EV READINESS PROGRAM

EV Readiness Program Info Session
July 29, 2024

Metropolitan Mayors Caucus

GRC2 Greenest Region Compact

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Agenda

- Intro to EV Readiness (EVR) Program
- How the EVR Program works
- How EV Ready Cohort Communities get it done
- What you get out of EVR
- EV Ready Community experience
  - Village of Glencoe
  - Village of University Park

How the EV Readiness Program Works

EDITH MAKRA,

DIRECTOR OF ENVIRONMENTAL INITIATIVES, METROPOLITAN MAYORS CAUCUS

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EV Ready

Components of EVR

- Strategic and Prioritized Tasks
- Resources and Support
- Recognition as an EV Ready Community - Bronze, Silver, Gold

Strategic & Prioritized Actions

EV READINESS CHECKLIST CATEGORIES

COMMIT TO EV READINESS
ZONING AND PLANNING
PERMITTING AND INSPECTION
SAFETY AND TRAINING
PARKING AND ACCESS
NEW CONSTRUCTION
ACCESS TO EV CHARGING
MUNICIPAL FLEETS
UTILITY ENGAGEMENT
COMMUNITY ENGAGEMENT
MARKET DEVELOPMENT AND FINANCE

Bronze Pathway

70 Required points
30 Extra points

100 Total points

CR	COMMIT TO EV READINESS	
CR-1	**Make a public statement in support of EV readiness.**	**5**
CR-2	**Report baseline metrics, including power level and quantity of publicly accessible and municipally owned EVCSs; number of municipal EVs; and registered constituent-owned EVs.**	**5**
ZP-1	**Evaluate zoning code to identify any barriers to safe, expedient EVCS development.**	**10**
ZP-2A	When EV charging is not the primary use of the site, classify the EV charging station as an **accessory use.**	**5**
ZP-4	**Where minimum parking requirements exist, flex the number of required parking spaces to accommodate Level 2 and DCFC EVCS. (*Conditional Points*)**	**5**
PI-1A	Develop a clear and code-compliant standard permitting and inspection process for **single family residential** EVCSs.	**5**
PI-1B	Develop a clear and code-compliant standard permitting and inspection process for **multiple family and commercial** EVCSs.	**5**
PI-1D	Post standard EVCS checklist, permitting forms, and approval requirements online.	**5**
PI-2C	Establish reasonable standard permitting and inspection fee structures.	**5**
PI-3D	Advise constituents that EVCS installation contractors should be registered with the ICC.	**3**
ST-1A	Provide professional awareness training of EVs and EVCSs for first responders and public safety personnel.	**5**
PK-2A	Communicate provisions of Illinois Vehicle Code (ILCS 625 ILCS 5/11-1308) and/or local parking code regarding unauthorized use of EV-only parking by non-EVs at both public and private properties.	**3**
UE-2A	Encourage all EV owners to register with utility.	**2**
CE-1A	Communicate EV readiness commitment and actions to constituents.	**2**
MD-1A	Provide current information on incentives and grants to community.	**3**
MD-1E	Monitor existing and pending grants and incentive programs to be ready to deploy plans when funds become available.	**2**

2. EV Ready Designation *Pathways*

EVR commitment

+ *16 fundamental* actions

+ *30* tailored “extra points”

100 points for
Bronze EVR designation

EVR commitment

+ Bronze requirements

+ *24 important* actions

+ *30* tailored “extra points”

200 points total for
Silver EVR designation

EVR commitment

+ Bronze requirements

+ Silver requirements

+ *18 valuable* actions

+ *20* tailored “extra points”

300 points total for
Gold EVR designation

Extra points = *important* & *helpful* actions that suit community needs

Support from EVR Team & Cohort

- 12-16 diverse municipal & counties working together
- Bi-weekly, topical cohort meetings – 90 minutes
  - Attendance strongly recommended and recorded
- Shared resource files with templates & tools
- In-person training for first responders & inspectors
- Expert EVR Team

EV READINESS CHECKLIST

GUIDE & INTERACTIVE TOOL

TIM MILBURN,

GREEN WAYS 2GO

Metropolitan Mayors Caucus

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EV Ready

EV Readiness Checklist

- Live Checklist Demo
  - Self assessment
  - Strategic guide
  - Scoring & tracking progress

How the EV Readiness Program Communities Get it Done

MARTHA DOOLEY, EV READINESS CONSULTANT, METROPOLITAN MAYORS CAUCUS

Metropolitan Mayors Caucus

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EV Ready

Setting the Timeline, Priorities, and Collaboration

Cohort Timeline: **September to May (10 months)**

The EVRT has prioritized some actions to accommodate time for planning, collaboration, and cooperation with staff in other departments

- **Zoning Code (6-8 months):** Evaluate Zoning code, establish regulations, and track the code amendment through the public hearing process
- **Permitting (4 months):** Establish a process for EV infrastructure permits including informational checklists for residents, contractors, and inspectors
- ***Municipal Fleet Assessment (4 months):** Submit application and assist ComEd by gathering data and attending meetings when necessary
- **Safety Training:** Ensure fire personnel attend training arranged by the EVRT

The EVRT will establish interim milestones to ensure communities stay on track.

