Town of Thetford Vermont
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Selectboard Regular Meeting *Draft* Agenda
Thetford Town Offices
(w/Virtual Attendance Option)
Monday, May 2, 2022 7:00 PM

To connect to Zoom via computer: https://us02web.zoom.us/j/89080661986
To connect via phone only: +1 (646) 558 8656 | Meeting ID: 890 8066 1986

7:00 PM – Call to Order

1. Agenda Review

2. Town Manager Report – Bryan Gazda
    1. Roads Update
    2. Upper Valley Ambulance Update
    3. Water Study Update
    4. PM Airport Update
    5. Ped/Bike Grant Update
    6. Chief of Police Appointment

3. Public Comment

4. EV Charging Station Study Report Presentation by Thetford Joint Energy Committee

5. Town Audit – Presentation on How to Read and What to Look For by Chad Hewitt (to access the audit, click HERE)

6. Appointment of Commissioner to Two Rivers Ottauquechee Regional Commission to Represent Thetford

7. Discussion of Whether or Not to Adjust Selectboard Stipends

8. Warrants and Minutes

9. Adjourn

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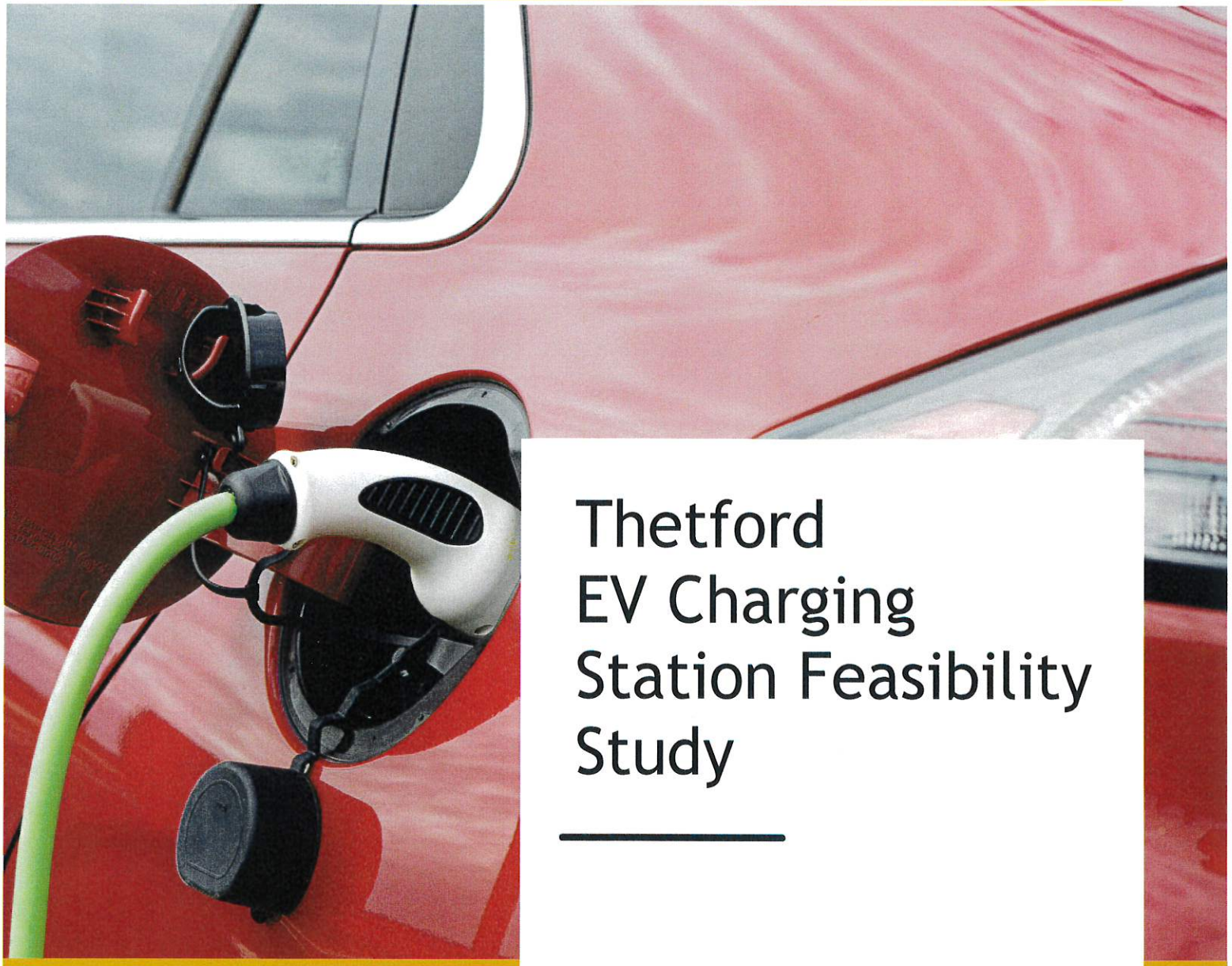

Thetford EV Charging Station Feasibility Study

MARCH 30, 2022

Prepared by DuBois & King, Inc.

DuBois & King inc.

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Contents

Project Overview

Thetford engaged DuBois & King (D&K), an Engineering and Planning firm, to conduct a feasibility study that identifies and prioritizes potential locations for Electric Vehicle (EV) charging facilities that would provide benefit to the community. This report is intended to be a starting point for further evaluation, design and installation of EV charging facilities.

Goals

The Town of Thetford is seeking to:

- Continue to encourage residents to transition away from combustion driven vehicles to electric or plug-in hybrid electric vehicles in order to reduce energy use.
- Identify locations within the community where electric vehicle (EV) charging stations could be installed that will provide residents and visitors with convenient access to recharge electric vehicles.
- Position the community to be able to pursue any potential grant funding that becomes available for the purpose of expanding the electric vehicle charging network.

Project Background

The Town of Thetford has long maintained an active interest in promoting the benefits of energy conservation, efficiency and renewable energy generation. The Thetford Energy Committee works tirelessly to develop sound energy policy for the community and to communicate, assist and educate residents as to how they can reduce their energy impacts.

The Thetford Town Plan (2020) recognizes that there is a direct connection between land use patterns, transportation and energy use. Like most rural communities in Vermont, residents must drive to school, work and to reach necessary services. As such, the Energy Committee has taken a strong role in encouraging residents to utilize electric vehicles for transportation. Most notable is their EV (Electric Vehicle)/PHEV(Plug-in Hybrid Electric Vehicle) Ambassador program, which provides valuable web content and local "ambassadors" who can answer questions residents might have as they consider an EV or PHEV.

The nearest public EV charging facilities are Level 1 chargers installed at the VTrans Park and Ride adjacent to I-91. The nearest Level 2 or 3 chargers (see table below for description of charging types) are located approximately 9 miles to the south in Norwich. The Energy Committee has noted that this can be a challenge for local EV owners. Seasonal power outages in the more remote areas of Thetford can often leave residents without power for extended periods. The Energy Committee has interest in identifying a public and central location where residents and visitors could charge an EV. Most recently, placing such a facility at the Thetford Park and Ride was considered, but it is generally considered too remote for residents due to the lack of proximity to local amenities, businesses or shelter.

EV Charging Basics

Powered by electric motors and batteries, electric vehicles are available in a variety of models with different ranges and capabilities. To recharge, they need to be plugged into a source of electric power through EVSE, often referred to as "charging equipment." Public charging is especially important for All-electric vehicles like the Nissan LEAF or Chevy Bolt, which are powered solely by energy stored in a battery. Plug-in hybrids have batteries paired with gasoline engines to enable longer trips without stopping to charge. There are three levels of charging described in Table 1 below.

