

EVSE Grant Application – Richmond, VT
Required Attachments
April 10, 2019

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Attachment 1: Municipal Resolution

Application or Grant # 2019 Electric Vehicle Supply Equipment (EVSE) Grant Program

RESOLUTION FOR ELECTRICAL VEHICLE SUPPLY EQUIPMENT

WHEREAS, the Municipality of Richmond is applying for funding as provided for in the FY 2019 Budget Act and may receive an award of funds under said provisions; and

WHEREAS, the Department of Housing and Community Development may offer a Grant Agreement to this Municipality for said funding; and

WHEREAS, the municipality has voted to provide local funds for an electric vehicle charging station,

Now, THEREFORE, BE IT RESOLVED

1. That the Legislative Body of this Municipality enters into and agrees to the requirements and obligations of this grant program including a commitment to match funds of 10 % of total project cost;
2. That the Municipal Planning Commission recommends applying for said Grant;

Mark Fausel _____
(Name of Planning Commission Chair) (Signature)

3a. That (Name) Joshua Arneson Title Town Manager
who is either the Chief Executive Officer (CEO), as defined by 10 VSA §683(8), or is a Select Board Member, the Town Manager, the City Manager, or the Town Administrator, is hereby designated to serve as the Municipal/Authorizing Official (M/AO) and to execute the Grant Agreement and other such Documents as may be necessary to secure these funds.

3b. (Alternate Authorizing Official for redundancy)

That (Name) Bard Hill Title Select Board Chair
who is either the Chief Executive Officer (CEO), as defined by 10 VSA §683(8), or a Select Board Member, is the Town Manager, the City Manager, or the Town Administrator, is hereby designated to serve as the Municipal/ Authorizing Official (M/AO) and to execute the Grant Agreement and other such Documents as may be necessary to secure these funds.

3c. That (Name)

Joshua Arneson Title Town Manager

is hereby designated as the Grant Administrator, the person with the overall Administrative responsibility for the Electric Vehicle Supply Equipment grant activities related to the application, and any subsequent Grant Agreement provisions.

Passed this 15th day of April, 2019.

LEGISLATIVE BODY – Select Board

(name)

(signature)

David Sander, Chair

Bard Hill, Vice Chair

Roger Brown

Christy Witters

Katie Mather

Attachment 2: Permit Summary

State permits:

State Permit	Required	Notes
Dept. of Fire Safety – Electrical Installation permit	Yes	Required for electrical hookup.
Dept. of Fire Safety – Electrical Energizing permit	Not expected	The utility is not expected to require energizing the site since we are using an existing power supply/account. But we will confirm if this is required – there is no fee in addition to the Electrical Installation permit.
Dept. of Fire Safety – Construction permit	No	We confirmed with Assistant State Fire Marshall Jesse Dobiecki that no permit will be needed, since the only building alteration will be a hole through the wall for the conduit to the charge station.
Flood Plains Permit	No	The site is outside the 100-year flood zone. See detail below regarding the ANR Project Review Sheet.
Wetlands permit	No	The project site, including excavation from the Library to the EVSE, is not within 50' of a Class I or II wetland. See detail below regarding the ANR Project Review Sheet.

The ANR Project Review Sheet indicates the possible need for Flood Plain and Wetlands permits. This is due to:

- a portion of the Town lot property is in the 100-year flood zone, but the installation site and excavation for conduit to the Library are outside the flood zone.
- a wetland on the State Wetlands Advisory map layer falls on a portion of the property, but that wetland (actual and as mapped) is on the other side of the parking lot, about 250 feet from the installation site and excavation.

As recommended in a discussion with ANR Permit Specialist Jeff McMahon, if the project moves forward we will bring it to the attention of the respective field offices. But we are confident these permits will not be necessary.

Town permits:

None required, as we are using existing parking spaces.

Attachment 3: ANR Permit Verification Form (Appendix G)

Not required – see ANR Project Review Sheet in Attachment 4.

Attachment 4: ANR Project Review Sheet

Please see the following pages.

