

# Cartographic Technologies, Inc.

GIS • Tax Mapping • Programming

March 13, 2025

Town of Bristol  
1 South Street  
Bristol, VT 05443

Dear Officials,

CTI is a small company in Putney, VT consisting of two principals, Susan Boswell & David Greenewalt. During the past 30 years our mission has been providing the highest quality GIS products and services to our clients. Over that time we have gained extensive experience working with municipalities and understanding property law. We do not subcontract our work to overseas companies or to other individuals. If you need to call, you will talk with us directly. Our current clients can provide the best perspective on who we are and what we do. Their information is in the attached proposal and we invite you to contact them.

I met with AZ Larsen and the Listers on February 25<sup>th</sup>. We discussed the current taxmaps, GIS data, workflows and project desires. We have reviewed your 2019 GIS data, the 2023 CAD data and taxmaps, the GIS Zoning data and the current active and inactive grand lists. Using this info, we conducted a thorough analysis to identify and quantify the types of errors and updates that need to be completed.

A project of this size can be a large expense for a small town. With a signed contract, we can spread out the payment for these services over 2-3 years to make it more feasible. The last pages of our proposal contain the information on costs and payment schedules.

We choose to work with small to medium size Vermont Towns and would very much welcome the opportunity to work with Bristol.

Sincerely,

Susan Boswell

## Letter of Transmittal

The undersigned proposer acknowledges and accepts that all the terms and conditions set forth in this proposal are mandatory and agrees that they will be included in their entirety in any contract resulting from this proposal.

Cartographic Technologies, Inc. warrants and certifies that the individual signing this proposal is a bona fide employee of the firm and has the authority to solicit and secure any agreement resulting from this proposal.

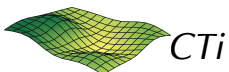
The proposal price has been arrived at independently, without collusion, consultation, or communication as to any other proposer or with any competitor. The proposal costs were not disclosed by the proposer and were not knowingly discussed prior to the submission, directly or indirectly, to any other proposer or any other competitor. No attempt was made by the proposer to induce any other person, partnership, or corporation to submit or not to submit a proposal for the purpose of restricting competition.

No elected or appointed official or employee of the Town of Bristol shall benefit financially or materially from any contract resulting from this proposal. This proposal shall remain in full force and effect for at least sixty (60) days from the date shown below.



March 13, 2025

Susan W. Boswell  
President



## Analysis of Current GIS Parcel Data & Methods of Correction

We have conducted a thorough review of the existing data to understand the amount and types of work to be performed. We evaluated the current GIS parcel data, GIS Zoning and Overlay Districts, the active and inactive grand lists and the current CAD data/taxmaps. Listed below are the issues we recommend correcting.

### Missing and Unmapped Properties

There are a large number of lots in the CAD data and the grand list that are not in the GIS data.

Below are some of these types of issues:

- There are 61 lots in the CAD data that aren't in the GIS data. These can easily be added from the CAD data.
- There are 59 lots in the active grand list that are not in the CAD data. These are most likely lots that have been created since the last map update. CTI will provide the Town with a list of these lots and the Town will provide digital copies of the surveys or deeds for their entry. Digital copies can be either entire document scans or pictures from a smartphone. CTI will provide instructions on how to send this information.
- There are 67 lots in the inactive grand list that are not in the CAD data. While these lots are inactive, they have the same legal status as any other piece of land. Proper planning and decision making can not be done without an accurate picture of all individual lots. For these reasons, it is important to have them all in the GIS data and on the taxmaps.

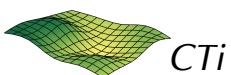
*Of note: CTI codes the source when entering info into the GIS data (the book and page number or survey plat number). This allows users the ability to locate the source data and evaluate the accuracy of the mapped data. This source data may not be entered by other mapping vendors.*

### Roadways

In general, the property lines along public roadways do not align well with those roadways (see images on the following page). CTI recommends remapping the property lines along all Town roadways to a standard 3-rod width. This can be done easily using a buffer distance from the road centerlines. For state highways CTI would use the VTrans right-of-way GIS data.

Additionally, there are a number of instances where Town roadways have not been mapped correctly. Using the VTrans town highway data and mileages we would correct the types of issues listed below:

