



**TOWN OF MORRISTOWN SELECTBOARD
MEETING NOTICE & AGENDA
COMMUNITY MEETING ROOM**

On Zoom and at 43 Portland St. Morrisville, VT 05661
5:30 PM Monday, October 21, 2024

[Join Zoom Meeting](#) or by phone join via conference call (audio only): 1 (646) 558-8656 | Meeting ID: [810 342 4528](#) | Passcode 05661

The meeting will be live streamed on the Town of Morristown's website:

<https://www.morristownvt.gov/community/page/meetings-agendas-minutes> and on [Town GMATV YouTube Channel](#) when possible

I. 5:30PM - CALL SELECTBOARD MEETING TO ORDER

II. 5:31PM - AGENDA CHANGES/ADDITIONS

III. 5:32PM - APPROVE MINUTES

1. Approve minutes of 10-3-24 Special Meeting
2. Approve minutes of 10-7-24
3. Approve minutes of 10-9-24 Special Meeting
4. Approve minutes of 10-15-24 Special Meeting

IV. 5:35PM - NEW BUSINESS

1. David Hoyne - Pavement Condition and Needs Assessment
2. Further discussion of Jersey Heights Special Assessment District and Article 2

V. 6:30PM - OLD BUSINESS

VI. 6:36PM - APPROVE WARRANTS

VII. 6:38PM - COMMUNITY COMMENTS

VIII. 6:48PM - SCHEDULE

1. Upcoming Schedule:
 - a. Monday, October 28, 2024 - Informational Meeting - 5:30PM
 - b. Monday, November 18, 2024 - SB Meeting - 5:30PM
 - c. Wednesday, November 20, 2024 - SB Workshop 8AM - 4PM

IX. 6:50PM - OTHER BUSINESS

X. 6:55PM - ADJOURN



SELECTBOARD MEETING MINUTES OF OCTOBER 3, 2024

Members: Don McDowell, Laura Streets, Richard Craig, George Cormier

Absent: Christopher Palermo

ADMINISTRATION and STAFF: Brent Raymond, Town Manager; Judi Alberi, Executive Assistant

PARTICIPANTS/GUESTS: Maria Ward, Dale Touchette, Tom Cloutier, Barbara Percy, Kate Greenmun, Clark Callender, Wallace Reeve, Kristin Marriott, Kristin Fogdall, Donnie Blake, Lee LaBier, Leah Hollenberger

**participating via Zoom*

6:00PM - CALL SELECTBOARD MEETING TO ORDER

Don McDowell called the Selectboard Special Meeting to order at 6:00PM at the Wing Center.

6:01PM - AGENDA CHANGES/ADDITIONS

None

6:02PM - NEW BUSINESS

1. Discuss Special Town Meeting Nov 5, 2024 Article 1

Don McDowell read the article. No questions.

2. Discuss Special Town Meeting Nov 5, 2024 Article 2

Don McDowell read the article and Brent Raymond gave an overview of the grant money that the town had accepted. We do not have a final figure of the stormwater solution and won't until the state accepts the solution that Tyler Mumley engineering has and is continuing to work on. Solutions will be presented to the residents and easements will need to be collected. It is important that we all work together. HA Manosh created the subdivision and obtained the original permit for the stormwater system. In 2007, the Town of Morristown Selectboard agreed to take over the road and sidewalks of the Subdivision. They did not assume responsibility for the Subdivision Stormwater Permit. Of the 700+ sites around the state that have been found to be non-compliant with the 3-acre rule, the Town of Morristown is one of seven entities to be awarded a grant that would cover approximately 70% of the total cost for the required improvements. The balance would be shared by the Town and the residents of the Jersey Heights Subdivision if article 2 passes. If Article 2 fails, then the town would be responsible for 100% of the project after the grant funds were applied. The grant's value is \$316,675.00.

A few residents felt the language in the article was misleading, and the town took responsibility for the permit. Therefore, the town should be the responsible party and not ask for Jersey Heights subdivision to be a party to the solution.

3. Discuss Special Town Meeting Nov 5, 2024 Article 3

Article 3 was read by Don McDowell. Based on the outcome of the vote, the town will use the grant funds and pay any expenses above and beyond the grant in one of two ways: 1. Secure long-term financing to spread the costs over a period of up to 20 years for both the Town and the 64 affected parcels. 2. Apply the grant funds directly and cover any additional costs upfront. There were questions regarding the language used in Article 2, which proposes the establishment of a special assessment district. This language is then referenced and carried over to Article 3 as if it has already happened. Brent Raymond had the same concern but was told by legal counsel that the language was the correct language for the articles.

4. Overview Special Town Meeting Nov 5, 2024 Article 2 and 3

The town has signed to accept the grant funds of \$316,675

7:45PM - COMMUNITY COMMENTS

None

8:00PM - ADJOURN

Motion made by George Cormier to adjourn. Motion seconded by Laura Streets. Motion carried. (4/0)

Meeting adjourned at 7:25pm

Submitted and filed this October 7, 2024.

Judi Alberi, Scribe

Please note all minutes are in Draft form and are subject to approval at the next Selectboard meeting.



**SELECTBOARD MEETING MINUTES
OF OCTOBER 7, 2024**

Members: Don McDowell, Christopher Palermo, Laura Streets, Richard Craig, George Cormier

Absent:

ADMINISTRATION and STAFF: Brent Raymond, Town Manager; Judi Alberi, Executive Assistant; Todd Thomas, Zoning/Planning Director

PARTICIPANTS/GUESTS: Martin Green, Evelyn & Jerry Throne, Robert Clark, Tony Cote, Etienne Hancock, Mason Kemerer

**participating via Zoom*

5:30PM - CALL SELECTBOARD MEETING TO ORDER

Don McDowell called the Selectboard Meeting to order at 5:30 PM at the Tegu Building.

5:31PM - AGENDA CHANGES/ADDITIONS

None

5:32PM - APPROVE MINUTES

1. Approve minutes of 9-16-24

Motion made by Chris Palermo to approve the minutes of the 9/16/24. Motion seconded by Richard Craig. Motion carried. (5/0)

2. Approve minutes of 9-23-24 Public Hearing

Motion made by Chris Palermo to approve the minutes of the 9/23/24 Public Hearing. Motion seconded by George Cormier. Motion carried (5/0) with amendments.

Chris Palermo was absent during the 9-23-24 Public Hearing meeting.

3. Approve minutes of 9-30-24 Public Hearing

Motion made by Chris Palermo to approve the minutes of the 9/30/24 Public Hearing. Motion seconded by Richard Craig. Motion carried. (5/0)

4. Approve minutes of 9-30-24 Special Meeting

Motion made by Chris Palermo to approve the minutes of the 9/30/24 Special Meeting. Motion seconded by George Cormier. Motion carried. (5/0)

5:35PM - NEW BUSINESS

1. Recognition Awards

Jerry Throne, Evelyn Throne, and Robert Clark led the successful renovation of the EMS kitchen,

demonstrating exceptional project management and construction expertise. Their meticulous work transformed the space into a functional area that enhances support for first responders, completed on time and within budget.

Scott Nelson, an experienced Tech III in the Highway Department, received an On-the-Spot Award for his dedication to training and mentoring new employees. His knowledge-sharing and supportive approach have boosted new technicians' skills and confidence, contributing to a positive work environment.

Caleb Holmes and Shane Blaisdell from the Highway Department were recognized with an On-the-Spot Award for volunteering at the 2024 Rocktoberfest event. They coordinated logistics with Gail Beck and ensured proper setup and teardown, demonstrating exceptional community service and teamwork.

Motion made by Chris Palermo to extend our sincere appreciation and recognition to volunteers and staff recognized tonight who have gone above and beyond with their efforts for the betterment of our community and authorize the chair of the Selectboard to sign the certificate of recognition on behalf of the entire Selectboard, expressing the town's gratitude for their service. Motion seconded by Richard Craig. Motion carried. (5/0)

2. Consider canceling November 4, 2024 Meeting due to election November 5, 2024

Motion made by Chris Palermo to cancel the November 4, 2024 meeting due to the November 5, 2024 election. Motion seconded by George Cormier. Motion carried (5/0).