Project Review Sheet

Date Initiated	<input type="text" value="11/14/2018"/>	ANR PIN#	<input type="text"/>	WW Project#	<input type="text"/>	Pre-application Review	<input checked="" type="checkbox"/>
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Project Information			
General Information			
PROJECT NAME (if applicable)		PROJECT TOWN	
Richmond EV Charging Station Municipal Parking Lot		Richmond	
PROJECT LOCATION (911 address if available)		SPAN(S) (if available)	
203 Bridge Street		519-163-11722	
Contact(s)			
CONTACT TYPE	NAME	ORGANIZATION NAME (if applicable)	
Representative	Linda Parent	Town of Richmond	
ADDRESS		TOWN	STATE ZIP
PO Box 285		Richmond	VT 05477
PHONE	CELL PHONE	EMAIL	
(802) 434-2221		jarenson@richmondvt.gov; Imparent@gmavt.net; kasperantz@icd	
Project Description			
ENTERED BY	INFORMATION SOURCE	DATE ENTERED	
Jeffrey McMahon	Individual	11/15/2018 3:30 PM	
PROJECT DESCRIPTION			
A project to install an Electric Vehicle Charging Station in an existing parking lot on a municipal parcel of 2.5 acres w/ the Town offices, library and downtown parking utilizing the lot. The 2 port charging station is proposed to be installed in an existing parking space located on the northwest side of the parking lot. There will be no other changes w/ this proposal.			
DEC Prior Permits			
PERMIT TYPE		PERMIT NUMBER	
Stormwater		7996	

 Jurisdictional Opinion(s) for permits that may be needed from the District Environmental Office **PRIOR TO COMMENCEMENT OF CONSTRUCTION**



Act 250 Jurisdictional Opinion			
This is a jurisdictional opinion issued pursuant to 10 V.S.A. § 6007(c) and Act 250 Rule 3(A). Reconsideration requests are governed by Act 250 Rule 3(B) and should be directed to the district coordinator at the above address. Effective May 31, 2016, any appeal of this decision must be filed with the Superior Court, Environmental Division (32 Cherry Street, 2nd Floor, Ste. 303, Burlington, VT 05401) within 30 days of the date the decision was issued, pursuant to 10 V.S.A. Chapter 220. The Notice of Appeal must comply with the Vermont Rules for Environmental Court Proceedings (VRECP). The appellant must file with the Notice of Appeal the entry fee required by 32 V.S.A. § 1431, which is \$295.00. The appellant also must serve a copy of the Notice of Appeal on the Natural Resources Board, 10 Baldwin Street, Montpelier, VT 05633-3201, and on other parties in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings.			
PERSON REQUESTING JURISDICTIONAL OPINION	REQUESTOR TYPE	ACT 250 PERMIT NUMBER (if any)	HAS THE LANDOWNER SUBDIVIDED BEFORE?
Jeffrey McMahon	Permit Specialist	No Act 250 permit found	<input type="checkbox"/> Yes <input type="checkbox"/> No
TYPE OF PROJECT (check all that apply)			
<input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Federal			
IS AN ACT 250 PERMIT REQUIRED?		COPIES SENT TO STATUTORY PARTIES?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
BASIS FOR DECISION			
The project does not constitute development pursuant to Act 250 Rule 2.			

DISTRICT COORDINATOR SIGNATURE 	2018.11.14 15:42:35 -05'00' Rachel Lomonaco, District Coordinator  [phone] 802-879-5658 [email] rachel.lomonaco@vermont.gov Natural Resources Board District 4 Environmental Commission 111 West Street, Essex Junction, VT 05452
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Wastewater System & Potable Water Supply Permit Jurisdictional Opinion

IS A WASTEWATER SYSTEM & POTABLE WATER SUPPLY PERMIT/APPROVAL REQUIRED? <input type="checkbox"/> Yes <input type="checkbox"/> Permit application currently under review <input checked="" type="checkbox"/> No <input type="checkbox"/> Permit issued on _____	PERMIT NOT REQUIRED? <input type="checkbox"/> Boundary Line Adjustment <input type="checkbox"/> Home Occupation <input type="checkbox"/> Clean Slate <input type="checkbox"/> Notice of Permit Requirement
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BASIS FOR DECISION
Does not meet the definition of "Permit Required" section 1-303

REGIONAL OFFICE STAFF SIGNATURE 	2018.11.16 08:43:42 -05'00' Bill Zabiloski, Assistant Regional Engineer  [phone] 802-557-5773 [email] bill.zabiloski@vermont.gov Department of Environmental Conservation Drinking Water & Groundwater Protection Division - Montpelier Regional Office 1 National Life Drive, Davis 1, Montpelier, VT 05620-3703
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The following are preliminary, non-binding determinations made by DEC Permit Specialists identifying other permits that may be needed
PRIOR TO COMMENCEMENT OF CONSTRUCTION