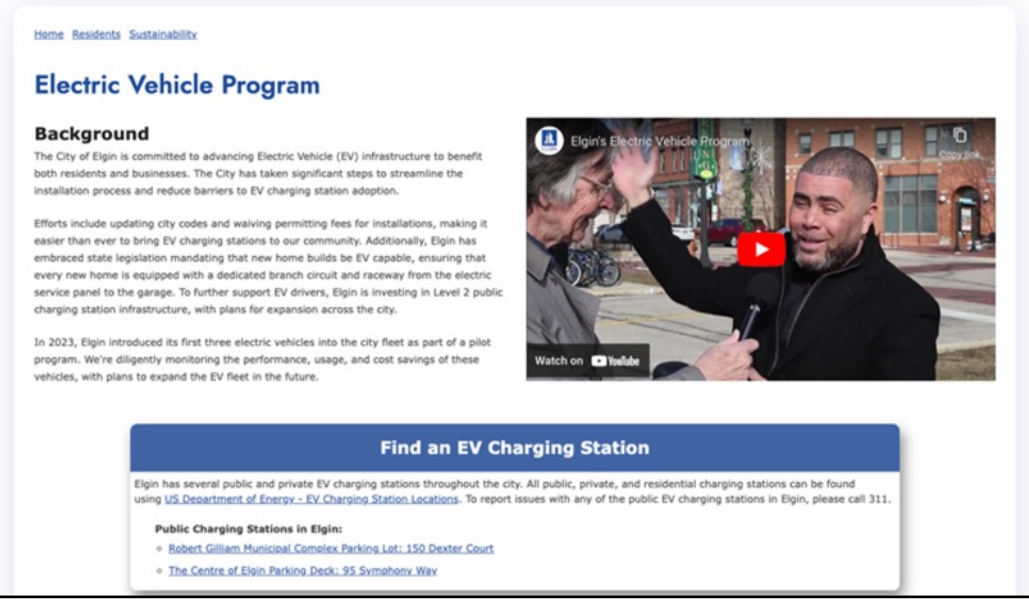
Timeline Overview

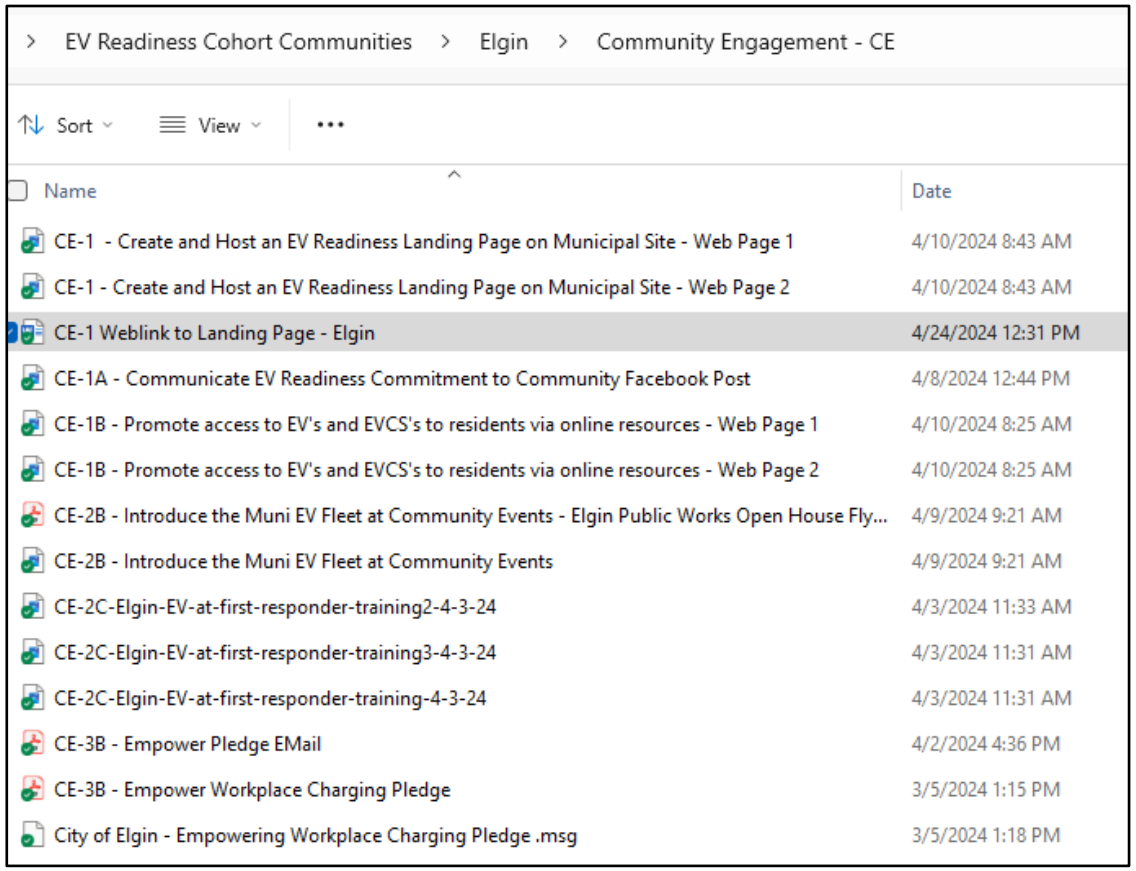
COHORT ACTION PRIORITIES										
Category	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Kickoff										
Zoning & New Construction										
Permitting & Inspection										
Municipal Fleet (silver)										
Safety Training										
Webpage										

