHERST | HAMPSHIRE | - | - | - | - |
| 250158203003 | AMHERST | HAMPSHIRE | - | - | - | - |
| 250158205002 | AMHERST | HAMPSHIRE | - | - | 1 | - |
| 250158208021 | AMHERST | HAMPSHIRE | - | - | - | - |
| 250158207002 | AMHERST | HAMPSHIRE | - | - | - | - |
| 250158203002 | AMHERST | HAMPSHIRE | - | - | - | - |
| 250158203004 | AMHERST | HAMPSHIRE | - | - | - | - |
| 250158202052 | BELCHERTOWN | HAMPSHIRE | 2 | 5 | 72 | - |
| 250158202071 | BELCHERTOWN | HAMPSHIRE | 6 | 15 | 44 | - |
| 250158202072 | BELCHERTOWN | HAMPSHIRE | 2 | 4 | 26 | - |
| 250158202073 | BELCHERTOWN | HAMPSHIRE | 1 | 2 | 25 | - |
| 250158202063 | BELCHERTOWN | HAMPSHIRE | - | 1 | 11 | - |
| 250158202061 | BELCHERTOWN | HAMPSHIRE | - | - | 11 | - |
| 250158202051 | BELCHERTOWN | HAMPSHIRE | 1 | 2 | 3 | - |
| 250158202062 | BELCHERTOWN | HAMPSHIRE | 1 | 2 | - | - |
| 250138138021 | BRIMFIELD | HAMPDEN | - | 1 | 236 | - |
| 250138138022 | BRIMFIELD | HAMPDEN | - | 1 | 22 | - |
| 250138130011 | CHESTER | HAMPDEN | - | - | 59 | - |
| 250158226074 | CHESTERFIELD | HAMPSHIRE | - | 1 | 9 | - |
| 250138106012 | CHICOPEE | HAMPDEN | - | - | 245 | - |
| 250138106021 | CHICOPEE | HAMPDEN | - | - | 101 | - |
| 250138111022 | CHICOPEE | HAMPDEN | - | - | 47 | - |
| 250138113024 | CHICOPEE | HAMPDEN | - | - | 38 | - |
| 250138106011 | CHICOPEE | HAMPDEN | - | - | 30 | - |
| 250138106013 | CHICOPEE | HAMPDEN | - | - | 28 | - |
| 250138107001 | CHICOPEE | HAMPDEN | - | - | 26 | - |
| 250138113012 | CHICOPEE | HAMPDEN | - | - | 27 | - |
| 250138111012 | CHICOPEE | HAMPDEN | - | - | 24 | - |
| 250138113013 | CHICOPEE | HAMPDEN | - | - | 23 | - |

# Attachment B: EVSE Demand Distribution: Levels 1 and 2

| | | | Multi-Unit Dwellings | | | |
|---|---|---|---|---|---|---|
| BlockGroupID | TownName | County | Level 1 Chargers | Level 2 Chargers | Public Level 2 Chargers | Private Workspace Level 2 Chargers |
| 250138109012 | CHICOPEE | HAMPDEN | - | - | 22 | - |
| 250138110003 | CHICOPEE | HAMPDEN | - | - | 21 | - |
| 250138113025 | CHICOPEE | HAMPDEN | - | - | 19 | - |
| 250138108002 | CHICOPEE | HAMPDEN | - | - | 18 | 104 |
| 250138111014 | CHICOPEE | HAMPDEN | - | - | 13 | - |
| 250138113022 | CHICOPEE | HAMPDEN | - | - | 13 | - |
| 250138109011 | CHICOPEE | HAMPDEN | - | - | 13 | 246 |
| 250138108001 | CHICOPEE | HAMPDEN | - | - | 11 | 84 |
| 250138112001 | CHICOPEE | HAMPDEN | - | - | 11 | - |
| 250138109023 | CHICOPEE | HAMPDEN | - | - | 9 | - |
| 250138110005 | CHICOPEE | HAMPDEN | - | - | 8 | - |
| 250138107005 | CHICOPEE | HAMPDEN | - | - | 5 | 82 |
| 250138111021 | CHICOPEE | HAMPDEN | - | - | 5 | - |
| 250138110001 | CHICOPEE | HAMPDEN | - | - | 6 | - |
| 250138110004 | CHICOPEE | HAMPDEN | - | - | 6 | - |
| 250138108003 | CHICOPEE | HAMPDEN | - | - | 5 | - |
| 250138113011 | CHICOPEE | HAMPDEN | - | - | 5 | - |
| 250138112002 | CHICOPEE | HAMPDEN | - | - | 6 | - |
| 250138111013 | CHICOPEE | HAMPDEN | - | - | 4 | - |
| 250138111024 | CHICOPEE | HAMPDEN | - | - | 2 | - |
| 250138107004 | CHICOPEE | HAMPDEN | - | - | 2 | - |
| 250138112003 | CHICOPEE | HAMPDEN | - | - | 3 | - |
| 250138111011 | CHICOPEE | HAMPDEN | - | - | 1 | - |
| 250138107003 | CHICOPEE | HAMPDEN | - | - | 2 | - |
| 250138111023 | CHICOPEE | HAMPDEN | - | - | 1 | - |
| 250138107002 | CHICOPEE | HAMPDEN | - | - | 1 | - |
| 250138109022 | CHICOPEE | HAMPDEN | - | - | 1 | - |
| 250138112004 | CHICOPEE | HAMPDEN | - | - | - | - |
| 250138113023 | CHICOPEE | HAMPDEN | - | - | - | - |
| 250138113014 | CHICOPEE | HAMPDEN | - | - | 1 | - |
| 250138109024 | CHICOPEE | HAMPDEN | - | - | - | - |
| 250138110002 | CHICOPEE | HAMPDEN | - | - | - | - |
| 250138109021 | CHICOPEE | HAMPDEN | - | - | - | - |
| 250138113021 | CHICOPEE | HAMPDEN | - | - | - | - |
| 250158227002 | CUMMINGTON | HAMPSHIRE | 1 | 3 | 30 | - |
| 250138134012 | EAST LONGMEADOW | HAMPDEN | - | - | 43 | - |
| 250138134032 | EAST LONGMEADOW | HAMPDEN | - | - | 55 | - |
| 250138134043 | EAST LONGMEADOW | HAMPDEN | - | - | 37 | - |
| 250138134011 | EAST LONGMEADOW | HAMPDEN | - | - | 29 | - |
| 250138134013 | EAST LONGMEADOW | HAMPDEN | - | - | 26 | - |
| 250138134014 | EAST LONGMEADOW | HAMPDEN | - | - | 6 | - |
| 250138134042 | EAST LONGMEADOW | HAMPDEN | - | - | 1 | - |
| 250138134031 | EAST LONGMEADOW | HAMPDEN | - | - | - | - |
| 250138134041 | EAST LONGMEADOW | HAMPDEN | - | - | - | - |
| 250158224025 | EASTHAMPTON | HAMPSHIRE | - | - | 64 | - |
| 250158224011 | EASTHAMPTON | HAMPSHIRE | - | - | 22 | - |
| 250158224024 | EASTHAMPTON | HAMPSHIRE | - | - | 21 | 90 |
| 250158224021 | EASTHAMPTON | HAMPSHIRE | - | - | 12 | 124 |
| 250158223001 | EASTHAMPTON | HAMPSHIRE | - | - | 12 | - |
| 250158224014 | EASTHAMPTON | HAMPSHIRE | - | - | 9 | - |
| 250158224012 | EASTHAMPTON | HAMPSHIRE | - | - | 9 | - |
| 250158223003 | EASTHAMPTON | HAMPSHIRE | - | - | 2 | - |
| 250158224023 | EASTHAMPTON | HAMPSHIRE | - | - | 6 | - |
| 250158224022 | EASTHAMPTON | HAMPSHIRE | - | - | 4 | - |
| 250158223002 | EASTHAMPTON | HAMPSHIRE | - | - | 2 | - |
| 250158223004 | EASTHAMPTON | HAMPSHIRE | - | - | - | - |
| 250158224013 | EASTHAMPTON | HAMPSHIRE | - | - | - | - |
| 250158226071 | GOSHEN | HAMPSHIRE | 1 | 2 | 39 | - |
| 250158209002 | GRANBY | HAMPSHIRE | - | - | 125 | - |
| 250158209003 | GRANBY | HAMPSHIRE | - | - | 53 | - |
| 250158209001 | GRANBY | HAMPSHIRE | - | - | 29 | - |

# Attachment B: EVSE Demand Distribution: Levels 1 and 2

| | | | Multi-Unit Dwellings | | | |
|---|---|---|---|---|---|---|
| BlockGroupID | TownName | County | Level 1 Chargers | Level 2 Chargers | Public Level 2 Chargers | Private Workspace Level 2 Chargers |
| 250138130023 | GRANVILLE | HAMPDEN | 1 | 2 | 566 | - |
| 250158214004 | HADLEY | HAMPSHIRE | - | - | 611 | - |
| 250158214001 | HADLEY | HAMPSHIRE | - | - | 71 | - |
| 250158214002 | HADLEY | HAMPSHIRE | - | - | 22 | - |
| 250158214003 | HADLEY | HAMPSHIRE | - | - | 18 | - |
| 250138135004 | HAMPDEN | HAMPDEN | - | - | 102 | - |
| 250138135003 | HAMPDEN | HAMPDEN | - | - | 13 | - |
| 250138135001 | HAMPDEN | HAMPDEN | - | - | - | - |
| 250138135002 | HAMPDEN | HAMPDEN | - | - | - | - |
| 250158215003 | HATFIELD | HAMPSHIRE | 2 | 5 | 225 | - |
| 250158215002 | HATFIELD | HAMPSHIRE | 1 | 3 | 165 | - |
| 250158215001 | HATFIELD | HAMPSHIRE | 1 | 4 | 13 | - |
| 250138138012 | HOLLAND | HAMPDEN | - | - | 28 | - |
| 250138138013 | HOLLAND | HAMPDEN | - | - | 24 | - |
| 250138121032 | HOLYOKE | HAMPDEN | 12 | 30 | 365 | 82 |
| 250138121031 | HOLYOKE | HAMPDEN | 3 | 8 | 52 | - |
| 250138121012 | HOLYOKE | HAMPDEN | - | - | 27 | - |
| 250138121041 | HOLYOKE | HAMPDEN | 7 | 17 | 17 | - |
| 250138114001 | HOLYOKE | HAMPDEN | 5 | 11 | 15 | 77 |
| 250138120013 | HOLYOKE | HAMPDEN | 6 | 14 | 15 | 92 |
| 250138117002 | HOLYOKE | HAMPDEN | 6 | 16 | 15 | 134 |
| 250138115001 | HOLYOKE | HAMPDEN | 5 | 12 | 13 | 198 |
| 250138115002 | HOLYOKE | HAMPDEN | 4 | 9 | 13 | 126 |
| 250138117001 | HOLYOKE | HAMPDEN | 3 | 6 | 13 | 355 |
| 250138118005 | HOLYOKE | HAMPDEN | 5 | 11 | 14 | 167 |
| 250138116002 | HOLYOKE | HAMPDEN | 5 | 13 | 12 | 140 |
| 250138119001 | HOLYOKE | HAMPDEN | 3 | 8 | 12 | - |
| 250138114002 | HOLYOKE | HAMPDEN | 6 | 14 | 9 | 209 |
| 250138121042 | HOLYOKE | HAMPDEN | 6 | 14 | 8 | - |
| 250138118003 | HOLYOKE | HAMPDEN | 6 | 14 | 7 | - |
| 250138118004 | HOLYOKE | HAMPDEN | 3 | 6 | 6 | - |
| 250138121011 | HOLYOKE | HAMPDEN | - | - | 6 | - |
| 250138116003 | HOLYOKE | HAMPDEN | 3 | 8 | 3 | 214 |
| 250138120023 | HOLYOKE | HAMPDEN | 3 | 6 | 4 | 91 |
| 250138119003 | HOLYOKE | HAMPDEN | 2 | 5 | 4 | - |
| 250138121013 | HOLYOKE | HAMPDEN | - | 1 | 4 | - |
| 250138120014 | HOLYOKE | HAMPDEN | 3 | 8 | 3 | - |
| 250138116004 | HOLYOKE | HAMPDEN | 3 | 6 | 2 | - |
| 250138116001 | HOLYOKE | HAMPDEN | 3 | 8 | 2 | - |
| 250138118002 | HOLYOKE | HAMPDEN | 4 | 9 | 1 | - |
| 250138120021 | HOLYOKE | HAMPDEN | 5 | 13 | 1 | - |
| 250138120024 | HOLYOKE | HAMPDEN | 3 | 6 | 1 | 185 |
| 250138120022 | HOLYOKE | HAMPDEN | 2 | 6 | 2 | - |
| 250138120011 | HOLYOKE | HAMPDEN | 7 | 17 | - | 235 |
| 250138118001 | HOLYOKE | HAMPDEN | 4 | 9 | 1 | 185 |
| 250138120012 | HOLYOKE | HAMPDEN | 3 | 7 | - | 215 |
| 250138121044 | HOLYOKE | HAMPDEN | 4 | 10 | - | - |
| 250138121043 | HOLYOKE | HAMPDEN | 2 | 6 | - | - |
| 250138119002 | HOLYOKE | HAMPDEN | 2 | 5 | - | - |
| 250158226012 | HUNTINGTON | HAMPSHIRE | 2 | 5 | 14 | - |
| 250158226011 | HUNTINGTON | HAMPSHIRE | 1 | 2 | - | - |
| 250138133031 | LONGMEADOW | HAMPDEN | - | - | 15 | - |
| 250138133041 | LONGMEADOW | HAMPDEN | - | - | 9 | - |
| 250138133043 | LONGMEADOW | HAMPDEN | - | - | 4 | - |
| 250138133032 | LONGMEADOW | HAMPDEN | - | - | 2 | - |
| 250138133042 | LONGMEADOW | HAMPDEN | - | - | 1 | - |
| 250138133014 | LONGMEADOW | HAMPDEN | - | - | 1 | - |
| 250138133012 | LONGMEADOW | HAMPDEN | - | - | 1 | - |
| 250138133013 | LONGMEADOW | HAMPDEN | - | - | 1 | - |
| 250138133011 | LONGMEADOW | HAMPDEN | - | - | - | - |
| 250138104142 | LUDLOW | HAMPDEN | 1 | 2 | 157 | - |

