

The City of Frederick Plug-in Electric Vehicle (PEV) Charging Infrastructure Implementation Plan



Introduction

- Came about as part of Sustainability Plan
- Plan is online
- City Adopted a Resolution

Plug-in Electric Vehicle Charging Infrastructure Implementation Plan for the City of Frederick

Plug-In Electric Vehicle Charging Infrastructure Implementation Plan for the City of Frederick

Prepared for:

The City of Frederick

Frederick, MD

Department of Public Works

Prepared by:



Energetics

Columbia, MD

and

Vision Engineering & Planning, LLC



Columbia, MD

PEV Plan

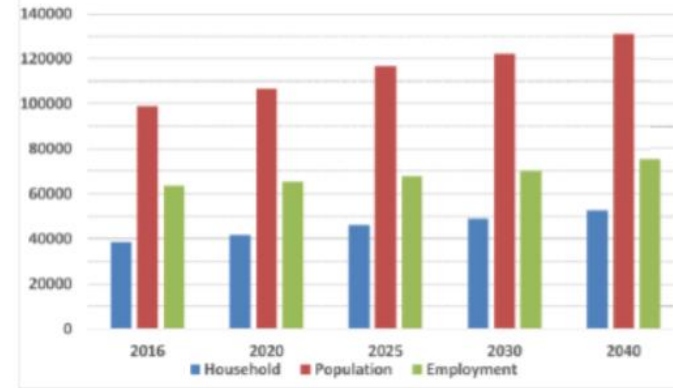
- Procurement and Selection
- Evaluation Criteria
- Selection of Vendor / Consultant
- Total of Five Respondents
- Proposals Ranged from \$34K - \$109K

Selection Criteria	Possible Points
Understanding the Project	30
Project Management	10
Experience and Qualifications	30
Price Proposal	15
References	15

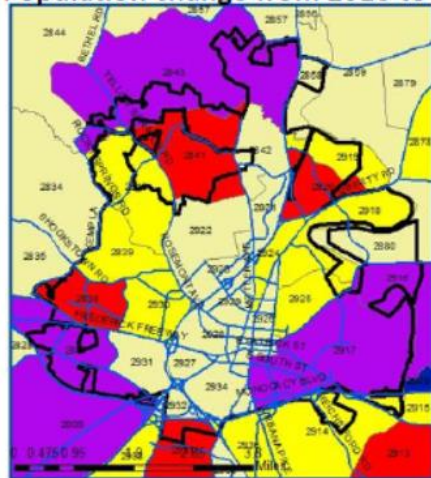
PEV Plan

Use MWCOCG data to project: 1) population, 2) households (#people, # vehicles), 3) employment, 4) roadway volumes

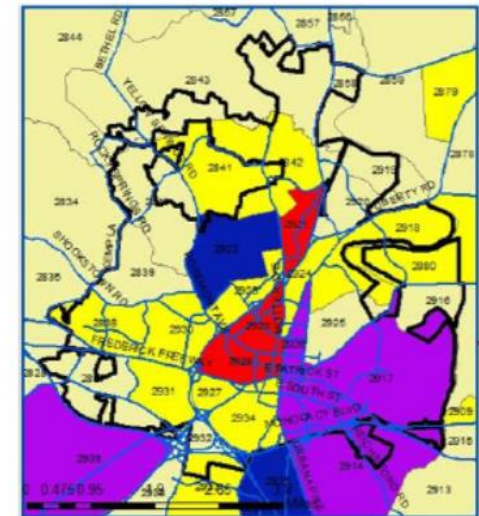
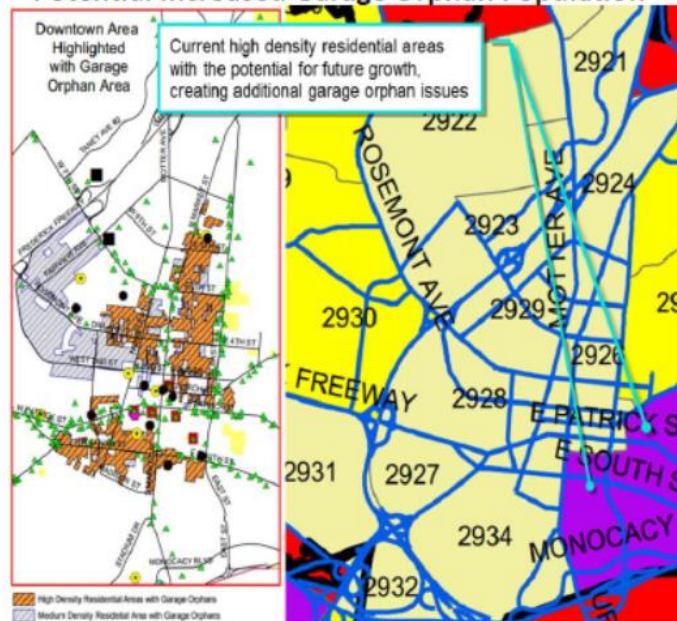
- Shows where, and when, changes are projected to happen to focus efforts