SPECIAL WETLANDS DISCLAIMER

A desktop review cannot definitively confirm the presence or absence of a wetland in or within fifty feet of your project site. This review sheet is the result of a desktop review that included reviewing the project site with these mapping tools available at <https://anr.vermont.gov/maps>. Many wetlands do not appear on these maps. You are advised to review the site on the ground for wetlands, regardless of whether this box is checked or not (<https://dec.vermont.gov/watershed/wetlands/what/guide>). To confirm the presence/absence of wetlands, contact a qualified environmental consultant (<https://dec.vermont.gov/watershed/wetlands/what/id/wetland-consultant-list>) or the State Wetlands Program (<https://dec.vermont.gov/watershed/wetlands>).

Preliminary, Non-binding Determination of the Applicability of Other State Permits
 Note: Fact Sheet numbers below refer to permit fact sheets available at: <http://dec.vermont.gov/permits/handbook/info-sheets>

Agency of Natural Resources - Department of Environmental Conservation

WATERSHED MANAGEMENT DIVISION



- Flood Plains
 - Northwest Region
 Contact: Rebecca Pfeiffer, CFM Email: rebecca.pfeiffer@vermont.gov Phone: 802-490-6157
- Wetlands [Fact Sheet #29]
 - Chittenden County:
 Contact: Tina Heath Email: tina.heath@vermont.gov Phone: 802-490-6202

Department of Public Safety

- Construction Permit Fire Prevention, Electrical, Plumbing, Accessibility (ADA) [Fact Sheets #49, 50, 50.1, & 50.2]
 - Williston: 802-879-2300

Local Permits

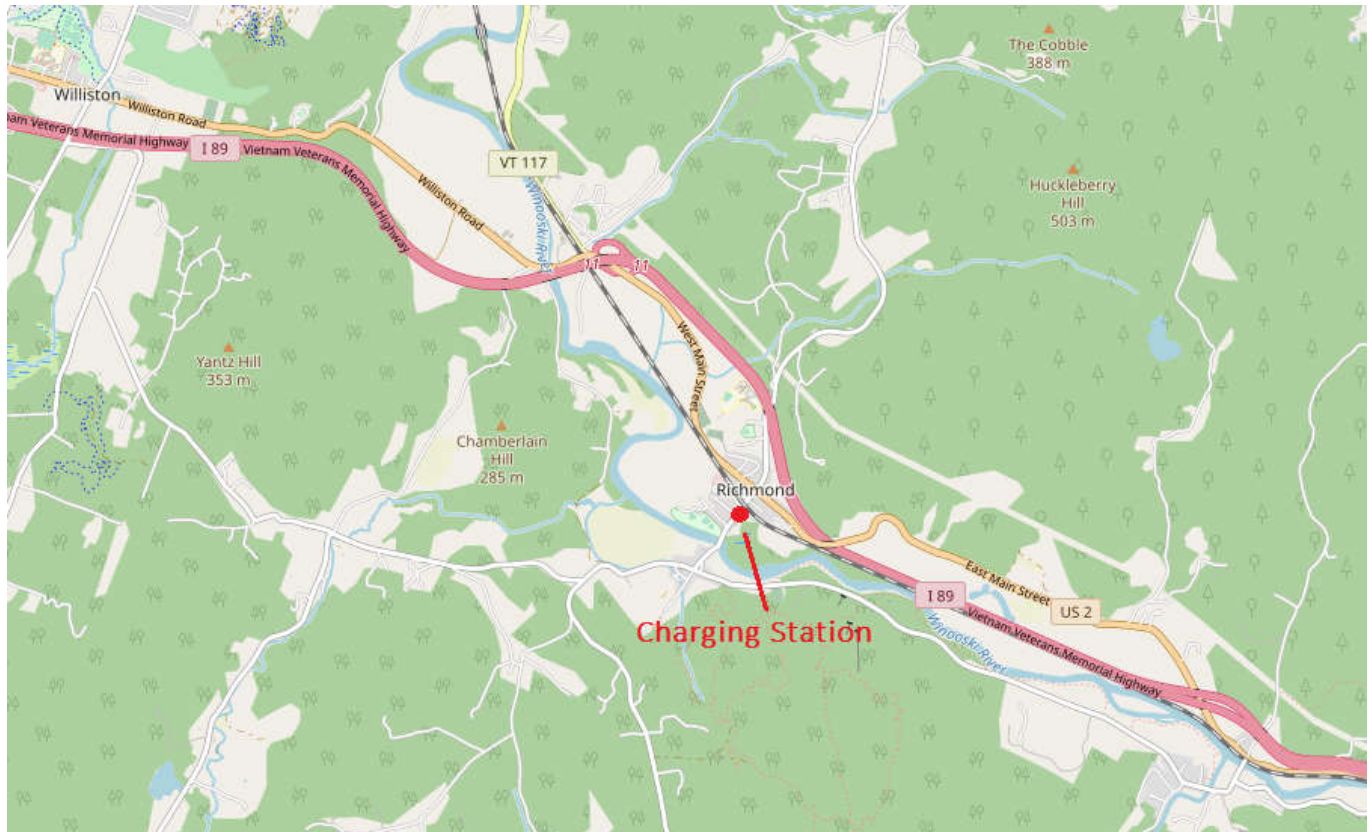
- See your Town Clerk, Zoning Administrator, Planning Commission or Public Works