DEMO DOCUMENTATION

CE-1, Elgin
Weblink to Landing Page

Weblink to Webpage: https://elginil.gov/2626/Electric-Vehicle-Program





WHAT YOU GET OUT OF IT

TIM MILBURN, GREEN WAYS 2GO

CHERYL SCOTT,

SENIOR SUSTAINABILITY SPECIALIST, METROPOLITAN MAYORS CAUCUS

Metropolitan Mayors Caucus

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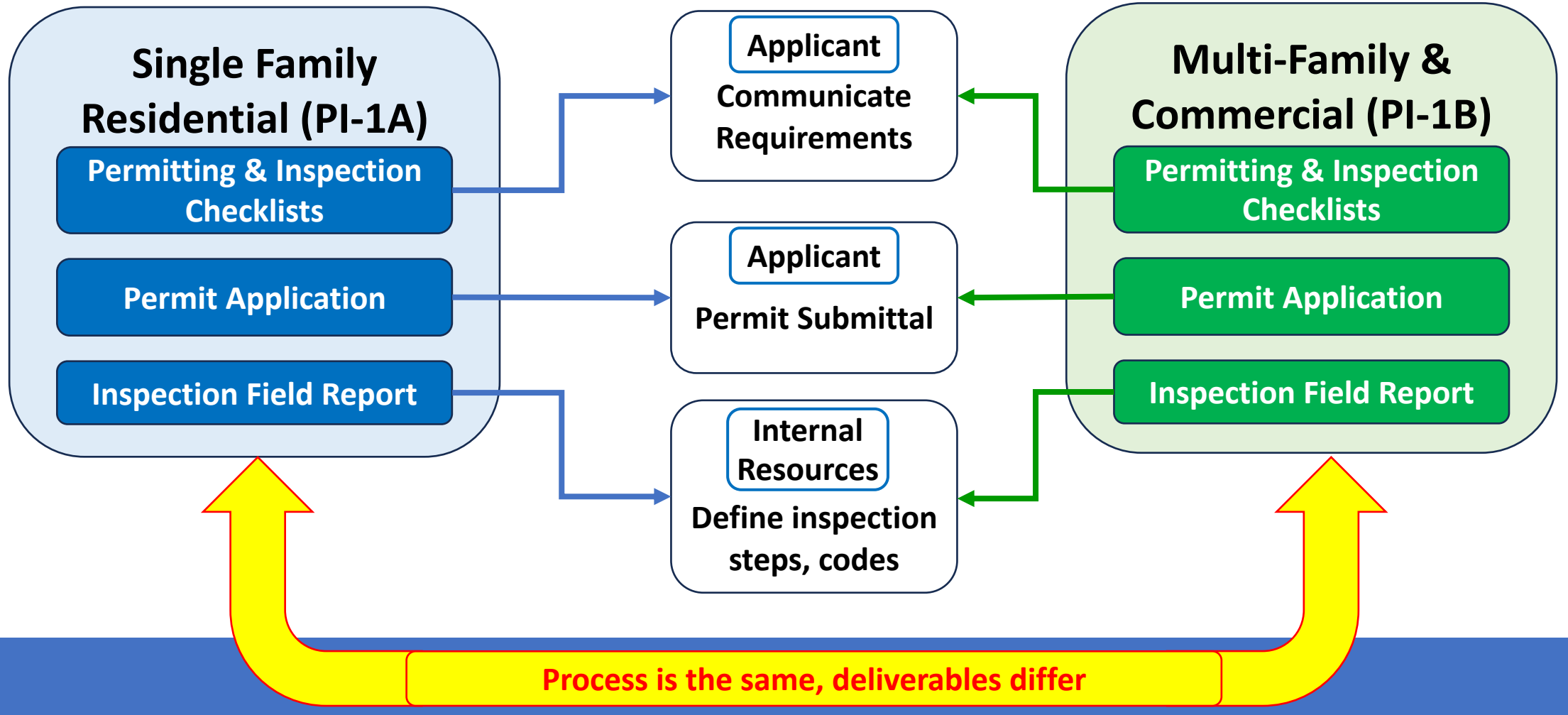
EV Ready

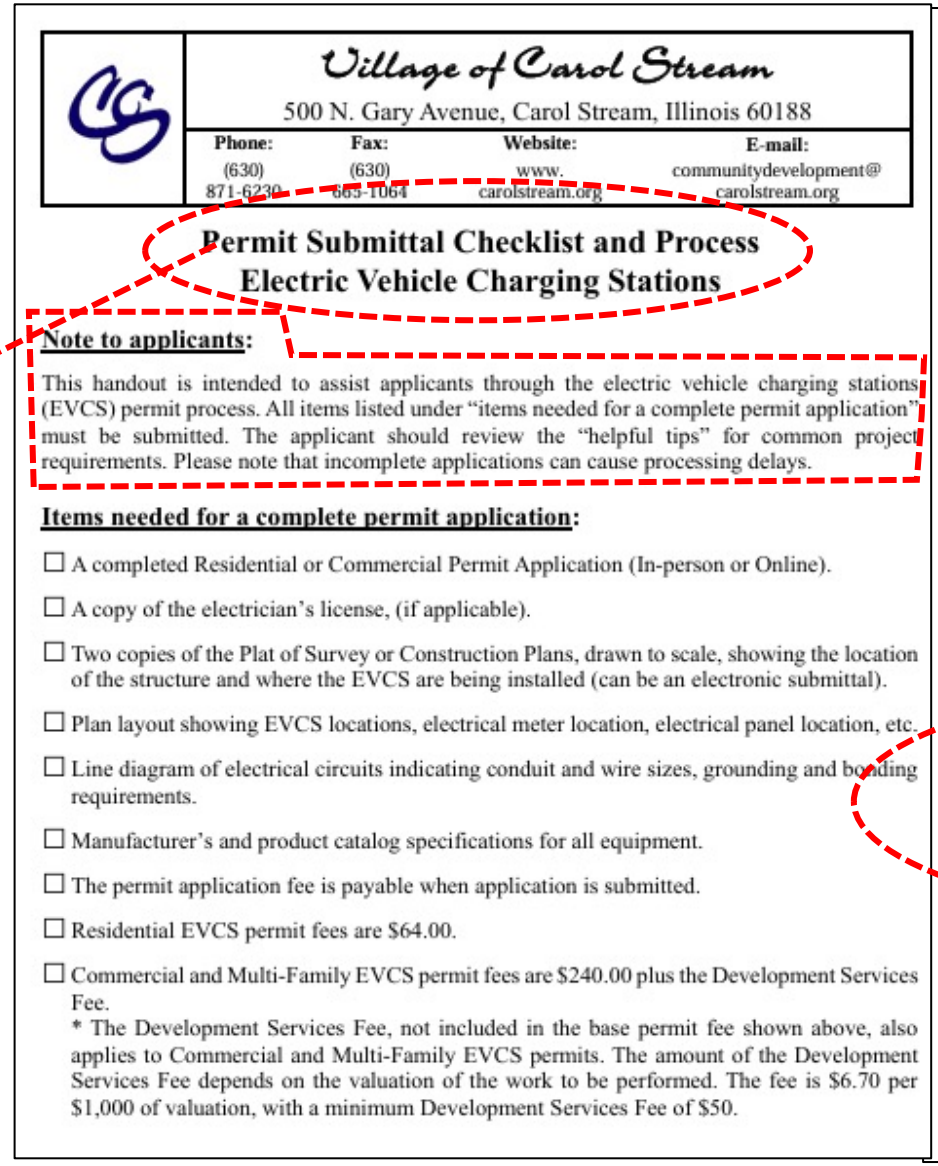
PERMITTING & INSPECTION
SIX EVR DELIVERABLES (PI-1A & PI-1B)