# Attachment B: EVSE Demand Distribution: Levels 1 and 2

| | | | Multi-Unit Dwellings | | | |
|---|---|---|---|---|---|---|
| BlockGroupID | TownName | County | Level 1 Chargers | Level 2 Chargers | Public Level 2 Chargers | Private Workspace Level 2 Chargers |
| 250138104141 | LUDLOW | HAMPDEN | - | 1 | 128 | - |
| 250138104121 | LUDLOW | HAMPDEN | 1 | 2 | 62 | - |
| 250138104122 | LUDLOW | HAMPDEN | 1 | 2 | 33 | - |
| 250138104041 | LUDLOW | HAMPDEN | 3 | 7 | 30 | - |
| 250138104143 | LUDLOW | HAMPDEN | 1 | 4 | 27 | - |
| 250138104123 | LUDLOW | HAMPDEN | - | - | 26 | - |
| 250138104031 | LUDLOW | HAMPDEN | 2 | 6 | 15 | - |
| 250138104033 | LUDLOW | HAMPDEN | 2 | 4 | 15 | - |
| 250138104032 | LUDLOW | HAMPDEN | 4 | 10 | 8 | 110 |
| 250138137022 | MONSON | HAMPDEN | - | - | 22 | - |
| 250138137012 | MONSON | HAMPDEN | - | - | 12 | - |
| 250138137011 | MONSON | HAMPDEN | - | - | 6 | - |
| 250138137021 | MONSON / PALMER | HAMPDEN | - | - | 75 | - |
| 250138137023 | MONSON / PALMER | HAMPDEN | - | - | 30 | - |
| 250138130021 | MONTGOMERY | HAMPDEN | - | - | - | - |
| 250158216012 | NORTHAMPTON | HAMPSHIRE | 5 | 11 | 183 | - |
| 250158222003 | NORTHAMPTON | HAMPSHIRE | 1 | 4 | 87 | - |
| 250158222001 | NORTHAMPTON | HAMPSHIRE | 3 | 7 | 81 | - |
| 250158219033 | NORTHAMPTON | HAMPSHIRE | 6 | 16 | 35 | 112 |
| 250158219043 | NORTHAMPTON | HAMPSHIRE | 6 | 15 | 28 | 333 |
| 250158216011 | NORTHAMPTON | HAMPSHIRE | 4 | 9 | 28 | - |
| 250158219031 | NORTHAMPTON | HAMPSHIRE | 7 | 18 | 15 | - |
| 250158216021 | NORTHAMPTON | HAMPSHIRE | 3 | 7 | 16 | - |
| 250158219012 | NORTHAMPTON | HAMPSHIRE | 5 | 11 | 16 | 101 |
| 250158217001 | NORTHAMPTON | HAMPSHIRE | 3 | 8 | 9 | - |
| 250158222002 | NORTHAMPTON | HAMPSHIRE | 1 | 3 | 8 | - |
| 250158216023 | NORTHAMPTON | HAMPSHIRE | 3 | 8 | 7 | - |
| 250158216022 | NORTHAMPTON | HAMPSHIRE | 5 | 13 | 3 | - |
| 250158219042 | NORTHAMPTON | HAMPSHIRE | 5 | 12 | 4 | 220 |
| 250158219041 | NORTHAMPTON | HAMPSHIRE | 4 | 11 | 3 | - |
| 250158217004 | NORTHAMPTON | HAMPSHIRE | 1 | 3 | 2 | - |
| 250158220001 | NORTHAMPTON | HAMPSHIRE | 2 | 5 | 3 | 243 |
| 250158219011 | NORTHAMPTON | HAMPSHIRE | 7 | 17 | 3 | - |
| 250158217002 | NORTHAMPTON | HAMPSHIRE | 2 | 5 | 2 | - |
| 250158217003 | NORTHAMPTON | HAMPSHIRE | - | - | - | - |
| 250158219032 | NORTHAMPTON | HAMPSHIRE | - | - | - | - |
| 250138101001 | PALMER | HAMPDEN | - | - | 204 | - |
| 250138101003 | PALMER | HAMPDEN | - | - | 81 | - |
| 250138101002 | PALMER | HAMPDEN | - | - | 69 | - |
| 250138101004 | PALMER | HAMPDEN | - | - | 32 | - |
| 250138102001 | PALMER | HAMPDEN | - | - | 23 | - |
| 250138103001 | PALMER | HAMPDEN | - | - | 7 | - |
| 250138102002 | PALMER | HAMPDEN | - | - | 6 | - |
| 250138102003 | PALMER | HAMPDEN | - | - | 1 | - |
| 250138103002 | PALMER / MONSON | HAMPDEN | - | - | 44 | - |
| 250158202053 | PELHAM | HAMPSHIRE | - | - | 385 | - |
| 250158227001 | PLAINFIELD | HAMPSHIRE | 1 | 2 | 98 | - |
| 250138130022 | RUSSELL | HAMPDEN | - | - | 21 | - |
| 250158210004 | SOUTH HADLEY | HAMPSHIRE | - | - | 78 | - |
| 250158213002 | SOUTH HADLEY | HAMPSHIRE | - | - | 68 | - |
| 250158211013 | SOUTH HADLEY | HAMPSHIRE | - | - | 24 | - |
| 250158210003 | SOUTH HADLEY | HAMPSHIRE | - | - | 18 | - |
| 250158211014 | SOUTH HADLEY | HAMPSHIRE | - | - | 8 | - |
| 250158211012 | SOUTH HADLEY | HAMPSHIRE | - | - | 6 | - |
| 250158211011 | SOUTH HADLEY | HAMPSHIRE | - | - | 1 | - |
| 250158210002 | SOUTH HADLEY | HAMPSHIRE | - | - | 1 | - |
| 250158213003 | SOUTH HADLEY | HAMPSHIRE | - | - | - | - |
| 250158213001 | SOUTH HADLEY | HAMPSHIRE | - | - | - | - |
| 250158212001 | SOUTH HADLEY | HAMPSHIRE | - | - | - | - |
| 250158210001 | SOUTH HADLEY | HAMPSHIRE | - | - | - | - |
| 250158225002 | SOUTHAMPTON | HAMPSHIRE | - | - | 61 | - |

# Attachment B: EVSE Demand Distribution: Levels 1 and 2

| | | | Multi-Unit Dwellings | | | |
|---|---|---|---|---|---|---|
| BlockGroupID | TownName | County | Level 1 Chargers | Level 2 Chargers | Public Level 2 Chargers | Private Workspace Level 2 Chargers |
| 250158225004 | SOUTHAMPTON | HAMPSHIRE | - | - | 18 | - |
| 250158225003 | SOUTHAMPTON | HAMPSHIRE | - | - | 13 | - |
| 250158225001 | SOUTHAMPTON | HAMPSHIRE | - | - | 7 | - |
| 250138131021 | SOUTHWICK | HAMPDEN | - | - | 165 | - |
| 250138131013 | SOUTHWICK | HAMPDEN | - | - | 143 | - |
| 250138131011 | SOUTHWICK | HAMPDEN | - | - | 104 | - |
| 250138131022 | SOUTHWICK | HAMPDEN | - | - | 19 | - |
| 250138131012 | SOUTHWICK | HAMPDEN | - | - | 17 | - |
| 250138002021 | SPRINGFIELD | HAMPDEN | 1 | 3 | 501 | - |
| 250138015031 | SPRINGFIELD | HAMPDEN | 4 | 9 | 261 | - |
| 250138014011 | SPRINGFIELD | HAMPDEN | 6 | 15 | 119 | - |
| 250138003001 | SPRINGFIELD | HAMPDEN | 2 | 4 | 96 | - |
| 250138008002 | SPRINGFIELD | HAMPDEN | 3 | 7 | 79 | - |
| 250138015032 | SPRINGFIELD | HAMPDEN | 2 | 6 | 67 | - |
| 250138015022 | SPRINGFIELD | HAMPDEN | 1 | 3 | 52 | - |
| 250138015033 | SPRINGFIELD | HAMPDEN | 1 | 2 | 52 | - |
| 250138016053 | SPRINGFIELD | HAMPDEN | 1 | 1 | 48 | - |
| 250138013004 | SPRINGFIELD | HAMPDEN | 2 | 5 | 41 | 80 |
| 250138004005 | SPRINGFIELD | HAMPDEN | 7 | 18 | 38 | 96 |
| 250138021015 | SPRINGFIELD | HAMPDEN | 3 | 8 | 37 | - |
| 250138011011 | SPRINGFIELD | HAMPDEN | 4 | 11 | 35 | 670 |
| 250138016042 | SPRINGFIELD | HAMPDEN | - | - | 32 | - |
| 250138002013 | SPRINGFIELD | HAMPDEN | 2 | 6 | 28 | - |
| 250138020003 | SPRINGFIELD | HAMPDEN | 4 | 9 | 26 | 121 |
| 250138024004 | SPRINGFIELD | HAMPDEN | - | - | 24 | - |
| 250138001011 | SPRINGFIELD | HAMPDEN | 3 | 6 | 22 | - |
| 250138001023 | SPRINGFIELD | HAMPDEN | 7 | 18 | 20 | 104 |
| 250138013003 | SPRINGFIELD | HAMPDEN | 5 | 12 | 20 | 120 |
| 250138015021 | SPRINGFIELD | HAMPDEN | 2 | 4 | 21 | - |
| 250138016051 | SPRINGFIELD | HAMPDEN | 8 | 19 | 20 | - |
| 250138015023 | SPRINGFIELD | HAMPDEN | 3 | 9 | 16 | 80 |
| 250138023001 | SPRINGFIELD | HAMPDEN | 3 | 8 | 16 | 115 |
| 250138016014 | SPRINGFIELD | HAMPDEN | 1 | 4 | 17 | - |
| 250138007001 | SPRINGFIELD | HAMPDEN | 2 | 5 | 15 | 173 |
| 250138006003 | SPRINGFIELD | HAMPDEN | 1 | 4 | 14 | 216 |
| 250138019012 | SPRINGFIELD | HAMPDEN | 12 | 29 | 14 | 131 |
| 250138003004 | SPRINGFIELD | HAMPDEN | 1 | 3 | 14 | - |
| 250138016032 | SPRINGFIELD | HAMPDEN | - | 1 | 15 | - |
| 250138015013 | SPRINGFIELD | HAMPDEN | 2 | 4 | 15 | - |
| 250138012001 | SPRINGFIELD | HAMPDEN | 6 | 15 | 13 | 336 |
| 250138001022 | SPRINGFIELD | HAMPDEN | 4 | 10 | 14 | 90 |
| 250138019021 | SPRINGFIELD | HAMPDEN | 11 | 28 | 11 | 353 |
| 250138018001 | SPRINGFIELD | HAMPDEN | 5 | 11 | 12 | 117 |
| 250138022003 | SPRINGFIELD | HAMPDEN | 5 | 13 | 11 | 200 |
| 250138001021 | SPRINGFIELD | HAMPDEN | 8 | 20 | 12 | 87 |
| 250138001013 | SPRINGFIELD | HAMPDEN | 4 | 9 | 12 | - |
| 250138012003 | SPRINGFIELD | HAMPDEN | 5 | 13 | 11 | 178 |
| 250138013002 | SPRINGFIELD | HAMPDEN | 5 | 11 | 9 | - |
| 250138019011 | SPRINGFIELD | HAMPDEN | 8 | 19 | 9 | 249 |
| 250138015014 | SPRINGFIELD | HAMPDEN | 1 | 3 | 9 | 203 |
| 250138009002 | SPRINGFIELD | HAMPDEN | 8 | 19 | 7 | 189 |
| 250138012002 | SPRINGFIELD | HAMPDEN | 8 | 21 | 8 | 171 |
| 250138011021 | SPRINGFIELD | HAMPDEN | 4 | 10 | 8 | 286 |
| 250138009001 | SPRINGFIELD | HAMPDEN | 4 | 9 | 6 | 312 |
| 250138014022 | SPRINGFIELD | HAMPDEN | 4 | 10 | 6 | 83 |
| 250138022001 | SPRINGFIELD | HAMPDEN | 4 | 11 | 7 | 157 |
| 250138026014 | SPRINGFIELD | HAMPDEN | 6 | 14 | 7 | 211 |
| 250138009003 | SPRINGFIELD | HAMPDEN | 5 | 14 | 7 | 157 |
| 250138002014 | SPRINGFIELD | HAMPDEN | 2 | 6 | 6 | - |
| 250138014012 | SPRINGFIELD | HAMPDEN | 7 | 18 | 5 | 138 |
| 250138002012 | SPRINGFIELD | HAMPDEN | 3 | 8 | 6 | - |

# Attachment B: EVSE Demand Distribution: Levels 1 and 2

| | | | Multi-Unit Dwellings | | | |
|---|---|---|---|---|---|---|
| BlockGroupID | TownName | County | Level 1 Chargers | Level 2 Chargers | Public Level 2 Chargers | Private Workspace Level 2 Chargers |
| 250138016023 | SPRINGFIELD | HAMPDEN | - | - | 6 | - |
| 250138016052 | SPRINGFIELD | HAMPDEN | - | - | 6 | - |
| 250138006002 | SPRINGFIELD | HAMPDEN | 5 | 12 | 4 | - |
| 250138018005 | SPRINGFIELD | HAMPDEN | 3 | 8 | 4 | - |
| 250138023005 | SPRINGFIELD | HAMPDEN | 5 | 12 | 4 | 210 |
| 250138011022 | SPRINGFIELD | HAMPDEN | 1 | 3 | 4 | 219 |
| 250138002015 | SPRINGFIELD | HAMPDEN | 2 | 5 | 4 | - |
| 250138023002 | SPRINGFIELD | HAMPDEN | 7 | 17 | 4 | - |
| 250138024003 | SPRINGFIELD | HAMPDEN | - | - | 3 | - |
| 250138019022 | SPRINGFIELD | HAMPDEN | 5 | 14 | 3 | 119 |
| 250138018004 | SPRINGFIELD | HAMPDEN | 3 | 7 | 3 | 133 |
| 250138020002 | SPRINGFIELD | HAMPDEN | 9 | 21 | 2 | 155 |
| 250138020001 | SPRINGFIELD | HAMPDEN | 3 | 9 | 2 | - |
| 250138013001 | SPRINGFIELD | HAMPDEN | 2 | 6 | 2 | - |
| 250138023003 | SPRINGFIELD | HAMPDEN | 11 | 27 | 3 | 194 |
| 250138017003 | SPRINGFIELD | HAMPDEN | 6 | 14 | 2 | - |
| 250138026013 | SPRINGFIELD | HAMPDEN | 5 | 13 | 2 | - |
| 250138021013 | SPRINGFIELD | HAMPDEN | 4 | 10 | 3 | 136 |
| 250138025006 | SPRINGFIELD | HAMPDEN | 2 | 6 | 2 | - |
| 250138015012 | SPRINGFIELD | HAMPDEN | - | - | 3 | - |
| 250138016012 | SPRINGFIELD | HAMPDEN | - | - | 3 | - |
| 250138022002 | SPRINGFIELD | HAMPDEN | 5 | 11 | 1 | 143 |
| 250138017004 | SPRINGFIELD | HAMPDEN | 4 | 11 | 1 | - |
| 250138005002 | SPRINGFIELD | HAMPDEN | 4 | 10 | 1 | - |
| 250138006001 | SPRINGFIELD | HAMPDEN | 4 | 10 | 1 | 132 |
| 250138019023 | SPRINGFIELD | HAMPDEN | 2 | 6 | 1 | 91 |
| 250138017001 | SPRINGFIELD | HAMPDEN | 5 | 13 | 2 | - |
| 250138015011 | SPRINGFIELD | HAMPDEN | 4 | 9 | 1 | - |
| 250138023004 | SPRINGFIELD | HAMPDEN | 4 | 9 | 1 | - |
| 250138018002 | SPRINGFIELD | HAMPDEN | 3 | 8 | 1 | 148 |
| 250138017006 | SPRINGFIELD | HAMPDEN | 3 | 7 | 2 | 82 |
| 250138025003 | SPRINGFIELD | HAMPDEN | 2 | 6 | 1 | - |
| 250138004002 | SPRINGFIELD | HAMPDEN | 2 | 5 | 1 | - |
| 250138004001 | SPRINGFIELD | HAMPDEN | 4 | 10 | 2 | 99 |
| 250138025005 | SPRINGFIELD | HAMPDEN | 2 | 5 | 1 | - |
| 250138026011 | SPRINGFIELD | HAMPDEN | 1 | 3 | 2 | - |
| 250138004003 | SPRINGFIELD | HAMPDEN | 5 | 12 | 2 | - |
| 250138026012 | SPRINGFIELD | HAMPDEN | 4 | 10 | 1 | - |
| 250138016031 | SPRINGFIELD | HAMPDEN | 3 | 7 | 1 | - |
| 250138008001 | SPRINGFIELD | HAMPDEN | 9 | 22 | - | 216 |
| 250138007002 | SPRINGFIELD | HAMPDEN | 7 | 18 | - | - |
| 250138005001 | SPRINGFIELD | HAMPDEN | 5 | 13 | - | - |
| 250138018003 | SPRINGFIELD | HAMPDEN | 2 | 4 | - | 103 |
| 250138003002 | SPRINGFIELD | HAMPDEN | 2 | 5 | - | - |
| 250138001012 | SPRINGFIELD | HAMPDEN | 2 | 6 | - | - |
| 250138003003 | SPRINGFIELD | HAMPDEN | 2 | 5 | 1 | - |
| 250138016021 | SPRINGFIELD | HAMPDEN | 8 | 19 | - | - |
| 250138021011 | SPRINGFIELD | HAMPDEN | 8 | 19 | - | 172 |
| 250138002011 | SPRINGFIELD | HAMPDEN | 5 | 12 | 1 | 118 |
| 250138026015 | SPRINGFIELD | HAMPDEN | 3 | 8 | 1 | - |
| 250138016013 | SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138017002 | SPRINGFIELD | HAMPDEN | 5 | 12 | - | - |
| 250138004004 | SPRINGFIELD | HAMPDEN | 2 | 6 | - | 91 |
| 250138014021 | SPRINGFIELD | HAMPDEN | 1 | 3 | - | - |
| 250138026021 | SPRINGFIELD | HAMPDEN | 1 | 3 | - | - |
| 250138021016 | SPRINGFIELD | HAMPDEN | 4 | 11 | - | - |
| 250138021014 | SPRINGFIELD | HAMPDEN | 4 | 9 | - | - |
| 250138021012 | SPRINGFIELD | HAMPDEN | 3 | 6 | - | 110 |
| 250138026016 | SPRINGFIELD | HAMPDEN | 2 | 5 | - | - |
| 250138005003 | SPRINGFIELD | HAMPDEN | 1 | 2 | - | 404 |
| 250138017005 | SPRINGFIELD | HAMPDEN | - | 1 | - | - |