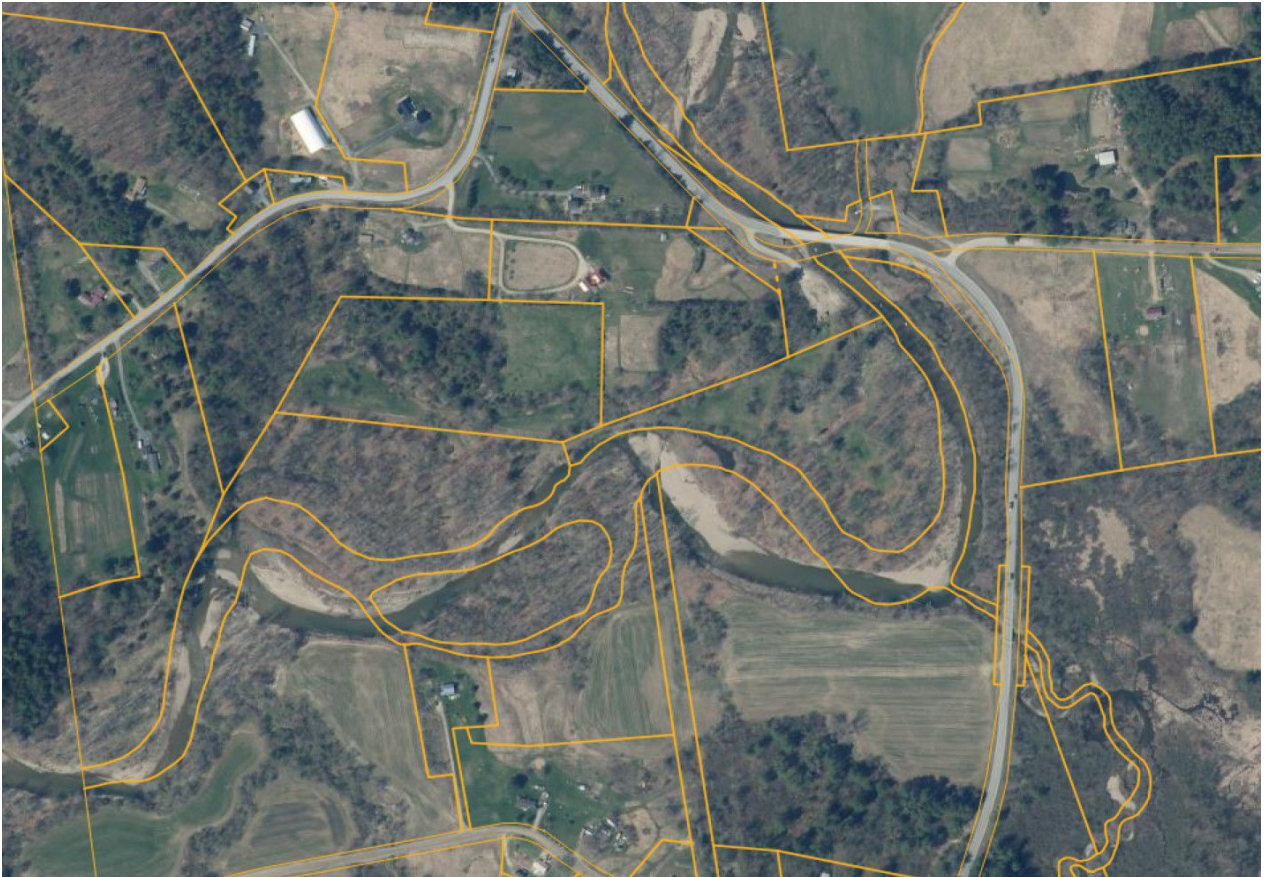
- Add Town highways that have not been mapped as public right-of-ways such as Firehouse Drive or LaFrance Drive
- Correct Town highways that have been mapped too long or too short such as TH-28 or Baslow Road





## Waterways

The following images show property lines (in orange) that do not follow current road and waterways. We suggest remapping those boundaries to improve the accuracy of the data.





### General Shifting of Data

The two images below show areas where the property boundaries appear shifted uniformly from their true locations. This is not uncommon when CAD data (which is not tied to a ground location) is converted to GIS data. CTI recommends making these corrections.





## GIS Zoning Data and Overlay Districts

CTI obtained the most recent GIS Zoning and Overlay District data from the RPC and identified corrections needed to ensure these layers align. The image below shows the current misalignment (pink lines = zoning districts, orange lines = property lines):



The image below shows the downtown design review district (pink) and property boundaries (orange).



As a part of entering annual property line updates, CTI will ensure that these data layers get edited when needed and provide the updated data to the RPC.