PERMITTING & INSPECTION Checklist

Accessed from Webpage

Deliverables



Village of Carol Stream
500 N. Gary Avenue, Carol Stream, Illinois 60188

Phone:	Fax:	Website:	E-mail:
(630) 871-6230	(630) 665-1064	www.carolstream.org	communitydevelopment@carolstream.org

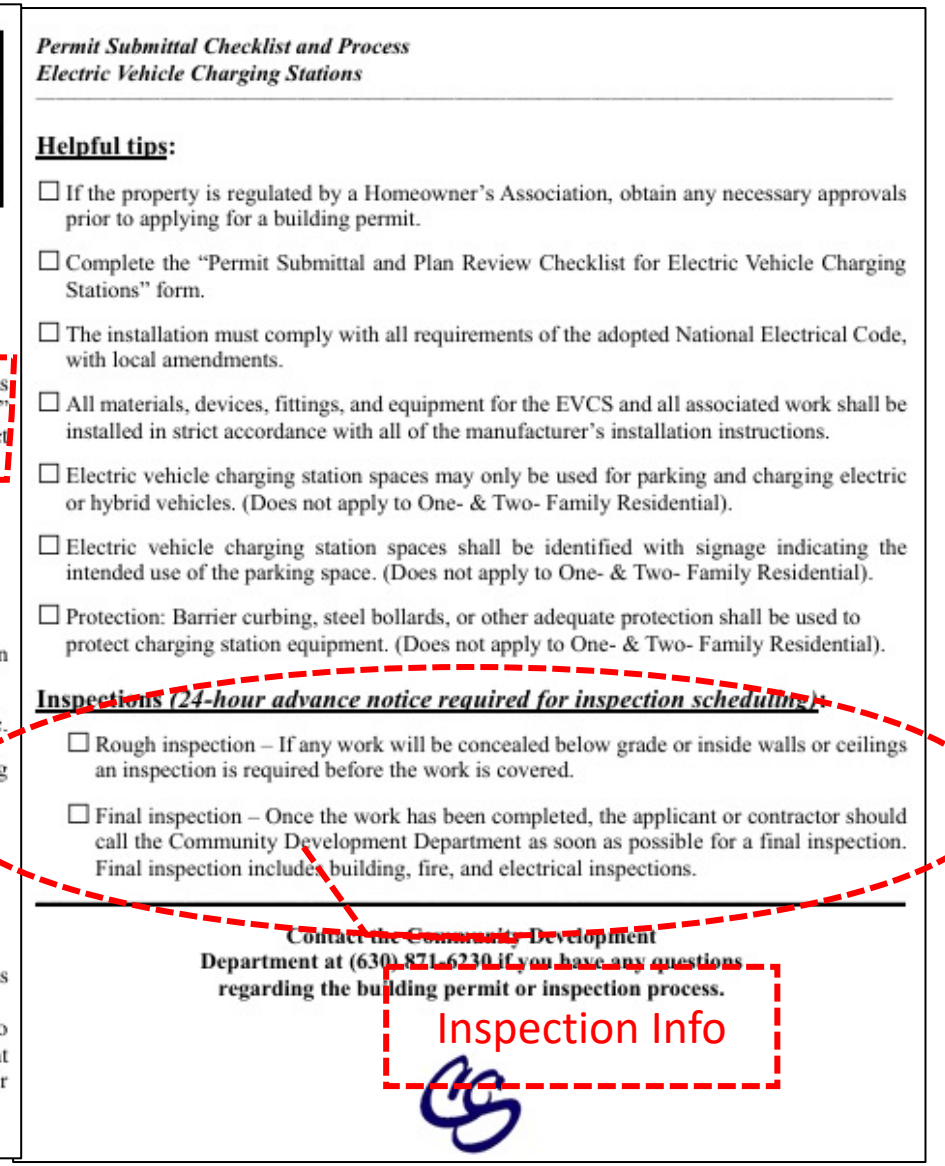
Permit Submittal Checklist and Process
Electric Vehicle Charging Stations

Note to applicants:

This handout is intended to assist applicants through the electric vehicle charging stations (EVCS) permit process. All items listed under "items needed for a complete permit application" must be submitted. The applicant should review the "helpful tips" for common project requirements. Please note that incomplete applications can cause processing delays.

Items needed for a complete permit application:

- ☐ A completed Residential or Commercial Permit Application (In-person or Online).
- ☐ A copy of the electrician's license, (if applicable).
- ☐ Two copies of the Plat of Survey or Construction Plans, drawn to scale, showing the location of the structure and where the EVCS are being installed (can be an electronic submittal).
- ☐ Plan layout showing EVCS locations, electrical meter location, electrical panel location, etc.
- ☐ Line diagram of electrical circuits indicating conduit and wire sizes, grounding and bonding requirements.
- ☐ Manufacturer's and product catalog specifications for all equipment.
- ☐ The permit application fee is payable when application is submitted.
- ☐ Residential EVCS permit fees are $64.00.
- ☐ Commercial and Multi-Family EVCS permit fees are $240.00 plus the Development Services Fee.
  * The Development Services Fee, not included in the base permit fee shown above, also applies to Commercial and Multi-Family EVCS permits. The amount of the Development Services Fee depends on the valuation of the work to be performed. The fee is $6.70 per $1,000 of valuation, with a minimum Development Services Fee of $50.



Permit Submittal Checklist and Process
Electric Vehicle Charging Stations

Helpful tips:

- ☐ If the property is regulated by a Homeowner's Association, obtain any necessary approvals prior to applying for a building permit.
- ☐ Complete the "Permit Submittal and Plan Review Checklist for Electric Vehicle Charging Stations" form.
- ☐ The installation must comply with all requirements of the adopted National Electrical Code, with local amendments.
- ☐ All materials, devices, fittings, and equipment for the EVCS and all associated work shall be installed in strict accordance with all of the manufacturer's installation instructions.
- ☐ Electric vehicle charging station spaces may only be used for parking and charging electric or hybrid vehicles. (Does not apply to One- & Two- Family Residential).
- ☐ Electric vehicle charging station spaces shall be identified with signage indicating the intended use of the parking space. (Does not apply to One- & Two- Family Residential).
- ☐ Protection: Barrier curbing, steel bollards, or other adequate protection shall be used to protect charging station equipment. (Does not apply to One- & Two- Family Residential).