Level 1 (120 Volts)	Level 1 charging uses the same 120 volt current found in standard household outlets and can be performed using the EVSE that comes with an EV from the automaker. This typically provides about 2-5 miles of range per hour of charging. Offering level 1 charging can be as simple as installing dedicated 120 volt outlets in a parking area, as VTrans has done at a number of recently constructed park and ride facilities, including Thetford's. Level 1 chargers are ideal for locations where EV owners can plug in all day or overnight, so their car is ready when they need it.
Level 2 (240 Volts)	Level 2 charging uses 240 volt power to enable faster regeneration of an EV battery system - usually about 10-20 miles of range per hour of charging depending on the vehicle and EVSE power capability. Providing this type of charging requires installation of a dedicated EVSE charging device and electrical wiring capable of handling higher voltage power. Level 2 chargers are best for situations where the EV owner can park for a while, such as workplaces or retail parking lots. Options that can be considered for an EV Installation include networked charging

	stations, which have a small monthly fee, allow for controlled access, data collection and charging customers for use.
Level 3 (DC Fast Charging)	DCFC provides compatible vehicles (generally all-electric models) with an 80% charge in 20-30 minutes by converting high voltage AC power to DC power outside of the vehicle for storage in EV batteries. This provides 100+ miles of range per hour of charging. Currently most DCFC compatible vehicles can handle up to 50 kW of DCFC power, but higher powered, faster charging DCFC is expected to be widely available in vehicles arriving over the next few years with charging power up to 300 kW or more. Level 3 chargers are optimal for use by EV owners as a stopover on long road trips when charging is needed "on the go," typically near a highway exit. Options to consider include identifying how many charging stations are needed, as electrical upgrades are typically required for DCFC.

Table 1: EV Charging levels and their characteristics

DCFC is the optimal choice for travelers as it is the highest powered EV charging currently available in the consumer marketplace. DCFC can provide over 100 miles of range per hour of charging with most vehicles able to receive an 80% charge in 30 minutes or less. The increased charging speed makes this technology ideal for serving longer distance corridor travels or other EV motorists who desire more of a "fueling station" type of experience.

However, as is noted later in this report, the costs and infrastructure requirements for Level 3 DCFC are quite significant. For Thetford, Level 2 charging facilities represent an appropriate balance of charging capacity and installation and operational costs.

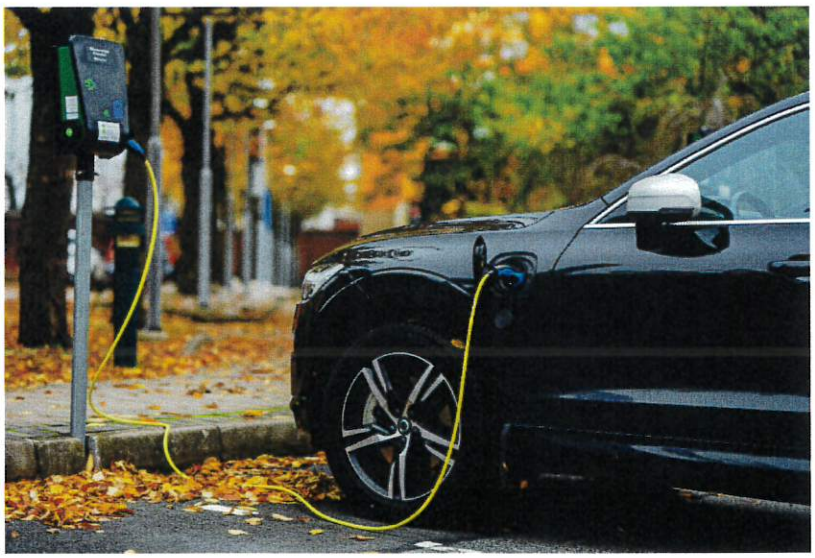

Figure 1: Level 2 charging is likely to be the most practical option for Thetford (Photo Source: iStock Photos

Equipment Options

EVs use several different types of plug connectors. Tesla has its own proprietary connector for all three levels of charging. Other manufacturers have standardized on the Society of Automotive Engineers (SAE) "J1772" standard plug connector for Level 1 and Level 2 charging. For non-Tesla DCFC there are two additional plug types - the CHAdeMO used by Nissan and Mitsubishi and the SAE Combined Charging System (or SAE CCS, sometimes called SAE Combo) used by American and European automakers (Figure 2). For the purposes of this report, it is recommended any public use Level 3 charger installed in Thetford utilize "dual plug" (CHAdeMO and SAE CCS) EVSE that offers both types of non-proprietary plugs. Charging power is the second distinguishing trait, with existing DCFC ranging up to 120 kW for Tesla and 25-50 kW for CHAdeMO and SAE CCS charging equipment currently in use in Vermont.

Figure 2: Variations in vehicle charging plugs (Photo Source: VEIC)

There are a number of equipment vendors including ABB, ChargePoint, Fuji, Sumitomo and Signet, which are more widespread in VT. Other manufacturers include Efacec, BTC Power and Blink, to name a few.

Site Analysis and Assessment

To identify potential site locations that would be appropriate for EVSE and would meet Thetford's intended goals for this study, a process of site analysis and assessment was undertaken. With the primary purpose of identifying locations within the community where electric vehicle charging stations could be installed to provide residents and visitors with convenient access to recharge electric vehicles, the project team worked with Thetford to develop a checklist of desirable characteristics for charging locations.

Site Criteria

These characteristics were divided into three core categories, with specific criteria under each:

Constructability

Key to the consideration of where to locate EVSE are considerations relating to the installation of the system. Of primary consideration is the availability of power and its distance from a potential site. Likewise, ownership of the property is a consideration as it may be easier for the Town to utilize its own property vs. private property for an EV charger.

- **Availability of, and proximity to, 3-phase power supply**: While 3-phase power is only required for DCFC (Level 3) charging stations, it allows for greater options with regard to expandability and future improvements. Cost effective DCFC installations currently require 3-phase power supply from the local electric utility. To keep installation costs down, and to allow for future expansion or improvements as technology changes, sites where 3-phase power is in immediate proximity were prioritized.
- **Property Ownership**: Recognizing that the community might be able to proceed more quickly utilizing property already owned by the Town, properties that were under public ownership were prioritized for consideration.
- **Landowner Support**: For both public and private properties, having a willing partner is essential for any future effort to install an EV Charging facility for public use. Properties with owners willing to consider an EV charging station were prioritized.

Amenities

An EV charging location may be more desirable to users if it offers amenities that can be utilized while the vehicle is charging.

- **Proximity to Businesses:** Understanding that EV charging requires time, locations were prioritized with services, such as shopping, restrooms, food and other workplace facilities which provide EV owners with a range of activities to pursue while their vehicle is plugged in.
- **Public Wi-Fi Availability:** Users who need to charge for extended periods could benefit from the availability of public Wi-Fi to work, or undertake other tasks while charging. These locations were identified as valuable.
- **24-hour Access:** Access to 24-hour services has a value, particularly for travelers or residents who need to charge their vehicles outside of common business hours.

User Potential

If a charging station is intended to generate revenue that eventually covers the cost of installing and maintaining the facility, its location should consider where there is more likely to be a higher number of users.

- **Proximity to Workers:** Locating EV charging stations in areas where they can serve businesses is a way to ensure that there are more potential users, which over time, can help pay for the installation and operation of the charger if a pay for service model is used.
- **Carpool Potential:** Given Thetford's desire to reduce energy consumption, locations were analyzed for their carpool potential, under the assumption that an EV charging facility would be of benefit to carpoolers.

Site Screening

The project Steering Committee worked with D&K to identify potential locations in the community for EV charging stations that had the potential of meeting some or all of the criteria identified. Thirteen initial sites were considered for review, with a focus on locations in Thetford Center, Thetford Hill and East Thetford. These sites included:

- Thetford Town Hall - Thetford Center
- Thetford Town Garage - Thetford Center
- Community Center Building - Thetford Center

- Timothy Frost Building - Thetford Center
- Watson's Garage - Thetford Center
- Thetford Elementary - Thetford Hill
- Thetford Public Library - Thetford Hill
- Thetford Academy - Thetford Hill
- Cedar Circle Farm - East Thetford
- Wing's - East Thetford
- Huggett's (Irving) - East Thetford
- Wells River Bank - East Thetford
- Red Clover Creamery - East Thetford

These sites were prioritized and analyzed via a matrix that applied a weighted category rank to each of the site criteria (see appendix A: Thetford Prioritization matrix). Based on the weighted scoring, site locations were assigned a "priority" score, with number one being the highest priority. While there were several sites that scored a two, the Project Management Committee selected three priority sites, one in each of the identified villages. Locations include the Town Office, Thetford Elementary and Huggett's Irving.