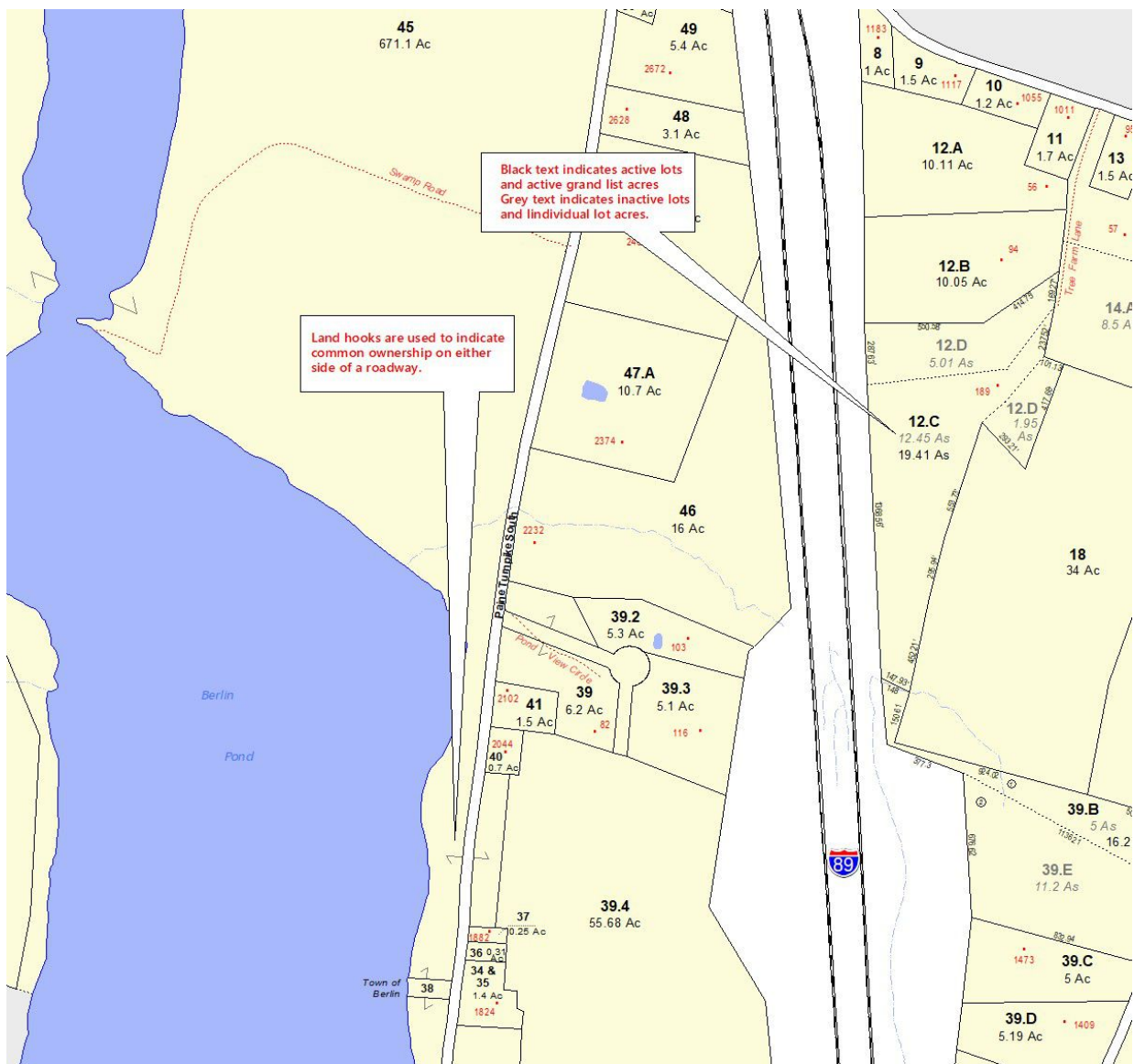


## Create Updated Tax Maps

All our taxmaps are printed in color and have additional features such as waters and topographic lines to provide a better picture of a property. Other features such as buildings with address numbers or owner names can be added at the request of the Town. We can also provide PDF images of the maps to be loaded on the Town's website. Examples of our maps can be found online at these links:

- Wilmington, VT: <https://wilmingtonvermont.us/departments/assessor-office2023wilmington-tax-maps/>
- Stratton, VT: <https://www.townofstrattonvt.com/assessors--office.html>

Our taxmaps show both active and inactive lots. Inactive lots have numbers and acreages in gray, while numbers and acreages in black correspond to the active grand list number and acreage. Dashed property lines indicate common ownership between lots. Land hooks indicate common ownership across roadways.



## GIS Software

Our TownView GIS software products are tailored to the specific needs of small municipalities. They are easy to use, provide a wealth of information and are relatively inexpensive. The desktop version costs \$350 per year. The web version costs \$450 per year. 95% of our clients use one or both apps.

There are a number of significant advantages to a custom desktop software product or web app. vs. the State's Parcel Viewer.

- It is possible to search by owner name
- Ability to view all grand list data for one or many selected parcels
- Identify abutting property owners and export that data to an external document or mailing labels
- Provide a link to property cards
- Provide more functionality for users by having additional data layers (listed below):
  - Zoning and Overlay districts
  - Flood Hazard Areas
  - Surface waters
  - Building locations and street address numbers

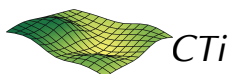
### TownView Desktop

The desktop version of TownView is licensed to the Town so it can be installed on as many computers within the Town Offices as desired. CTI provides the software on either a flash drive or as a download from the web.