3. Discuss Planning Council letter to the Selectboard

Todd Thomas reviewed the Planning Council Chair Etienne Hancock's letter regarding the creation of on-street parking and other improvements on and around Pleasant Street. Todd discussed two of the eight items covered in the letter: the post office parking and the Wee Explorers Preschool parking. The committee recommended the letter be referred to the town manager, Brent Raymond for further consideration.

4. Mason Kemmerer - Ideas for one-way town square and safety improvements

Mason Kemmerer, a traffic design engineer, submitted a comprehensive proposal addressing the traffic pattern downtown for vehicles, bikes, and pedestrians. He suggested a one-way town square. His plan included maps delineating which streets would be affected while incorporating the rail trail bikers' use of the town's businesses. Laura Streets voiced a concern about school traffic and the route of the one-way streets. George Cormier had a question about routes 12, 15A, and Copley traffic during rush hours. Richard Craig discussed emergency vehicles. Chris Palermo thanked Mason for his detailed work and agreed that the town should get a consultant. Mason added that there are a couple of grants available through v-Trans and a grant that involved a 50/50 split with the town. Mason suggested that the town create a Transportation and Mobility Committee. The board was in agreement of forming a and suggested that Mason talk to the Town Manager about the committee.

5. Discuss the Morristown Development Fund proposed changes

The selectboard discussed the Resolution Regarding the Establishment of the Morristown Development Fund Loan Advisory Committee. The MDF committee is looking for the selectboard approval as there is \$500,000 being held for the businesses in town. Several discussion points were raised. Brent Raymond will review these and return the topic to the next selectboard meeting.

5:55PM - OLD BUSINESS

None

5:56PM - APPROVE WARRANTS

Motion made by Chris Palermo to approve the warrants. Motion seconded by George Cormier. Motion carried. (5/0)

6:00PM - COMMUNITY COMMENTS

None

6:10PM - SCHEDULE

- a. Wednesday, October 9, 2024 - SB Special Meeting - 6 pm The Town Offices
- b. Tuesday, October 15, 2024 - SB Special Meeting - 6 pm The Town Offices
- b. Monday, October 21, 2024 - SB Meeting - 5:30 pm
- c. Monday, October 28, 2024 - Informational Meeting - 5:30 pm The Town Offices
- d. Monday, November 18, 2024 - SB Meeting - 5:30 pm

1. Upcoming schedule

- a. Wednesday, October 9, 2024 - SB Special Meeting - 6pm The Wing Center **TBD**
- b. Tuesday, October 15, 2024 - SB Special Meeting - 6pm The Wing Center **TBD**
- b. Monday, October 21, 2024 - SB Meeting - 5:30pm
- c. Monday, October 28, 2024 - Informational Meeting - 5:30pm
- d. Monday, November 18, 2024 - SB Meeting - 5:30pm

The location of the following meetings has been changed to be:

Wednesday, October 9, 2024 - SB Special Meeting - 6 pm Town Offices

Tuesday, October 15, 2024 - SB Special Meeting - 6 pm Town Offices

6:15PM - OTHER BUSINESS

None

6:30PM - ADJOURN

Motion made by Chris Palermo to adjourn. Motion seconded by George Cormier. Motion carried. (5/0)

Meeting adjourned at 7:00 pm

Submitted and filed this 10/8/24.

Bonnie McDermott, Scribe

Please note all minutes are in Draft form and are subject to approval at the next Selectboard meeting.



**SELECTBOARD MEETING MINUTES
OF OCTOBER 9, 2024**

Members: Don McDowell, Christopher Palermo, Richard Craig, George Cormier

Absent: Laura Streets

ADMINISTRATION and STAFF: Brent Raymond, Town Manager; Judi Alberi, Executive Assistant; Ally Olsen, Media Operator

PARTICIPANTS/GUESTS: Patrick Harrington, Tom Cloutier, Dale Touchette, Martin Green, Laura Green, Jim Pease, Maria Ward, Deb Dever, Leah Bronner, Desmond Culcleasure, Haley Jiron

**participating via Zoom*

6:00PM - CALL SELECTBOARD MEETING TO ORDER

Don McDowell called the Selectboard Special Meeting to order at 6:00PM at the Tegu Building.

6:01PM - AGENDA CHANGES/ADDITIONS

None

6:02PM - NEW BUSINESS

1. Discuss Special Town Meeting November 5, 2024 Article 1

Don McDowell read the proposed Town Charter. There were no questions.

2. Discuss Special Town Meeting November 5, 2024 Article 2

Don McDowell read the article. We do not have a final figure of the stormwater solution and won't until the state accepts the solution that Tyler Mumley engineering has and is continuing to work on. Solutions will be presented to the residents and easements will need to be collected. It is important that we all work together. HA Manosh created the subdivision and obtained the original permit for the stormwater system. In 2007, the Town of Morristown Selectboard agreed to take over the roads of the Subdivision. They did not assume responsibility for the Subdivision Stormwater Permit. Of the 700+ sites around the state that have been found to be non-compliant with the 3-acre rule, the Town of Morristown is one of seven entities to be awarded a grant that would cover approximately 70% of the total cost for the required improvements. The balance would be shared by the Town and the residents of the Jersey Heights Subdivision if article 2 passes. If Article 2 fails, then the town would be responsible for 100% of the project after the grant funds were applied. The grant's value is \$316,675.00.

A few residents felt the language in the article was misleading, and they feel that the town took responsibility for the permit and infrastructure when they took over the roads. Therefore, the town should be the responsible party and not ask for Jersey Heights subdivision to be a party to the solution. Several residents expressed concern that the town was trying to create conflict among residents. The Selectboard strongly denied this, stating it was not their intention. There were some questions regarding how the percentages were reached for the residents of Jersey Heights. Brent Raymond explained that there was a calculation done based on impervious surfaces and that there was expertise in doing this and that it was not a draft equation. The percentages can be confirmed. Brent Raymond will have the ANR timeline posted to the

website.

3. Discuss Special Town Meeting November 5, 2024 Article 3

Article 3 was read by Don McDowell. Based on the outcome of the vote, the town will use the grant funds and pay any expenses above and beyond the grant in one of two ways: 1. Secure long-term financing to spread the costs over a period of up to 20 years for both the Town and the 64 affected parcels. 2. Apply the grant funds directly and cover any additional costs upfront.

4. Overview Special Town Meeting November 5, 2024 Article 2 and 3

No questions.

8:00PM - ADJOURN

Motion made by George Cormier to adjourn. Motion seconded by Richard Craig. Motion carried. (4/0)

Meeting adjourned at 7:58 pm

Submitted and filed this October 10, 2024.

Judi Alberi, Scribe

Please note all minutes are in Draft form and are subject to approval at the next Selectboard meeting.



SELECTBOARD MEETING MINUTES OF OCTOBER 15, 2024

Members: Don McDowell, Christopher Palermo, Laura Streets, Richard Craig, George Cormier

Absent:

ADMINISTRATION and STAFF: Brent Raymond, Town Manager; Judi Alberi, Executive Assistant

PARTICIPANTS/GUESTS: Tom Cloutier, Martin Green, Skip & Maria Ward, Heather Bonahoom, Leah Hollenberger, Sheila Tarbox, Tony Cote

**participating via Zoom*

6:00PM - CALL SELECTBOARD MEETING TO ORDER

Don McDowell called the Selectboard Meeting to order at 6:00PM at the Tegu Building.

6:01PM - AGENDA CHANGES/ADDITIONS

No changes or additions.

Chris Palermo did ask a question regarding the minutes of the past few special meetings. Judi Alberi indicated they will be on the October 21, 2024 agenda for approval.

6:02PM - NEW BUSINESS

1. Discuss Special Town Meeting November 5, 2024 Article 1

Don McDowell read the proposed Town Charter. This is the 4th time the charter has been discussed publicly. Again, no questions.

2. Discuss Special Town Meeting November 5, 2024 Article 2

Don McDowell reviewed the article regarding the Jersey Heights Subdivision stormwater issue in Morristown.

Initially, the grant required forming a Homeowners Association (HOA). Brent Raymond worked with ANR to modify this requirement. A public/private partnership can now be established through easements without an HOA or special assessment tax district.

In 2007, the town accepted responsibility for the road. Recent discoveries after research into old files revealed that a previous town administrator, Crawford, signed off on a stormwater transfer permit request to DEC without Selectboard authorization. Jim Pease in his official role with Vermont Dept. of Environmental Conservation warned the Selectboard that there would need to be a homeowners' association to cover the fees and any infrastructure in private ownership.