# Attachment B: EVSE Demand Distribution: Levels 1 and 2

| | | | Multi-Unit Dwellings | | | |
|---|---|---|---|---|---|---|
| BlockGroupID | TownName | County | Level 1 Chargers | Level 2 Chargers | Public Level 2 Chargers | Private Workspace Level 2 Chargers |
| 250138025004 | SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138024001 | SPRINGFIELD | HAMPDEN | - | - | 1 | - |
| 250138024002 | SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138025001 | SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138025002 | SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138016022 | SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138016011 | SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138016041 | SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138130012 | TOLLAND / BLANDFORD | HAMPDEN | 1 | 2 | 30 | - |
| 250138138011 | WALES | HAMPDEN | - | - | 37 | - |
| 250158201011 | WARE | HAMPSHIRE | 1 | 2 | 128 | - |
| 250158201013 | WARE | HAMPSHIRE | 2 | 6 | 48 | - |
| 250158201022 | WARE | HAMPSHIRE | 7 | 16 | 41 | - |
| 250158201014 | WARE | HAMPSHIRE | 1 | 2 | 38 | - |
| 250158201021 | WARE | HAMPSHIRE | 3 | 8 | 21 | - |
| 250158201012 | WARE | HAMPSHIRE | 4 | 10 | 15 | - |
| 250158201023 | WARE | HAMPSHIRE | 10 | 24 | 3 | - |
| 250138123001 | WEST SPRINGFIELD | HAMPDEN | - | - | 566 | - |
| 250138122013 | WEST SPRINGFIELD | HAMPDEN | - | - | 267 | - |
| 250138122023 | WEST SPRINGFIELD | HAMPDEN | - | - | 133 | - |
| 250138123003 | WEST SPRINGFIELD | HAMPDEN | - | - | 118 | - |
| 250138122022 | WEST SPRINGFIELD | HAMPDEN | - | - | 56 | - |
| 250138122024 | WEST SPRINGFIELD | HAMPDEN | - | - | 56 | - |
| 250138123002 | WEST SPRINGFIELD | HAMPDEN | - | - | 21 | 79 |
| 250138122021 | WEST SPRINGFIELD | HAMPDEN | - | - | 17 | - |
| 250138122012 | WEST SPRINGFIELD | HAMPDEN | - | - | 16 | 133 |
| 250138122011 | WEST SPRINGFIELD | HAMPDEN | - | - | 12 | 79 |
| 250138124012 | WEST SPRINGFIELD | HAMPDEN | - | - | 11 | - |
| 250138124032 | WEST SPRINGFIELD | HAMPDEN | - | - | 9 | - |
| 250138123004 | WEST SPRINGFIELD | HAMPDEN | - | - | 10 | 209 |
| 250138123005 | WEST SPRINGFIELD | HAMPDEN | - | - | 8 | 193 |
| 250138124031 | WEST SPRINGFIELD | HAMPDEN | - | - | 5 | 92 |
| 250138124033 | WEST SPRINGFIELD | HAMPDEN | - | - | 1 | - |
| 250138124034 | WEST SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138124041 | WEST SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138124014 | WEST SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138124042 | WEST SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138124011 | WEST SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138124013 | WEST SPRINGFIELD | HAMPDEN | - | - | - | - |
| 250138125002 | WESTFIELD | HAMPDEN | - | - | 1,674 | - |
| 250138128003 | WESTFIELD | HAMPDEN | - | - | 763 | - |
| 250138125005 | WESTFIELD | HAMPDEN | - | - | 264 | - |
| 250138125003 | WESTFIELD | HAMPDEN | - | - | 200 | - |
| 250138126003 | WESTFIELD | HAMPDEN | - | - | 114 | - |
| 250138129022 | WESTFIELD | HAMPDEN | - | - | 98 | - |
| 250138127021 | WESTFIELD | HAMPDEN | - | - | 74 | - |
| 250138126002 | WESTFIELD | HAMPDEN | - | - | 38 | - |
| 250138127024 | WESTFIELD | HAMPDEN | - | - | 32 | 164 |
| 250138125004 | WESTFIELD | HAMPDEN | - | - | 27 | - |
| 250138128001 | WESTFIELD | HAMPDEN | - | - | 25 | - |
| 250138125001 | WESTFIELD | HAMPDEN | - | - | 22 | - |
| 250138126001 | WESTFIELD | HAMPDEN | - | - | 19 | - |
| 250138127022 | WESTFIELD | HAMPDEN | - | - | 18 | 145 |
| 250138129011 | WESTFIELD | HAMPDEN | - | - | 9 | - |
| 250138128004 | WESTFIELD | HAMPDEN | - | - | 8 | - |
| 250138127011 | WESTFIELD | HAMPDEN | - | - | 7 | - |
| 250138127023 | WESTFIELD | HAMPDEN | - | - | 5 | 103 |
| 250138129021 | WESTFIELD | HAMPDEN | - | - | 4 | - |
| 250138127012 | WESTFIELD | HAMPDEN | - | - | 3 | 75 |
| 250138129012 | WESTFIELD | HAMPDEN | - | - | 3 | - |
| 250138126004 | WESTFIELD | HAMPDEN | - | - | 2 | - |

# Attachment B: EVSE Demand Distribution: Levels 1 and 2

| | | | Multi-Unit Dwellings | | | |
|---|---|---|---|---|---|---|
| **BlockGroupID** | **TownName** | **County** | **Level 1 Chargers** | **Level 2 Chargers** | **Public Level 2 Chargers** | **Private Workspace Level 2 Chargers** |
| 250138128002 | WESTFIELD | HAMPDEN | - | - | 1 | - |
| 250138127013 | WESTFIELD | HAMPDEN | - | - | - | 122 |
| 250138129013 | WESTFIELD | HAMPDEN | - | - | - | - |
| 250138129031 | WESTFIELD | HAMPDEN | - | - | - | - |
| 250138129023 | WESTFIELD | HAMPDEN | - | - | - | - |
| 250158226031 | WESTHAMPTON | HAMPSHIRE | - | - | 84 | - |
| 250138136011 | WILBRAHAM | HAMPDEN | - | - | 335 | - |
| 250138136012 | WILBRAHAM | HAMPDEN | - | - | 17 | - |
| 250138136015 | WILBRAHAM | HAMPDEN | - | - | 32 | - |
| 250138136013 | WILBRAHAM | HAMPDEN | - | - | 23 | - |
| 250138136022 | WILBRAHAM | HAMPDEN | - | - | 5 | - |
| 250138136021 | WILBRAHAM | HAMPDEN | - | - | - | - |
| 250138136014 | WILBRAHAM | HAMPDEN | - | - | - | - |
| 250138136023 | WILBRAHAM | HAMPDEN | - | - | - | - |
| 250158226073 | WILLIAMSBURG | HAMPSHIRE | 3 | 9 | 55 | - |
| 250158226072 | WILLIAMSBURG | HAMPSHIRE | 1 | 2 | 4 | - |
| 250158227003 | WORTHINGTON / MIDD | HAMPSHIRE | 1 | 2 | 22 | - |
| | | **Total** | **704** | **1,749** | **16,349** | **14,771** |

# Attachment C

## EVSE Deployment Prioritization: Residential and Public Levels 1 and 2

# Attachment C: EVSE Deployment Prioritization: Residential and Public Levels 1 and 2

| BlockGroupID | TownName | County | Multi-Unit Dwellings: Level 1 and Level 2 | Public: Level 2 |
|---|---|---|---|---|
| 250138132054 | AGAWAM | HAMPDEN | 367 | 9 |
| 250138132082 | AGAWAM | HAMPDEN | 202 | 17 |
| 250138132071 | AGAWAM | HAMPDEN | 367 | 34 |
| 250138132061 | AGAWAM | HAMPDEN | 367 | 58 |
| 250138132063 | AGAWAM | HAMPDEN | 367 | 91 |
| 250138132091 | AGAWAM | HAMPDEN | 367 | 97 |
| 250138132051 | AGAWAM | HAMPDEN | 264 | 147 |
| 250138132073 | AGAWAM | HAMPDEN | 367 | 204 |
| 250138132093 | AGAWAM | HAMPDEN | 264 | 208 |
| 250138132062 | AGAWAM | HAMPDEN | 367 | 220 |
| 250138132072 | AGAWAM | HAMPDEN | 264 | 241 |
| 250138132081 | AGAWAM | HAMPDEN | 367 | 269 |
| 250138132042 | AGAWAM | HAMPDEN | 264 | 277 |
| 250138132052 | AGAWAM | HAMPDEN | 367 | 302 |
| 250138132041 | AGAWAM | HAMPDEN | 367 | 329 |
| 250138132053 | AGAWAM | HAMPDEN | 367 | 428 |
| 250138132092 | AGAWAM | HAMPDEN | 367 | 428 |
| 250158208011 | AMHERST | HAMPSHIRE | 264 | 26 |
| 250158203001 | AMHERST | HAMPSHIRE | 264 | 32 |
| 250158205007 | AMHERST | HAMPSHIRE | 264 | 81 |
| 250158205003 | AMHERST | HAMPSHIRE | 264 | 140 |
| 250158207001 | AMHERST | HAMPSHIRE | 218 | 151 |
| 250158208012 | AMHERST | HAMPSHIRE | 218 | 175 |
| 250158205001 | AMHERST | HAMPSHIRE | 218 | 225 |
| 250158203005 | AMHERST | HAMPSHIRE | 264 | 229 |
| 250158206001 | AMHERST | HAMPSHIRE | 264 | 229 |
| 250158205004 | AMHERST | HAMPSHIRE | 218 | 238 |
| 250158207003 | AMHERST | HAMPSHIRE | 264 | 265 |
| 250158205005 | AMHERST | HAMPSHIRE | 218 | 314 |
| 250158208014 | AMHERST | HAMPSHIRE | 264 | 322 |
| 250158208013 | AMHERST | HAMPSHIRE | 218 | 348 |
| 250158205002 | AMHERST | HAMPSHIRE | 264 | 353 |
| 250158204001 | AMHERST | HAMPSHIRE | 218 | 383 |
| 250158205006 | AMHERST | HAMPSHIRE | 264 | 392 |
| 250158203003 | AMHERST | HAMPSHIRE | 264 | 392 |
| 250158208021 | AMHERST | HAMPSHIRE | 264 | 392 |
| 250158207002 | AMHERST | HAMPSHIRE | 264 | 392 |
| 250158203002 | AMHERST | HAMPSHIRE | 264 | 392 |
| 250158203004 | AMHERST | HAMPSHIRE | 264 | 392 |
| 250158202052 | BELCHERTOWN | HAMPSHIRE | 144 | 49 |
| 250158202071 | BELCHERTOWN | HAMPSHIRE | 29 | 70 |
| 250158202072 | BELCHERTOWN | HAMPSHIRE | 154 | 111 |
| 250158202073 | BELCHERTOWN | HAMPSHIRE | 182 | 115 |
| 250158202063 | BELCHERTOWN | HAMPSHIRE | 190 | 203 |
| 250158202061 | BELCHERTOWN | HAMPSHIRE | 367 | 204 |
| 250158202051 | BELCHERTOWN | HAMPSHIRE | 182 | 302 |
| 250158202062 | BELCHERTOWN | HAMPSHIRE | 174 | 392 |
| 250138138021 | BRIMFIELD | HAMPDEN | 196 | 15 |
| 250138138022 | BRIMFIELD | HAMPDEN | 190 | 125 |
| 250138130011 | CHESTER | HAMPDEN | 367 | 57 |
| 250158226074 | CHESTERFIELD | HAMPSHIRE | 190 | 216 |
| 250138106012 | CHICOPEE | HAMPDEN | 218 | 14 |
| 250138106021 | CHICOPEE | HAMPDEN | 264 | 37 |
| 250138111022 | CHICOPEE | HAMPDEN | 264 | 69 |
| 250138113024 | CHICOPEE | HAMPDEN | 367 | 78 |
| 250138106011 | CHICOPEE | HAMPDEN | 218 | 92 |
| 250138106013 | CHICOPEE | HAMPDEN | 264 | 101 |
| 250138113012 | CHICOPEE | HAMPDEN | 367 | 107 |
| 250138107001 | CHICOPEE | HAMPDEN | 264 | 110 |
| 250138111012 | CHICOPEE | HAMPDEN | 218 | 116 |
| 250138113013 | CHICOPEE | HAMPDEN | 218 | 120 |
| 250138109012 | CHICOPEE | HAMPDEN | 199 | 123 |