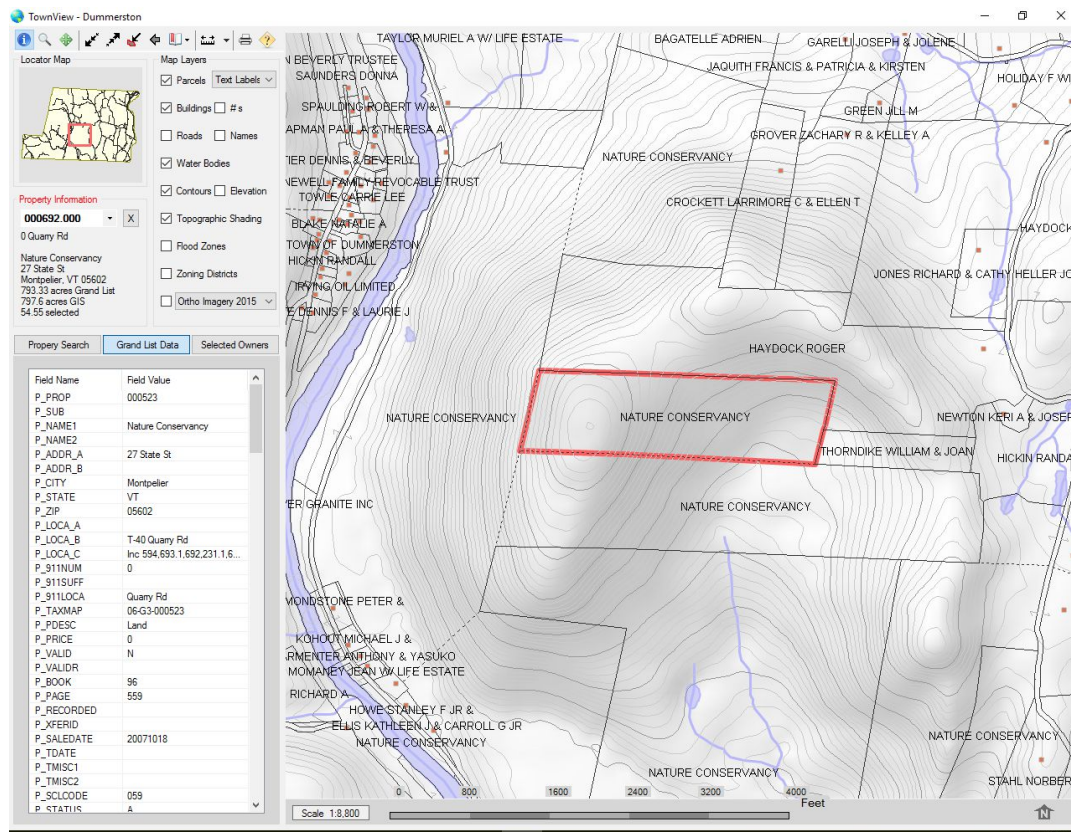
If you would like to try an actual version of TownView Desktop, you may download a copy for the Town of Marshfield:

1. Go to: <https://ln5.sync.com/dl/7c78e8040#f9kbgap5-zhavxg55-qdy69fjm-eyhvvqrz>
2. Click on Download All
3. Click on Download Now
4. Go to the Downloads folder in your file manager
5. Unzip the "MarshfieldTownView.zip" file
6. Open the folder and run "Setup TownView for Marshfield.exe"
7. Follow the remaining install instructions.

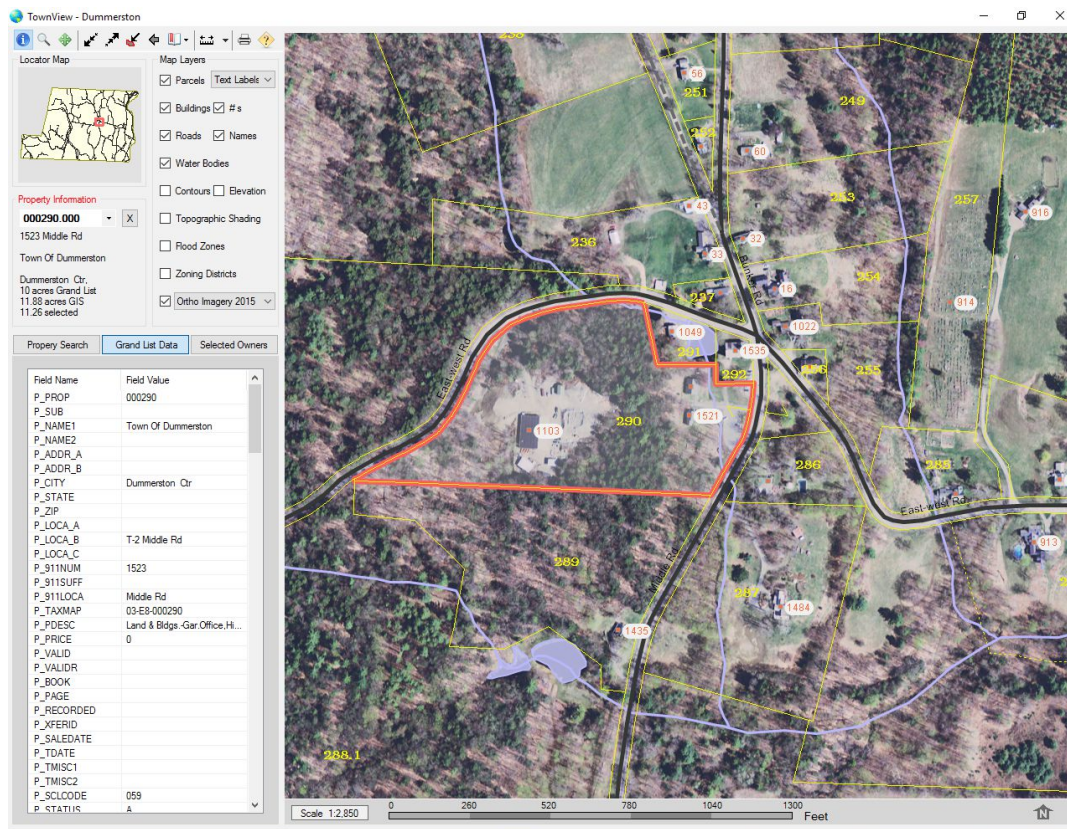
Screen shots of TownView Desktop for the Town of Dummerston are shown on the following pages.