Maria Ward has asked the Selectboard to consider another option. As new information has been

discovered, would the Selectboard change their opinion and ask that all votes for article 2 and article 3 be null and void? If article 2 passes, Maria is convinced that there will be an appeal.

3. Discuss Special Town Meeting November 5, 2024 Article 3

Article 3 was read by Don McDowell. Based on the outcome of the vote, the town will use the grant funds and pay any expenses above and beyond the grant in one of two ways: 1. Secure long-term financing to spread the costs over a period of up to 20 years for both the Town and the 64 affected parcels. 2. Apply the grant funds directly and cover any additional costs upfront.

Tyler Mumley Engineering is working on a stormwater solution, which is not yet finalized. The state must accept the proposed solution before it can be implemented. Once a solution is developed, it will be shared with the Selectboard and the community.

4. Overview Special Town Meeting November 5, 2024 Article 2 and 3

Don McDowell explained the grid illustrating the outcomes of Articles 2 and 3 passing or failing. The Selectboard then discussed the project timeline, with completion set for August 31, 2026. Mumley Engineering, drawing from their experience with similar stormwater solutions in other municipalities, expressed confidence in meeting this deadline.

The Selectboard was asked if they could nullify Articles 2 and 3. However, as this was not on the agenda, they could not take action on the request during that meeting. Following a discussion between the Selectboard and Brent, an informal poll was conducted regarding the inclusion of an agenda item for the October 21, 2024 meeting. This item would address whether the results of Article 2 and/or Article 3 should be considered null and void. The majority of the Selectboard agreed to further discuss only Article 2 of the Jersey Heights Special Assessment District at the upcoming October 21, 2024 meeting.

8:00PM - ADJOURN

Motion made by Chris Palermo to adjourn. Motion seconded by George Cormier. Motion carried. (5/0)

Meeting adjourned at 6:58pm

Submitted and filed this October 18, 2024.

Judi Alberi, Scribe

Please note all minutes are in Draft form and are subject to approval at the next Selectboard meeting.



Morristown
Where Art, Food, & History Meet *Vermont*

A Pavement Condition and Network Level Analysis Morristown, VT

David Hoyne P.E.

VP | Director of Construction Services

Greenman-Pedersen Inc.

GPI

Scope of Work

- ▶ Identify the paved roads in town included in the study
- ▶ Develop data collection framework
- ▶ Perform Windshield Survey
- ▶ Prepare a Network Level Analysis
- ▶ Develop and Present Final Report

Summary of Paved Roads

	Class 1 TH	Class 2 TH	Class 3 TH	Total
Roads Segments	8*	5	61	74
Mileage	2.882	14.66	19.22	36.76

* The eight segments of Class 1 Town Highways refer to the local street names used and not the state route numbers which are also used for these segments.

Data Collection Framework

Street Name	The common name of the road
Town Highway Number	The Town Highway number from the State General Highway Map
Town Highway Classification	The Town Highway classification from the State General Highway Map
Begin Mile Point	The begin mile point of the road or road segment
End Mile Point	The end mile point of the road or road segment
Length	The length of the road or road segment (miles)
Curbing	Denotes whether curbing is present or not
Drainage	Denotes whether drainage is present or not
Thermal Cracking	Denotes whether thermal cracking is present
Structural Cracking	Denoted whether structural cracking is present
Rutting	Denotes whether rutting is present
Raveling	Denotes whether raveling is present
Ride	Denotes ride quality as Good, Fair, Poor, or Very Poor
Dominant Defect	Denotes the dominant defect driving the overall pavement condition
Overall Pavement Condition	Denotes the overall pavement condition as Good, Fair, Poor, Very Poor
General Observations	Additional information noted during the data collection

Pavement Conditions

	Mileage	Good	Fair	Poor	Very Poor
Class 1	2.882	2.719	0.00	0.163	0.00
Class 2	14.66	2.74	3.50	7.17	1.25
Class 3	19.22	5.14	3.26	3.91	6.91
Mileage	36.76	10.60	6.76	11.24	8.16
Percent of Network		28.8%	18.4%	30.6%	22.2%

Dominant Defect

- ▶ Class 1 Town Highway:
 - ▶ Reflective cracking
 - ▶ Raveling



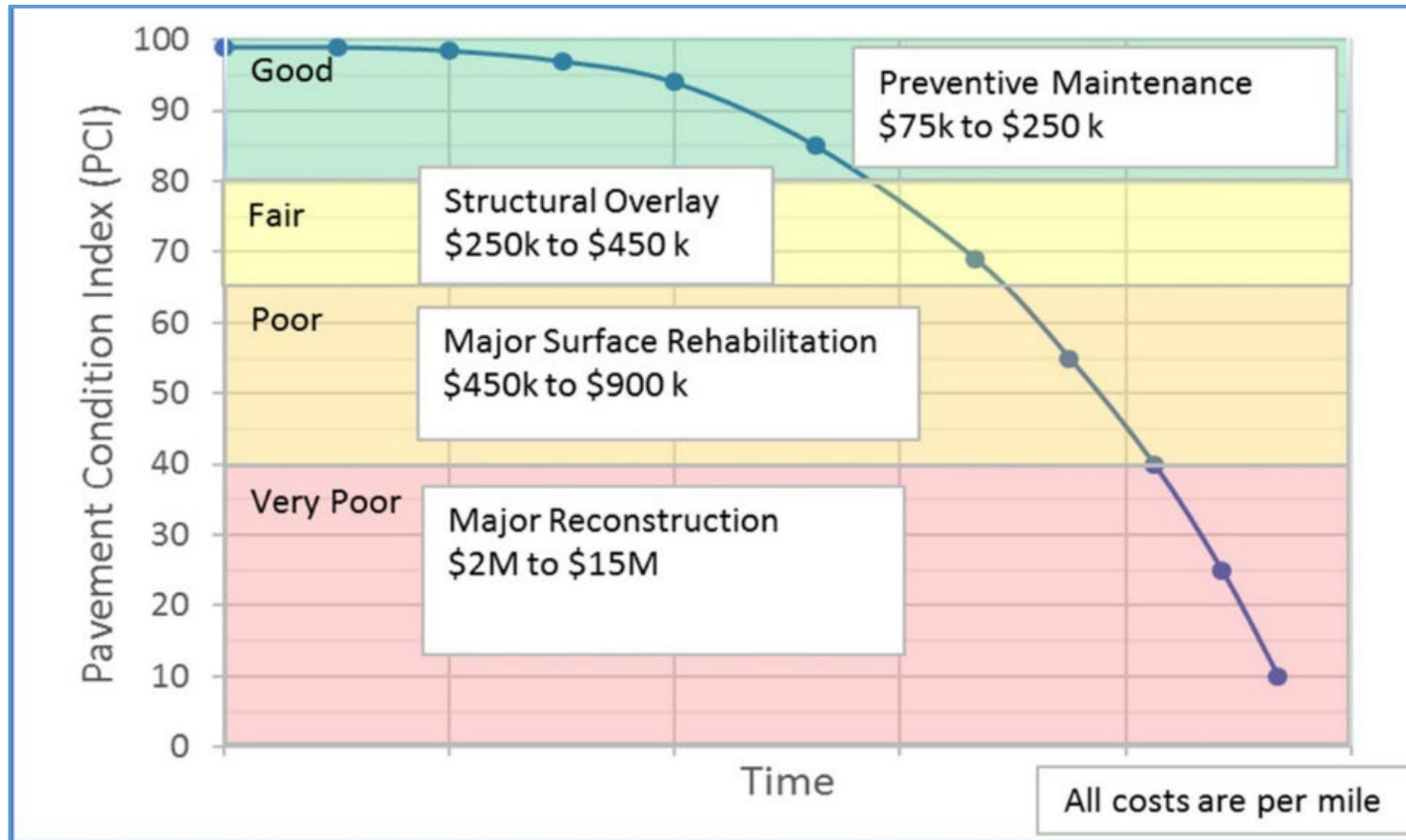
Dominant Defect

- ▶ Class 2 & 3 Town Highway
 - ▶ Structural or Fatigue Cracking
 - ▶ Inadequate pavement
 - ▶ Inadequate subbase
 - ▶ Inadequate drainage