PERMIT SPECIALIST SIGNATURE 	2018.11.20 07:56:43 -05'00' Jeff McMahon, Permit Specialist  [phone] 802-477-2241 [email] jeff.mcmahon@vermont.gov Department of Environmental Conservation Environmental Assistance Office - Essex Regional Office 111 West Street, Essex Junction, VT 05452
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Attachment 5: Project Site Plan and Photographs

GPS coordinates of proposed location: 44.402910, -72.995185

Location map, surrounding area:



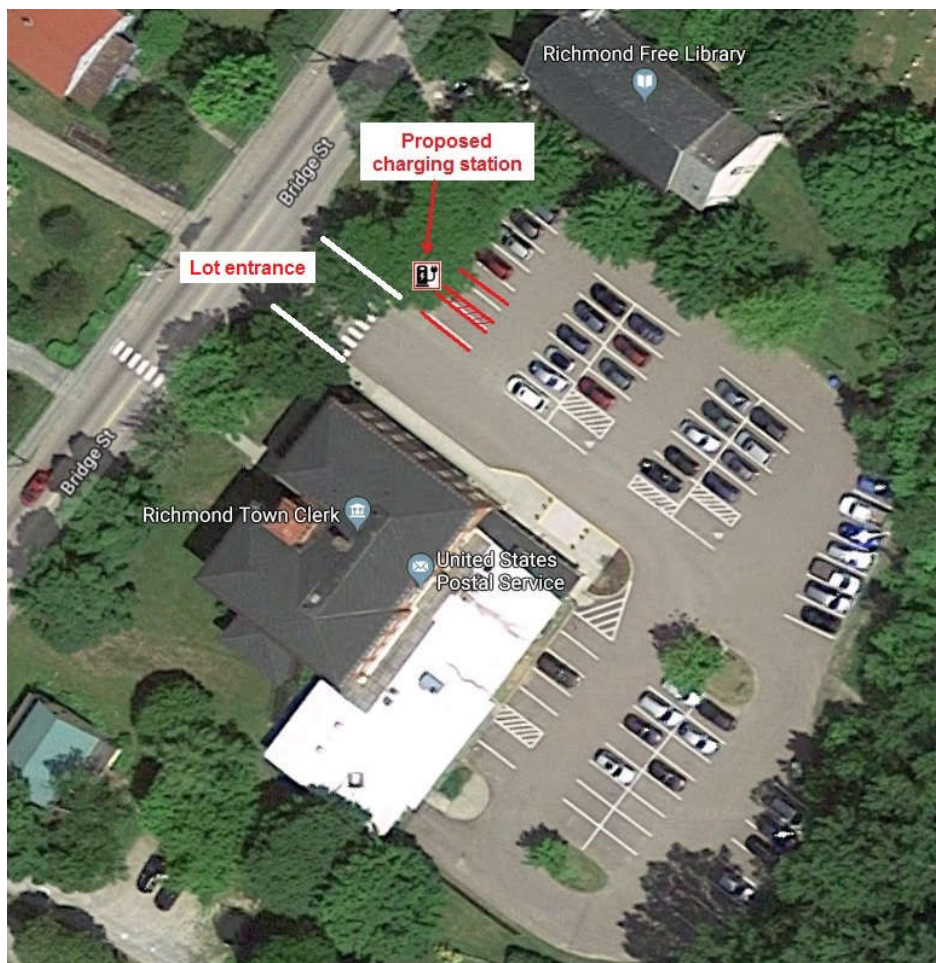
Map © OpenStreetMap Contributors, use allowed with attribution