*Selected property (red outline) with complete Grand List data in scrolling window*



*Building locations and addresses with aerial imagery and selected property outlined*

Locator Map

Map Layers

☒ Parcels ☒ Text Labels

☒ Buildings ☒ #s

☒ Roads ☒ Names

☒ Water Bodies

☒ Contours ☐ Elevation

☐ Topographic Shading

☐ Flood Zones

☐ Zoning Districts

☐ NAIP Imagery 2014

Property Information

000286.000

1498 Middle Rd

Baxendale David A  
Po Box 6426  
Brattleboro, VT 05302  
1.5 acres Grand List  
1.77 acres GIS

Property Search Grand List Data Selected Owners

Abutters to: 000286.000  
Baxendale David A  
Po Box 6426  
Brattleboro, VT 05302

Copy to Clipboard  
Create Mail Merge  
Print

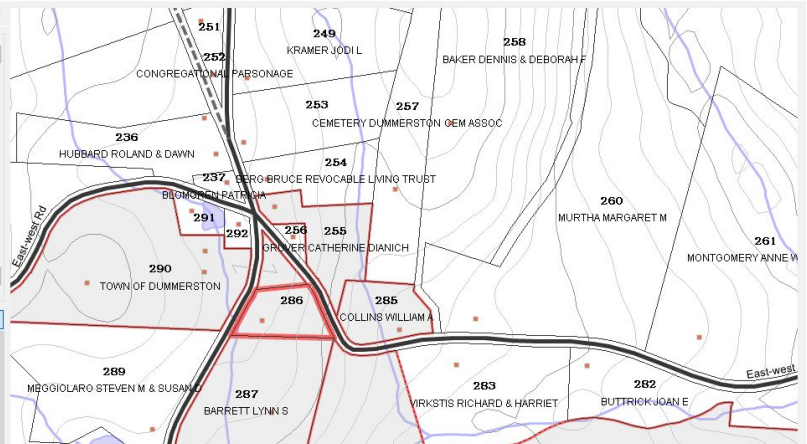
5 Owners 5 Parcels

Barrett Lynn S  
1484 Middle Rd  
Dummerston, VT 05301

Collins William A  
934 East West Rd  
E Dummerston, VT 05346

Gruver Catherine Dianich  
1022 East West Rd  
E Dummerston, VT 05346

Town Of Dummerston  
Dummerston Ctr.  
Virkstis Richard & Harriet  
Revocable Trust  
913 East West Rd  
E Dummerston, VT 05346



Preview

Zoom In

Zoom Out

Zoom Page

View

☒ Page 1

☐ Page 2

Include

☐ Grand List

Copies

1

Print Scale

1:2,400

PDF export

Print

Close

Town of Dummerston

000286.000

1498 Middle Rd

Baxendale David A  
Po Box 6426  
Brattleboro, VT 05302  
1.5 acres Grand List  
1.77 acres GIS

Map Features:  
Topographic Shading  
Flood Zones  
Zoning Districts  
NAIP Imagery 2014