Network Level Analysis

► Pavement Management Principles: Life Cycle of a Road



Network Level Analysis

► Pavement Management Principles: Life Cycle of a Road

Treatment	Year Work Performed
New Construction	Year 0
Preventive Maintenance	Years 3-10
Resurfacing	Years 8-15
Rehabilitation	Years 15-20
Preventive Maintenance	Years 23-30
Resurfacing	Years 28-35
Reconstruction	Years 40+

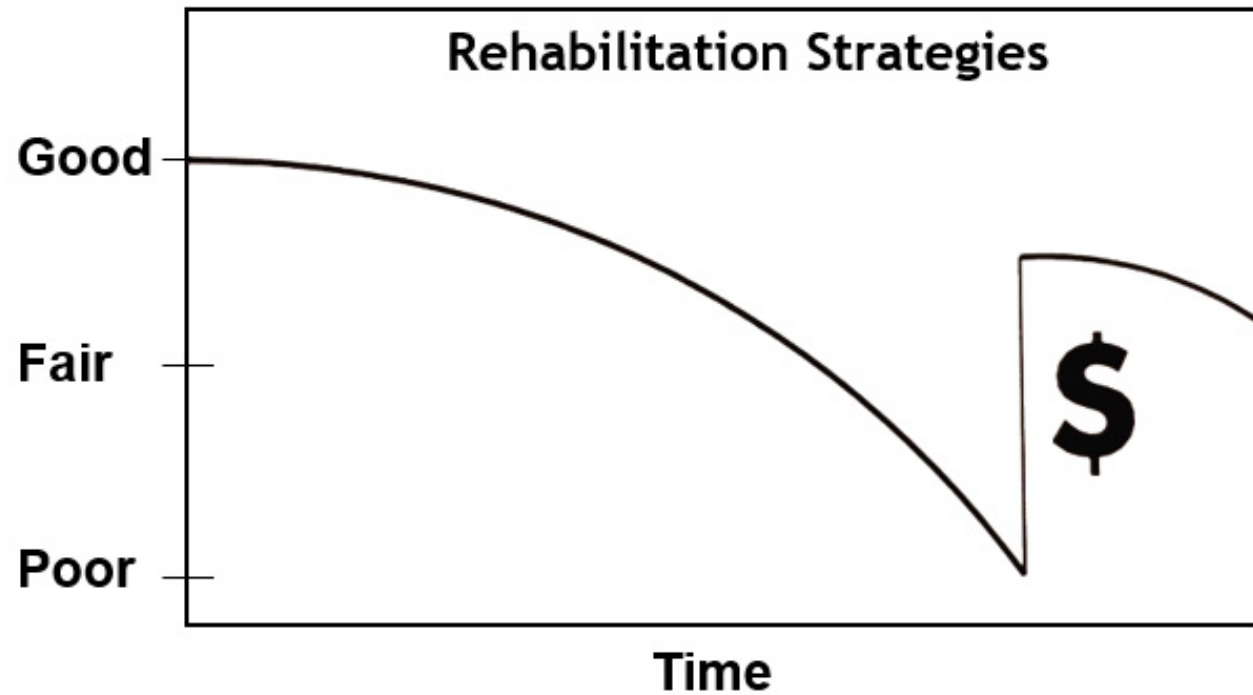
Network Level Analysis

► Pavement Management Principles: Treatment Lifespan

Treatment	Lifespan (Years)
Preventive Maintenance	3- 8
Resurfacing	8-12
Rehabilitation	12-16
New Construction	40+

Network Level Analysis

► Pavement Management Principles: Treatment Timing



Network Level Analysis

► Pavement Management Principles: Treatment Cost per Mile

Treatment	Cost per Mile
Preventive Maintenance	\$5,000 - \$25,000
Resurfacing	\$150,000 - \$235,000
Rehabilitation	\$350,000 - \$450,000
New Construction	\$500,000-\$1,500,000

Network Level Analysis

- ▶ Option 1 Simplified Resurfacing
 - ▶ 34 miles
 - ▶ Level & Overlay
 - ▶ Average life 10 years
 - ▶ Pave 3.4 miles per year
 - ▶ Cost per mile \$150K - \$235K
 - ▶ Annual Budget \$500K-\$800K

Network Level Analysis

- ▶ Option 2 Full Reconstruction
 - ▶ 34 miles
 - ▶ Reconstruct 1 mile per year
 - ▶ \$1M
 - ▶ Level & Overlay 1 mile per year
 - ▶ \$150K
 - ▶ Crack Sealing 1 mile per year
 - ▶ \$15K
 - ▶ Major Rehabilitation 1 mile per year
 - ▶ \$350K
 - ▶ Annual Budget \$1.5M

Network Level Analysis

- ▶ Option 3 Combination of Treatments
 - ▶ 34 miles
 - ▶ Reconstruct 1 mile per year
 - ▶ \$500K
 - ▶ Level & Overlay 1 mile per year
 - ▶ \$150K
 - ▶ Crack Sealing 3 miles per year
 - ▶ \$30K
 - ▶ Major Rehabilitation 1 mile per year
 - ▶ \$350K
 - ▶ Annual Budget \$1.03M

Network Level Analysis Summary

	Option 1	Option 2	Option 3
Strategy	Level & Overlay	Reconstruction	Combination
Budget Estimate	\$500K-\$800K	\$1.5M	\$1.03M
	Fair conditions	Good conditions	Fair to Good
	Simple approach	Long term approach	Balanced approach
	Focus on surface defects	Last miles are challenges	Timely treatments applied
	Root cause not addressed	Cost loaded on the front end	Able to address surface and root cause

Questions

A Pavement Condition and Network Level Analysis An Investigation of Paved Town Highways



Morristown
Where Art, Food, & History Meet *Vermont*

David Hoyne, P.E.
Vice President
Director of Construction Services - Vermont
dhoyne@gpinet.com

10.17.2024

Introduction

The Town of Morrisville, VT has enlisted the consulting services of Greenman – Pedersen, Inc. (GPI) to assess the current condition of paved roads in town and to conduct a network level cost analysis to help the Town derive an annual budget amount for maintaining the paved segments. The annual budget amount can vary depending on the pavement condition expectations commensurate with each road segment's function and expectation of each road segment. Long term, the Town seeks to develop a pavement preservation program to manage the inventory in a cost-effective manner using timely and effective pavement preservation strategies. This report initiates the process by developing the paved segment inventory, a budget based on objective data points, and strategies for managing the network of paved roads.

The inventory captures essential information about the road such as location, length, condition, and classification. The classification (Class 1, 2 and 3) and the use of the road play a significant role in the network analysis since a road segment with a greater volume of traffic may warrant better pavement conditions than a segment with a low volume of traffic. The classification approach recognizes that not all road segments are equal, and the expected pavement condition will vary based on the traffic volumes and use of the road. The classification approach does not imply that all the funding goes to the roads with the most traffic and even the lowest volume roads require investment. The pavement condition of a low volume road has a minimum threshold that when exceeded, is not tolerable or acceptable to the public, costs more to maintain, and may create safety hazards.

The town currently maintains approximately thirty-six miles of paved road, consisting of Class 1, 2 and 3 Town Highways and needs an objective framework to plan for, and budget for maintenance, preservation, and rehabilitation projects. The first step is an assessment of the current inventory of paved roads and their conditions to help arrive at an annual investment level that meets the community's expectations.

Project Approach

The project approach is to determine the Town's inventory of paved roads, the classification of the roads, and to conduct a pavement condition survey to better understand the current condition of the network. Once the classification and condition of the roads captured, a cost analysis can then be performed to arrive at an annual investment level that will provide an acceptable level of service corresponding to the use of the road. This report will summarize the work performed and the results of the analysis. More specifically, the scope of the project is:

1. Identify the paved roads in Town based on published town maps and information provided by the town.
2. Develop the data collection framework including:
 - A linear referencing system for each road segment to identify the road name, beginning mile point, end mile point, and quarter mile segments.

- A pavement condition rating scale of Good, Fair, Poor, and Very Poor is adopted for the windshield survey.
 - Capture additional data points including pavement structure type, dominant defect, drainage, and general observations.
3. Perform a windshield survey of the paved roads to collect the data described by Task 2.
 4. Perform an analysis to estimate the cost of maintaining the network using a variety of approaches.
 5. Prepare a Final Report summarizing the tasks performed.
 6. Prepare and present the findings to the Selectboard

Task 1: Identify the Paved Roads

The Town provided GPI with a document produced by the Vermont Enhanced 911 Board specifically for Morristown. The document consisted of a general town map, an index of road names with the paved segments highlighted, and a series of detailed maps showing the roads, and pertinent 911 information. This document is provided in Appendix A.