Location map, Richmond Village:



Map © OpenStreetMap Contributors, use allowed with attribution

Location aerial view with site detail:



Site photo - existing spaces to be used, prominently located next to the parking lot's only entrance/exit:

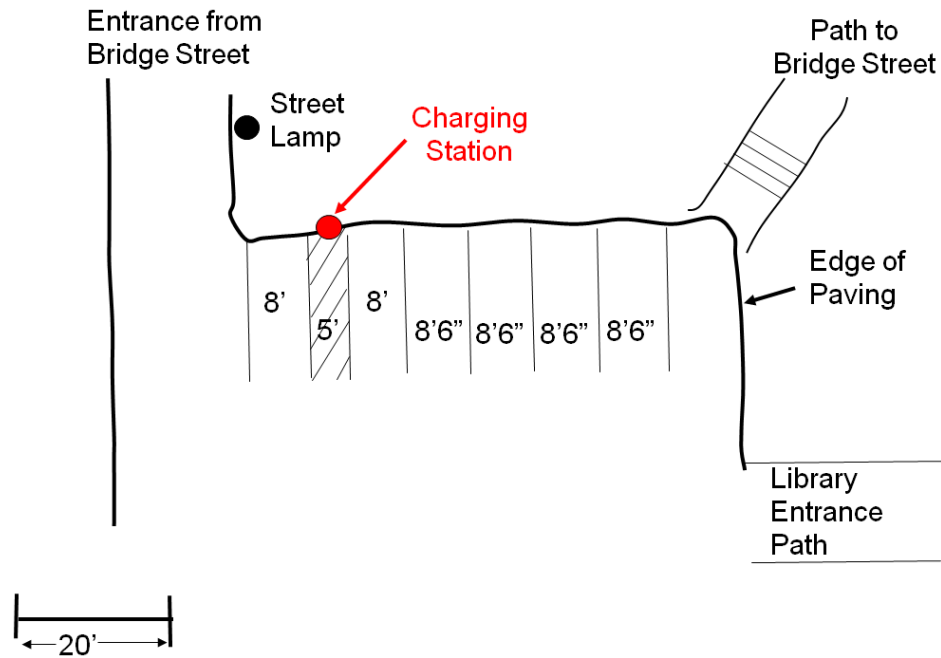


Site photo – using the two spaces on the left (to be re-stripped for ADA compliance):



Site plan diagram:

Current parking spaces are 9' wide, to be slightly reduced as noted in the diagram to accommodate one ADA-compliant EV space while maintaining the current number of parking spaces. Future expansion of EV chargers would be to the adjacent spaces. The existing sites are reserved for police vehicles, but the Police Department has agreed to move those to elsewhere in the parking lot.



On-site signage:

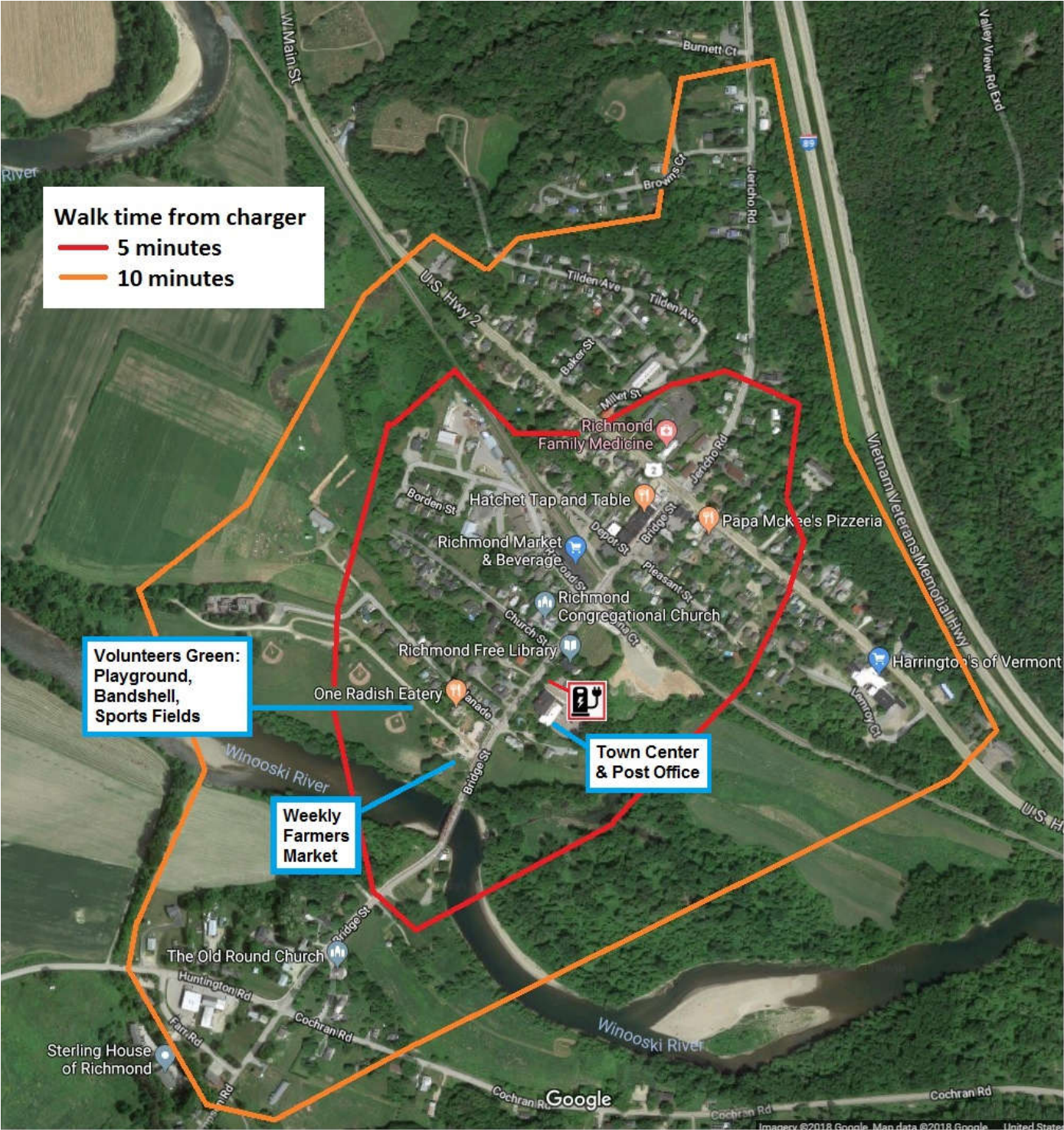


We have budgeted for:

- 2 Directional signs at the lot entrance (1 for each direction)
- 1 Directional sign on entering the lot
- 2 Parking Space signs (1 per EV space)
- 1 Informational sign (“Please limit use to 2 hours” – not pictured).

Off-site signage: VTrans contact Kristin Driscoll has assured us that VTrans would install EV directional signs on the General Service signs on I89, at the exit ramps’ directional boards, and at the intersection of U.S. Route 2 with Bridge Street, at no cost to the Town.

Village destinations within 5 and 10 minute walking distance:



Attachment 6: Technical Equipment Specifications

This application was developed by Richmond's Energy Committee. These Committee members together have expertise in installation and operation of PV sustainable energy installations, small business accounting, and four members own/drive EV automobiles.

Several current owner/operators of comparable EV charging facilities (notably Town of Plainfield) were contacted for advice. Studies of charging equipment and operating requirements were reviewed and evaluated, notably:

- *Electric Vehicle Charger Selection Guide*, January 2018
https://www.afdc.energy.gov/uploads/publication/EV_Charger_Selection_Guide_2018-01-112.pdf
- *The Ultimate Guide to Electric Car Charging Networks*, July 2018,
<https://www.plugincars.com/ultimate-guide-electric-car-charging-networks-126530.html>

The following two short-listed options were compared:

- ChargePoint CT4021 Dual station, <https://www.chargepoint.com/products/commercial/>
- SemaConnect station: Dual level 2 station with dual cable management.