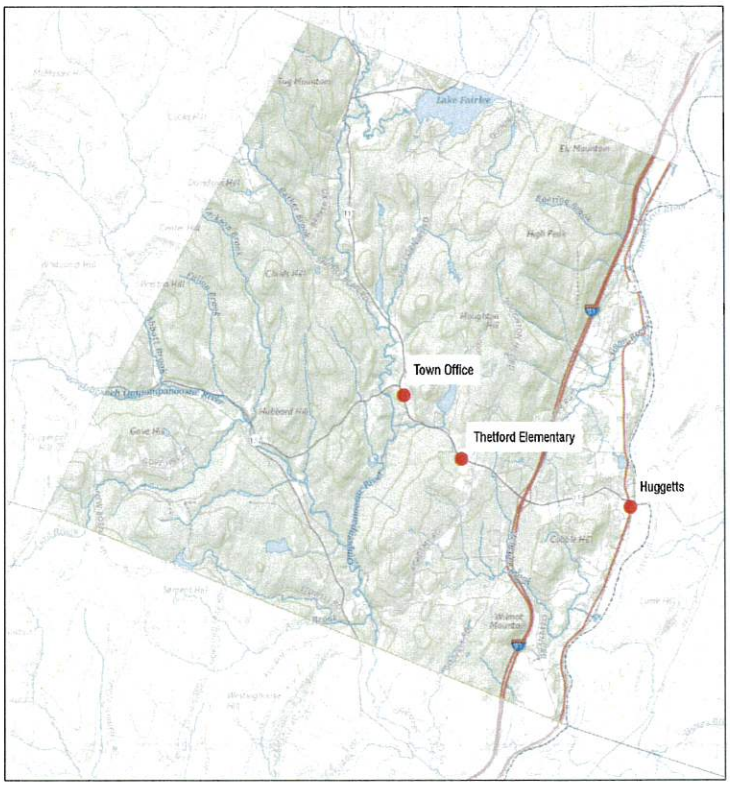

Figure 3: Priority locations for EVSE in Thetford

Priority Site Locations

The three identified locations are worthy of further and more in depth consideration. D&K has conducted a preliminary analysis of each site and identified potential locations where EV charging equipment could be installed. However, it is important to recognize that further site analysis will need to be conducted to be confirmed, and communication with landowners will be essential.

Huggett's Irving - East Thetford

The Huggett's site is located on Route 5 in East Thetford, roughly 1.5 miles west of I-91. Of the three sites identified as priority locations, this site is the only privately owned property. The site's advantages include the presence of the gas station/convenience store which can provide shelter, rest room and food options for anyone waiting for their vehicle to charge. However, Huggett's current hours of operation (5AM-9PM) do not provide 24 hour access. There is nearby 3 phase power, and coupled with the higher use potential due to Route 5, this location is recommended for a Level 3 DCFC.

Figure 4: Huggett's Irving, East Thetford

The optimal location (See Map #1, Appendix B) for a DCFC would be in the parking spaces on the north side of Huggett's lot. At present, these spaces appear to be used by a seasonal food stand. This location is close to 3 phase power which would help to keep installation costs down.

Figure 5: An EV charger could be located in the small parking area on the north side of Huggett's lot (where vehicle appears in photo above).

Thetford Elementary School (TES) - Thetford Hill

Thetford Elementary, which is located roughly one mile from I-91, offers the benefit of providing a relatively central location between the three focus areas. TES also serves as Thetford's Emergency Shelter. In addition, the school is a small center of employment, meaning an on-site EV Charging facility could benefit employees as well as the public. While 3 phase power is present along Route 113, the potential costs of a DCFC station and its infrastructure needs (vault, pad, etc.) may not be optimal at this location, particularly as it relates to cost of installation. As an alternative, a Level 2 charger should be considered.

Figure 6: A dual plug EV charging station could be installed adjacent to the ADA parking spaces in the Elementary School lot.

Map #2, Appendix B, indicates a possible location for a Level 2 charger. The current configuration of the Thetford Elementary School lot includes two ADA parking spaces in the center row parking area. Given

the proximity to the school, it would be reasonable to allocate two spaces adjacent to the ADA spaces for EV charging. Extending 240v power service to this location would not be cost prohibitive, although it would require underground conduit.

The Level 2 chargers would be stand mounted on a small concrete pad (see Figure 6). It should be noted that it is optimal for Level 2 chargers to be wall mounted vs. stand mounted. One approach to increasing protection for stand mounted chargers is to include a protective cover (see Figure 7). It is important to note that if the school is on Green Mountain Power's Rate 65, which bills for both kilowatt hours and demand (KW), there is the possibility that multiple chargers could impact electrical costs.

Figure 7: Example stand mounted Level 2 charger (Photo Source: Bulbs.com)

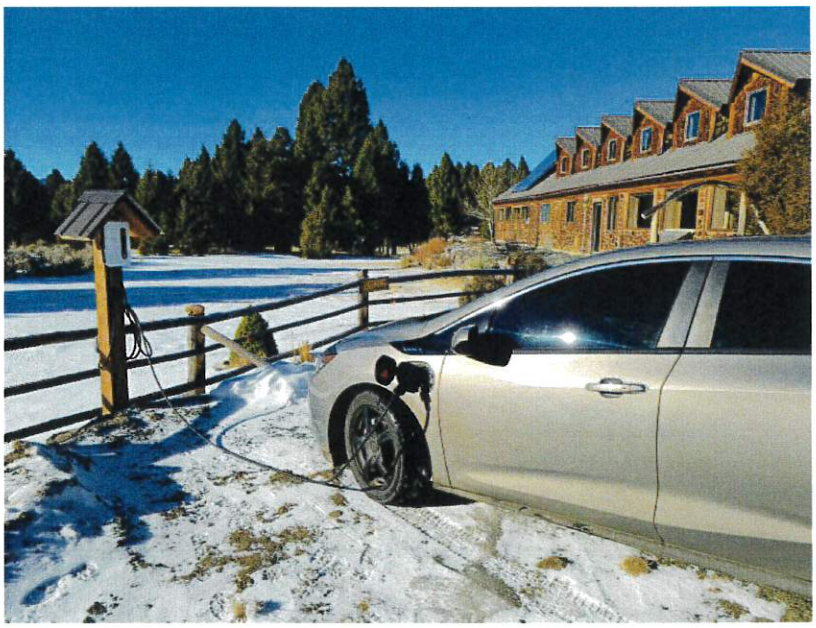

Figure 8: Protection from the elements is an important consideration. (Photo Source: montanarenewables.org)

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Thetford Town Office - Thetford Center

The Thetford Town Office has the advantage of being on municipally owned property, which would make a municipally owned EV charging station reasonably practical to install. Underground power to this location would be less expensive to install due to groundcover (earthen). Given the location and the potential for use by municipal staff, this location would be a good location for a Level 2 charger.

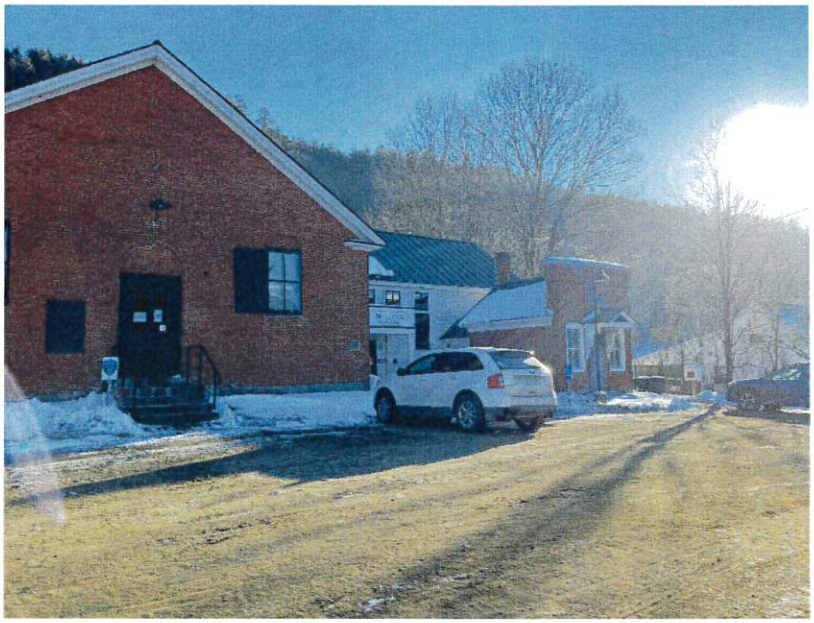

Figure 9: The Thetford Town office is an excellent location for an EV charger.