The Enhanced 911 maps were then correlated with the VTrans Town Highway Maps for 2023 for the Town and Village. See Appendix B. The VTrans Town Highway Maps for 2023 were used to determine the length of the road segments.

There are seventy-four unique roads that total 36.76 miles in length. There is a mixture of Class 1, 2 and 3 Town highways as summarized by Table 1.

Table 1: Road Segments by Classification

	Class 1 TH	Class 2 TH	Class 3 TH	Total
Roads Segments	8*	5	61	74
Mileage	2.882	14.66	19.22	36.76

**The eight segments of Class 1 Town Highways refer to the local street names used and not the state route numbers which are also used for these segments.*

Task 2: Data Collection Framework

The data collection framework captures the pertinent information collected and used in the network level life cycle analysis. The attributes collected are shown in Table 2.

Table 2: Data Collection Attributes

Street Name	The Common Name of the Road
Town Highway Number	The Town Highway number from the State General Highway Map
Town Highway Classification	The Town Highway classification from the State General Highway Map
Begin Mile Point	The begin mile point of the road or road segment
End Mile Point	The end mile point of the road or road segment
Length	The length of the road or road segment (miles)
Curbing	Denotes whether curbing is present or not
Drainage	Denotes whether drainage is present or not
Thermal Cracking	Denotes whether thermal cracking is present
Structural Cracking	Denotes whether structural cracking is present
Rutting	Denotes whether rutting is present
Raveling	Denotes whether raveling is present
Ride	Denotes ride quality as Good, Fair, Poor, or Very Poor
Dominant Defect	Denotes the dominant defect driving the overall pavement condition
Overall Pavement Condition	Denotes the overall pavement condition as Good, Fair, Poor, Very Poor
General Observations	Additional information noted during the data collection

A note about the defects of rutting, raveling, and structural cracking described above. Raveling of the pavement in the wheel path will have a depression like rutting, but the depression is not caused by rutting and so rutting is not identified for that segment. Rutting of pavement is when the pavement has too much liquid asphalt or when the loading over time causes the pavement or subbase to deform elastically to an excessive amount. The structural cracking and associated wheel path depression may be from a failed subbase, but that cannot be determined without test pits. For the data collection, only when signs of over-asphalt or overloading were present, was rutting selected.

Task 3: Windshield Survey

The data collection was performed using the windshield survey technique, which is the most basic and subjective analysis and results in an immediate reaction to the most severe roadway distresses from the rater. The rater uses the data collection framework outlined above and captures the presence of thermal cracking, structural cracking, rutting, raveling, the dominant defect, overall pavement condition, and overall ride quality, as witnessed from a vehicle traveling at low speeds. The survey was completed between October 2nd-8th, 2024. Each road segment was evaluated and scored according to the framework.

It is important to mention that for any given segment of road a rater could likely find many, if not all the pavement defects. For example, most segments of pavement will have a thermal shrinkage crack, minor raveling, or an isolated fatigue crack, but to record defects in that manner would negate the value of the data collection since most segments would exhibit most defects. This would not provide any granularity or offer the Town and actionable information. The purpose of the windshield survey is to identify dominant features that are representative of the road segment, and not isolated defects. It is important to know the dominant or representative defects as they typically drive the maintenance and preservation treatment options.

There are more detailed data collection protocols including PASER, Pavement Condition Rating and Pavement Condition Index, however they require much great level of effort and time to perform. These methods are suited to automated data collection techniques at the network level, or project level decision making. For the purposes of this project, and the allotted time and resources, the windshield survey technique is the most appropriate.

Summary of Findings

The following table reflects the mileage and overall condition of the paved road segments based on classification of Town Highway, and the Good, Fair, Poor, and Very Poor categories. The raw data is included in the Appendix.

Table 3: Pavement Condition Summary

	Mileage	Good	Fair	Poor	Very Poor
Class 1	2.882	2.719	0.000	0.163	0.000
Class 2	14.660	2.740	3.500	7.170	1.250
Class 3	19.220	5.140	3.260	3.910	6.910
Mileage	36.760	10.600	6.760	11.240	8.160
Percent of Network		28.8%	18.4%	30.6%	22.2%

The Class 1 Town Highways were paved between 2019 and 2022, and in general are in good condition. There is a segment on Bridge Street, including a portion of the bridge itself with extensive raveling of the wearing course, and in poor condition, but this is relatively isolated. The remainder of the Class 1 show signs of reflective cracking and raveling, which is common for overlay treatments and segments with high volumes of traffic. See Photo 1 of pavement raveling on Bridge Street.

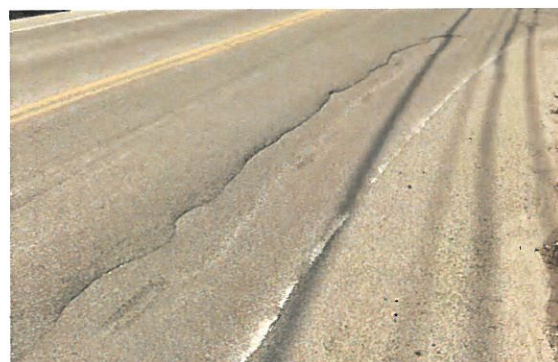


Photo 1: Defect Pavement Raveling

Reflective cracking is common to overlay treatments as is the case with the Class 1 Town Highway program. The cracking in the base or binder layers of pavement are not remediated by the overlay, and over time reflect through the overlay. In time, the cracking pattern will reflect through the wearing surface.

Raveling is a common pavement defect for roads with high volumes of traffic and occurs when the bond between the aggregate and the asphalt is lost, and the material in the wheel path is eroded. When the raveling is severe, the wearing surface becomes very thin and then the pavement can delaminate. In extreme situations, the different layers of pavement are exposed in the wheel paths as the raveling progresses.

The Class 2 Town Highway pavement conditions are dominated by Cadys Falls Road, Randolph Road, and Stagecoach Road. These three roads contain most of the Class 2 mileage and have segments in good, fair, poor and very poor, with the poor category dominating at 7.17 miles. Of the roads in poor or very poor condition, it is structural cracking defect that dominates.

The Class 3 Town Highways represent the most mileage (52.3%) in the network. The mileage is evenly distributed between the good, fair, poor, and very poor categories. The Class 3 Town Highways dominate the very poor mileage in the network. Of the roads in poor or very poor condition, it is structural cracking defect that dominates.

The dominant defect for the Class 2 and Class 3 Town Highways is structural cracking and this defect was observed throughout the network. Structural or fatigue cracking reflects the inability of the pavement structure to withstand the loading from the vehicles. When the load in terms of axle weights and number of vehicles applied to the pavement is greater than the structural capacity of the pavement and underlying subbase, then the material fails. The structural cracking defect is also commonly referred to as alligator cracking, as the crack pattern looks like the skin of an alligator. Most of the major distresses exhibited for these segments are load or fatigue related and will continue to deteriorate over time if not remediated. See Photo 2 of structural or fatigue cracking.

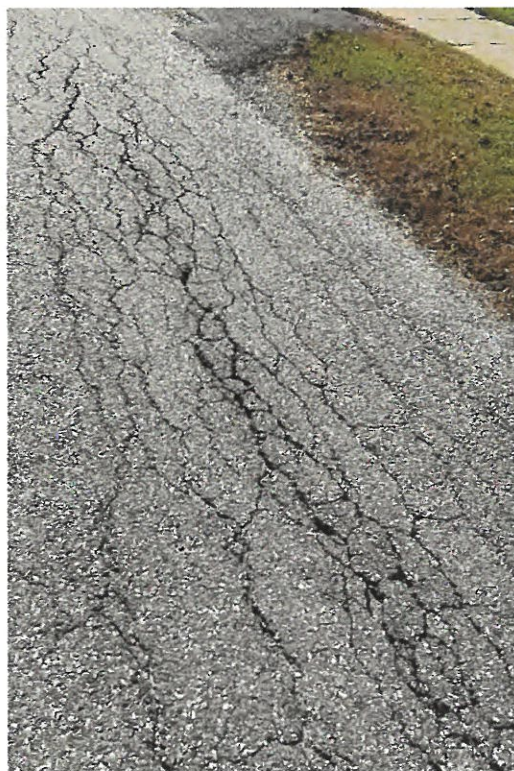


Photo 2: Defect Structural or Fatigue Cracking

The structural capacity of a road is comprised of the subbase, or unbound materials, and the pavement, or bound materials. In combination, they must provide a free draining structural component designed to carry the loads applied from the anticipated traffic over the life of the pavement. The most common reasons for this type of pavement failures are inadequate subbase, a poor subgrade, and inadequate pavement in terms of its thickness and quality. For example, a pavement structure with inadequate pavement, subbase, or both, will not be able sustain the loading and fail prematurely.