# Attachment C: EVSE Deployment Prioritization: Residential and Public Levels 1 and 2

| BlockGroupID | TownName | County | Multi-Unit Dwellings: Level 1 and Level 2 | Public: Level 2 |
|---|---|---|---|---|
| 250138110003 | CHICOPEE | HAMPDEN | 264 | 132 |
| 250138113025 | CHICOPEE | HAMPDEN | 264 | 140 |
| 250138108002 | CHICOPEE | HAMPDEN | 202 | 144 |
| 250138111014 | CHICOPEE | HAMPDEN | 202 | 183 |
| 250138113022 | CHICOPEE | HAMPDEN | 202 | 183 |
| 250138109011 | CHICOPEE | HAMPDEN | 202 | 183 |
| 250138112001 | CHICOPEE | HAMPDEN | 202 | 199 |
| 250138108001 | CHICOPEE | HAMPDEN | 218 | 202 |
| 250138109023 | CHICOPEE | HAMPDEN | 218 | 213 |
| 250138110005 | CHICOPEE | HAMPDEN | 367 | 232 |
| 250138110001 | CHICOPEE | HAMPDEN | 218 | 247 |
| 250138110004 | CHICOPEE | HAMPDEN | 264 | 249 |
| 250138112002 | CHICOPEE | HAMPDEN | 367 | 256 |
| 250138107005 | CHICOPEE | HAMPDEN | 202 | 262 |
| 250138111021 | CHICOPEE | HAMPDEN | 218 | 264 |
| 250138108003 | CHICOPEE | HAMPDEN | 264 | 265 |
| 250138113011 | CHICOPEE | HAMPDEN | 264 | 265 |
| 250138111013 | CHICOPEE | HAMPDEN | 264 | 277 |
| 250138112003 | CHICOPEE | HAMPDEN | 264 | 294 |
| 250138111024 | CHICOPEE | HAMPDEN | 218 | 314 |
| 250138107003 | CHICOPEE | HAMPDEN | 218 | 314 |
| 250138107004 | CHICOPEE | HAMPDEN | 264 | 322 |
| 250138111011 | CHICOPEE | HAMPDEN | 202 | 338 |
| 250138113014 | CHICOPEE | HAMPDEN | 218 | 348 |
| 250138111023 | CHICOPEE | HAMPDEN | 264 | 353 |
| 250138107002 | CHICOPEE | HAMPDEN | 264 | 353 |
| 250138109022 | CHICOPEE | HAMPDEN | 264 | 353 |
| 250138112004 | CHICOPEE | HAMPDEN | 202 | 378 |
| 250138113023 | CHICOPEE | HAMPDEN | 218 | 383 |
| 250138109024 | CHICOPEE | HAMPDEN | 218 | 383 |
| 250138110002 | CHICOPEE | HAMPDEN | 264 | 392 |
| 250138109021 | CHICOPEE | HAMPDEN | 264 | 392 |
| 250138113021 | CHICOPEE | HAMPDEN | 367 | 428 |
| 250158227002 | CUMMINGTON | HAMPSHIRE | 168 | 94 |
| 250138134032 | EAST LONGMEADOW | HAMPDEN | 367 | 61 |
| 250138134012 | EAST LONGMEADOW | HAMPDEN | 218 | 72 |
| 250138134043 | EAST LONGMEADOW | HAMPDEN | 264 | 81 |
| 250138134011 | EAST LONGMEADOW | HAMPDEN | 367 | 97 |
| 250138134013 | EAST LONGMEADOW | HAMPDEN | 367 | 111 |
| 250138134014 | EAST LONGMEADOW | HAMPDEN | 367 | 256 |
| 250138134042 | EAST LONGMEADOW | HAMPDEN | 264 | 353 |
| 250138134031 | EAST LONGMEADOW | HAMPDEN | 264 | 392 |
| 250138134041 | EAST LONGMEADOW | HAMPDEN | 367 | 428 |
| 250158224025 | EASTHAMPTON | HAMPSHIRE | 218 | 54 |
| 250158224011 | EASTHAMPTON | HAMPSHIRE | 264 | 125 |
| 250158224024 | EASTHAMPTON | HAMPSHIRE | 264 | 132 |
| 250158224021 | EASTHAMPTON | HAMPSHIRE | 202 | 191 |
| 250158223001 | EASTHAMPTON | HAMPSHIRE | 264 | 193 |
| 250158224014 | EASTHAMPTON | HAMPSHIRE | 218 | 213 |
| 250158224012 | EASTHAMPTON | HAMPSHIRE | 264 | 216 |
| 250158224023 | EASTHAMPTON | HAMPSHIRE | 367 | 256 |
| 250158224022 | EASTHAMPTON | HAMPSHIRE | 367 | 284 |
| 250158223002 | EASTHAMPTON | HAMPSHIRE | 264 | 322 |
| 250158223003 | EASTHAMPTON | HAMPSHIRE | 367 | 329 |
| 250158223004 | EASTHAMPTON | HAMPSHIRE | 202 | 378 |
| 250158224013 | EASTHAMPTON | HAMPSHIRE | 264 | 392 |
| 250158226071 | GOSHEN | HAMPSHIRE | 182 | 75 |
| 250158209002 | GRANBY | HAMPSHIRE | 218 | 29 |
| 250158209003 | GRANBY | HAMPSHIRE | 367 | 63 |
| 250158209001 | GRANBY | HAMPSHIRE | 367 | 97 |
| 250138130023 | GRANVILLE | HAMPDEN | 182 | 5 |
| 250158214004 | HADLEY | HAMPSHIRE | 264 | 3 |

# Attachment C: EVSE Deployment Prioritization: Residential and Public Levels 1 and 2

| BlockGroupID | TownName | County | Multi-Unit Dwellings: Level 1 and Level 2 | Public: Level 2 |
|---|---|---|---|---|
| 250158214001 | HADLEY | HAMPSHIRE | 367 | 50 |
| 250158214002 | HADLEY | HAMPSHIRE | 264 | 125 |
| 250158214003 | HADLEY | HAMPSHIRE | 367 | 148 |
| 250138135004 | HAMPDEN | HAMPDEN | 218 | 36 |
| 250138135003 | HAMPDEN | HAMPDEN | 264 | 187 |
| 250138135001 | HAMPDEN | HAMPDEN | 264 | 392 |
| 250138135002 | HAMPDEN | HAMPDEN | 367 | 428 |
| 250158215003 | HATFIELD | HAMPSHIRE | 144 | 16 |
| 250158215002 | HATFIELD | HAMPSHIRE | 168 | 21 |
| 250158215001 | HATFIELD | HAMPSHIRE | 157 | 188 |
| 250138138012 | HOLLAND | HAMPDEN | 367 | 104 |
| 250138138013 | HOLLAND | HAMPDEN | 264 | 118 |
| 250138121032 | HOLYOKE | HAMPDEN | 1 | 8 |
| 250138121031 | HOLYOKE | HAMPDEN | 99 | 64 |
| 250138121012 | HOLYOKE | HAMPDEN | 264 | 105 |
| 250138121041 | HOLYOKE | HAMPDEN | 20 | 150 |
| 250138114001 | HOLYOKE | HAMPDEN | 55 | 161 |
| 250138120013 | HOLYOKE | HAMPDEN | 31 | 161 |
| 250138117002 | HOLYOKE | HAMPDEN | 25 | 164 |
| 250138118005 | HOLYOKE | HAMPDEN | 60 | 177 |
| 250138115001 | HOLYOKE | HAMPDEN | 47 | 179 |
| 250138115002 | HOLYOKE | HAMPDEN | 79 | 179 |
| 250138117001 | HOLYOKE | HAMPDEN | 114 | 179 |
| 250138116002 | HOLYOKE | HAMPDEN | 39 | 189 |
| 250138119001 | HOLYOKE | HAMPDEN | 100 | 193 |
| 250138114002 | HOLYOKE | HAMPDEN | 31 | 209 |
| 250138121042 | HOLYOKE | HAMPDEN | 35 | 225 |
| 250138118003 | HOLYOKE | HAMPDEN | 34 | 237 |
| 250138118004 | HOLYOKE | HAMPDEN | 118 | 249 |
| 250138121011 | HOLYOKE | HAMPDEN | 367 | 256 |
| 250138120023 | HOLYOKE | HAMPDEN | 116 | 273 |
| 250138119003 | HOLYOKE | HAMPDEN | 141 | 277 |
| 250138121013 | HOLYOKE | HAMPDEN | 196 | 284 |
| 250138116003 | HOLYOKE | HAMPDEN | 92 | 289 |
| 250138120014 | HOLYOKE | HAMPDEN | 100 | 294 |
| 250138116004 | HOLYOKE | HAMPDEN | 114 | 306 |
| 250138116001 | HOLYOKE | HAMPDEN | 92 | 307 |
| 250138120022 | HOLYOKE | HAMPDEN | 131 | 322 |
| 250138118002 | HOLYOKE | HAMPDEN | 81 | 338 |
| 250138118001 | HOLYOKE | HAMPDEN | 81 | 338 |
| 250138120021 | HOLYOKE | HAMPDEN | 45 | 348 |
| 250138120024 | HOLYOKE | HAMPDEN | 118 | 353 |
| 250138120011 | HOLYOKE | HAMPDEN | 21 | 374 |
| 250138120012 | HOLYOKE | HAMPDEN | 109 | 383 |
| 250138121044 | HOLYOKE | HAMPDEN | 75 | 392 |
| 250138121043 | HOLYOKE | HAMPDEN | 131 | 392 |
| 250138119002 | HOLYOKE | HAMPDEN | 144 | 428 |
| 250158226012 | HUNTINGTON | HAMPSHIRE | 144 | 178 |
| 250158226011 | HUNTINGTON | HAMPSHIRE | 182 | 428 |
| 250138133031 | LONGMEADOW | HAMPDEN | 367 | 170 |
| 250138133041 | LONGMEADOW | HAMPDEN | 367 | 220 |
| 250138133043 | LONGMEADOW | HAMPDEN | 264 | 277 |
| 250138133032 | LONGMEADOW | HAMPDEN | 202 | 311 |
| 250138133042 | LONGMEADOW | HAMPDEN | 264 | 353 |
| 250138133014 | LONGMEADOW | HAMPDEN | 264 | 353 |
| 250138133012 | LONGMEADOW | HAMPDEN | 367 | 364 |
| 250138133013 | LONGMEADOW | HAMPDEN | 367 | 364 |
| 250138133011 | LONGMEADOW | HAMPDEN | 367 | 428 |
| 250138104142 | LUDLOW | HAMPDEN | 174 | 23 |
| 250138104141 | LUDLOW | HAMPDEN | 190 | 27 |
| 250138104121 | LUDLOW | HAMPDEN | 172 | 55 |
| 250138104122 | LUDLOW | HAMPDEN | 174 | 86 |

# Attachment C: EVSE Deployment Prioritization: Residential and Public Levels 1 and 2

| BlockGroupID | TownName | County | Multi-Unit Dwellings: Level 1 and Level 2 | Public: Level 2 |
|---|---|---|---|---|
| 250138104041 | LUDLOW | HAMPDEN | 109 | 92 |
| 250138104143 | LUDLOW | HAMPDEN | 157 | 107 |
| 250138104123 | LUDLOW | HAMPDEN | 367 | 111 |
| 250138104033 | LUDLOW | HAMPDEN | 150 | 164 |
| 250138104031 | LUDLOW | HAMPDEN | 125 | 166 |
| 250138104032 | LUDLOW | HAMPDEN | 72 | 225 |
| 250138137022 | MONSON | HAMPDEN | 367 | 130 |
| 250138137012 | MONSON | HAMPDEN | 367 | 197 |
| 250138137011 | MONSON | HAMPDEN | 367 | 256 |
| 250138137021 | MONSON / PALMER | HAMPDEN | 367 | 47 |
| 250138137023 | MONSON / PALMER | HAMPDEN | 264 | 94 |
| 250138130021 | MONTGOMERY | HAMPDEN | 367 | 428 |
| 250158216012 | NORTHAMPTON | HAMPSHIRE | 59 | 20 |
| 250158222003 | NORTHAMPTON | HAMPSHIRE | 157 | 41 |
| 250158222001 | NORTHAMPTON | HAMPSHIRE | 113 | 44 |
| 250158219033 | NORTHAMPTON | HAMPSHIRE | 26 | 85 |
| 250158219043 | NORTHAMPTON | HAMPSHIRE | 30 | 101 |
| 250158216011 | NORTHAMPTON | HAMPSHIRE | 86 | 101 |
| 250158216021 | NORTHAMPTON | HAMPSHIRE | 111 | 158 |
| 250158219012 | NORTHAMPTON | HAMPSHIRE | 61 | 160 |
| 250158219031 | NORTHAMPTON | HAMPSHIRE | 18 | 166 |
| 250158217001 | NORTHAMPTON | HAMPSHIRE | 100 | 216 |
| 250158222002 | NORTHAMPTON | HAMPSHIRE | 162 | 225 |
| 250158216023 | NORTHAMPTON | HAMPSHIRE | 100 | 241 |
| 250158219042 | NORTHAMPTON | HAMPSHIRE | 54 | 284 |
| 250158216022 | NORTHAMPTON | HAMPSHIRE | 41 | 290 |
| 250158220001 | NORTHAMPTON | HAMPSHIRE | 141 | 294 |
| 250158219041 | NORTHAMPTON | HAMPSHIRE | 66 | 302 |
| 250158219011 | NORTHAMPTON | HAMPSHIRE | 23 | 302 |
| 250158217004 | NORTHAMPTON | HAMPSHIRE | 168 | 322 |
| 250158217002 | NORTHAMPTON | HAMPSHIRE | 144 | 329 |
| 250158217003 | NORTHAMPTON | HAMPSHIRE | 218 | 383 |
| 250158219032 | NORTHAMPTON | HAMPSHIRE | 264 | 392 |
| 250138101001 | PALMER | HAMPDEN | 264 | 18 |
| 250138101003 | PALMER | HAMPDEN | 218 | 43 |
| 250138101002 | PALMER | HAMPDEN | 367 | 51 |
| 250138101004 | PALMER | HAMPDEN | 218 | 87 |
| 250138102001 | PALMER | HAMPDEN | 367 | 122 |
| 250138103001 | PALMER | HAMPDEN | 367 | 243 |
| 250138102002 | PALMER | HAMPDEN | 264 | 249 |
| 250138102003 | PALMER | HAMPDEN | 367 | 364 |
| 250138103002 | PALMER / MONSON | HAMPDEN | 367 | 71 |
| 250158202053 | PELHAM | HAMPSHIRE | 264 | 7 |
| 250158227001 | PLAINFIELD | HAMPSHIRE | 174 | 38 |
| 250138130022 | RUSSELL | HAMPDEN | 367 | 135 |
| 250158210004 | SOUTH HADLEY | HAMPSHIRE | 264 | 46 |
| 250158213002 | SOUTH HADLEY | HAMPSHIRE | 367 | 52 |
| 250158211013 | SOUTH HADLEY | HAMPSHIRE | 367 | 119 |
| 250158210003 | SOUTH HADLEY | HAMPSHIRE | 218 | 145 |
| 250158211014 | SOUTH HADLEY | HAMPSHIRE | 264 | 229 |
| 250158211012 | SOUTH HADLEY | HAMPSHIRE | 264 | 249 |
| 250158210002 | SOUTH HADLEY | HAMPSHIRE | 218 | 348 |
| 250158211011 | SOUTH HADLEY | HAMPSHIRE | 367 | 364 |
| 250158213003 | SOUTH HADLEY | HAMPSHIRE | 264 | 392 |
| 250158213001 | SOUTH HADLEY | HAMPSHIRE | 264 | 392 |
| 250158212001 | SOUTH HADLEY | HAMPSHIRE | 264 | 392 |
| 250158210001 | SOUTH HADLEY | HAMPSHIRE | 367 | 428 |
| 250158225002 | SOUTHAMPTON | HAMPSHIRE | 367 | 56 |
| 250158225004 | SOUTHAMPTON | HAMPSHIRE | 367 | 148 |
| 250158225003 | SOUTHAMPTON | HAMPSHIRE | 218 | 186 |
| 250158225001 | SOUTHAMPTON | HAMPSHIRE | 367 | 243 |
| 250138131021 | SOUTHWICK | HAMPDEN | 264 | 21 |