Charger at this location would need to be stand mounted at the edge of the parking area, which is reasonably close to the Town Hall. See Map #3, Appendix B for more information.

Figure 10: Potential location for EV Charger at Town Office

Costs and Funding Options

Charger Facility Type	Level 2 (3.3-6.6 kW)	Level 3 (25-50 kW)
Priority Site	Town Office Thetford Elementary School Huggett's	Huggett's
Estimated Installation Costs	$5,000-10,000*	$10,000-20,000***
Estimated Equipment Costs	$700-12,000**	$17,000-70,000***
*data source = RSMeans **data source = Green Mountain Power ***data source = VEIC(2017), adjusted for inflation		

Table 2: Estimated costs for installation and equipment at priority sites

Equipment Installation Costs

The cost of installing an EV charging station will vary significantly based on the type of charger and the location of the charger. Electrical service can account for nearly half of the cost of installation of a charger. One way to reduce this is to install equipment during new construction or lot resurfacing. Installing multiple charging stations at one time is a way to reduce per unit costs.

- Power Access: Costs include electric circuit components and conduit needed to reach equipment.
- Mounting: Wall mounted chargers are generally more inexpensive to install than stand mounted chargers. The advantage to wall mounted chargers is that they are closer to immediate power and are often more easily protected from the weather and there are less likely to be issues related to damaged cords or stands, particularly during plowing.
- Equipment Protection: This includes shelter for stand mounted chargers, as well as bollards or wheel stops to protect chargers from vehicles.
- Visual: While not a significant cost, there should be wayfinding signage for the EV charger, as well as necessary parking lot lines, and stripes.
- Safety and Connectivity: Chargers should be located in a well-lit area, so lighting must be a consideration. Additionally, if a pay for service model is used, an internet connection or cellular data service will be needed.

- Permitting: While permitting is likely to be limited, a municipal permit will need to be obtained as well as an Act 250 permit or jurisdictional opinion if the property has an associated Act 250 permit.

Equipment Costs

Equipment costs relate to the charger and any related gear (pedestal, etc.). These components are generally available directly from manufacturers, through local distributors or online. Larger installations are often bid out through a competitive process to obtain the best pricing possible based on unique specifications and requirements for a particular location. Several vendors offer "turnkey" services which include equipment selection, site planning, permitting and installation.

Equipment for EV charging units are typically available through manufacturers, local distributors or online. Several vendors offer full services which include equipment selection, site planning, permitting and installation.

Figure 11: Juicebox Level 2 charger and pedestal. (Photo Source: Bulb.com)

As indicated above, cost estimates for EV Chargers can vary significantly based on type, size, capacity and options. For example, a level 2 charger that does not include a method to charge the user a fee, would be less expensive than one that does, as the extra equipment needed to process the sale adds to the cost. Purchasing an EV Charging unit that allows for two vehicles to charge at once is typically more cost effective than a single charging unit.

Operation and Maintenance Costs

Operation and maintenance varies largely based on the level of use and the capacity level of the charger. Given Thetford's rural location, it is unlikely that annual use of an EV charger would be high enough to effectively cover yearly expenses, which include electricity charges, fees, insurance and cloud service for point of sale and locational services. Additional costs of charging unit maintenance and activities such as snow removal should be considered as well.

Charger Facility Type	Level 2 (3.3-6.6 kW)	Level 3 (25-50 kW)
Priority Site	Town Office Thetford Elementary School	Huggett's
Energy	$200/year - $2,500/year: Energy costs will vary depending on time of use and total use.	Highly variable depending on use and potential peak demand charges, which could reach $12,000/year for a 50 kW DC Fast Charger
Usage monitoring and point of sale systems (optional)	$255/year: per charging port for access to software and network systems	$255/year: per charging port for access to software and network systems
EV Charging Unit Maintenance	$400/year	$400/year
Snow Removal	Varies	Varies
Insurance	Varies	Varies
Estimated Total	$1200+	$1500+

Table 3: Operation and maintenance costs for Level 2 & 3 chargers. Data Source: driveelectricvt.org

Return on Investment

In data provided by the Two Rivers-Ottauquechee Regional Commission, based on a conservative estimate of 500 sessions/year, a Level 2 EV charging station would operate at a loss on a yearly basis. While the estimated loss of revenue is not significant, it would be unlikely that the Town could recover costs of investment. In order to reach a break-even point, there would need to be as many as 1200 sessions/year, which is unlikely given the rural location. As such, pursuing grant funding to subsidize the cost of installation is recommended.

Calculations in the table below are based on the Level 2 charger located at Dan & Whit's in Norwich. Revenue for sessions can be counted at a per hour rate or a per kWh rate. Average kWh/session is 5.5. Note that the fees represented include a 10% vendor fee charge.

500 sessions/year					
At $1/hr		At $0.20/kWh		At $0.30/kWh	
Revenue		Revenue		Revenue	
User Fees	$600	User Fees	$497	User Fees	$745
Total Revenue	$600	Total Revenue	$497	Total Revenue	$745
Expenses		Expenses		Expenses	
Electricity Cost @ GMP .17 kWh rate	$473	Electricity Cost @ GMP .17 kWh rate	$473	Electricity Cost @ GMP .17 kWh rate	$473
Fixed GMP Fees	$284	Fixed GMP Fees	$284	Fixed GMP Fees	$284
Network/Insurance	$1,303	Network/Insurance	$1,303	Network/Insurance	$1,303
Total Expenses	$2,060	Total Expenses	$2,060	Total Expenses	$2,060
Annual Town Subsidy	($1,460)	Annual Town Subsidy	($1,563)	Annual Town Subsidy	($1,315)

Table 4: Estimated expenses vs. costs @ 500 sessions/year. Data Courtesy of TRORC

Potential Funding Sources

At the time of the writing of this report funding for EV charging facilities there were limited options for funding of EVSE.

- **ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) GRANT PROGRAM** - The Agency of Commerce and Community Development has utilized several rounds of funding to assist communities with the installation of EVSE in designated villages and downtowns. The 2022 round of available funding is limited to facilities serving multi-family housing units. However, it is likely that this program will continue to evolve. Each of the priority locations identified in this feasibility study is located within a Designated Village Center area and may be eligible for future funding rounds. Contact Gary Holloway, Downtown Program Coordinator for more information at gary.holloway@vermont.gov.

- **AMERICAN RESCUE PLAN ACT (ARPA)** - The installation of EVSE at public buildings may be possible under the community's pool of ARPA funding. Following changes to the funding's rules, Towns can classify up to $10 million of their awards as "Lost Public Sector Revenue." Contact Sarah Wraight at the Two Rivers-Ottauquechee Regional Commission at swraight@trorc.org for more information.

- **GREEN MOUNTAIN POWER: WORKPLACE EV CHARGING INCENTIVE** - Green Mountain Power offers an incentive program for EVSE installations at workplace locations with public accessibility. The program offers rebates on charging ports and financing through the Vermont Economic Development Authority (VEDA). (See appendix C)

- **OTHER POTENTIAL FUNDING OPPORTUNITIES** - The state of Vermont has committed to several additional investments in EVSE statewide in 2022, these include:

    - $2 million for EV charging infrastructure on the highway network
    - $10 million for Level I & II charging for multi-family dwellings, workplaces, and community attractions
    - $3 million for Level II charging at State Parks, FWD fishing access areas (paired with solar installations)
    - Additionally, it is anticipated that the Infrastructure Investment and Jobs Act will include federal funding that is directed at expanding EVSE.

Next Steps

Engage with property owners

The next immediate step toward installing EVSE in Thetford will be to engage in direct discussions with property owners to determine their willingness to move forward with any proposed charging infrastructure investments. In order to move forward the Energy Committee must have a willing partner who is amenable to the potential impacts (and costs) of installing EVSE at their location. Landowners should be fully aware of the impacts of installation and any costs they might be expected to incur during installation and operation. The Town Office and the Elementary School will each need communication with their governing bodies.

Finalize installation location

This project assessed the feasibility of installing EVSE at three priority locations, but further detailed analysis is required in order to fully understand the nuances of installation at each location. The Town should engage a qualified EVSE installer to assess the most likely locations for an EV charging station who will develop a clear plan of work and provide an estimate that can be used to seek funding. In some cases, funding programs such as the GMP Workplace Charging Incentive work with a specific contractor to provide this detailed analysis.