Map Scale 1:2,400

1 inch = 200 feet

Print to: HP Photosmart C6300 series

Print maps and grand list data to either to paper or PDF file

Preview

Zoom In

Zoom Out

Zoom Page

View

☐ Page 1

☒ Page 2

Include

☒ Grand List

Copies

1

Print Scale

1:2,400

PDF export

Print

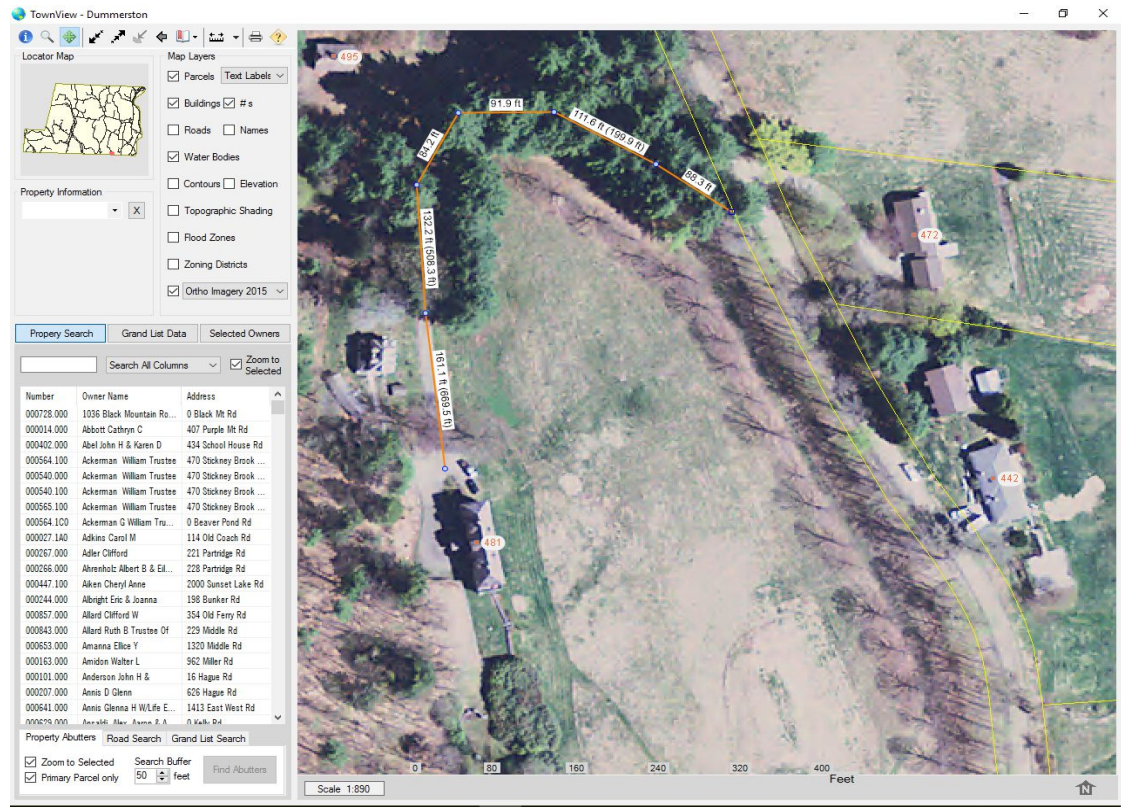
Close

Town of Dummerston

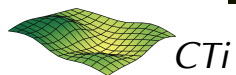
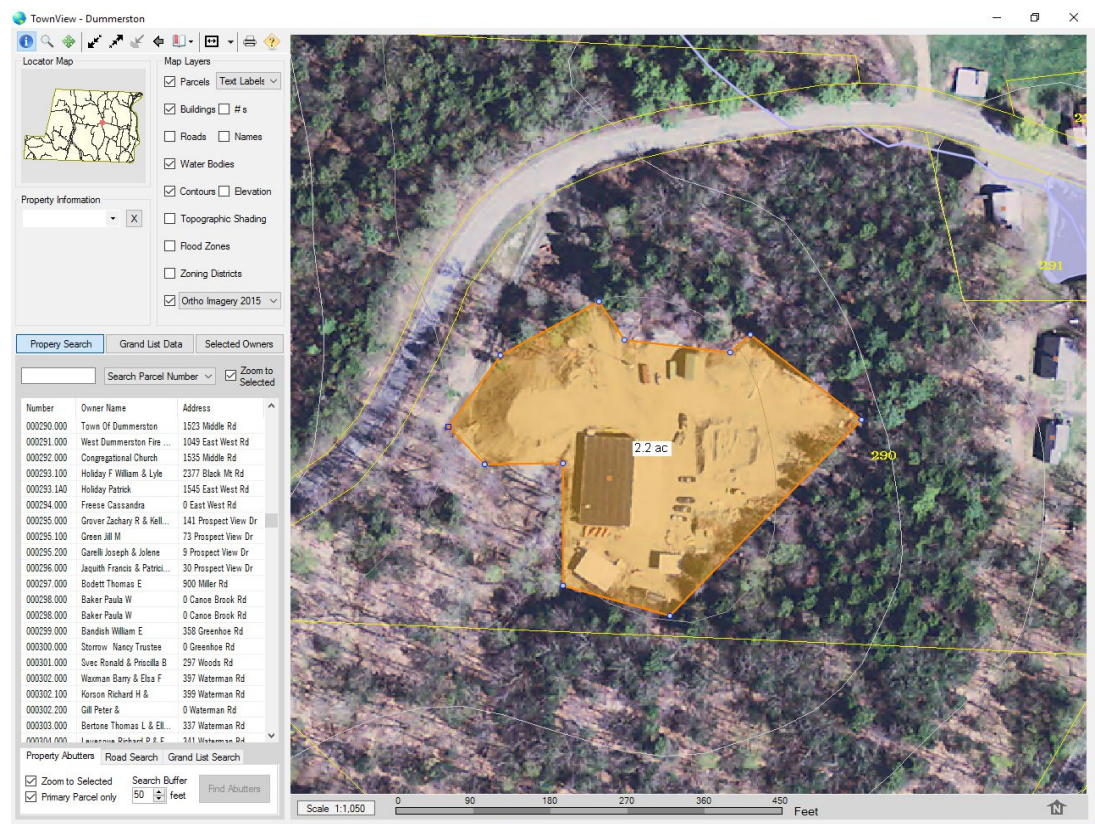
Parcel ID	Owner Name	Area (Acres)	Assessed Value	Grand List Value	Map Scale
P_0001	Barrett Lynn S	1.5	\$100,000	\$100,000	1:2,400
P_0002	Collins William A	1.5	\$100,000	\$100,000	1:2,400
P_0003	Gruver Catherine Dianich	1.5	\$100,000	\$100,000	1:2,400
P_0004	Town Of Dummerston	1.5	\$100,000	\$100,000	1:2,400
P_0005	Virkstis Richard & Harriet Revocable Trust	1.5	\$100,000	\$100,000	1:2,400