Population change from 2016 to 2030



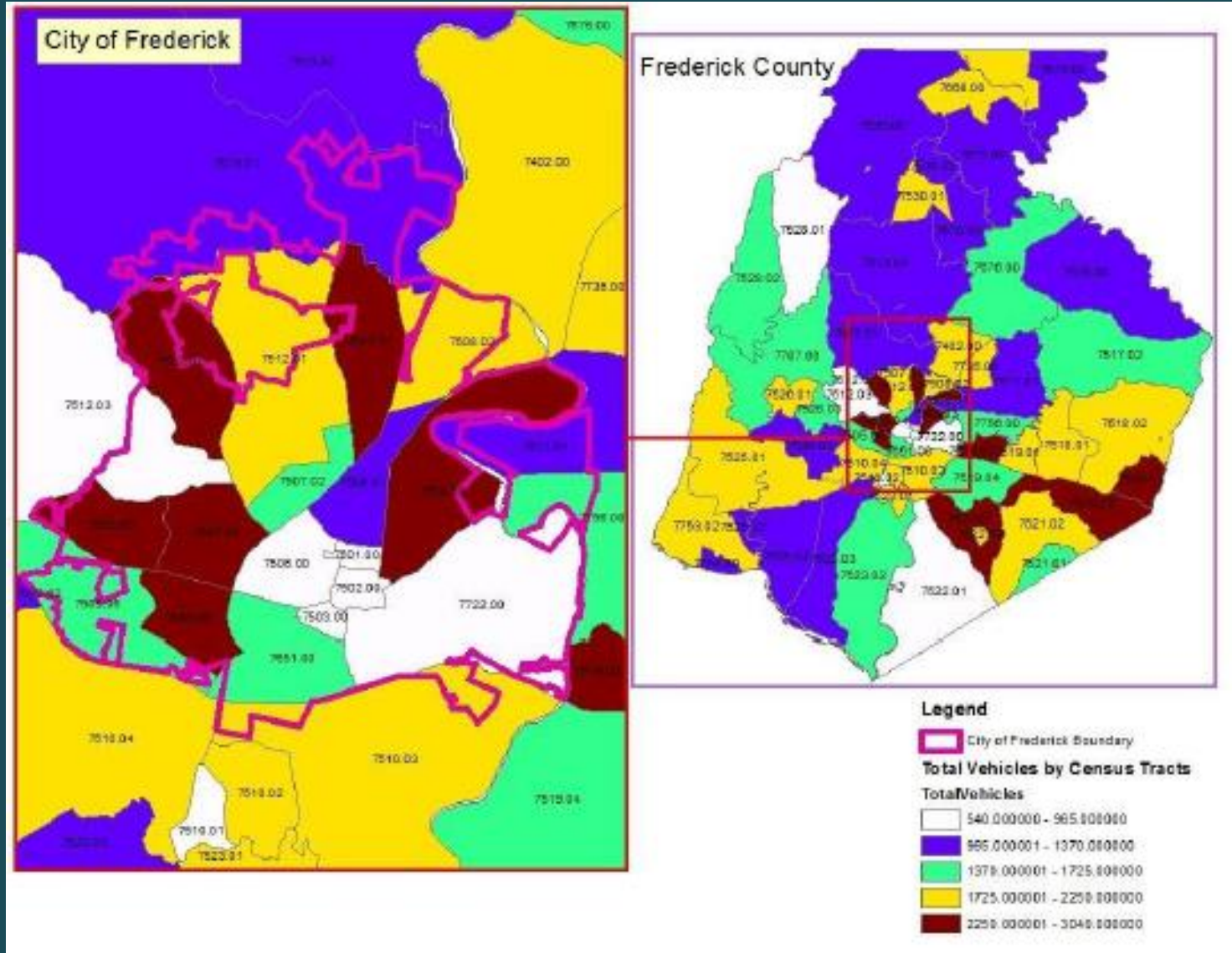
Potential Increased Garage Orphan Population



Legend
 Roads
 City of Frederick Boundary
 Difference in Total Employment
 DTE5

PEV Plan

- MVA BIG Data –sampling of the total



PEV Plan

- Successes During the Plan Investigation
 - In our community Staff Support was a challenge for plan development, but getting more support for implementation
 - Ease of access to data
 - Public interest and support