Identify Potential funding sources

The intent of this project is to position Thetford to pursue funding for EVSE when it is available. The Town should strongly consider the possibility of allocating ARPA funds for a charger at the Town Office. Further investigation into the Green Mountain Power Workplace EV Incentive should be made for the Elementary site location as that program might be a good fit.

Primarily, the Energy Committee should work with the Regional Planning Commission to identify any funding from the Infrastructure Investment and Jobs Act or other state programs that would be appropriate. RPC staff may be able to assist in the application process for some types of funding.

Appendix

Appendix A: Prioritization Matrix

Appendix B: Maps

Appendix C: Other information

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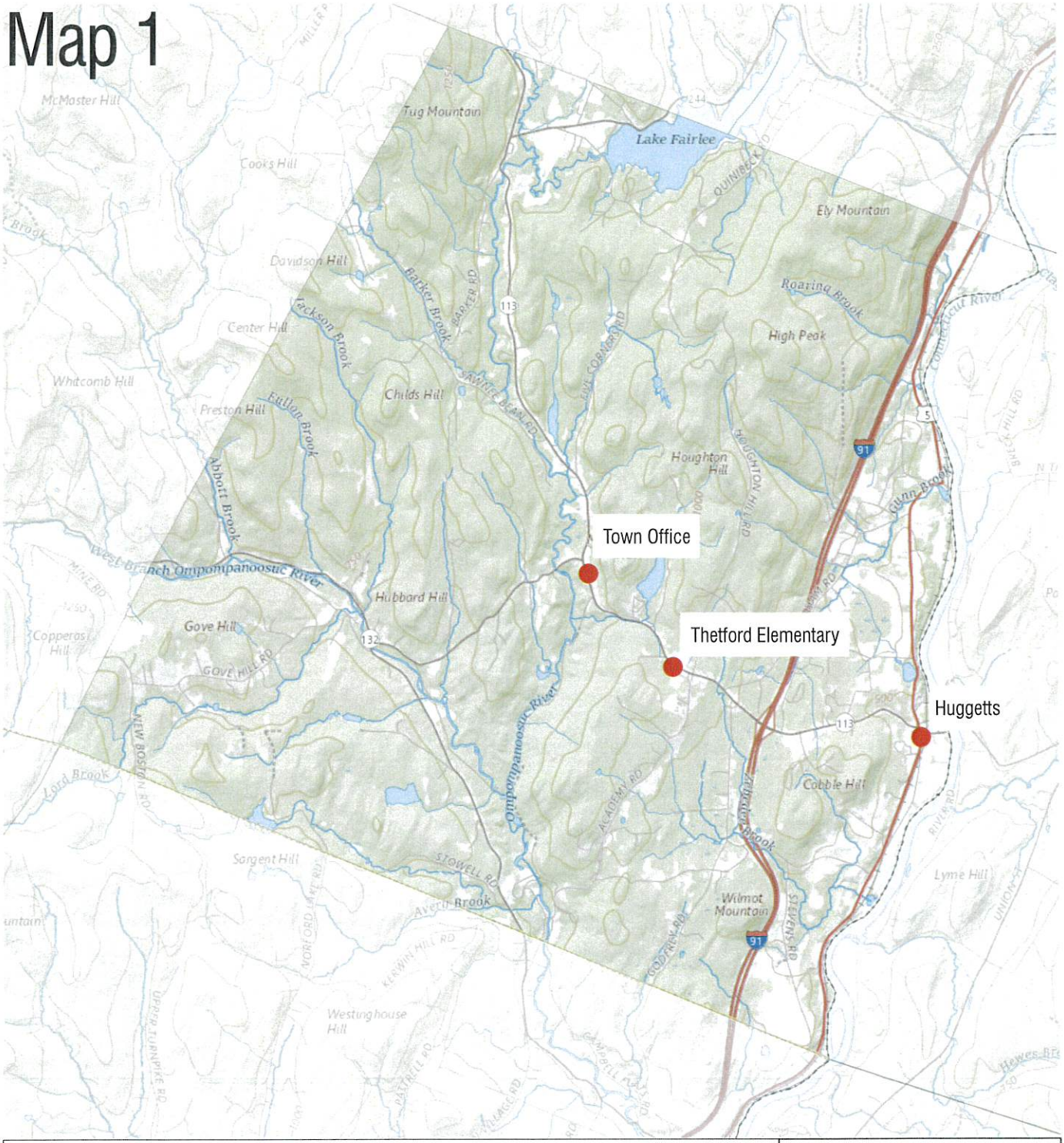
EV SITE PRIORITIZATION MATRIX

Thetfor

SITE			CONSTRUCTABILITY										AMENITIES						USER POTENTIAL						TOTAL SCORE	
			3-Phase Power Supply			Ownership			Landowner Support			Available Parking Spaces			Proximity to Businesses			Public Wifi Availability			24-hour Indoor Access			Proximity to Workers			Carpool Potential				
	Name	Location	Proximity	Score	Rank	Type	Score	Rank	Support	Score	Rank	Quantity	Score	Rank	# w/in 1/4 mi	Score	Rank	Wifi?	Score	Rank	Access?	Score	Rank	Workers	Score	Rank	Potential	Score	Rank	Total Score	Priority
	Town Hall	Thetford Center	<50'	3	3	Public	3	2	Supportive	3	3	18	3	2	1	1	2	Yes	3	1	No	1	1	8	1	2	Some	2.00	1	38	2
	Town Garage	Thetford Center	<50'	3	3	Private	1	2	Neutral	2	3	4	1	2	1	1	2	No	1	1	No	1	1	8	1	2	No	1.00	1	25	12
	Community Center Building	Thetford Center	<50'	3	3	Public	3	2	Neutral	2	3	4	1	2	1	1	2	No	1	1	No	1	1	8	1	2	No	1.00	1	29	9
	Timothy Frost Building	Thetford Center	<50'	3	3	Public	3	2	Supportive	3	3	10	2	2	1	1	2	No	1	1	No	1	1	8	1	2	Some	2.00	1	34	7
	Watson's Garage	Thetford Center	<50'	3	3	Public	3	2	Supportive	3	3	6	1	2	3	1	2	No	1	1	No	1	1	8	1	2	No	1.00	1	32	8
	Thetford Elementary	Thetford Hill	<50'	3	3	Public	3	2	Supportive	3	3	75	3	2	0	1	2	No	1	1	No	1	1	30	3	2	Some	2.00	1	40	1
	Thetford Public Library	Thetford Hill	225'	2	3	Public	3	2	Supportive	3	3	12	2	2	1	1	2	Yes	3	1	No	1	1	30	3	2	Some	2.00	1	37	5
	Thetford Academy	Thetford Hill	<50'	3	3	Private	1	2	Unknown	0	3	100	3	2	1	1	2	No	1	1	No	1	1	30	3	2	Yes	3.00	1	27	11
	Cedar Circle Farm	East Thetford	2000'	1	3	Private	1	2	Unknown	0	3	14	3	2	1	1	2	No	1	1	No	1	1	5	1	2	No	1.00	1	17	13
	Wings	East Thetford	<50'	3	3	Private	1	2	Unknown	0	3	28	3	2	5	3	2	No	1	1	No	1	1	10	2	2	No	1.00	1	29	9
	Irving - Huggett's	East Thetford	<50'	3	3	Private	1	2	Supportive	3	3	20	3	2	4	3	2	No	1	1	No	1	1	10	2	2	No	1.00	1	38	2
	Wells River Bank	East Thetford	<50'	3	3	Private	1	2	Supportive	3	3	14	3	2	5	3	2	No	1	1	No	1	1	10	2	2	No	1.00	1	38	2
	Red Clover Creamery	East Thetford	<50'	3	3	Private	1	2	Supportive	3	3	12	2	2	5	3	2	No	1	1	No	1	1	10	2	2	No	1.00	1	36	6
	Category Ranking:		Category Rank		3	Category Rank		2	Category Rank		3	Category Rank		2	Category Rank		2	Category Rank		1	Category Rank		1	Category Rank		2	Category Rank		1		
	3 = High		**Category Scoring**			**Category Scoring**			**Category Scoring**			**Category Scoring**			**Category Scoring**			**Category Scoring**			**Category Scoring**			**Category Scoring**			**Category Scoring**				
	2 = Medium		1: >250' to 3-phase			1: Private			1: Unsupportive			1: 1-4 spaces			1: No businesses			1: No			1: No			1: 1-9 workers			1: No potential				
	1 = Low		2: 50-250' to 3-phase						2: Neutral			2: 5-12 spaces			2: 1-2 businesses									2: 10-19 workers			2: Some potential				
			3: <50' to 3-phase			3: Public			3: Supportive			3: 13+ spaces			3: 3+ businesses			3: Yes			3: Yes			3: 20+ workers			3: Potential				
			(Measurement from existing utility to existing parking area)									(Counted from aerial photos)			(Based on businesses within 1/4 mi)									(Estimates for employees within 1/4 mi)			(Based on need for high turnover parking, staff parking, and site space)				