Print to: HP Photosmart C6300 series





*Measure and calculate distances and areas*



### TownView Online

The online version of TownView provides access to the GIS Data through a link on the Town's website. It can be used on tablets and phones, and will geolocate a user in the field.

Additionally, CTI can provide edit functionality for some changes to your Zoning Administrator who has GIS experience.

Here is a link to TownView online for the Town of Montgomery:

<https://mangomap.com/cartographic-technologies-inc/maps/133454/montgomery-vt-townview-online?preview=true>

### **Schedule of Delivery**

We would strive to complete all products within 120 days of signing of a contract. Work on correcting the GIS data and updates using the CAD data can commence immediately. We recommend updating the data to the 4/1/2025 grand list, so final products will be created on receipt of that finalized grand list – usually during the summer.

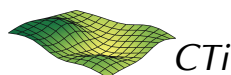
Annually, we typically deliver all products to our clients within 30 days of the receipt of all materials (subdivisions, lot line changes and grand lists). CTI makes lot line changes throughout the year as they occur and provides those updates to the State and Town once a year with the new grand list. We ask listers to send lot line changes or subdivision changes as they happen to ensure timely delivery.

### **Ownership**

All data developed as part of this project will be the property of the Town at all times. CTI will provide any interim products if the Town wishes to inspect the work performed to date.

### **Insurance**

CTI maintains an insurance policy to cover possible losses of data and equipment and general liability insurance in the amount of \$1,000,000. A certificate of insurance can be provided upon request.

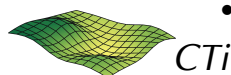




## Firm Qualifications

### Vermont Tax Mapping Clients

- Arlington: 8 years, Earl Labatt, Lister, arlister@comcast.net
- Berlin: 18 years, Clarissa Holmes, Lister, listers@berlinvt.org
- Bakersfield: New 2024, Susan Sonski, bfieldlist@gmail.com
- Braintree: 2 years, Jackson Evans, Lister, braintreelisters@gmail.com
- Brookline: 5 years, Helen Holt, Lister, brookline.listers@comcast.net
- Burke: 11 years, Matt Krajieski – (New England Municipal Consultants), listers@burkevermont.org
- Dorset: 19 years, Margot Schofstall, Lister, dorsetlister@gmail.com
- Dummerston: 15 years: Stephen Mindel, Lister, listers@dummerston.org
- Fairlee: 3 years, Noel Walker, Lister, listers@fairleevt.gov
- Franklin: 11 years, Lisa Larivee, Town Clerk, townoff@franklinvt.net
- Grafton: 5 years, Merrill Hardy, Lister, merrill.f.hardy@gmail.com
- Jay: 2 years, Lynnette Deaette, Town Clerk, townofjay@comcast.net
- Marlboro: 21 years, Forset Holzapfel, Town Clerk, marlborotownclerk@gmail.com
- Marshfield: 13 years, BobbiBrimblecomb, Town Clerk, clerk@town.marshfield.vt.us
- Montgomery, 3 years, Elizabeth Reighley Municipal Clerk, municipalclerkmontgomery@gmail.com
- Newfane: 6 years, Doris Knetchel, Lister, newfanelisters@svcable.net
- Pownal: 12 years, Wendy Jordan-Bisson, Lister, pownal.listers@townofpownal.org
- Putney: 19 years, Geordie Heller, Lister, listers@putneyvt.gov
- Stamford: 5 years, Nancy Bushika, Selectboard Chair, nancybushika@yahoo.com
- Stratton: 19 years, Candie Bernard, Lister, cbernard1331@gmail.com
- Townshend: 6 years, Helen Holt, Lister, tnlst@svcable.net
- Vernon: 9 years, Carol Hammond, Lister, vlisters@sover.net
- Walden: New 2024, Dia Michaud, Lister, listers@waldenvt.gov
- Westford: New 2024, Holly Delisle, Town Administrator, hdelisle@westfordvt.u