# Attachment C: EVSE Deployment Prioritization: Residential and Public Levels 1 and 2

| BlockGroupID | TownName | County | Multi-Unit Dwellings: Level 1 and Level 2 | Public: Level 2 |
|---|---|---|---|---|
| 250138131013 | SOUTHWICK | HAMPDEN | 367 | 24 |
| 250138131011 | SOUTHWICK | HAMPDEN | 264 | 35 |
| 250138131022 | SOUTHWICK | HAMPDEN | 367 | 143 |
| 250138131012 | SOUTHWICK | HAMPDEN | 218 | 151 |
| 250138002021 | SPRINGFIELD | HAMPDEN | 162 | 6 |
| 250138015031 | SPRINGFIELD | HAMPDEN | 85 | 13 |
| 250138014011 | SPRINGFIELD | HAMPDEN | 27 | 30 |
| 250138003001 | SPRINGFIELD | HAMPDEN | 151 | 40 |
| 250138008002 | SPRINGFIELD | HAMPDEN | 107 | 45 |
| 250138015032 | SPRINGFIELD | HAMPDEN | 127 | 53 |
| 250138015022 | SPRINGFIELD | HAMPDEN | 162 | 64 |
| 250138015033 | SPRINGFIELD | HAMPDEN | 172 | 64 |
| 250138016053 | SPRINGFIELD | HAMPDEN | 189 | 67 |
| 250138013004 | SPRINGFIELD | HAMPDEN | 138 | 73 |
| 250138004005 | SPRINGFIELD | HAMPDEN | 16 | 76 |
| 250138021015 | SPRINGFIELD | HAMPDEN | 92 | 80 |
| 250138011011 | SPRINGFIELD | HAMPDEN | 62 | 84 |
| 250138016042 | SPRINGFIELD | HAMPDEN | 264 | 88 |
| 250138002013 | SPRINGFIELD | HAMPDEN | 121 | 100 |
| 250138020003 | SPRINGFIELD | HAMPDEN | 80 | 109 |
| 250138024004 | SPRINGFIELD | HAMPDEN | 218 | 116 |
| 250138001011 | SPRINGFIELD | HAMPDEN | 116 | 124 |
| 250138015021 | SPRINGFIELD | HAMPDEN | 151 | 131 |
| 250138001023 | SPRINGFIELD | HAMPDEN | 16 | 137 |
| 250138013003 | SPRINGFIELD | HAMPDEN | 49 | 138 |
| 250138016051 | SPRINGFIELD | HAMPDEN | 14 | 139 |
| 250138016014 | SPRINGFIELD | HAMPDEN | 156 | 154 |
| 250138015023 | SPRINGFIELD | HAMPDEN | 89 | 156 |
| 250138023001 | SPRINGFIELD | HAMPDEN | 96 | 157 |
| 250138007001 | SPRINGFIELD | HAMPDEN | 134 | 161 |
| 250138016032 | SPRINGFIELD | HAMPDEN | 190 | 168 |
| 250138015013 | SPRINGFIELD | HAMPDEN | 153 | 168 |
| 250138006003 | SPRINGFIELD | HAMPDEN | 155 | 172 |
| 250138019012 | SPRINGFIELD | HAMPDEN | 2 | 173 |
| 250138001022 | SPRINGFIELD | HAMPDEN | 68 | 173 |
| 250138003004 | SPRINGFIELD | HAMPDEN | 162 | 175 |
| 250138012001 | SPRINGFIELD | HAMPDEN | 27 | 182 |
| 250138018001 | SPRINGFIELD | HAMPDEN | 57 | 190 |
| 250138001021 | SPRINGFIELD | HAMPDEN | 9 | 193 |
| 250138001013 | SPRINGFIELD | HAMPDEN | 86 | 193 |
| 250138019021 | SPRINGFIELD | HAMPDEN | 3 | 198 |
| 250138022003 | SPRINGFIELD | HAMPDEN | 41 | 199 |
| 250138012003 | SPRINGFIELD | HAMPDEN | 41 | 199 |
| 250138013002 | SPRINGFIELD | HAMPDEN | 55 | 209 |
| 250138019011 | SPRINGFIELD | HAMPDEN | 11 | 211 |
| 250138015014 | SPRINGFIELD | HAMPDEN | 160 | 212 |
| 250138012002 | SPRINGFIELD | HAMPDEN | 8 | 222 |
| 250138011021 | SPRINGFIELD | HAMPDEN | 71 | 223 |
| 250138009002 | SPRINGFIELD | HAMPDEN | 10 | 234 |
| 250138022001 | SPRINGFIELD | HAMPDEN | 62 | 234 |
| 250138026014 | SPRINGFIELD | HAMPDEN | 33 | 236 |
| 250138009003 | SPRINGFIELD | HAMPDEN | 38 | 238 |
| 250138009001 | SPRINGFIELD | HAMPDEN | 78 | 245 |
| 250138014022 | SPRINGFIELD | HAMPDEN | 67 | 246 |
| 250138002014 | SPRINGFIELD | HAMPDEN | 127 | 247 |
| 250138002012 | SPRINGFIELD | HAMPDEN | 100 | 249 |
| 250138016023 | SPRINGFIELD | HAMPDEN | 264 | 249 |
| 250138016052 | SPRINGFIELD | HAMPDEN | 264 | 249 |
| 250138014012 | SPRINGFIELD | HAMPDEN | 18 | 262 |
| 250138006002 | SPRINGFIELD | HAMPDEN | 47 | 271 |
| 250138018005 | SPRINGFIELD | HAMPDEN | 92 | 272 |
| 250138023005 | SPRINGFIELD | HAMPDEN | 49 | 273 |

# Attachment C: EVSE Deployment Prioritization: Residential and Public Levels 1 and 2

| BlockGroupID | TownName | County | Multi-Unit Dwellings: Level 1 and Level 2 | Public: Level 2 |
|---|---|---|---|---|
| 250138011022 | SPRINGFIELD | HAMPDEN | 160 | 273 |
| 250138002015 | SPRINGFIELD | HAMPDEN | 138 | 276 |
| 250138023002 | SPRINGFIELD | HAMPDEN | 22 | 277 |
| 250138019022 | SPRINGFIELD | HAMPDEN | 37 | 287 |
| 250138018004 | SPRINGFIELD | HAMPDEN | 106 | 287 |
| 250138023003 | SPRINGFIELD | HAMPDEN | 4 | 290 |
| 250138021013 | SPRINGFIELD | HAMPDEN | 72 | 292 |
| 250138015012 | SPRINGFIELD | HAMPDEN | 218 | 292 |
| 250138024003 | SPRINGFIELD | HAMPDEN | 264 | 294 |
| 250138016012 | SPRINGFIELD | HAMPDEN | 264 | 294 |
| 250138020002 | SPRINGFIELD | HAMPDEN | 7 | 307 |
| 250138020001 | SPRINGFIELD | HAMPDEN | 90 | 307 |
| 250138013001 | SPRINGFIELD | HAMPDEN | 121 | 307 |
| 250138017001 | SPRINGFIELD | HAMPDEN | 41 | 311 |
| 250138017006 | SPRINGFIELD | HAMPDEN | 108 | 311 |
| 250138017003 | SPRINGFIELD | HAMPDEN | 35 | 314 |
| 250138026013 | SPRINGFIELD | HAMPDEN | 45 | 314 |
| 250138025006 | SPRINGFIELD | HAMPDEN | 127 | 314 |
| 250138004001 | SPRINGFIELD | HAMPDEN | 72 | 314 |
| 250138026011 | SPRINGFIELD | HAMPDEN | 162 | 314 |
| 250138004003 | SPRINGFIELD | HAMPDEN | 53 | 322 |
| 250138022002 | SPRINGFIELD | HAMPDEN | 57 | 332 |
| 250138017004 | SPRINGFIELD | HAMPDEN | 64 | 332 |
| 250138005002 | SPRINGFIELD | HAMPDEN | 68 | 332 |
| 250138006001 | SPRINGFIELD | HAMPDEN | 68 | 332 |
| 250138019023 | SPRINGFIELD | HAMPDEN | 121 | 332 |
| 250138003003 | SPRINGFIELD | HAMPDEN | 135 | 332 |
| 250138015011 | SPRINGFIELD | HAMPDEN | 81 | 338 |
| 250138023004 | SPRINGFIELD | HAMPDEN | 81 | 338 |
| 250138018002 | SPRINGFIELD | HAMPDEN | 96 | 338 |
| 250138025003 | SPRINGFIELD | HAMPDEN | 125 | 338 |
| 250138004002 | SPRINGFIELD | HAMPDEN | 137 | 338 |
| 250138002011 | SPRINGFIELD | HAMPDEN | 49 | 338 |
| 250138026015 | SPRINGFIELD | HAMPDEN | 96 | 338 |
| 250138025005 | SPRINGFIELD | HAMPDEN | 138 | 348 |
| 250138026012 | SPRINGFIELD | HAMPDEN | 75 | 353 |
| 250138016031 | SPRINGFIELD | HAMPDEN | 111 | 353 |
| 250138024001 | SPRINGFIELD | HAMPDEN | 264 | 353 |
| 250138008001 | SPRINGFIELD | HAMPDEN | 6 | 370 |
| 250138007002 | SPRINGFIELD | HAMPDEN | 15 | 370 |
| 250138005001 | SPRINGFIELD | HAMPDEN | 39 | 370 |
| 250138018003 | SPRINGFIELD | HAMPDEN | 149 | 370 |
| 250138003002 | SPRINGFIELD | HAMPDEN | 135 | 374 |
| 250138001012 | SPRINGFIELD | HAMPDEN | 121 | 374 |
| 250138016021 | SPRINGFIELD | HAMPDEN | 12 | 378 |
| 250138021011 | SPRINGFIELD | HAMPDEN | 12 | 378 |
| 250138016013 | SPRINGFIELD | HAMPDEN | 202 | 378 |
| 250138017002 | SPRINGFIELD | HAMPDEN | 52 | 383 |
| 250138004004 | SPRINGFIELD | HAMPDEN | 127 | 383 |
| 250138014021 | SPRINGFIELD | HAMPDEN | 162 | 383 |
| 250138026021 | SPRINGFIELD | HAMPDEN | 168 | 392 |
| 250138021016 | SPRINGFIELD | HAMPDEN | 65 | 392 |
| 250138021014 | SPRINGFIELD | HAMPDEN | 86 | 392 |
| 250138021012 | SPRINGFIELD | HAMPDEN | 118 | 392 |
| 250138026016 | SPRINGFIELD | HAMPDEN | 141 | 392 |
| 250138005003 | SPRINGFIELD | HAMPDEN | 174 | 392 |
| 250138017005 | SPRINGFIELD | HAMPDEN | 190 | 392 |
| 250138025004 | SPRINGFIELD | HAMPDEN | 264 | 392 |
| 250138024002 | SPRINGFIELD | HAMPDEN | 264 | 392 |
| 250138025001 | SPRINGFIELD | HAMPDEN | 264 | 392 |
| 250138025002 | SPRINGFIELD | HAMPDEN | 264 | 392 |
| 250138016022 | SPRINGFIELD | HAMPDEN | 264 | 392 |

# Attachment C: EVSE Deployment Prioritization: Residential and Public Levels 1 and 2

| BlockGroupID | TownName | County | Multi-Unit Dwellings: Level 1 and Level 2 | Public: Level 2 |
|---|---|---|---|---|
| 250138016011 | SPRINGFIELD | HAMPDEN | 264 | 392 |
| 250138016041 | SPRINGFIELD | HAMPDEN | 264 | 392 |
| 250138130012 | TOLLAND / BLANDFORD | HAMPDEN | 174 | 94 |
| 250138138011 | WALES | HAMPDEN | 367 | 83 |
| 250158201011 | WARE | HAMPSHIRE | 182 | 28 |
| 250158201013 | WARE | HAMPSHIRE | 131 | 67 |
| 250158201022 | WARE | HAMPSHIRE | 24 | 73 |
| 250158201014 | WARE | HAMPSHIRE | 182 | 78 |
| 250158201021 | WARE | HAMPSHIRE | 105 | 135 |
| 250158201012 | WARE | HAMPSHIRE | 77 | 170 |
| 250158201023 | WARE | HAMPSHIRE | 5 | 294 |
| 250138123001 | WEST SPRINGFIELD | HAMPDEN | 202 | 4 |
| 250138122013 | WEST SPRINGFIELD | HAMPDEN | 218 | 11 |
| 250138122023 | WEST SPRINGFIELD | HAMPDEN | 218 | 25 |
| 250138123003 | WEST SPRINGFIELD | HAMPDEN | 202 | 31 |
| 250138122022 | WEST SPRINGFIELD | HAMPDEN | 218 | 59 |
| 250138122024 | WEST SPRINGFIELD | HAMPDEN | 264 | 60 |
| 250138123002 | WEST SPRINGFIELD | HAMPDEN | 264 | 132 |
| 250138122021 | WEST SPRINGFIELD | HAMPDEN | 218 | 151 |
| 250138122012 | WEST SPRINGFIELD | HAMPDEN | 264 | 158 |
| 250138122011 | WEST SPRINGFIELD | HAMPDEN | 218 | 192 |
| 250138124012 | WEST SPRINGFIELD | HAMPDEN | 367 | 204 |
| 250138123004 | WEST SPRINGFIELD | HAMPDEN | 218 | 207 |
| 250138124032 | WEST SPRINGFIELD | HAMPDEN | 218 | 213 |
| 250138123005 | WEST SPRINGFIELD | HAMPDEN | 202 | 223 |
| 250138124031 | WEST SPRINGFIELD | HAMPDEN | 264 | 265 |
| 250138124033 | WEST SPRINGFIELD | HAMPDEN | 367 | 364 |
| 250138124034 | WEST SPRINGFIELD | HAMPDEN | 199 | 374 |
| 250138124041 | WEST SPRINGFIELD | HAMPDEN | 264 | 392 |
| 250138124014 | WEST SPRINGFIELD | HAMPDEN | 264 | 392 |
| 250138124042 | WEST SPRINGFIELD | HAMPDEN | 367 | 428 |
| 250138124011 | WEST SPRINGFIELD | HAMPDEN | 367 | 428 |
| 250138124013 | WEST SPRINGFIELD | HAMPDEN | 367 | 428 |
| 250138125002 | WESTFIELD | HAMPDEN | 264 | 1 |
| 250138128003 | WESTFIELD | HAMPDEN | 367 | 2 |
| 250138125005 | WESTFIELD | HAMPDEN | 367 | 12 |
| 250138125003 | WESTFIELD | HAMPDEN | 218 | 19 |
| 250138126003 | WESTFIELD | HAMPDEN | 367 | 33 |
| 250138129022 | WESTFIELD | HAMPDEN | 264 | 38 |
| 250138127021 | WESTFIELD | HAMPDEN | 264 | 48 |
| 250138126002 | WESTFIELD | HAMPDEN | 199 | 76 |
| 250138127024 | WESTFIELD | HAMPDEN | 264 | 88 |
| 250138125004 | WESTFIELD | HAMPDEN | 264 | 105 |
| 250138128001 | WESTFIELD | HAMPDEN | 264 | 114 |
| 250138125001 | WESTFIELD | HAMPDEN | 264 | 125 |
| 250138126001 | WESTFIELD | HAMPDEN | 264 | 140 |
| 250138127022 | WESTFIELD | HAMPDEN | 218 | 145 |
| 250138129011 | WESTFIELD | HAMPDEN | 264 | 216 |
| 250138128004 | WESTFIELD | HAMPDEN | 367 | 232 |
| 250138127011 | WESTFIELD | HAMPDEN | 218 | 238 |
| 250138127023 | WESTFIELD | HAMPDEN | 198 | 261 |
| 250138129021 | WESTFIELD | HAMPDEN | 264 | 277 |
| 250138127012 | WESTFIELD | HAMPDEN | 264 | 294 |
| 250138129012 | WESTFIELD | HAMPDEN | 264 | 294 |
| 250138126004 | WESTFIELD | HAMPDEN | 264 | 322 |
| 250138128002 | WESTFIELD | HAMPDEN | 367 | 364 |
| 250138127013 | WESTFIELD | HAMPDEN | 218 | 383 |
| 250138129013 | WESTFIELD | HAMPDEN | 264 | 392 |
| 250138129031 | WESTFIELD | HAMPDEN | 367 | 428 |
| 250138129023 | WESTFIELD | HAMPDEN | 367 | 428 |
| 250158226031 | WESTHAMPTON | HAMPSHIRE | 367 | 42 |
| 250138136011 | WILBRAHAM | HAMPDEN | 218 | 10 |