Inspections ***(24-hour advance notice required for inspection scheduling):***

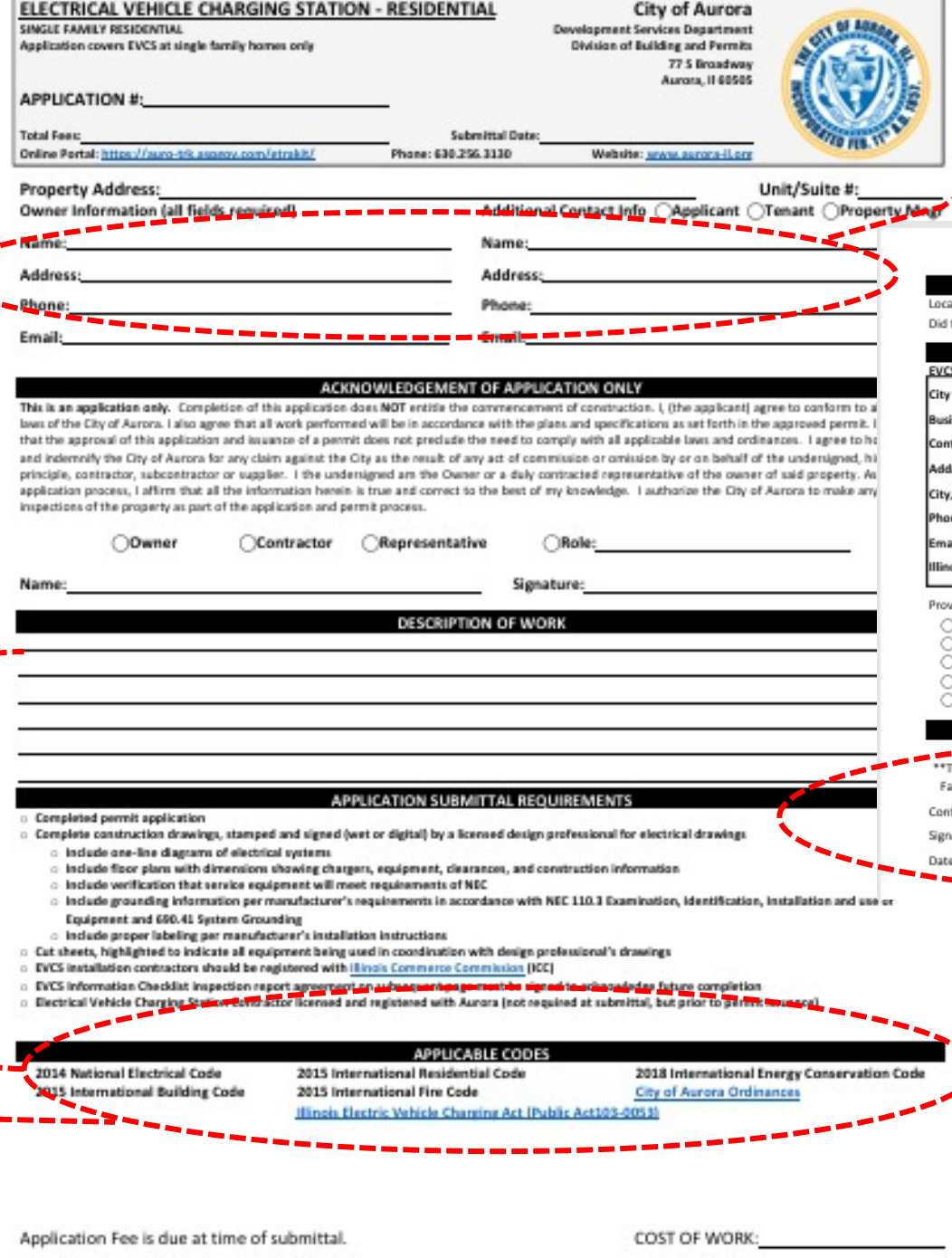
- ☐ Rough inspection – If any work will be concealed below grade or inside walls or ceilings an inspection is required before the work is covered.
- ☐ Final inspection – Once the work has been completed, the applicant or contractor should call the Community Development Department as soon as possible for a final inspection. Final inspection includes building, fire, and electrical inspections.

Contact the Community Development Department at (630) 871-6230 if you have any questions regarding the building permit or inspection process.

Inspection Info

PERMITTING & INSPECTION

Permit Application



ELECTRICAL VEHICLE CHARGING STATION - RESIDENTIAL

SINGLE FAMILY RESIDENTIAL

Application covers EVCS at single family homes only

City of Aurora

Development Services Department

Division of Building and Permits

77 S Broadway

Aurora, IL 60505

APPLICATION #:

Total Fees: Submittal Date:

Online Portal: https://aurora-egh.aspgov.com/etrakit/ Phone: 630.256.3110 Website: www.aurora-il.org

Property Address: Unit/Suite #:

Owner Information (all fields required) Additional Contact Info ◯Applicant ◯Tenant ◯Property Mngr

Name: Name:

Address: Address:

Phone: Phone:

Email: Email:

ACKNOWLEDGEMENT OF APPLICATION ONLY

This is an application only. Completion of this application does **NOT** entitle the commencement of construction. I, (the applicant) agree to conform to a laws of the City of Aurora. I also agree that all work performed will be in accordance with the plans and specifications as set forth in the approved permit. I that the approval of this application and issuance of a permit does not preclude the need to comply with all applicable laws and ordinances. I agree to hold and indemnify the City of Aurora for any claim against the City as the result of any act of commission or omission by or on behalf of the undersigned, his principle, contractor, subcontractor or supplier. I the undersigned am the Owner or a duly contracted representative of the owner of said property. As application process, I affirm that all the information herein is true and correct to the best of my knowledge. I authorize the City of Aurora to make any inspections of the property as part of the application and permit process.