The purpose of capturing the ride quality, rutting, and raveling for this survey is to help discern when the defects become noticeable and even objectionable to the traveling public. The public is not versed in thermal or structural cracking, or raveling, but they do know when the rutting is so severe that a vehicle may hydroplane, or when the defects cause the occupants discomfort when driving. The traveling public can differentiate two road segments with similar defects based on ride quality. There are exceptions to this overview of Town Highways, however the usefulness of drawing the distinctions is to convey that not all roads are the same, serve the same purpose, nor are they maintained in the same manner.

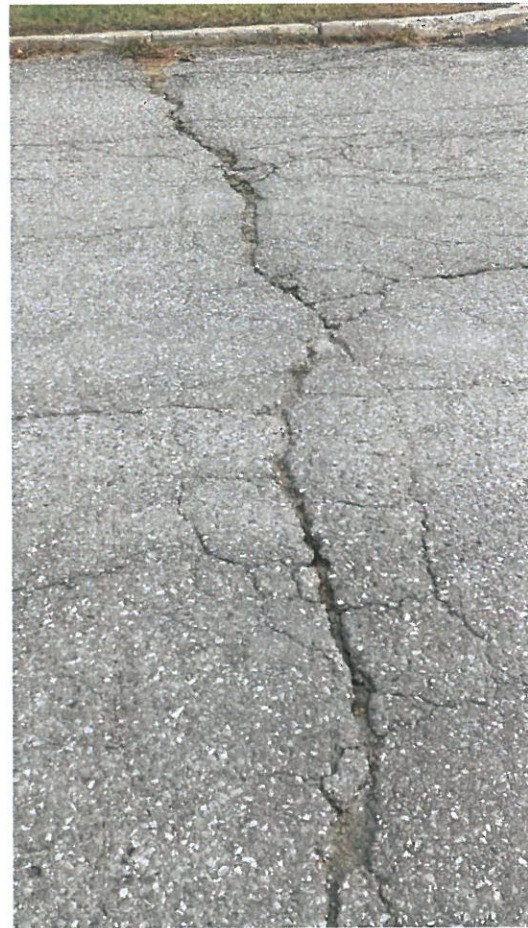


Photo 3: Defect Thermal Cracking

For example, the investment levels for the Class 2 Town Highway with the most traffic will be different than the investment levels to the Class 3 Town Highway with only a few residential properties. The traveling public expects better pavement conditions for the roads more heavily traveled and with a higher posted speed limit. The limitation to this approach is that even for town highways with minimal traffic, there is a condition threshold that will generate criticism. A section of road that is so poor that it is uncomfortable to the driver will be objectionable. Even the lowest volume roads should be maintained to a minimum standard.

While the author is not promoting a "worst first" approach, however when ride quality is very poor and compounded by severely deteriorated pavement conditions, then the combination of these two factors should be considered during the project selection process.

A well-engineered and constructed pavement structure consists of a proportion of subbase and pavement, is free draining, supported by a capable subgrade, and is manufactured and constructed to credible specifications. Other factors that contribute to the long-term performance of a pavement include the climate, workmanship, and equipment. Given the current conditions of the pavement observed from the windshield survey, it is opined that any investigations of those factors would not revise any of the conclusions or recommendations.

Task 4: Network Level Analysis

The objective of the network level analysis is to establish a target annual investment that reflects a cost-effective approach to preserving and maintaining the paved road segments in an acceptable condition. The town desires to establish an annual budget amount that reflects the current condition of the network and sound pavement management principles.

The network level analysis offered here has limitations and lacks the precision that a more sophisticated pavement management system would offer. For example, a formal PMS would contain the following information:

- The pavement structure, including the thickness and quality of the bound and unbound layers
- Defect measurements, include cracking, rutting and ride quality
- Performance models that depict how treatments will perform over time
- The actual cost of various preservation, rehabilitation, and reconstruction treatments
- Traffic data

Achieving a robust PMS can take several years to develop, and in the interim, the Town needs a starting point, and this simplified network level analysis offers a beginning.

The approach to this analysis is to understand the makeup of the network, the life cycle of a road, cost information, the treatment life, and the acceptable or desired conditions of the pavements.

Makeup of the Network

The network consists of approximately 36.76 miles of paved roads and the roads are classified as Town Highway (Class 1, 2 and 3). Table 4 breaks down the mileage by the class of Town Highway.

Table 4: Network Mileage Summary

Town Highway Classification	Mileage
Class 1	2.882
Class 2	14.66
Class 3	19.22

The Class 1 Town Highways are the portions of State Routes (VT 12, VT 15A, VT 100), within the limits of the Village. Class 2 Town Highways tend to be the collector roads that serve as the larger branches in the network, moving traffic to the state highways. The Class 3 Town Highways are generally the local roads, often in residential, urban, or light commercial areas, moving traffic from destinations to the collector roads.

The responsibility for scheduled surface maintenance of Class 1 Town Highways is governed by Title 19: Highways, Chapter 003: Town Highways (19 V.S.A. § 306a) and is assigned to VTrans. The work is performed at no cost to the municipality. The Town is still responsible for general maintenance of the Class 1 Town Highways. For this reason, the segments of Class 1 Town Highways can be omitted from the network analysis.

The Life Cycle of a Road

A traditional life cycle of a highway begins with the construction of an engineered road, followed by preventive maintenance treatments, resurfacing, rehabilitation, and then ultimately back to reconstruction when the defects render the preservation and resurfacing options ineffective. There are many variables that can affect the timing of the treatments, and whether sub-cycles to this process are appropriate and effective. For example, after a major rehabilitation, the cycle may revert to the preventive maintenance stage, progress from there, and repeat itself several times before requiring reconstruction. The life cycle depends on the initial construction, the timing and effectiveness of treatments, and how traffic changes over time. The ideal life cycle of a road goes something like this:

Table 5: Network Mileage Summary

Treatment	Year Work Performed
New Construction	Year 0
Preventive Maintenance	Years 3-10
Resurfacing	Years 8-15
Rehabilitation	Years 15-20
Preventive Maintenance	Years 23-30
Resurfacing	Years 28-35
Reconstruction	Years 40+
New Construction	Year 0
Preventive Maintenance	Years 3-10

To understand the treatment terms, consider the following:

New Construction or Reconstruction: a complete replacement of the subbase, pavement, drainage layer, engineered and constructed to the current standards. The pavement structure is engineered to withstand the loading requirements and accounts for a frost-free design.

Preventive Maintenance: crack sealing, micro-surfacing, chip seals are examples of preventive maintenance treatments, designed to keep water out of the subbase and preserve the wearing surface.

Resurfacing: an application of a bonded wearing course or thin pavement overlay, with or without a leveling course. This treatment help to correct minor defects, restore surface irregularities and ride quality.

Rehabilitation: a structural overlay (minimum of 2 ½ inches of pavement) or a full depth reclamation are examples of pavement rehabilitation strategies used to restore structural capacity and correct pavement related defects.

The most significant factor influencing any highway network is that the roads were not engineered or constructed to any standard from the beginning. The roads have evolved over time, beginning as dirt paths, then as a gravel surface, and then paved. This lack of foundation inhibits the performance of the preventive maintenance and resurfacing treatments as correcting to root cause is very expensive and disruptive. Unfortunately, this also means that more expensive treatments like structural overlays and full depth reclamation are required more frequently.

Cost Information

For a network or project level analysis, the cost per mile information is required when comparing alternative treatments and establishing budget information. It is also important to specify what ancillary items are included in the cost per mile like traffic control, guard rail, culverts, signs, and pavement markings. The intent is to compare the treatment options on an equal footing. For this purpose, we have examined information from VTrans and based on expert opinion, developed cost information for the Town to consider.