# Attachment C: EVSE Deployment Prioritization: Residential and Public Levels 1 and 2

| BlockGroupID | TownName | County | Multi-Unit Dwellings: Level 1 and Level 2 | Public: Level 2 |
|---|---|---|---|---|
| 250138136015 | WILBRAHAM | HAMPDEN | 367 | 90 |
| 250138136013 | WILBRAHAM | HAMPDEN | 264 | 121 |
| 250138136012 | WILBRAHAM | HAMPDEN | 264 | 154 |
| 250138136022 | WILBRAHAM | HAMPDEN | 367 | 269 |
| 250138136021 | WILBRAHAM | HAMPDEN | 264 | 392 |
| 250138136014 | WILBRAHAM | HAMPDEN | 367 | 428 |
| 250138136023 | WILBRAHAM | HAMPDEN | 367 | 428 |
| 250158226073 | WILLIAMSBURG | HAMPSHIRE | 91 | 61 |
| 250158226072 | WILLIAMSBURG | HAMPSHIRE | 174 | 277 |
| 250158227003 | WORTHINGTON / MIDDLEFIELD | HAMPSHIRE | 174 | 125 |

# Attachment D

## EVSE Demand Distribution: DCFC

# Attachment D: EVSE Demand Distribution: DCFC

| BlockGroupID | TownName | County | Urban_Rural | DC Fast Charger |
|---|---|---|---|---|
| 250158202052 | BELCHERTOWN | HAMPSHIRE | Rural | 4 |
| 250158202071 | BELCHERTOWN | HAMPSHIRE | Urban | 12 |
| 250158202072 | BELCHERTOWN | HAMPSHIRE | Urban | 3 |
| 250158202073 | BELCHERTOWN | HAMPSHIRE | Rural | 2 |
| 250158202063 | BELCHERTOWN | HAMPSHIRE | Urban | 1 |
| 250158202051 | BELCHERTOWN | HAMPSHIRE | Urban | 2 |
| 250158202062 | BELCHERTOWN | HAMPSHIRE | Urban | 2 |
| 250138138021 | BRIMFIELD | HAMPDEN | Rural | 2 |
| 250138138022 | BRIMFIELD | HAMPDEN | Rural | 2 |
| 250158226074 | CHESTERFIELD | HAMPSHIRE | Rural | 2 |
| 250158227002 | CUMMINGTON | HAMPSHIRE | Rural | 2 |
| 250158226071 | GOSHEN | HAMPSHIRE | Rural | 2 |
| 250138130023 | GRANVILLE | HAMPDEN | Rural | 2 |
| 250158215003 | HATFIELD | HAMPSHIRE | Urban | 4 |
| 250158215002 | HATFIELD | HAMPSHIRE | Urban | 2 |
| 250158215001 | HATFIELD | HAMPSHIRE | Urban | 3 |
| 250138121032 | HOLYOKE | HAMPDEN | Urban | 24 |
| 250138121031 | HOLYOKE | HAMPDEN | Urban | 6 |
| 250138121041 | HOLYOKE | HAMPDEN | Urban | 13 |
| 250138114001 | HOLYOKE | HAMPDEN | Urban | 9 |
| 250138120013 | HOLYOKE | HAMPDEN | Urban | 11 |
| 250138117002 | HOLYOKE | HAMPDEN | Urban | 13 |
| 250138115001 | HOLYOKE | HAMPDEN | Urban | 10 |
| 250138115002 | HOLYOKE | HAMPDEN | Urban | 7 |
| 250138117001 | HOLYOKE | HAMPDEN | Urban | 5 |
| 250138118005 | HOLYOKE | HAMPDEN | Urban | 9 |
| 250138116002 | HOLYOKE | HAMPDEN | Urban | 10 |
| 250138119001 | HOLYOKE | HAMPDEN | Urban | 6 |
| 250138114002 | HOLYOKE | HAMPDEN | Urban | 11 |
| 250138121042 | HOLYOKE | HAMPDEN | Urban | 11 |
| 250138118003 | HOLYOKE | HAMPDEN | Urban | 11 |
| 250138118004 | HOLYOKE | HAMPDEN | Urban | 5 |
| 250138116003 | HOLYOKE | HAMPDEN | Urban | 6 |
| 250138120023 | HOLYOKE | HAMPDEN | Urban | 5 |
| 250138119003 | HOLYOKE | HAMPDEN | Urban | 4 |
| 250138120014 | HOLYOKE | HAMPDEN | Urban | 6 |
| 250138116004 | HOLYOKE | HAMPDEN | Urban | 5 |
| 250138116001 | HOLYOKE | HAMPDEN | Urban | 6 |
| 250138118002 | HOLYOKE | HAMPDEN | Urban | 7 |
| 250138120021 | HOLYOKE | HAMPDEN | Urban | 11 |
| 250138120024 | HOLYOKE | HAMPDEN | Urban | 5 |
| 250138120022 | HOLYOKE | HAMPDEN | Urban | 5 |
| 250138120011 | HOLYOKE | HAMPDEN | Urban | 13 |
| 250138118001 | HOLYOKE | HAMPDEN | Urban | 7 |
| 250138120012 | HOLYOKE | HAMPDEN | Urban | 5 |
| 250138121044 | HOLYOKE | HAMPDEN | Urban | 8 |
| 250138121043 | HOLYOKE | HAMPDEN | Urban | 4 |
| 250138119002 | HOLYOKE | HAMPDEN | Urban | 4 |
| 250158226012 | HUNTINGTON | HAMPSHIRE | Rural | 4 |
| 250158226011 | HUNTINGTON | HAMPSHIRE | Rural | 2 |
| 250138104142 | LUDLOW | HAMPDEN | Urban | 2 |
| 250138104141 | LUDLOW | HAMPDEN | Urban | 1 |
| 250138104121 | LUDLOW | HAMPDEN | Urban | 1 |
| 250138104122 | LUDLOW | HAMPDEN | Urban | 1 |
| 250138104041 | LUDLOW | HAMPDEN | Urban | 6 |

# Attachment D: EVSE Demand Distribution: DCFC

| BlockGroupID | TownName | County | Urban_Rural | DC Fast Charger |
|---|---|---|---|---|
| 250138104143 | LUDLOW | HAMPDEN | Urban | 3 |
| 250138104031 | LUDLOW | HAMPDEN | Urban | 5 |
| 250138104033 | LUDLOW | HAMPDEN | Urban | 3 |
| 250138104032 | LUDLOW | HAMPDEN | Urban | 8 |
| 250158216012 | NORTHAMPTON | HAMPSHIRE | Urban | 9 |
| 250158222003 | NORTHAMPTON | HAMPSHIRE | Urban | 3 |
| 250158222001 | NORTHAMPTON | HAMPSHIRE | Urban | 5 |
| 250158219033 | NORTHAMPTON | HAMPSHIRE | Urban | 12 |
| 250158219043 | NORTHAMPTON | HAMPSHIRE | Urban | 12 |
| 250158216011 | NORTHAMPTON | HAMPSHIRE | Urban | 7 |
| 250158219031 | NORTHAMPTON | HAMPSHIRE | Urban | 14 |
| 250158216021 | NORTHAMPTON | HAMPSHIRE | Urban | 5 |
| 250158219012 | NORTHAMPTON | HAMPSHIRE | Urban | 9 |
| 250158217001 | NORTHAMPTON | HAMPSHIRE | Urban | 6 |
| 250158222002 | NORTHAMPTON | HAMPSHIRE | Urban | 2 |
| 250158216023 | NORTHAMPTON | HAMPSHIRE | Urban | 6 |
| 250158216022 | NORTHAMPTON | HAMPSHIRE | Urban | 10 |
| 250158219042 | NORTHAMPTON | HAMPSHIRE | Urban | 9 |
| 250158219041 | NORTHAMPTON | HAMPSHIRE | Urban | 9 |
| 250158217004 | NORTHAMPTON | HAMPSHIRE | Urban | 2 |
| 250158220001 | NORTHAMPTON | HAMPSHIRE | Urban | 4 |
| 250158219011 | NORTHAMPTON | HAMPSHIRE | Urban | 13 |
| 250158217002 | NORTHAMPTON | HAMPSHIRE | Urban | 4 |
| 250158227001 | PLAINFIELD | HAMPSHIRE | Rural | 2 |
| 250138002021 | SPRINGFIELD | HAMPDEN | Urban | 2 |
| 250138015031 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138014011 | SPRINGFIELD | HAMPDEN | Urban | 12 |
| 250138003001 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138008002 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138015032 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138015022 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138015033 | SPRINGFIELD | HAMPDEN | Urban | 2 |
| 250138016053 | SPRINGFIELD | HAMPDEN | Urban | 1 |
| 250138013004 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138004005 | SPRINGFIELD | HAMPDEN | Urban | 15 |
| 250138021015 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138011011 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138002013 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138020003 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138001011 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138001023 | SPRINGFIELD | HAMPDEN | Urban | 14 |
| 250138013003 | SPRINGFIELD | HAMPDEN | Urban | 9 |
| 250138015021 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138016051 | SPRINGFIELD | HAMPDEN | Urban | 15 |
| 250138015023 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138023001 | SPRINGFIELD | HAMPDEN | Urban | 6 |
| 250138016014 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138007001 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138006003 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138019012 | SPRINGFIELD | HAMPDEN | Urban | 23 |
| 250138003004 | SPRINGFIELD | HAMPDEN | Urban | 2 |
| 250138016032 | SPRINGFIELD | HAMPDEN | Urban | 1 |
| 250138015013 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138012001 | SPRINGFIELD | HAMPDEN | Urban | 12 |
| 250138001022 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138019021 | SPRINGFIELD | HAMPDEN | Urban | 22 |

# Attachment D: EVSE Demand Distribution: DCFC

| BlockGroupID | TownName | County | Urban_Rural | DC Fast Charger |
|---|---|---|---|---|
| 250138018001 | SPRINGFIELD | HAMPDEN | Urban | 9 |
| 250138022003 | SPRINGFIELD | HAMPDEN | Urban | 10 |
| 250138001021 | SPRINGFIELD | HAMPDEN | Urban | 16 |
| 250138001013 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138012003 | SPRINGFIELD | HAMPDEN | Urban | 10 |
| 250138013002 | SPRINGFIELD | HAMPDEN | Urban | 9 |
| 250138019011 | SPRINGFIELD | HAMPDEN | Urban | 15 |
| 250138015014 | SPRINGFIELD | HAMPDEN | Urban | 2 |
| 250138009002 | SPRINGFIELD | HAMPDEN | Urban | 15 |
| 250138012002 | SPRINGFIELD | HAMPDEN | Urban | 16 |
| 250138011021 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138009001 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138014022 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138022001 | SPRINGFIELD | HAMPDEN | Urban | 9 |
| 250138026014 | SPRINGFIELD | HAMPDEN | Urban | 11 |
| 250138009003 | SPRINGFIELD | HAMPDEN | Urban | 11 |
| 250138002014 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138014012 | SPRINGFIELD | HAMPDEN | Urban | 14 |
| 250138002012 | SPRINGFIELD | HAMPDEN | Urban | 6 |
| 250138006002 | SPRINGFIELD | HAMPDEN | Urban | 9 |
| 250138018005 | SPRINGFIELD | HAMPDEN | Urban | 6 |
| 250138023005 | SPRINGFIELD | HAMPDEN | Urban | 10 |
| 250138011022 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138002015 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138023002 | SPRINGFIELD | HAMPDEN | Urban | 13 |
| 250138019022 | SPRINGFIELD | HAMPDEN | Urban | 11 |
| 250138018004 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138020002 | SPRINGFIELD | HAMPDEN | Urban | 17 |
| 250138020001 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138013001 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138023003 | SPRINGFIELD | HAMPDEN | Urban | 21 |
| 250138017003 | SPRINGFIELD | HAMPDEN | Urban | 11 |
| 250138026013 | SPRINGFIELD | HAMPDEN | Urban | 10 |
| 250138021013 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138025006 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138022002 | SPRINGFIELD | HAMPDEN | Urban | 9 |
| 250138017004 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138005002 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138006001 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138019023 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138017001 | SPRINGFIELD | HAMPDEN | Urban | 10 |
| 250138015011 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138023004 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138018002 | SPRINGFIELD | HAMPDEN | Urban | 6 |
| 250138017006 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138025003 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138004002 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138004001 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138025005 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138026011 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138004003 | SPRINGFIELD | HAMPDEN | Urban | 9 |
| 250138026012 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138016031 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138008001 | SPRINGFIELD | HAMPDEN | Urban | 17 |
| 250138007002 | SPRINGFIELD | HAMPDEN | Urban | 14 |
| 250138005001 | SPRINGFIELD | HAMPDEN | Urban | 10 |

# Attachment D: EVSE Demand Distribution: DCFC

| BlockGroupID | TownName | County | Urban_Rural | DC Fast Charger |
|---|---|---|---|---|
| 250138018003 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138003002 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138001012 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138003003 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138016021 | SPRINGFIELD | HAMPDEN | Urban | 15 |
| 250138021011 | SPRINGFIELD | HAMPDEN | Urban | 15 |
| 250138002011 | SPRINGFIELD | HAMPDEN | Urban | 9 |
| 250138026015 | SPRINGFIELD | HAMPDEN | Urban | 6 |
| 250138017002 | SPRINGFIELD | HAMPDEN | Urban | 9 |
| 250138004004 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138014021 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138026021 | SPRINGFIELD | HAMPDEN | Urban | 3 |
| 250138021016 | SPRINGFIELD | HAMPDEN | Urban | 8 |
| 250138021014 | SPRINGFIELD | HAMPDEN | Urban | 7 |
| 250138021012 | SPRINGFIELD | HAMPDEN | Urban | 5 |
| 250138026016 | SPRINGFIELD | HAMPDEN | Urban | 4 |
| 250138005003 | SPRINGFIELD | HAMPDEN | Urban | 2 |
| 250138017005 | SPRINGFIELD | HAMPDEN | Urban | 1 |
| 250138130012 | TOLLAND / BLANDFORD | HAMPDEN | Rural | 2 |
| 250158201011 | WARE | HAMPSHIRE | Rural | 2 |
| 250158201013 | WARE | HAMPSHIRE | Urban | 5 |
| 250158201022 | WARE | HAMPSHIRE | Urban | 13 |
| 250158201014 | WARE | HAMPSHIRE | Urban | 2 |
| 250158201021 | WARE | HAMPSHIRE | Urban | 6 |
| 250158201012 | WARE | HAMPSHIRE | Urban | 8 |
| 250158201023 | WARE | HAMPSHIRE | Urban | 19 |
| 250158226073 | WILLIAMSBURG | HAMPSHIRE | Rural | 6 |
| 250158226072 | WILLIAMSBURG | HAMPSHIRE | Rural | 2 |
| 250158227003 | WORTHINGTON / MIDDLEFIELD | HAMPSHIRE | Rural | 2 |
| | | | **Total** | **993** |

# Attachment E

## Model EVSE Zoning Bylaw

## MODEL Electric Vehicle and Electric Vehicle Supply Equipment (EVSE) Bylaw

Purpose:

The purpose of including provisions for electric vehicle supply equipment (EVSE) in municipal bylaws is to promote the adoption of electric vehicles (EVs) , support the development of necessary infrastructure, ensure safety and compliance, and enhance accessibility for all community members. These regulations aim to facilitate the sustainable transition to electric transportation, in alignment with environmental goals and state policies, while fostering economic development and equitable distribution of resources.