Ultimately the ChargePoint CT4021 system was selected, based on the following criteria:

- Meets the grant requirements
- Company with extensive national experience (duration of company operations)
- Largest U.S. Network – approximately 6,083 stations, vs. 1,166 for SemaConnect¹
- Energy Star rating (SemaConnect does not yet have EStar-rated equipment)
- Competitive pricing of equipment
- Warrantee options
- Ease of use – high prevalence of registered cardholding users, flexible fee structure
- Anticipated reliability; reported service and downtime record
- Anecdotal preference reports by local users of EV vehicles.

¹ “The Ultimate Guide to Electric Car Charging Networks”, 23-July-2018,
<https://www.plugincars.com/ultimate-guide-electric-car-charging-networks-126530.html>

Attachment 7: Fee/Rate Structure Statement

The Town's fee/rate structure will be set to recover the costs of maintaining the charging station. The \$/kWh rate to users will equal the Town's \$/kWh electric rate paid to Green Mountain Power. No excess funds will be collected from its users for any other purpose.

The fee/rate structure will be fully disclosed prior to charging the consumer, both at the charging station and in online apps for finding charging stations (ChargePoint, PlugShare, etc.).

The currently open PUC docket 18-2660-INV, to be completed by July 1, will address EV charging rate structures, including whether non-utility owned EV charging stations in Green Mountain Power territory will be allowed to charge by the kWh.² If that docket does not allow charging by kWh, we will derive an equivalent \$/hour rate based on an average vehicle charging power (kW).

Year 1 Fee/Rate Structure

\$0.155/kWh for 3 hours, \$2.00/hour after that (dwelling fee)

\$1.25/gallon equivalent – assuming 25 mpg vehicle equivalent, and 3.1 miles/kWh EV

	Level 2 Charging
Peak Charging Power (kW)	6
Price/Hour	\$0.930
\$/kWh	\$0.155
\$/Gallon Gasoline Equivalent	\$1.25

Future Fee/Rate Structure

The future \$/kWh cost to users will equal the Town's cost of electricity.

After year 1, and annually thereafter, the Select Board will review the charging station usage data to determine if adding an O&M adder is appropriate to cover unexpected costs, e.g., due to vandalism or accidents, and to cover future O&M costs after the 5-year grant period. If an O&M adder is applied, it would not exceed \$0.05/kWh. The ChargePoint Assure Maintenance Plan is expected to cover O&M costs during the 5-year grant period.

² <https://epuc.vermont.gov/?q=node/64/134378/FV-BDIssued-PTL>

Attachment 8: Project Schedule

Project Installation Schedule

Grant matching funds become available July 1, 2019, as approved with the FY2019 budget at Town Meeting in March 2019.

	Task	2019						2020			
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Grant award	■									
2	Obtain required permits		■	■	■						
3	Prepare/distribute competitive RFP		■	■							
4	Select Board approval, contractor notified				■						
5	Site work (excavation, bollard, etc.)					■	■				
6	Equipment installation						■				
7	Signage						■	■			
8	Register site with NREL AFDC							■			
9	Go live - charging stations on-line							■			
10	Publicity, including on-line listings							■	■	■	■
11	Submit final Grant closeout report								■		

Monitoring/Reporting/Publicity Schedule

	Task	2020				2021				2022				2023				2024			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Monitoring/Reporting																				
1.1	Report usage data to PSD				■				■					■					■		
1.2	Report to Town Select Board				■				■					■					■		
1.3																					
2	Publicity																				
2.1	Check/revise online listings	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.2	Local publicity/FPF postings		■		■		■		■		■		■		■		■		■		■
2.3	Article/letter in local newspapers	■			■				■				■				■			■	

Attachment 9: Budget Worksheet

Complete the budget form below itemizing the scope of work and the sources and amounts of all project funds. Please indicate the status of each fund and attach this sheet to the application.

Note: Funding may be used for the purchase of Level 2, or direct current fast-charge (DCFC) equipment for light-duty vehicles according to the criteria below. Funding may also support auxiliary costs, including: permitting, design, power connection, striping, on-site signage, warranty, software, internet connection, protective devices, and eligible installation costs.

Funds may not be used to purchase or rent real-estate or pay for other capital costs (such as: construction of buildings, parking facilities, etc.), electricity costs, general operation and maintenance, or administrative costs incurred by the applicant.