Map 1



Town Map

- EV Charger Potential Location

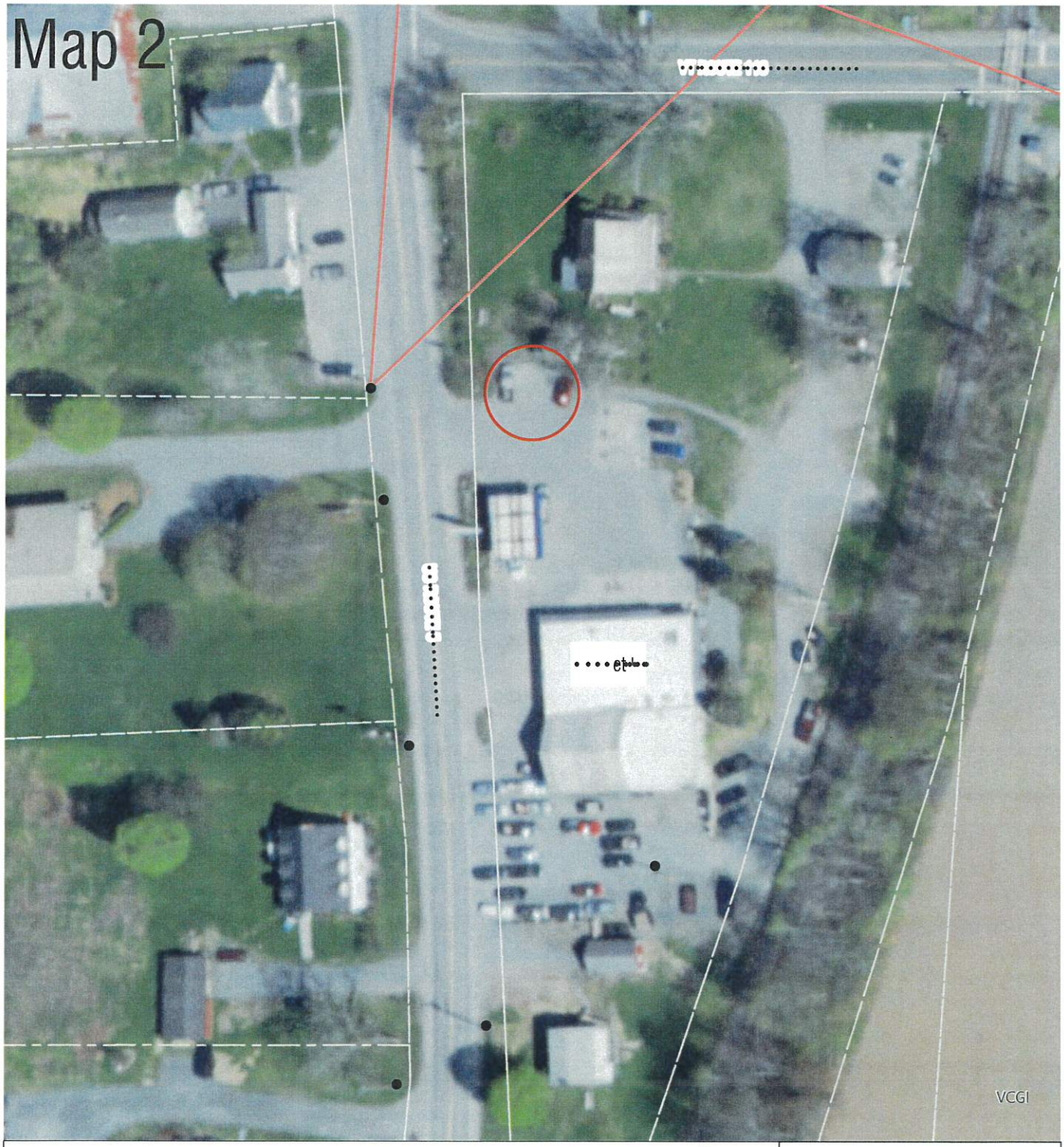
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2021.

DuBois & King

PROJECT	Thetford EV Charging Station
PROJECT LOCATION	Thetford, VT
DATE	JAN 2021

0 0.75 1.5 Miles

Map 2



Thetford Elementary Concept Site Plan

DuBois & King

- EV Charger Potential Location
- Utility Poles (Green Mountain Power)
- 3 Phase Power Lines
- Parcels

Note: The configuration of the school lot has changed from what is represented above. Location is approximate.

Data Sources: VCGI (Parcels, 2021; 3 Phase Power, 2020; Utility Poles, 2021; Imagery - Best of Color Image Service)

PROJECT	Thetford EV Charging Station
PROJECT LOCATION	Thetford, VT
DATE	DEC 2021

0 50 100 Feet

1 inch equals 100 feet

Map 4

DuBois & King

GREEN MOUNTAIN POWER: WORKPLACE EV CHARGING INCENTIVE

GREEN MOUNTAIN POWER

#4

How It Works

Green Mountain Power is giving workplace customers a rebate of **$750 per new charging port!**

Eligibility Requirements:

- Must be a **workplace location with public accessibility** to charging stations
- Eligible participants **must be existing Green Mountain Power customers**, including businesses, parking lots, hospitality, retail, restaurants, multi-unit dwellings, and more
- Stations must be **networked via AmpUp**, and paid through customer's utility bill
- Financing options for charging stations are available from the Vermont Economic Development Authority (VEDA).

Contact Green Mountain Power to get started!

Green Mountain Power
businessinnovation@greenmountainpower.com
Workplace Charging Website

AmpUp
info@ampup.io
AmpUp VT Incentives

#4

Hardware Options - PowerCharge E20

# of Connectors	Wall Mount	Wall Mount w/ Cable Retractor	Pedestal Mount	Pedestal Mount w/ Cable Retraction
Single	$1,549	$1,825	$2,148	$2,125
Dual	$3,198	$3,125	$3,597	$4,797

Power: 7.6kW

Current: 32A

Connector type: SAE J1772

Number of connectors: 1 or 2

Mounting: Wall or Pole

Cable management: Retractable Opt.

Cable length: 18 feet

Warranty: 5 years

Connection: Cellular

OCPP compliant

https://www.powerchargeev.com/collections/energy-series

#4

SOLD OUT FOR 2021

Hardware Options - EVBox Business Line

# of Connectors	Price w/o Cable Retractor	Price w/ Cable Retractor
Single	$2,210	$2,645
Dual	$4,035	$4,840 *two singles mounted to single pole, two retractor boxes

Power: 7.4kW

Current: 32A

Connector type: SAE J1772

Number of connectors: 1 or 2

Mounting: Wall or Pole

Cable management: Retractable

Cable length: 18 feet

Warranty: 5 years

Connection: Cellular

OCPP compliant

https://evbox.com/us-en/businessline

#4

SOLD OUT FOR 2021

Hardware Options - EVBox Iqon

# of Connectors	Price
Dual	$6,645

Power: 7.4kW

Current: 30A

Connector type: SAE J1772

Number of connectors: 2

Mounting: Pedestal

Cable management: Retractable

Cable length: 18 feet

Warranty: 5 years

Connection: Cellular

OCPP compliant

https://evbox.com/us-en/iqon

#4

Hardware Options - EVSE LLC Garage Overhead

# of Connectors	Price
Single	$5,226

*all pricing MSRP

Power: 7.2/9.6kW

Mounting: Ceiling (overhead)