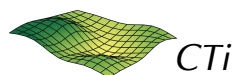


- Westminster: 3 years, Rachael Cohen, Lister, [listers@westminstervt.org](mailto:listers@westminstervt.org)
- Whitingham: 18 years, Jenepher Burnell, Lister, [listers@whitinghamvt.org](mailto:listers@whitinghamvt.org)
- Wilmington: 20 years, Sarah Kociela, Lister, [skociela@wilmingtonvt.us](mailto:skociela@wilmingtonvt.us)

#### **Other References**

Chaveli Miles: VCGI Parcel Program Manager, [chaveli.miles@vermont.gov](mailto:chaveli.miles@vermont.gov)

Jeff Nugent: GIS Program Manager, Windham RPC, [jnugent@windhamregional.org](mailto:jnugent@windhamregional.org)





## Employee Qualifications

### Susan Boswell

Susan provides skills in technical operation, planning and management of projects. She has excellent analytical capabilities and a good understanding of the operation of municipalities to help clients meet their GIS objectives. Susan has overseen the creation and updating of municipal parcel data for over fifty municipalities.

#### *Education*

Bachelor of Science: Geography, Dartmouth College

#### *Professional Experience*

Principal, Cartographic Technologies Inc., Putney, VT      1995-Present  
GIS skills in technical operation, planning and management of projects, data development, cartographic design and map production. Setup and maintain TownView Online web applications.

Windham Regional Commission, Brattleboro, VT      1991-1995  
GIS education for public and town officials, software support for towns using GIS, GIS database design, map design and production. Susan worked with over 20 towns on GIS and mapping projects.

#### *Community Service*

State of Vermont – Judicial Branch, Guardian Ad Litem

### David Greenewalt

David combines a strong technical background with a broad artistic palette to create some of CTI's best products. Computer programming and cartographic design are two of David's specialties.

#### *Education*

Bachelor of Arts in Geology with a Minor in Geography - University of VT

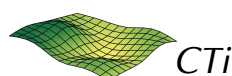
#### *Professional Experience*

Cartographic Technologies, Inc., Putney, VT      1995-Present  
Technical GIS operations, automation, GIS programming and analysis, cartographic production. David has created TownView Desktop software packages for over 25 communities.

Windham Regional Commission, Brattleboro, VT      1991-1995  
GIS database design and analysis. GIS data documentation and management. Integration of various data sources from CAD and raster GIS into GIS formats. Design and produce maps. Install, support and maintain GIS software for 27 regional towns.

#### *Community Service*

Town of Dummerston, VT, Conservation Commission



## Project Costs

<b>Total Project Cost</b>	<b>\$ 14,800</b>
• Correct & Update GIS Parcel & Zoning Data to 4/1/2025	\$ 11,475
• Provide Updated Paper & PDF Taxmaps	\$ 3,325

### Optional Products:

• TownView Desktop Software	\$ 350
• TownView Online Software	\$ 450

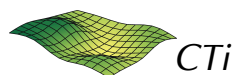
## **Annual Updates After Initial Project**

*While some vendors require annual contracts with fixed prices, we prefer to bill for the time needed to perform the tasks each year (enter property line changes). Annual contracts probably don't reflect an amount that would be in the favor of the client. Our method is fair for both parties.. Our clients find that the costs remain relatively stable from year to year.*

<b>Estimated Costs for Annual Updates</b>	<b>\$ 1,115</b>
• Enter new subdivisions and lot line changes – est. 10 <i>(only the time needed to make the changes would be billed)</i>	\$ 640
• Link data to new grand list <i>(only time needed is billed)</i>	\$ 130
• Provide updated data to state and RPC	\$ 50
• 1 set of small size paper maps	\$ 162
• 1 set PDF images of maps	\$ 108
• Map shipping	\$ 25

### Optional Products:

• TownView Desktop Software	\$ 350
• TownView Online Software	\$ 450



## Payment

This type of project can present a large expense for a small town. To help ease this situation, we have often provided our new clients the option to pay for the initial project over two or three years with a signed contract indicating the specifics of the payments. Below are two options:

### Two Year Payment Schedule:

- Year one invoice would be \$7,400
- Year two invoice would be \$7,400 + \$1,115 est. (2026 updates)

### Three Year Payment Schedule:

- Year one invoice would be \$4,933
- Year two invoice would be \$4,933 + \$1,115 est. (2026 updates)
- Year three invoice would be \$4,933 + \$1,115 est. (2027 updates)

CTI does not require an upfront payment and will not invoice for the project, or on an annual basis, until all work for that year has been completed.