Itemized Project Budget

Item Description	Quantity	Unit Cost	Total Cost
EVSE Charging Station			
Charging station : ChargePoint CT4021-GW1 Dual Port, 5-year cloud commercial plan per charger (required), and 5-year Assure Maintenance Program	1	\$10,950	\$10,950 ³
Protective Bollard			
Bollard, 4-inch, in front of charge equipment, installed	1	\$450	\$450 ³
Electrical Service			
Installation of charging station, single pedestal mount, dual cable management, trenching/underground wiring, electrical connections (two 40-amp 240V circuits), wireless configuration.	1	\$9,550	\$9,550 ³
Future proofing – Installation of conduit from Library to charge station to support 2 additional Level 2 chargers in the future	1	\$1,450	\$1,450 ³
Lighting			
N/A – Lighting is already in place			\$0
EVSE Sign(s)			
On-site signage materials – signs, posts, hardware (see Attachment 3 for detail)	1	\$690	\$690 ⁴
Signage installation, per post	6	\$100	\$600
Off-site signage on Interstate 89, exit ramps, U.S. Rte 2 intersection with Bridge St. – to be installed by VTrans	6	\$0	\$0
Other			
Pavement striping, remarking 6 spaces + ADA aisle	1	\$400	\$400 ⁵
State permit, Vermont Department of Fire Safety	1	\$240	\$240
TOTAL			\$24,330

³ Estimate from Peck Electric based on equipment, site plan, and electrical hookup.

⁴ Signage costs are based on a quote provided by VT Correctional Industries.

⁵ Estimate from local striping contractor.

Funding Sources

Funding Source	Status of Funding	Amount
EVSE Grant	Pending	\$21,897
Town match, 10% of total project cost	See detail below	\$2,433
TOTAL		\$24,330
Town 10% Matching Funds		
Signage installation – 6 posts, \$100/post	In-kind, by Highway Dept.	\$600
Green Mountain Power incentive rebate, \$375/charger, paid as a bill credit once the chargers are installed	Confirmed by GMP	\$750
Town of Richmond direct funding	Allocated for FY2019	\$1,083
Total		\$2,433

Financial Summary

Total Project Cost	\$24,330.00
Grant Funding Request	\$21,897.00
Minimum Required Match Amount	\$2,433.00
Above Minimum Required Match Amount	\$0.00
Applicant's Total Contribution to Project Costs	\$2,433.00

Attachment 10: Community Impact

The Richmond Town Plan adopted by voters on November 6, 2018, is committed to the Vermont state energy goal of 90% renewable energy across all sectors by 2050.⁶ This includes conversion of Richmond's privately-owned, light-duty vehicle fleet from 0.6% in 2015 to 89% by 2050, with intermediate goals of 6% by 2025 and 41% by 2035.⁷ This anticipated expansion of the EV fleet by a factor of 10 over the next 7 years will require an immediate, significant expansion of public EV supply equipment, of which Richmond currently has none. Specifically, the Plan commits us to: "Support the installation of private and public electric vehicle (EV) charging stations in convenient locations. Consider installing one at the Town Center, the Park and Ride and along travel corridors."⁸

Several additional goals in the Town Plan reference concentrating growth within our downtown village center, in accordance with state-defined "smart growth" principles.⁹ We are clearly committed to maintaining a vibrant and active downtown consisting of both residential and commercial uses. The addition of an EVSE close to the library, post office, municipal and school district offices, supermarket, hardware store, public park, restaurants and other businesses supports the use of the downtown as an attractive local destination for both residents and visitors, and will provide a convenient rationale for spending time in the center of town.

In addition, this Richmond EVSE will be located 1.8 miles from Exit 11 of I-89 and the Richmond Park and Ride, and 0.2 miles from US Route 2. It will be conveniently positioned between EVSE in Williston and Waterbury along the Montpelier-Burlington corridor, thus providing these two major travel routes with more frequent service intervals. Commuters and travelers will have an opportunity to recharge and visit Richmond's village center while doing so.

⁶ Town Plan, Energy Section; p. 18

⁷ Almanac; pp. 65-67

⁸ Energy Section; Goal 1, Action 6; p. 20

⁹ Economic Development Section, Goal 1, Action 4 and Goal 3, Actions 1-3, pp. 12-13; Energy Section, Goal 1, Action 1, p.20; Future Land Use Section, Goal 1, p.26; Transportation Section, Goal 4, Action 3, p.38