Connection: Ethernet

Current: 30/40A Switchable

Cable management: Retractable

OCPP compliant

Connector type: SAE J1772

Cable length: 20 feet

RFID compatible

Number of connectors: 1

Warranty: 5 years

ADA compliant

http://evsellc.com/products/evse-garage-overhead-charger/

Optional: *price subject to change

Payment Module

Cellular

Meter Accuracy

Ultrasonic cable drop sensor

#4

Hardware Options - EVSE LLC Pole Mount

# of Connectors	Price
Single	$5,719
Dual	$11,699

*all pricing MSRP

Optional: *price subject to change

Wooden Utility Pole Mount

Power: 7.4/9.6kW

Mounting: Utility or Light Pole

**up to 50% reduction in installation cost*

Current: 30/40A switchable

**depends on breaker*

Cable management: Retractable

**Backplate included*

Connector type: SAE J1772

Cable length: 25 feet

RFID compatible

Warranty: 5 years

Connection: Cellular

OCPP compliant

http://evsellc.com/products/ev-chargers-3704-autocoil/

#4

AmpUp Community Manager

	AmpUp Basic	AmpUp Lite	AmpUp Pro
	$17/port/mo	$23/port/mo	$28/port/mo
Simple Pricing	✓	✓	✓
Direct Deposit	✓	✓	✓
Real-Time Reporting	✓	✓	✓
Utility Demand Response	✓	✓	✓
User Groups & Access Control		✓	✓
Tiered Pricing		✓	✓
Single Load Management		✓	✓
Advanced Load Management			✓
Time-of-Use Pricing			✓

#4

Resources

Email businessinnovation@greenmountainpower.com to get started!

PowerCharge: https://www.powerchargeev.com/collections/energy-series

EVBox: http://evsellc.com/products/

EVSE LLC: https://evbox.com/us-en/

AmpUp: https://ampup.io

VEDA Application:
https://www.veda.org/financing-options/vermont-commercial-financing/electric-vehicle-charging-station-loan-program/

#6

On Wed, Apr 20, 2022 at 9:15 AM Angela McCanna <angiemccanna@gmail.com> wrote:
Good Morning David,
Thank you for reaching out. Yes, I am interested in this position. Please let the Selectboard know that I would like to be a Thetford representative to the Two Rivers Ottauquechee Regional Commission.

Thank you,
Angela

On Tue, Apr 19, 2022 at 12:25 PM David Goodrich <dgoodrich@thetfordvt.gov> wrote:
Hi Angela,
We are trying to finish making our appointments to the various Town positions.
Jesse Anderson has suggested that you might be a good choice to be a representative to the Two Rivers Ottauquechee Regional Commission.
Is that something that you might be interested in?
I have attached a job description for you to review.
Please let me know what you think.

Thank You
David Goodrich
Thetford Selectboard

Town of Thetford Vermont
3910 Vermont Route 113 • P.O. Box 126 • Thetford Center, VT 05075
802-785-2922 • thetfordvermont.us

Selectboard Regular Meeting *Draft* Minutes
Thetford Town Offices
(w/Virtual Attendance Option)
Monday, April 18th, 2022 7:00 PM

Selectboard members present: Sharon Harkay (Chair), Li Shen (Vice Chair), Mary Bryant, David Goodrich, Steve Tofel
Others present: Town Manager Bryan Gazda (via Zoom), Town Clerk/Treasurer Tracy Borst (via Zoom), Bryan Ruoff with Stantec (via Zoom), Intermunicipal Regional Energy Coordinator Geoff Martin (via Zoom), Selectboard Assistant Martie Betts
Contributing Community members: Erica Ko (via Zoom), Chris Hebb (via Zoom)

Sharon Harkay called the meeting to order at 7:00 PM.

1) Agenda Review
No changes to the agenda.

2) Town Manager Report – Bryan Gazda
a) Water Study Update
Bryan said that160 people responded to the survey and the water study group met again on Thursday. They are on track to develop the scope of work and the committee hopes to have a recommendation to the Selectboard in June.
b) Green Up Day – May 7
Bryan said reflective vests have been ordered and are at town hall, along with the bags.
c) Other
Charlie Smith and Robert Eaton from CRREL will be meeting with Bryan and Dale about road conditions during mud season.
Bryan, Road Foreman Dale Lewis and Chief Scruggs attended the virtual ICS 402 training.
Bryan suggested a meeting with Mariah Whitcomb once the rest of the board is trained.
The demonstration for pollinator gardening was postponed on Saturday due to rain and is rescheduled for April 30th.

Li Shen asked about a final cost figure for mud season. Bryan said he is still working on it, but it will probably be around $110,000.

3) Public Comment
No public comment.

4) Annual Certification of Emergency Management Plan
Bryan said there were no changes to the plan, so it is the same as last year.
David Goodrich questioned the address for the stump dump.
Motion by Sharon Harkay that we approve the latest version of the Local Emergency Management Plan for Thetford, with a note that the address for the stump dump will be checked and corrected if needed.

Mary Bryant expressed concerns about hearing that the fire department is having a very hard time getting volunteers to join and their numbers are down. That would be something she would like to address. Sharon Harkay said that is not true, as someone from the fire department corrected that information publicly.
VOTE; All in favor (5-0-0). **Motion passed.**

5) Review of Stantec's VT Route 132 Engineering Services During Construction Amendment

Bryan Ruoff said this is for final paving, sign installation, some guardrail work, cleaning, closing up the project, and inspection work. They will be on site in June and probably July to close out the project.
Steve Tofel asked if this is an additional charge from the original scope. Bryan Ruoff said it is an additional charge.
Li commented that the project is still under budget, and this will not put it over budget.
Bryan Gazda said the original plan was to push the paving off to 2022. Bryan added that Thetford is very fortunate to have project manager Seth Potter on this project. He felt it would be foolish to complete the project without him.
Motion by Li Shen to approve the Route 132 Engineering Services During Construction Amendment for year 2022 with Stantec in the amount of $29,996.00. **VOTE;** All in favor (5-0-0). **Motion passed.**

6) Overview of EEI Proposals with Geoff Martin, Chris Hebb and Erica Ko

Geoff Martin, Intermunicipal Regional Energy Coordinator, took the Selectboard through a review of the process of electing EEI for the work on Town Hall. Geoff, Chris Hebb and Erica Ko reviewed the initial proposal and found inadequacies, such as installing heat pumps just for certain offices, the age of the propane furnaces and the condition of the cooling system. The consensus was to not continue to rely on systems that will likely fail soon. There was a second proposal which wasn't even presented because it wasn't the right proposal. Instead, they have settled on a scope of work they think addresses all the concerns, from fossil fuel use to fresh air and consistency. Geoff said he does recognize the substantial cost increase and has asked EEI for a more detailed breakdown of the costs. Assuming the cost is justifiable Geoff suggested that EEI put the mechanical and electrical components out to bid. The Selectboard could consider doing the work in two phases. Geoff said that ARPA money might be one option, and there is currently a bill making its way through the state legislature that would provide grants – however it will be very competitive. Geoff recognized Chris Hebb and Erica Ko for their contributions to this project.
Li asked about the reduction in carbon emissions if the old propane furnaces were kept and heat pumps are used in just part of the building. Geoff said his guess would be somewhere around half. Chris Hebb said the current proposal that replaces whole system includes a heat recovery ventilator which would replace both gas furnaces. If it was decided to do the project in phases, they would have to determine how to put in the ventilator.
Sharon asked when the ventilator might be put in if the project was divided into two different years, and if it would cost more.