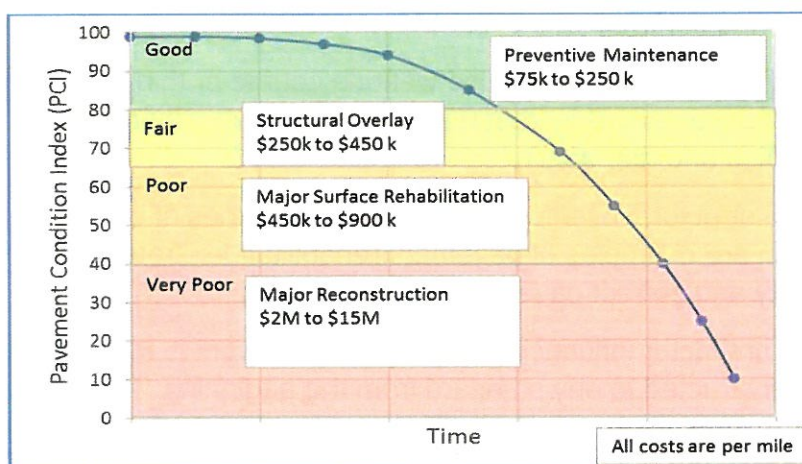
The following tables represents the cost information VTrans uses for the treatment selection process:

Table 6: VTrans Cost per Mile of Treatment

Treatment	Cost per Mile
Maintenance	\$100,000 - \$150,000
Preservation	\$150,000 - \$250,000
Level & Overlay	\$350,000 - \$500,000
Mill & Fill (Class 1 TH)	\$1,000,000 - \$2,200,000
Reclaim	\$1,000,000 - \$2,000,000
Reconstruction	\$5,000,000 - \$15,000,000

Furthermore, the VTrans cost information and timing of treatments curve taken from the 2018 TAMP is provided in Figure 1.

Figure 1: Typical Pavement Deterioration Curve



For the Class 2 and 3 roads we can develop rough estimates for treatments to help correlate the per mile costs used by VTrans and to apply the values to the Town's roads. The cost estimate is based on the current 2-year average posted price for bituminous concrete pavement and adjusted for the small tonnage, the width of the road, the treatment, and an allowance for incidentals such as pavement markings and traffic control. All other costs like guard rail, signs, sidewalks, streetscapes, and drainage will further increase the estimate. The average price for pavement in place, given the small quantities required for the roads is estimated at \$110.00 per ton.

For a level and overlay project consisting of a ½" leveling course followed by a 1 ½" wearing course, yields in tons of pavement per mile:

Table 7: Estimate of Paving Costs per Mile

Roadway Width	Tons of Pavement	Pavement Cost Per Mile	Total Cost Per Mile
20	1300	\$143,000	\$150,000
24	1600	\$176,000	\$200,000
28	1900	\$209,000	\$235,000

If the range for Town roads is \$150,000.00 to \$235,000.00, this equates to approximately 45% of the VTrans values. Applying the 45% discount to the values yields:

Table 8: Discounted Treatment per Mile Costs

Treatment	Cost per Mile
Maintenance	\$45,000 - \$70,000
Preservation	\$70,000 - \$110,000
Level & Overlay	\$160,000 - \$225,000
Mill & Fill (Class 1 TH)	\$450,000 - \$900,000
Reclaim	\$450,000 - \$900,000
Reconstruction	\$2,250,000 - \$6,750,000

With limited data to draw from, the numbers below reflect the expert opinions of the author. The range of pricing reflects the width of the road, the traffic control requirements, and the treatment. There is an allowance for minor quantities of ancillary items such as guard rail, signs, pavement marking and culverts which may or may not be included in the project.

Table 9: Recommended Costs per Mile Values

Treatment	Cost per Mile
Preventive Maintenance	\$5,000 - \$25,000
Resurfacing	\$150,000 - \$235,000
Rehabilitation	\$350,000 - \$450,000
New Construction	\$500,000-\$1,500,000

Note that the new construction values are heavily discounted in Table 9. The reason for this is that the Town will not have the same expenses as VTrans does for property acquisition and design, and the overall footprint of the town roads is much less than a state highway, resulting in a substantial savings in material costs.

Treatment Life

The expected life of a treatment depends on several variables, notably the original construction of the road, the drainage characteristics of the subbase, underdrain and culverts, and the timing of the treatment. It is implied that the treatment is constructed using quality materials and meets recognized specifications.

An engineered road built to current standards will provide a better foundation for all subsequent treatments and the preventive maintenance and resurfacing treatments will yield a better cost-benefit ratio as they will remain in better condition for a longer time. Drainage is critical for two important reasons; a saturated subbase has considerably less capacity to handle heavy wheel loads than a well-drained subbase, and a saturated

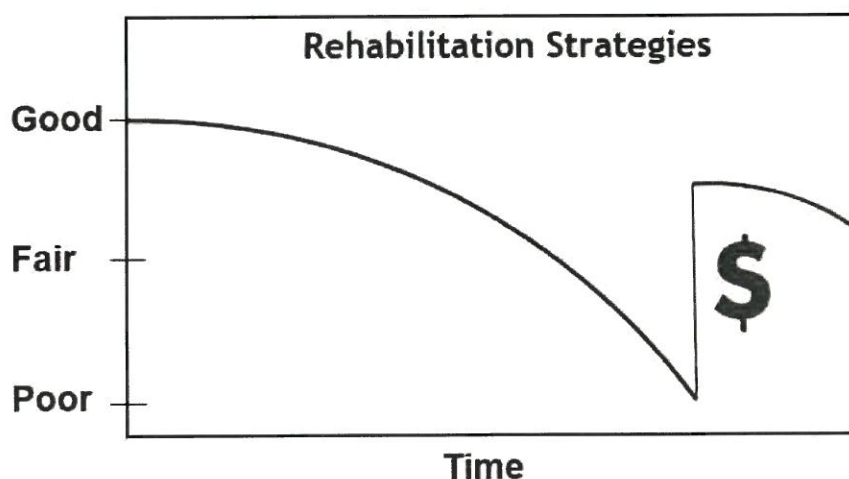
subbase will expand and contract with the freeze-thaw cycles and cause the road to deteriorate prematurely. Furthermore, a treatment that is applied too late will not perform well or achieve the full benefit. For example, crack sealing a road with load related fatigue cracking will not provide the full potential benefit of the treatment because the cracks are active and will continue to propagate.

Established pavement condition deterioration curves have been developed nationwide to illustrate deterioration rates and recovery rates based on rehabilitation measures. These curves lend guidance as to the necessary action based on any scale chosen of pavement condition.

A preservation, rehabilitation or reconstruction treatment on a road or segment of road and its condition in relation to the above curve is illustrated by Figure 1. This figure illustrates the improvement in condition with any pavement treatment and the predicted remaining service life over time. Differing treatments from preventive maintenance to total reconstruction would result in differing condition ratings and life expectancy. The decision is to determine what treatment will result in providing the most acceptable service condition for the least amount of money during the life of the asset.

For example, a preventive maintenance treatment may perform for 5+/-years, a rehabilitation may provide 12-15 years or life, and a total reconstruction can provide 20+ years of service. Equally, each of these three treatment options will yield differing condition improvements and corresponding service lives. Initially, all treatments would bring the surface condition to a comparable like new condition, but the variable is the deterioration rate based on the treatment selected. What has not been calculated here is the benefit of any individual selected treatment, which is the area under the curve after rehabilitation, vs the cost to arrive at a benefit to cost ratio.

Figure 2: Effect of Pavement Rehabilitation



The following table provides a range of treatment lives based on the expert opinion of the author.

Table 10: Estimated Treatment Performance

Treatment	Lifespan (Years)
Preventive Maintenance	3- 8
Resurfacing	8-12
Rehabilitation	12-16
New Construction	40+

Network Pavement Conditions

It may be desirable to have the entire inventory of roads in good condition, but it is rarely economically feasible to do so. The burden on taxpayers to have the entire network in good condition may be more than they are willing to support, nor is it necessary for the roads to function properly. Practically speaking, we can afford to have defects in our pavement and the roads will continue to perform their intended function. The other extreme is that the roads are so rough that driving over the roads cause damage to the vehicles, they cost more to maintain, and they compromise the safety of the traveling public.