◯Owner ◯Contractor ◯Representative ◯Role:

Name: Signature:

DESCRIPTION OF WORK

APPLICATION SUBMITTAL REQUIREMENTS

- Completed permit application
- Complete construction drawings, stamped and signed (wet or digital) by a licensed design professional for electrical drawings
  - Include one-line diagrams of electrical systems
  - Include floor plans with dimensions showing chargers, equipment, clearances, and construction information
  - Include verification that service equipment will meet requirements of NEC
  - Include grounding information per manufacturer's requirements in accordance with NEC 110.3 Examination, Identification, Installation and use of Equipment and 690.41 System Grounding
  - Include proper labeling per manufacturer's installation instructions
- Cut sheets, highlighted to indicate all equipment being used in coordination with design professional's drawings
- EVCS installation contractors should be registered with Illinois Commerce Commission (ICC)
- EVCS Information Checklist inspection report agreement on subsequent page must be signed to acknowledge future completion
- Electrical Vehicle Charging Station contractor licensed and registered with Aurora (not required at submittal, but prior to permit issuance)

APPLICABLE CODES

2014 National Electrical Code	2015 International Residential Code	2018 International Energy Conservation Code
2015 International Building Code	2015 International Fire Code	City of Aurora Ordinances
	Illinois Electric Vehicle Charging Act (Public Act103-0051)	

Application Fee is due at time of submittal. COST OF WORK:

EVCS INFORMATION CHECKLIST – GENERAL INFORMATION

Location of installation: ◯Garage ◯Exterior Wall ◯Street/Curb ◯Other Number of Chargers:

Did this location previously have a charging station: ◯Yes ◯No

EVCS INFORMATION CHECKLIST – BUILDING INFORMATION

EVCS CONTRACTOR INFORMATION

City of Aurora Registration #:

Business Name:

Contact Name:

Address:

City, State, Zip:

Phone:

Email:

Illinois Commerce Commission Reg. #:

Charging Level: ◯Level 1 ◯Level 2 ◯DC Fast

Maximum Rating of EV Service Equipment: kw

Manufacturer: EVSC Voltage:

Load of existing panel supplying EVCS: AMPS

Service Load of installed EVCS: AMPS

Total Load (existing plus EVCS load): AMPS

Are batteries being installed: ◯Yes ◯No

Provide the following drawings and documents:

- ◯Manufacturer's specifications and cut sheets that show method of attachment
- ◯Proper labeling per manufacturer's installation instructions
- ◯Cut sheets that have been highlighted to show specific equipment in coordination with design professional's drawings
- ◯One line diagrams of the entire electrical system
- ◯Floor plan indicating installation location on the property that includes equipment, disconnect, utility meter, and service

EVCS INFORMATION CHECKLIST – INSPECTION REPORT AGREEMENT

INSPECTION REPORT of completed installation will be completed and delivered **prior** to final inspection approval.

**This document shall be provided by contractor or independent Certified Inspection Company (covering all electrical components)

Failure to properly complete and verify item on checklist may result in inspection fines for contractor on subsequent inspections.

Contact Name: Contact Email:

Signature: Contact Phone:

Date: Any Additional Contact Emails:

Project Info

Deliverables

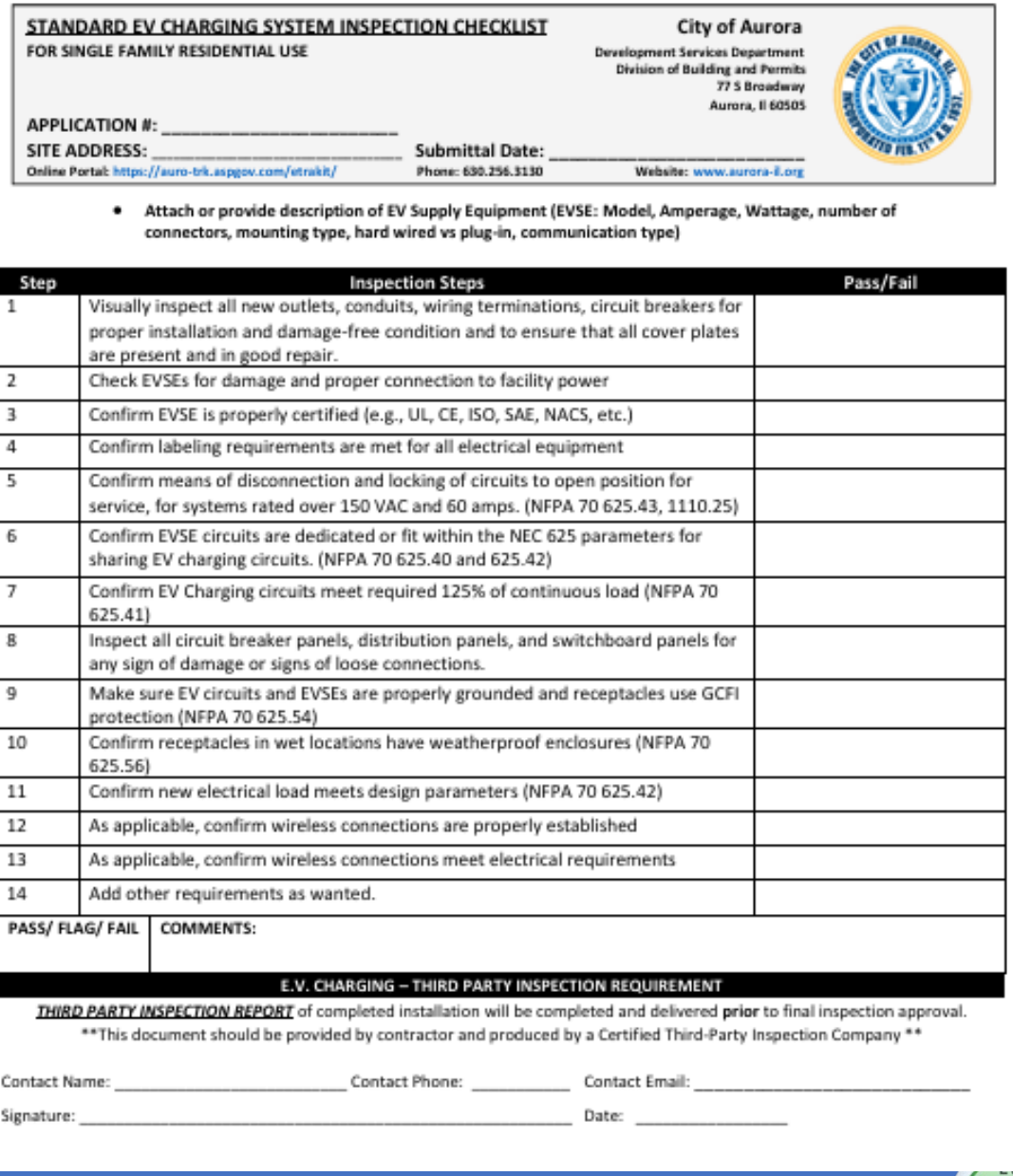
Inspection Info

Codes

PERMITTING & INSPECTION

Inspection Report (Checklist)