Inclusion of this language into bylaws also complies with requirements for state and federal funding opportunities for the construction, operation, and maintenance of EVSE, including the National Electric Vehicle Infrastructure (NEVI) Formula Program and the Charging and Fueling Infrastructure (CFI) Grant Program.

## MODEL – Electric Vehicle Supply Equipment (EVSE)

1. Purpose

The purpose of this [ordinance/bylaw/section] is to support and guide the development of electric vehicle supply equipment (EVSE) and to promote the adoption of electric vehicles (EVs) within our community. This bylaw aims to:

- Encourage Sustainable Transportation: Fostering the use of EVs to reduce greenhouse gas (GHG) emissions, minimize [municipality] carbon footprint, and contribute to a healthier environment.
- Facilitate EVSE Deployment: Streamline the installation and availability of EVSE in both residential and commercial areas, ensuring that such infrastructure is readily accessible to all residents and visitors.
- Enhance Energy Efficiency: Promote advancements in energy efficiency using EVs and smart charging technologies, contributing to energy conservation goals.
- Support Economic Growth: Encourage investment in EV technologies and infrastructure, fostering local job creation and stimulating economic development through the growth of green technologies and industries.
- Ensure Public Safety and Accessibility: Regulate the installation of EVSE to ensure safety, reliability, and accessibility, including considerations for site design, electrical safety standards, and compliance with the Americans with Disabilities Act (ADA).
- Plan for Future Demand: Proactively plan for the anticipated increase in EV adoption by allocating appropriate resources and infrastructure, ensuring [municipality] can adapt to future transportation needs.
- Promote Equity: Ensure that EVSE is equitably distributed across all socio-economic and geographic segments of [municipality], providing access to clean transportation options for all.
- Coordinate Community Efforts: Foster collaboration among municipal departments, private entities, and residents to create a coherent strategy for electrifying transportation and achieving sustainability goals.

By implementing this bylaw, [municipality] commits to advancing a sustainable, efficient, and forward-looking transportation ecosystem that aligns with broader environmental goals and enhances the quality of life for all residents.

Commentary¿ Municipalities.should.clearly.articulate.goals.for.EVSE.bylaws.and.resulting.infrastructure¡.In.doing.so? municipalities.can.better.guide.development?support.sustainable.growth?and.meet.the.diverse.needs.of. their.residents?businesses?and.visitors¡.Municipalities.may.use.the.suggested.goals.above.or.create.goals. appropriate.for.local.conditions¡

2. Definitions

Accessible Parking Space: A parking space that is specifically designed and allocated for use by individuals with disabilities, ensuring convenient and safe access to buildings and facilities. These spaces typically include features such as increased width, adjacent access aisles, appropriate signage, and proximity to accessible entrances, complying with guidelines set forth under the ADA and local regulations.

Automatic Load Management Systems (ALMS): A control system that allows multiple connected EVSE to share a circuit or panel and automatically manage power at each charger, reducing the total connected electrical capacity of all EVSE.[1]

Charging Connector: The device that plugs into a vehicle to transfer electricity. Multiple connectors and connector types can be available on one charging port, but only one vehicle will charge at a time. The two primary kinds of charging connectors are:

- J1772 and Combined Charging System (CCS): The J1772 connector is specifically designed for alternating current (AC) charging and is used for Level 1 and Level 2 charging. On the other hand, the CCS connector is versatile in that it can handle Level 1 and Level 2 AC charging, as well as Level 3 direct current fast charging (DC Fast). This dual capability allows drivers to utilize regular and fast charging with the same plug, providing enhanced flexibility and convenience.
- North American Charging Standard (NACS): Developed by Tesla, the NACS connector allows for Level 1, Level 2, and Level 3 (DC Fast) charging.

Commentary¿ Municipal.planners?building.commissioners?and.planning.boards.should.distinguish.EV.charging.connector. types.to.ensure.parking.plans.will.maximize.compatibility.and.convenience.for.EV.drivers¡.Though.the. technology.is.rapidly.changing?CCS.and.NACS.are.the.most.prominent.EV.charging.systems.in.the.U¡S¡.

Charging Levels: The standardized voltages used to recharge an EV's battery. The most common charging levels for EVs are Levels 1, 2, and 3, described as follows:

- Level 1: Uses a 120-volt, AC plug and is commonly referred to as slow or trickle charging. Mobile Level 1 equipment comes standard with many vehicles and does not require additional installation. This type of charging is most commonly performed at the owner's home or locations where the time of stay spans multiple days.
- Level 2: Uses a 240-volt, AC plug and necessitates the installation of home or public charging equipment, often requiring a dedicated 40-amp circuit. Level 2 charging stations are usually found in residential areas, public parking lots, workplaces, and commercial settings.

- Level 3 (DC Fast): Voltage ranges between 200-volt and 600-volt DC, though it can climb to 1,000-volt DC. Level 3 (DC Fast) charging stations are generally associated with intracity, intercity, and interstate travel as well as time-sensitive users. They are typically located in commercial or industrial areas and along heavily traveled roads.

Charging Port: The physical interface where the charging connector (i.e., plug) connects to an EV to allow for the transfer of electrical energy. A charging port provides power to charge a single EV at a time, though it may accommodate multiple connector types to support different EV standards.

Charging Services: The transfer of electric energy from an EV charging station to a battery or other storage device in an EV, along with billing services, networking and operation, and maintenance.[2]

Charging Station/Station Location: The physical installation or site where one or more EVSE units are located. A charging station includes the physical setup of the site, including mounting poles, protection bollards, lighting, payment systems, and signage.

Curbside Charging: Refers to EVSE installed along streets, providing convenient access for vehicles parked at the curb.[3] This kind of charging is most popular in urban locations where private driveways or garages may be unavailable.

EV: A vehicle fully or partially powered by electricity.

Commentary¿
Municipalities.can.elaborate.on.types.of.EVs.as.are.relevant.to.their.bylaws¿

- Battery.Electric.Vehicle.(BEV)¿A.vehicle.entirely.powered.by.an.electric.battery¡.BEVs.do.not.have.an. internal.combustion.engine.(ICE).and.rely.solely.on.energy.stored.in.rechargeable.battery.packs¡
- Plug_in.Hybrid.Electric.Vehicle.(PHEV)¿A.vehicle.that.combines.a.conventional.ICE.with.a.rechargeable. battery.that.can.be.plugged.in.to.recharge¡.PHEVs.can.run.either.on.electricity?gasoline?or.both¡
- Hybrid.Electric.Vehicle.(HEV)¿A.vehicle.that.combines.an.ICE.with.an.electric.battery.but.does.not.have.a. plug_in.capability¡.The.battery.is.recharged.primarily.through.regenerative.braking.and.the.engine✘. operation¡
- Fuel.Cell.Electric.Vehicle.(FCEV)¿A.vehicle.that.generates.electricity.to.power.the.motor.using.a.fuel.cell. that.combines.hydrogen.with.oxygen.from.the.air?producing.only.water.and.heat.as.byproducts¡
- Neighborhood.Electric.Vehicle.(NEV)¿A.small?low_speed.EV.primarily.designed.for.short_distance.travel. within.neighborhoods?often.used.for.limited_range.applications.such.as.campus.shuttles¡

[2] Massachusetts Legislature. (n.d.). General.Laws¿Part.I?Title.II?Chapter.8❶A?Section.7❷. Retrieved September 12, 2024, from https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter25A/Section16
[3] U.S. Department of Energy. (n.d.). Project.lessons¿Curbside.charging. Clean Cities. Retrieved September 17, 2024 from https://cleancities.energy.gov/project-lessons-curbside-charging/

EV Ready Parking Space (EV Ready Space): A designated parking space (or two adjacent parking spaces) provided with a dedicated branch circuit sufficient to provide 240V AC Level 2 or equivalent charging.[4]

EVSE: The equipment that facilitates the flow of electrical energy from an external power source to charge an EV, inclusive of the charging port; charging cable; power electronics for the conversion of electrical power from the external source to the correct voltage, current, and type (AC or DC); safety mechanisms (e.g., ground fault circuit interrupters, overcurrent protection, thermal monitoring, and surge protection); and user interface elements (e.g., displays and controls for managing and monitoring a charging session).

EVSE-Installed Space: A parking space that includes the full installation of an EVSE unit.

Publicly Available Parking Space: A parking space that has been designated by a property owner or lessee to be available to and accessible by the public and may include on-street parking spaces and parking spaces in surface lots or parking garages; provided, however, that ''publicly available parking space'' shall not include a parking space that is part of or associated with a private residence or a parking space that is reserved for the exclusive use of an individual driver or vehicle or a group of drivers or vehicles including employees, tenants, visitors, residents of a common interest development or residents of an adjacent building.[5]

Public EV Charging Station: EVSE that is located in a publicly available parking space.

Service Fee: A fee levied on EV users by the charging station operator or service provider for utilizing an EVSE unit to recharge their vehicle. This fee may cover the cost of electricity, operational expenses for maintaining the EVSE, customer support, payment processing, and parking. The service fee can be structured in different ways, such as per session or based on kWh used.

Universal Parking Space: A parking space specifically designed to accommodate all users, including people with disabilities, thereby offering flexibility and inclusivity in parking design. A universal parking space typically meets or exceeds the dimensions, accessibility features, and safety standards required for accessible parking spaces under federal, state, and local regulations, ensuring that these parking spaces can be used by any driver, regardless of physical ability.

[4] UpCodes. (2021). IECC.8687¿Chapter.RE( 8.definitions. Retrieved September 12, 2024, from https://up.codes/viewer/massachusetts/iecc-2021/chapter/RE_2/re-definitions#RE_2

[5] Massachusetts General Court. (2016). Chapter.00❹of.the.Acts.of.867❷ Retrieved September 12, 2024 from https://malegislature.gov/Laws/SessionLaws/Acts/2016/Chapter448

3. Applicability

   a. This [ordinance/bylaw/section] shall apply to all EVSE installed, constructed, or modified after the effective date of this [ordinance/bylaw/section].

   b. All EVSE shall be implemented in accordance with the most recent building and electrical codes set by the Massachusetts State Building Code (780 CMR) and Massachusetts State Stretch Energy Code (225 CMR 22 and 225 CMR 23).

> Commentary¿ Municipalities.should.reference.the.latest.versions.of.the.Massachusetts.State.Building.Code.(780.CMR).and. the.Massachusetts.State.Stretch.Energy.Code.(88❶CMR.88.and.88❶CMR.89)¡.These.documents.provide.a. development.and.parking.framework.that.must.be.observed.by.any.town.or.city.that.has.adopted.the.Stretch. Energy.Code.or.Specialized.Code¡

4. Exemptions

   a. EVSE or existing parking lots already in place before the effective date of this ordinance are not required to comply with its requirements unless substantial modifications to the infrastructure are proposed.

> Commentary¿ Communities.should.reference.site.alteration.or.modification.thresholds.in.existing.land.development.codes¡

5. Permitted Locations

   a. Level 1, Level 2, and Level 3 (DC Fast) EVSE are permitted as an accessory for residential and non-residential use, provided they meet all relevant building and electrical codes set by the Massachusetts State Building Code (780 CMR) and Massachusetts State Energy Stretch Code (225 CMR 22 and 225 CMR 23).

   b. Primary Use as Charging Stations. If the primary use of the parcel is for the commercial charging of EVs, it shall be classified as a service station and is subject to special land use approval.

> Commentary¿ It.is.recommended.that.Level.7?8?and.9.(DC.Fast).EVSE.are.permitted.as.of.right.in.all.zones.to.encourage.the. adoption.of.EVs¡.However?municipalities.may.consider.requiring.Site.Plan.Review.or.Special.Permitting.for. Level.9.(DC.Fast)¡.Requiring.site.plan.review.for.Level.9.(DC.fast).EVSE.can.help.municipalities.manage.the. impacts.of.these.installations.and.ensure.they.are.integrated.safely.and.effectively.into.the.community¡
>
> Historically?the.most.challenging.place.to.install.EVSE.is.at.existing.multi_family.structures¡.Therefore?EV_ owning.residents.often.rely.on.charging.stations.outside.of.their.residences¡.To.make.it.easier.to.install.EVSE. at.these.properties?some.municipalities?such.as.the.City.of.Cambridge?have.adopted.a.Right.to.Charge.Law? prohibiting.associations.(of.homeowners?condos?or.another.nongovernmental.entity).from.restricting. owners.from.installing.EVSE¡

6. Parking Requirements

   a. EVSE should be installed in accordance with Table 1. Calculations for spaces shall be rounded up to the nearest whole number.

Table 1. Parking Requirements

| Type of Development | Minimum EV Ready Spaces |
|---|---|
| 1 & 2 family dwellings and townhomes | At least one 50-amp branch circuit per dwelling unit to provide for AC Level 2 charging. |
| Multi-family residential (3+ units) | At least 20% of spaces served with a 40-amp, 208/240-volt circuit with a minimum capacity of 9.6 kVA |
| Commercial or business uses | At least 20% of spaces served with a 40-amp dedicated branch circuit or larger branch circuit with ALMS |
| All other uses | At least 10% of spaces served with a 40-amp dedicated branch circuit or larger branch circuit with ALMS |

Source: 225 CMR 22: MA Stretch Code and Specialized Code for Low-Rise Residential 2023; 225 CMR 23: MA Commercial Stretch Energy Code and Municipal Opt-In Specialized Code 2023

Commentary¿
For.many.7.™.8.family.dwellings.and.townhomes.without.garages?EV.Ready.spaces.will.be.driveways.with.adjacent.outlets¡

Urban.areas.may.require.higher.densities.of.EV.charging.stations.due.to.greater.population.density.and.EV.adoption.rates?necessitating.accessible.and.frequent.charging.infrastructure.integrated.into.public.spaces.and.multi_family.developments¡.In.contrast?rural.areas.with.lower.population.densities.may.focus.on.strategic.placement.of.EVSE.at.key.locations.like.major.roadways.and.community.hubs?emphasizing.the.need.for.Level.9.(DC.Fast).EVSE¡.

Communities.that.have.not.adopted.the.Massachusetts.Stretch.Energy.Code.may.choose.to.require.fewer.EV.Ready.spaces¡.See.below.for.examples¡.

The.following.table.(adapted.from.Merrimack.Valley.Planning.Commission's.Model.Electric.Vehicle.Bylaw)?which.may.be.better.suited.for.smaller?more.rural.communities¡

| Type of Development | Minimum EV Ready/EVSE-Installed Spaces |
|---|---|
| 1 & 2 family dwellings and townhouses | At least one EV Ready space per household |
| Multifamily dwellings | At least 10% of parking spaces shall be EVSE-Installed |
| Lodging (hotels, motels, inns, etc.) | At least 10% of parking spaces shall be EVSE-Installed |
| Commercial (retail, dining, recreation, entertainment, etc.) | At least 10% of parking spaces shall be EVSE-Installed |
| All other occupancies | At least 5% of parking spaces shall be EVSE-Installed |

Another.option.for.multi_family.residential.is.to.create.tiered.requirements.per.unit¡.An.example.is.provided.below¿

- 9.to.76.units. 76↘ .EV.Ready.spaces?rounded.up.to.the.nearest.full.space
- 76.to.86.units 7❶↘ .EV.Ready.spaces?rounded.up.to.the.nearest.full.space
- 86>.units.. 86↘ .EV.Ready.spaces?rounded.up.to.the.nearest.full.space

This.tiered.approach.is.uncommon.but.may.be.more.enticing.for.communities.with.fewer.and.smaller.multi_family.developments¡

b. Alterations of existing parking facilities. When existing parking facilities are expanded by 10 or more spaces and the work requires a building permit, 5% of the total number of parking spaces added or altered shall be EV Ready.

c. Minimum parking requirements. EVSE-Installed parking spaces and EV Ready parking spaces are always counted towards any parking minimum requirements.

d. Level 3 (DC Fast) charging station provision. For mixed-use developments and commercial buildings, developers may substitute up to five Level-2 spaces with one Level 3 (DC Fast) space.[6]

Commentary¿
For.section.2c?municipalities.should.consider.incentivizing.EVSE.installation.by.having.EVSE_Installed.or.EV Ready.parking.spaces.count.for.more.than.one.parking.space¡.