PEV Plan

- Heat Map for Future Infrastructure

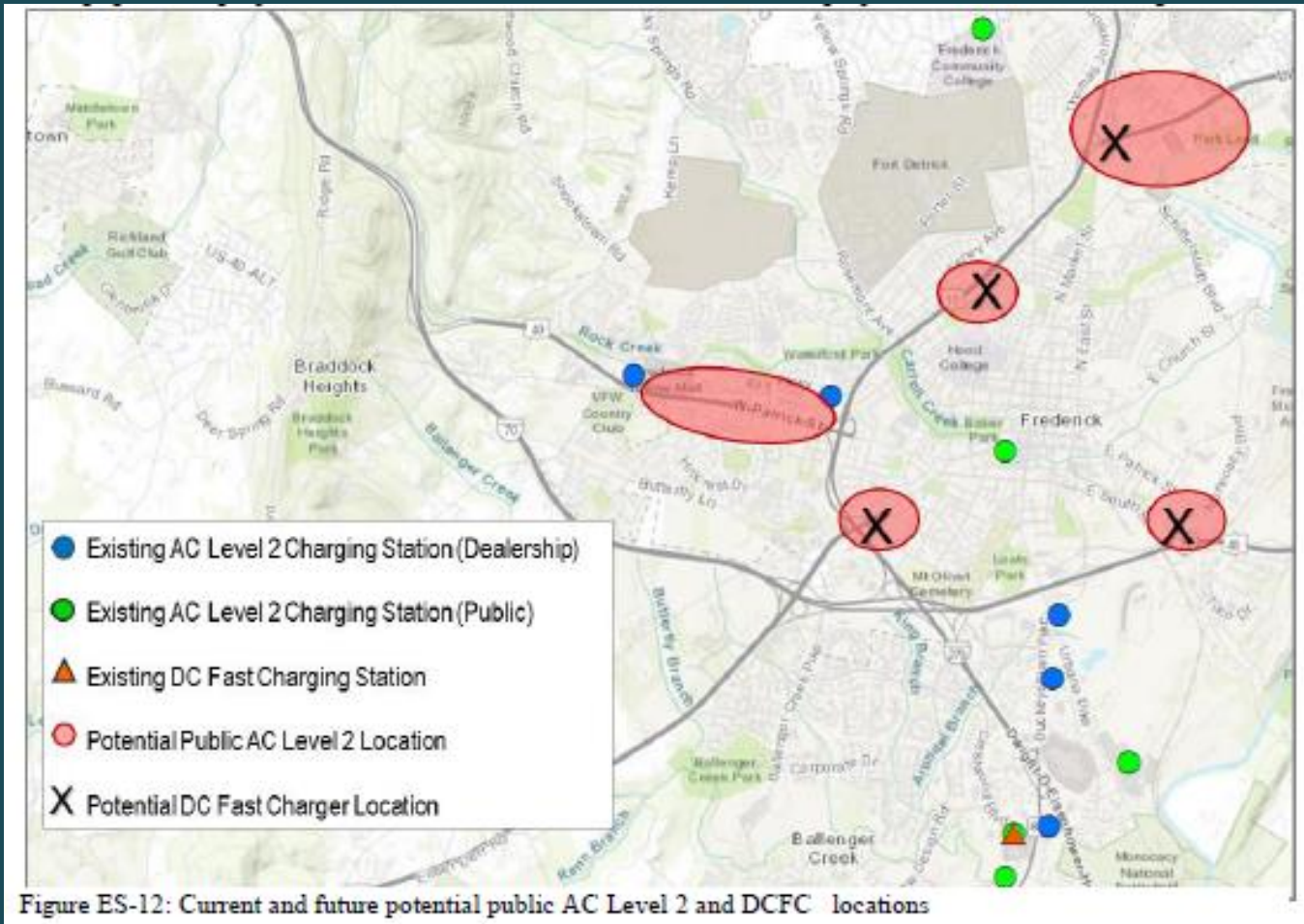


Figure ES-12: Current and future potential public AC Level 2 and DCFC locations

PEV Plan

- Projections for PEV

Table ES-1: PEV Population Projections

Case	2017	2020	2025	2030	2040
Low Oil	239	793	3,172	7,437	14,709
Reference	239	793	3,612	8,709	18,133
High Oil	239	793	4,898	12,198	27,525

Table ES-2: Projected PEV Population Requiring Public Charging at City Garages for Daily Charging

Case	2017	2020	2025	2030	2040
Low Oil	6	20	80	186	368
Reference	6	20	91	218	454
High Oil	6	20	123	305	688

PEV Plan Challenges

- Challenges for the Future Regarding Implementation (Plan Recommendations Below)
 - **Dedicated parking** (*Single-family house/townhouse [garage, carport, driveway]*)
 - **Shared Parking** (*townhouse, multi-dwelling units*) – Consider requiring charging infrastructure (electrical panel, conduit, wire, receptacle, etc.) at all/% of new construction, and major upgrade projects
 - **Streetside Charging**—develop method for residents to install private charging on city right-of-way (supports garage orphans)
 - **Permits/Inspection** – If the permit/inspection process is inefficient, consider establishing an online residential PEV charging station specific permitting process and inspection self-certification (by electrician)
 - **Zoning** – Consider supporting homeowners/business requests to install off-street driveways/parking when a PEV charging station(s) will be installed.

PEV Plan

- Find the plan here:
- <http://www.cityoffrederick.com/DocumentCenter/View/10005>
- Contact Information:

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