Typical + New EV Charging Related



STANDARD EV CHARGING SYSTEM INSPECTION CHECKLIST
FOR SINGLE FAMILY RESIDENTIAL USE

City of Aurora
Development Services Department
Division of Building and Permits
77 S Broadway
Aurora, Il 60505

APPLICATION #: _____
SITE ADDRESS: _____ **Submittal Date:** _____
Online Portal: https://auro-trk.aspgov.com/etrakit/ Phone: 630.256.3130 Website: www.aurora-il.org

- **Attach or provide description of EV Supply Equipment (EVSE: Model, Amperage, Wattage, number of connectors, mounting type, hard wired vs plug-in, communication type)**

Step	Inspection Steps	Pass/Fail
1	Visually inspect all new outlets, conduits, wiring terminations, circuit breakers for proper installation and damage-free condition and to ensure that all cover plates are present and in good repair.	
2	Check EVSEs for damage and proper connection to facility power	
3	Confirm EVSE is properly certified (e.g., UL, CE, ISO, SAE, NACS, etc.)	
4	Confirm labeling requirements are met for all electrical equipment	
5	Confirm means of disconnection and locking of circuits to open position for service, for systems rated over 150 VAC and 60 amps. (NFPA 70 625.43, 1110.25)	
6	Confirm EVSE circuits are dedicated or fit within the NEC 625 parameters for sharing EV charging circuits. (NFPA 70 625.40 and 625.42)	
7	Confirm EV Charging circuits meet required 125% of continuous load (NFPA 70 625.41)	
8	Inspect all circuit breaker panels, distribution panels, and switchboard panels for any sign of damage or signs of loose connections.	
9	Make sure EV circuits and EVSEs are properly grounded and receptacles use GCFI protection (NFPA 70 625.54)	
10	Confirm receptacles in wet locations have weatherproof enclosures (NFPA 70 625.56)	
11	Confirm new electrical load meets design parameters (NFPA 70 625.42)	
12	As applicable, confirm wireless connections are properly established	
13	As applicable, confirm wireless connections meet electrical requirements	
14	Add other requirements as wanted.	

PASS/ FLAG/ FAIL	COMMENTS:

E.V. CHARGING – THIRD PARTY INSPECTION REQUIREMENT

THIRD PARTY INSPECTION REPORT of completed installation will be completed and delivered **prior** to final inspection approval.
**This document should be provided by contractor and produced by a Certified Third-Party Inspection Company **

Contact Name: _____ Contact Phone: _____ Contact Email: _____

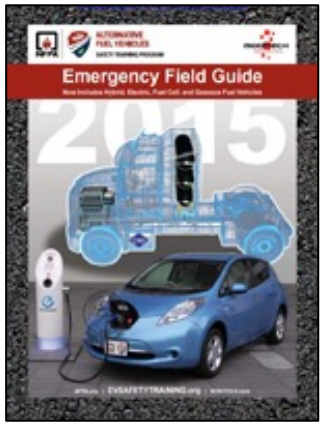
Signature: _____ Date: _____

SAFETY & TRAINING

ST-1A	Provide professional awareness training of EVs and EVCSs for first responders and public safety personnel.			5
ST-1B	Provide professional hands-on training of EVs and EVCSs for appropriate first responders and public safety personnel.			5

ST-1A: **Municipal First Responders** – half day Awareness Training course taught by Illinois Fire Service Institute

- Electric Vehicles
- EV chargers
- Electrical infrastructure
- Introduction to online courses
- Access to Emergency Field Guides



ST-1B: Will have EVs on site and go through hand-on training at same time

You will need to provide advanced notice to fire and police departments

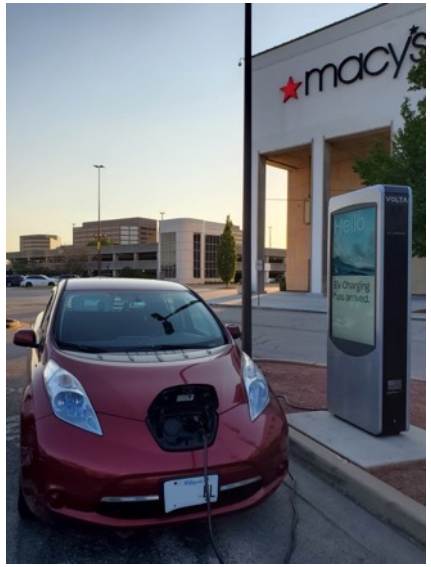
Size Up Scene → Identify Vehicle → Immobilize vehicle → Disable vehicle

Zoning code addresses EV charging stations

- Model code language, community examples, reasoning why
- One example of a model clause: Electric vehicle charging stations are permitted as accessory uses in all zoning districts.