#8

Erica Ko said it would cost more. She pointed out that they have not gotten the detailed breakdown yet, so they are not ready to provide a clear recommendation to the Selectboard.
Sharon said she always likes spreading costs out if possible. She wondered about using ARPA finds for the first phase and then applying for a grant for the second phase.
Steve Tofel wanted to know why Thetford would have difficulties getting the grant. Geoff said the biggest deterrent for Thetford is that the energy burden is relatively low, and there is administrative support for the town. Thetford would do well in terms of its location.
Mary Bryant wondered if they would have a better chance of getting a grant if no work was done this year. Then it would be a bigger project.
Geoff said the bill hasn't passed yet so anything can happen, but the way it is written now doesn't indicate that the size of a project would sway them one way or another. The work scope is perfect for the grant.
Mary asked if anything was done to the building after the last energy audit.
Chris Hebb said the foundation was sprayed and there may have been other air sealing done. Nothing mechanical was done.
Steve questioned the 15-day length of time given to approve the quote based on the decisions that needed to be made. Erica responded that with the current state-of-affairs, no one is holding a quote for longer than 2 weeks. Steve asked what excludes the town from wage rates, and Geoff said it's because the town can claim the lost revenue category.
David Goodrich said he assumed the Selectboard would see the detailed breakdown of the costs and he would like to see a detailed accounting of our current fuel usage compared to what it will be. Geoff confirmed he could have those for the Selectboard.
Mary suggested that the estimates include not just past costs but a comparison of what the upcoming year might look like.
Li Shen commented that there is a lot of consideration about costs, but the bigger picture is to get off fossil fuels and stop emissions.
Mary Bryant agreed and only wanted the numbers to get a clear picture of what it will cost. She asked about the use of solar panels.
Geoff thought maybe the town could purchase credits from the array at the elementary school.
Tracy Borst asked if more credit could be used from the solar array in Strafford. Geoff said that was a good question and he will look into it.
Erica noted that electric costs are much more predictable and stable over time.
The Selectboard thanked Geoff, Chris, Erica and Bryan for their work on this project.

7) Review and Discussion of Green Procurement Policy

Geoff Martin recapped the reason for the Green Procurement policy as it had been a long time since it was last discussed. Essentially this is taking the Green Fleet policy already in place and extending it to all systems. This does not obligate the town to any specific purchase, it simply makes sure there is a process in place. Geoff said he and Bryan Gazda took the template and changed it to fit Thetford, placing most of the responsibility on the town manager for administering the policy. The town manger would put together a list of any upcoming energy related purchases in August of each year, which would then go to the Joint Thetford Energy Committee (JTEC) for recommendations of the best option. Those recommendations would come back to town manager who would meet with the department heads, a member appointed by

the Selectboard, and the energy coordinator, to make sure the purchase meets the policy and operational needs. Ultimately the town manager would make a recommendation to Selectboard. If that recommendation is different than that of JTEC, it will be noted as to why it is different. The Selectboard would make the final decision.
Bryan noted that this lines up with his role as the procurement officer for the town.
David Goodrich expressed concerns over the use of the word "shall" throughout the policy. The work "shall" tends to reduce the amount of discretion the town manager would have. David would like to see those changed to "should".
Bryan said if David wanted to go through the policy and mark the specific areas that are of concern, he would be happy to review with Geoff. Erica commented most of the "shalls" are just to support the process, rather than limiting anyone's' role.
Sharon said she was prepared to make a motion to approve.
Geoff said it could be approved but wanted to make sure they were aware that under Attachment C, they would be committing to no fossil fuels.
Li asked about the procedure - will Bryan and JTEC go through the policy and make it consistent with the things in the memo? It needs some revision and needs to be consistent with the procurement policy.
Sharon said the recommendation in the town plan was that "the town shall seek to reduce or eliminate" fossil fuels and she wondered if Appendix C should read more along those lines.
Erica said Appendix C is the section about new construction. The 2050 goals are only 28 years away, and this policy may be an essential component of reaching those goals.
Sharon asked if the new construction was only for town facilities. Bryan confirmed and said that Attachment B is the procedure for HVAC systems which does allow for fossil fuels.
Steve asked a hypothetical question about building a battery shed for a solar array, which needs to be heated, so could it be heated with propane as it would be new construction. Geoff said this policy would prohibit that. An electric heat pump would be used instead.
Erica expressed her opinion to keep it as is, as the impact is small, and the instances would be pretty limited. This policy is supporting our accountability.
Steve said he recognizes what Erica is saying, but any flexibility has been removed.
Mary, going back to David's concern, asked if they would be willing to change the word "shall" to "should".
David said that is exactly what he would like to see happen.
Going back to Erica's comment, Bryan said a lot of the "shalls" are processes and not directives. He said he and the JTEC will just have to go through it again.
Sharon noted that the use of "shall" and "should" was a big discussion when the town plan was being written.
Li agreed with Bryan and Erica that the "shalls" are procedural. Let's not nibble away at the policy. Considering what's appropriate, and affordable is the best solution. Li said she thinks we should leave it as is. A future manager may interpret it differently if it's not clear.
Bryan said they could add a general exception clause.
Sharon asked Bryan to review again and have something ready in the next 2 – 4 weeks.

8) Appointments; Lister, Recreation Advisory Council and Discussion of TRORC Commissioner

Sharon Harkay announced that Barbara Harrington has been appointed to fill the vacant Lister position until the 2023 local elections. She will start this coming Wednesday.

Motion by Sharon Harkay to appoint Barbara Harrington as Lister, effective tonight through March. **VOTE by Roll Call;** David Goodrich – in favor, Li Shen – in favor, Steve Tofel – in favor, Mary Bryant – in favor, Sharon Harkay – in favor. **Motion passed.**

Motion by Sharon Harkay to appoint Stacy Barton for a 3-year term to the Recreation Advisory Council. **VOTE;** All in favor (5-0-0). **Motion passed.**

Motion by Mary Bryant that David Goodrich contact Angela McCanna and ask if she would be interested in being appointed as a TRORC commissioner for a term of one year. **VOTE;** All in favor (5-0-0). Motion passed.

9) ARPA Funding/Lost Revenue Declaration

Motion by Sharon Harkay that we authorize using the up to ten-million-dollar standard allowance option under the lost revenue provision under the ARPA funds. **VOTE;** All in favor (5-0-0). **Motion passed.**

10) Review of Revised 2022 List of Priorities

Sharon said she met with Bryan, and they moved some things around, changed some categories, and added initial steps when needed. Items with SB in parenthesis are tasks for the Selectboard.
Steve wondered if green burials should be for the Cemetery Commission.
Mary felt they were missing a town plan that ties in the economics, housing, water, everything.
Sharon said there was a town plan, but Mary said she is thinking of a different kind. One that is formally done, evaluates and looks at all these things and puts them together like a blueprint.
Mary said Fairlee and Bradford have one.
Bryan said he is aware of the type of plan Mary is talking about and he has reached out to both towns. He has not heard back from them. He will follow up.
Sharon wanted to know how to add it to the list without causing the same confused reaction from others.
Li agreed. She said they can't call it a town plan because we have a formally recognized town plan that has been reviewed by professionals and approved by TRORC.
Bryan suggested changing the category of economic development to community development.
Steve asked how they were going to proceed with the list.
Sharon said the Selectboard items will turn into agenda items. Things that need more research could be given to different members and when ready, they will become agenda items.
Bryan noted that some of these things are being worked on already.
Li thought the tree warden was drawing up a list of dangerous trees.
Mary expressed concerns about the housing crisis. She felt they could hire somebody part time to work on that.

Li said there are organizations that already do that work, such as Twin Pines Housing and GMEDC.
Mary said it could be somebody in town, looking at different pieces of land to see if someone would sell. She feels like we are missing opportunities if we are waiting for someone to come and offer their land. Mary said this needs attention. People are in crisis.
Sharon noted this is not just a problem in Thetford. It is statewide, if not even country wide.
Li said the town is really a provider of roads, safety, police etc. She is not sure that we should extend ourselves into housing.
Mary commented that when you have more people in town you have more taxpayers.
Li said they should be planning smart growth, which is what we are working on with our zoning by laws.
Sharon will make the edits and get the final copy out to the Selectboard.

11) Warrants and Minutes

#16.1 $31,319.37
#17.1 $7,903.26
#18.1 $24,423.11
#7.2 $14,851.08
#14.3 $367,930.28
#15.3 $32,970.41
#7.4 $24,456.91

Motion by David Goodrich to accept the warrants as presented. **VOTE;** All in favor (5-0-0). **Motion passed.**

Motion by Sharon Harkay that we accept the regular Selectboard meeting minutes of April 4, 2022, as edited. **VOTE;** All in favor (5-0-0). **Motion passed.**
Motion by Li Shen to accept the special Selectboard meeting minutes of April 11, 2022, as presented. **VOTE;** All in favor (5-0-0). **Motion passed.**

12) Adjourn

Motion by Steve Tofel to adjourn the Selectboard meeting at 8:56 PM. **VOTE;** All in favor (5-0-0). **Motion passed.**