7. Design Standards

a. EVSE within single-family and two-family residences are exempt from the below general requirements. This does not exempt electrical or other local permit requirements.

b. EVSE-Installed or EV Ready spaces should be of the same dimensions as non-EVSE spaces, as identified in [section number for parking requirements]. For accessible/universal EVSE spaces, refer to Section 8 of this bylaw.

c. Equipment Requirements.

i. Height standards. Charging ports shall be located between 30 and 48 inches from the ground or pavement source where mounted.[7]

ii. Cable management. EVSE must have designated fixtures to hang the connector and cable off the ground, preventing trip hazards and minimizing wear on equipment. EVSE must be configured so that the cable does not cross a driveway, sidewalk, or access path. Cables should be a minimum of 5 feet in length to allow for universal access.[8]

iii. Protection. Concrete-filled steel bollards or curbing may be used to protect the EVSE.

iv. Voltage requirements. Level 2 EVSE must have a continuous power delivery rating of at least 6 kW per port. Level 3 (DC Fast) EVSE must have a minimum continuous power delivery of 150 kilowatts (kW) per port.

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[6] City of Denver Community Planning and Development, (2019). Code.Amendment.Proposal¡.Retrieved October 4, 2024, from https://www.energycodes.gov/sites/default/files/2021-07/TechBrief_EV_Charging_July2021.pdf

[7] Massachusetts Government. (2023, February). Accessible.EVSE.guidance. Retrieved September 12, 2024, from https://www.mass.gov/files/documents/2023/02/14/Accessible%20EVSE%20Guidance_February2023.pdf

[8] US Access Board. Design.Recommendations.for.Accessible.Electric.Vehicle.Charging.Stations. Retrieved on September 17, 2024, from https://www.access-board.gov/tad/ev/

v. Load management. According to Massachusetts' Commercial Stretch Energy Code (225 CMR 23) and Specialized Opt-in Code, EV charging requirements can be fulfilled using either dedicated electric branch circuits or an ALMS. ALMS may be used to control electricity demand for EVSE-Installed or EV Ready with Level 1 or Level 2 EVSE, subject to the performance requirements in Table 2, below.

Table 2: EV Ready Performance Requirements

| Circuit Breaker Amperage | Maximum parking spaces that may share a branch circuit with 10-60% EV Ready spaces | Maximum parking spaces that may share a branch circuit with 61-100% EV Ready spaces |
|---|---|---|
| 40A | 1 | 2 |
| 50A | 1 | 2 |
| 60A | 2 | 4 |
| 70A | 3 | 6 |
| 80A | 4 | 8 |
| 90A | 5 | 9 |
| 100A | 6 | 10 |

Source: 225 CMR 23: MA Commercial Stretch Energy Code and Municipal Opt-In Specialized Code 2023

d. Location.

i. Parking lots. The placement and arrangement of EVSE should adapt to the design and primary use of the surrounding parking area. Except for accessible charging spaces, it is recommended that EVSE not be positioned in the most convenient parking spots to discourage use by non-EVs and ensure availability for EV users.

ii. Curbside parking. Curbside charging refers to charging on the side of a road or a sidewalk, rather than in a garage or off-street parking space.[9] EVSE may be ground-mounted on a pedestal or attached to a streetlight or pole.

e. Lighting. EVSE-Installed spaces should have adequate site lighting per [municipality's] [bylaws/ordinances] and regulations unless the EVSE is for daytime use only.

[9] U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy. Project.Lessons¿Curbside.EV. Charging¡ Retrieved September 12, 2024, from https://cleancities.energy.gov/project-lessons-curbside-charging/

f. Signage. All EVSE units must be marked with clearly visible signage that indicates its connector compatibility and maximum power output specifications. Regulatory signage should be at least 12" x 18" in size, installed adjacent to the EVSE at a height of 7 feet, and must feature general service information compliant with the latest version of the Manual on Uniform Traffic Control Devices (MUTCD).[10] Additional signage may also include:

    - Hours of operation and/or time limits and tow-away provisions if removal provisions are to be enforced by the property owner;
    - Service fees and parking fees, as permitted in M.G.L. Chapter 25A Section 16B-16E;[11] and
    - Contact information (telephone number) for reporting problems with the equipment.

    While parking spot stencils are optional, painting an EVSE symbol on the parking surface can help identify EVSE spaces without replacing the need for EVSE signage requirements.

Commentary¿
The.model»Design.Standards‹ .section.complies.with.89.CFR.Part.2406¿National.Electric.Vehicle. Infrastructure.(NEVI).Standards.and.Requirements¡.Adoption.of.these.bylaws.positions.communities.to.apply. for.federal.grant.funding?including.through.the.NEVI.Program.and.Charging.and.Fueling.Infrastructure.(CFI). Grant.Program?which.supplies.grants.to.communities.for.the.construction.of.EV.charging.infrastructure¡.

Curbside.charging?including.streetlight.or.pole_mounted.charging?would.be.most.appropriate.in.urban.areas. that.lack.available.off_street.parking.spaces.or.residential.garages¡.Curbside.charging.programs.have.been. implemented.by.the.City.of.Boston.and.the.City.of.New.York¡.If.attached.to.a.streetlight?it.may.be.necessary. to.coordinate.with.the.local.utility.for.an.easement.or.permit¡.

Additional.design.guidelines.may.be.adopted.in.accordance.with.current.state.and.federal.electrical.and. building.regulations¡.These.guidelines.may.incorporate.language.around.the.use.of.ALMS¡

[10] City of Boston. Electric.Vehicle.Readiness.Policy.for.New.Developments¡.Retrieved October 4, 2024, from https://www.boston.gov/sites/default/files/file/2020/03/EV%20Readiness%20Policy%20For%20New%20Developments%20%287%29.pdf.

[11] Massachusetts Legislature. (n.d.). General.Laws¿Part.I?Title.II?Chapter.81A. Retrieved September 12, 2024, from https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter25A

8. [Accessible/Universal] EVSE-Installed Spaces

   a. Number of [accessible/universal] EVSE-Installed spaces. 5% of all EVSE-Installed spaces, but not less than one, must be [accessible/universal].[12]

   b. Design.

      i. Dimensions. Each [accessible/universal] EVSE-Installed or EV Ready space should be a minimum of 11 feet wide and 20 feet long with an adjoining access aisle at least 5 feet wide.[13] See Figure 1: Dimensions for EVSE-Installed Spaces, Including Accessible Space.

      ii. Location. [Accessible/Universal] EVSE-Installed or EV Ready spaces should be located as close as possible to an accessible entrance of the building or facility and connected by an accessible route that is free of obstacles, adequately lit, and properly maintained.

      iii. Height requirements. Charging ports shall be located between 30 and 48 inches from the ground or pavement source where mounted.[14]

      iv. The access aisle should not be blocked or obscured by curbs, wheel stops, bollards, or charging cable slack.[15]

      v. Signage. It is recommended to install a permanent standing sign to indicate that the space is designed for users who may require accessible accommodations.

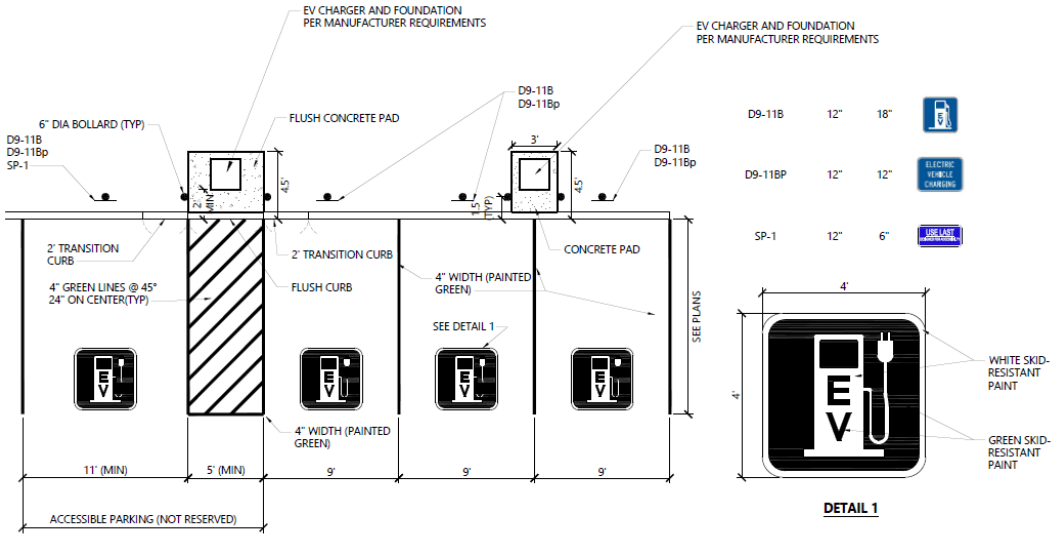
Commentary¿
The.model.language.for.accessible.spaces.is.adopted.from.the.U¡S¡.Access.Board?ADA.Accessibility.Standards?Architectural.Barriers.Act.(ABA).Accessibility.Standards?and.the.Massachusetts".DCAMM.Office.of.Planning?Statewide.Accessibility.Initiative¡.

A.permanent.standing.sign.with.the.words»This.charging.space.has.accessible.features‹.is.recommended.to.indicate.that.an.accessible-~~u~~niversal.EVSE_Installed.space.is.designed.for.persons.needing.accessible.features¡

The.ADA.symbol.should.not.be.used.unless.the.intent.is.to.restrict.EVSE_Installed.spaces.to.vehicles.with.disability.placards.only¡.

[12] Massachusetts Government. (2023, February). Accessible.EVSE.guidance. Retrieved September 12, 2024, from https://www.mass.gov/files/documents/2023/02/14/Accessible%20EVSE%20Guidance_February2023.pdf
[13] U.S. Access Board. (2023, July). Design.Recommendations.for.Accessible.Electric.Vehicle.Charging.Stations. Retrieved September 12, 2024, from https://www.access-board.gov/tad/ev/
[14] Massachusetts Government. (2023, February). Accessible.EVSE.guidance. Retrieved September 12, 2024, from https://www.mass.gov/files/documents/2023/02/14/Accessible%20EVSE%20Guidance_February2023.pdf
[15] U.S. Access Board. (2023, July). Design.Recommendations.for.Accessible.Electric.Vehicle.Charging.Stations. Retrieved September 17, 2024, from https://www.access-board.gov/tad/ev/

Figure 1: Dimensions for EVSE-Installed spaces, Including Accessible Space




**NOTES**

1. ALL DIMENSION TO CENTER OF STRIPING.
2. ALL SLOPES THROUGH OUT THE ACCESSIBLE PARKING AND AISLE SHALL NOT EXCEED 1.5%

**ELECTRIC VEHICLE CHARGING SPACES ADJACENT TO LANDSCAPE AREA** 02/24

N.T.S. Source: VHB REV LD_772

9. Service Fees

   a. As permitted in M.G.L. Chapter 25A Section 16B-16E, property owners and/or EVSE operators are permitted to collect a service fee for the use of EVSE. [Municipality] may elect to collect a service fee to provide a new revenue stream for local government operations.

   b. Pricing may be based on a per kilowatt-hour (kWh) basis to allow for a more equitable and transparent structure for EVSE users.

   c. Per M.G.L. Chapter 25A Section 16B, a person shall not be required to pay a subscription fee to use public EVSE. A range of flexible payment options must be provided, allowing various or combined payment methods, such as credit/debit cards, mobile payments, and subscription models.

   d. In site design and infrastructure procurement for EVSE-installed spaces, consideration must be given to the availability and reliability of network connectivity to ensure dependable payment processing. In areas where cellular network reliability is limited, consider:

      i. Installation of cellular signal boosters or repeaters;

ii. EVSE equipped with Wi-Fi hotspots;

iii. Wired internet connections;

iv. Satellite communication technologies;

v. Payment terminals capable of connecting to multiple cellular networks;

vi. Edge computing solutions to enable local transaction processing; and

vii. Shared network resources with proximate facilities.

Commentary¿
Several.different.service.fee.and.pricing.models.are.available¡.The.type.and.amount.of.service.fee.will.be.determined.when.executing.a.ground.lease.or.agreement.with.a.third_party.EVSE.vendor?as.applicable¡.Common.service.fee.and.pricing.models.include.the.following¿

- Per.kilowatt_hour.(kWh).pricing¡.This.model.is.similar.to.purchasing.gasoline.by.the.gallon.and.is.considered.an.equitable.and.transparent.structure.for.users¡
- Time_based.pricing¡.This.model.is.based.on.the.length.of.time.an.EV.draws.power.from.an.EVSE¡.However?charging.speed.may.vary.depending.on.ambient.temperature?the.temperature.of.the.EV.battery?the.amount.of.charge.remaining.in.the.EV.battery?and.other.users.simultaneously.charging?amongst.other.potential.factors¡
- Free.charging¡.Local.governments.may.opt.to.provide.free.charging.for.users.as.a.public.service¡.In.this.case?the.local.government.would.pay.the.utility.directly.for.electricity¡.A.parking.access.fee.may.be.used.with.this.model?where.on_street.or.off_street.parking.is.owned.or.managed.by.the.local.government¡.Free.charging.may.encourage.the.purchase.of.an.EV?though.it.may.be.financially.unsustainable.and.can.lead.to.overuse.and.congestion¡

89.CFR.Part.2406¿National.Electric.Vehicle.Infrastructure.(NEVI).Standards.and.Requirements.provides.the.following.standards.for.payment¿

Section..2406¡762Installation?operation?and.maintenance.by.qualified.technicians.of.electric.vehicle.charging.infrastructure¡

Part.f¿Payment.methods¡.Unless.charging.is.permanently.provided.free.of.charge.to.customers?charging.stations.must¿

(7).Provide.for.secure.payment.methods?accessible.to.persons.with.disabilities?which.at.a.minimum.shall.include.a.contactless.payment.method.that.accepts.major.debit.and.credit.cards?and.either.an.automated.toll_free.phone.number.or.a.short.message ~~–~~messaging.system.(SMS).that.provides.the.EV.charging.customer.with.the.option.to.initiate.a.charging.session.and.submit.payment·

(8).Not.require.a.membership.for.use·

(9).Not.delay?limit?or.curtail.power.flow.to.vehicles.on.the.basis.of.payment.method.or.membership·.and

(0).Provide.access.for.users.that.are.limited.English.proficient.and.accessibility.for.people.with.disabilities¡.Automated.toll_free.phone.numbers.and.SMS.payment.options.must.clearly.identify.payment.access.for.these.populations¡.

10. Violations

    a. If the owner of an EVSE is found to be in violation of the provisions of this [bylaw/ordinance/section], [municipal employee or department] shall be responsible for administering the violation.

11. Severability

    a. All other portions, parts, and provisions of the [bylaw/ordinance/section] of [municipality] as heretofore enacted and amended shall remain in force and effect.

    b. The invalidity of any section or provision of the [bylaw/ordinance/section] shall not be held to invalidate any other section or provision of this [bylaw/ordinance/section].

    c. If any part of this [bylaw/ordinance/section] conflicts with any other applicable federal, state, or local regulation, the more restrictive regulation shall control.