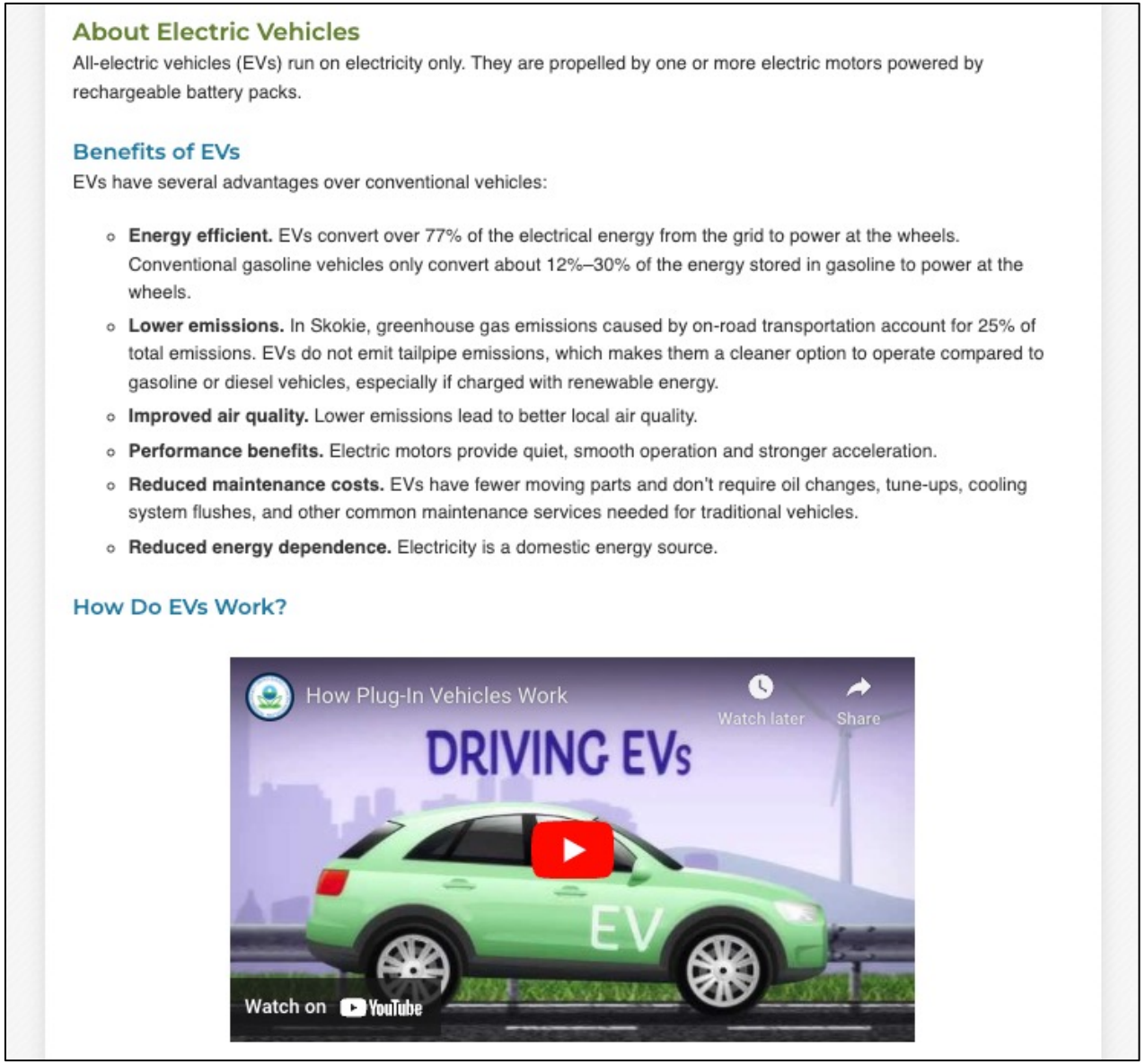
Primary use = movie theater, mall

Accessory use =
EV charging station



EV Readiness Webpage

- We provide a template and update this periodically with new information, links
- Communities choose which information to display on their webpage
- Skokie example (right)



About Electric Vehicles

All-electric vehicles (EVs) run on electricity only. They are propelled by one or more electric motors powered by rechargeable battery packs.

Benefits of EVs

EVs have several advantages over conventional vehicles:

- **Energy efficient.** EVs convert over 77% of the electrical energy from the grid to power at the wheels. Conventional gasoline vehicles only convert about 12%–30% of the energy stored in gasoline to power at the wheels.
- **Lower emissions.** In Skokie, greenhouse gas emissions caused by on-road transportation account for 25% of total emissions. EVs do not emit tailpipe emissions, which makes them a cleaner option to operate compared to gasoline or diesel vehicles, especially if charged with renewable energy.
- **Improved air quality.** Lower emissions lead to better local air quality.
- **Performance benefits.** Electric motors provide quiet, smooth operation and stronger acceleration.
- **Reduced maintenance costs.** EVs have fewer moving parts and don't require oil changes, tune-ups, cooling system flushes, and other common maintenance services needed for traditional vehicles.
- **Reduced energy dependence.** Electricity is a domestic energy source.

How Do EVs Work?

EV Readiness Webpage

- Maywood example

Recognition

EV READY COMMUNITY EXPERIENCE – FIRST COHORT

JEFF MAWDSLEY, PUBLIC WORKS MANAGEMENT ANALYST, VILLAGE OF GLENCOE

ELIZABETH SCOTT, VILLAGE MANAGER, VILLAGE OF UNIVERSITY PARK

RANDAL STEPHENS, OPERATIONS & GRANT ADMINISTRATOR, ANTERO GROUP

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EV Ready

Next Steps

- If interested and able to make the time/staff commitment, apply to join the cohort at: https://metropolitanmayorscaucus.submittable.com/submit

Questions?

Additional Information on Bronze Points

Easy Bronze points

CR-1	**Make a public statement in support of EV readiness.**	**5**			
CR-2	**Report baseline metrics, including power level and quantity of publicly accessible and municipally owned EVCSs; number of municipal EVs; and registered constituent-owned EVs.**	**5**			
PI-3C	Require EVCS installers applying for permits to be registered with the ICC as part of permitting process.			**5**	**5**
PI-3D	Advise constituents that EVCS installation contractors should be registered with the ICC.	**3**			
ST-1A	Provide professional awareness training of EVs and EVCSs for first responders and public safety personnel.	**5**			
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MD-1A	Provide current information on incentives and grants to community.	**3**			
MD-1E	Monitor existing and pending grants and incentive programs to be ready to deploy plans when funds become available.	**2**			

Challenging Bronze points

ZP-1	**Evaluate zoning code to identify any barriers to safe, expedient EVCS development.**	**10**
ZP-2A	When EV charging is not the primary use of the site, classify the EV charging station as an **accessory use.**	**5**
ZP-4	**Where minimum parking requirements exist, flex the number of required parking spaces to accommodate Level 2 and DCFC EVCS. (*Conditional Points*)**	**5**
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