The ideal scenario is to find the combination of treatments that maintain the network to condition levels commensurate with public's expectations for the lowest investment level. As described above, the public has different expectation depending on the road, so it is important to establish for the groups of roads:

- The condition that the traveling public expects
- The condition that the traveling public finds unacceptable

This helps to define the parameters that guide the investment levels. On one hand, if the public demands the condition of the roads be maintained at a very high level and are willing to pay for it, then that will drive the investment levels. Likewise, knowing the worst condition that residents find tolerable allows the town the ability to defer the costs of treating a poor road as long as possible so more money can be allocated to keeping good roads in good condition.

The strategy of fixing the roads in very poor condition instead of preserving good roads is known as the worst-first approach and generally regarded as the least cost-effective strategy. The explanation for this is that the roads are allowed to deteriorate until they are very poor and then spend large sums to make repairs rather than smaller expenditures that keep the road in good condition for a longer period of time. The common analogy is changing the oil in your car is more cost effective that waiting for the engine to seize and replacing the engine.

Analysis

The analysis that supports a range of investment levels can take several forms, as follows:

1. **Simplified Resurfacing.** We know the number of miles in the network and the life expectancy of a treatment like level and overlay, so it is a simple calculation to determine the number of miles that must be paved each year to make this approach viable. For example, assume a level and overlay or mill & fill should last on average 10 years. There are approximately thirty-four miles in the network (not including Class 1 TH's), therefore, a budget to resurface using the level & overlay treatment at 3.4 miles per year is an option.

This approach commits to paving at least 3.4 miles per year, with the understanding that the level and overlay treatment provides an acceptable level of service over its lifespan. This is the most simplified approach to managing the network. The mileage paved would reflect a combination of Class 2 and Class 3 Town Highways.

Budget Range: \$500,000.00 to 800,000.00

This assumes resurfacing 3.4 miles per year at between \$150,000 and \$235,000 per mile.

2. **Full Reconstruction.** Another approach is to embark on a reconstruction project to correct the underlying drainage, safety, and structural needs of the highway with a full depth reconstruction. The lifespan of a newly constructed road could last 40 years or more with proper maintenance. In this scenario, it would require construction of almost one mile of highway per year. The limitation of this approach is to determine which will be the last 10-20 miles of highway that do not receive any treatment until year twenty or beyond.

In addition to reconstructing one mile a year, there would need to be crack sealing, resurfacing and rehabilitation projects as demonstrated above.

Budget Range: \$1,500,000.00

This assumes one mile of reconstruction, crack sealing, resurfacing and rehabilitation each year at a cost of \$1,000,000.00, \$15,000.00, \$150,000.00, and \$350,000.00, respectively.

3. **Combination of Treatments.** In general, the preferred approach is to use a combination of treatments to preserve and maintain the highways. This approach is accepted by asset managers as cost effective, but the public does not always understand why an agency is performing crack sealing or overlays on roads in good and fair condition, while the poor roads go untreated. This approach means

that we are going to keep good roads in good condition, while addressing the very poor roads as resources allow and conditions dictate. Otherwise, we are only treating the poorest of roads, and we wait until the road has failed before acting. This is the worst-first approach and widely accepted as the least economical approach.

For example, a combination of treatments could consist of crack sealing roads in good condition, a level and overlay for roads in fair condition, and reclaim or reconstruction of roads in poor condition. The actual treatment selected for a given section of road needs to be based on the attributes of the road to ensure the treatment will be successful. A road with thermal cracking is a good candidate for crack sealing, a road in very poor condition that has lost its shape, has a poor subbase and no structure is a good candidate for reconstruction, and so forth.

As a starting point, we can use the current conditions of the roads to determine the distribution of treatments. Recall the conditions of the Class 2 and Class 3 Town Highways:

Table 11: Summary of Pavement Conditions by Classification

	Good	Fair	Poor	Very Poor
Class 2	2.74	3.50	7.17	1.25
Class 3	5.14	3.26	3.91	6.91
Mileage	7.88	6.76	11.08	8.16

The concept is to develop a 10-year plan that would make meaningful improvements to the network and position the town for the development and application of pavement management principles. The combination of treatments and mileage, based on current conditions, for each year over a span of 10 years, follows below.

The network currently has 8.16 miles in very poor condition. Once a road reaches this point, the appropriate treatment is full depth reclamation or reconstruction. These roads are exhibiting failed pavement, subbase, and loss of shape. They have inadequate base and drainage, and any surface treatment will be short lived. Over a 10-year period, the goal would be to reconstruct 1 mile of road each year. The exact length will vary based on the segments identified during the project selection process.

Similarly, the network currently has 11.08 miles in poor condition. An allowance should be made for a portion of the roads in poor condition to become very poor in the 10-year planning window. These roads may have a failed pavement, but retain a sound foundation and drainage, and a reclaim treatment would add to

the base, and provide a new pavement surface. Over a ten-year period, the goal would be to reclaim 1 mile of road each year. The exact length will vary based on the segments identified during the project selection process.

For the reclaim and reconstruction projects, each year it may make sense to focus on one or the other for economies of scale and to align the lengths of road segments with the budget.

For the roads in fair condition, the goal is to keep these from becoming roads in poor condition. The level and overlay or mill & fill treatments are common treatments.

Budget Range: \$1,000,000.00

This assumes 1 mile of reconstruction, reclaiming, resurfacing and 3 miles of crack sealing each year at a cost of \$500,000.00, \$350,000.00, \$150,000.00, and \$30,000.00 respectively.

Table 12: Summary of Annual Investment Scenarios

	Simplified Resurfacing	Full Reconstruction	Combination of Treatments
Annual Investment	\$500-800,000	\$1,500,000	\$1,000,000

These numbers taken at face value can be misleading. The variable that is not easily demonstrated through this type of analysis is that the three options above, simplified resurfacing, full reconstruction and a combination of treatments are not providing the same quality of roads. These are three options, but they are not equal.

The first option of simplified resurfacing may yield on average the roughest road conditions because each year, 30% of the network will be in poor or very poor condition as the mileage reaches the end of its service life. For example, a 10-year paving cycle with treatments lasting 10 years implies that 30% of the roads have been in service for at least 7 years and are approaching the end, or poor condition. In the near term, this approach can yield an improvement in condition and help to reduce the backlog of poor and very poor roads.

The full reconstruction option is likely to provide the best roads but at the highest cost. Each road segment gets reconstructed, and then maintained with timely treatments that keep the roads in good condition. As previously mentioned, the difficulty with this scenario is the transition from the current state to the future state, and those roads that do not get treated for many years.

The combination of treatments attempts to strike a balance by taking care of the good roads now, and slowly addressing the very poor segments with some reconstruction and some rehabilitation projects. In time, this approach will improve the network beyond the simplified resurfacing option but will take several years to notice the improvements.

One final note about treatment options and selecting the right projects. A PMS that can calculate the cost-benefit of a treatment will generate a different list of projects depending on the allowable budget. The more money available will allow for projects with long term benefits to be performed whereas a smaller budget may only select treatments that offer the best options for keeping the good roads in good condition.

Additional Observation and Considerations

The Town of Morrisville, VT has enlisted the consulting services of Greenman – There are a multitude of other factors that could be included in any particular pavement condition analysis and pavement management strategies, but this study is limited to a condition survey and a network analysis.

One condition that stood out during the field reviews was the lack of adequate drainage for some road segments. While drainage alone will not cure all ailments, it is understood that adequate drainage could combat some of the distresses such as rutting, structural cracking and settlement. A saturated subbase has a dramatically reduced capacity and leaves the pavement structure vulnerable to load related failures.

Several years ago, VTrans changed the base asphalt cement binder used throughout the State to a polymer modified binder which does provide for a higher level of protection against load related rutting. Specifying mix designs, select bound and unbound materials, and construction methodology that have been approved by VTrans can help lead to longer lasting pavements. VTrans is in the process of changing the requirements for the asphalt binder again and requiring the mix designs to meet current VTrans standards is encouraged.

Summary

More than 50% of the paved Class 2 and Class 3 roads are in poor and very poor condition and making significant improvements to the network will take time. It is also true that almost 25% of the roads are in good condition and preventive maintenance treatments will help keep these roads in good condition. It takes proportionally more money to bring a road from very poor condition back to good condition. The most cost-effective strategy for the health of the network includes a range of treatments from preservation to rehabilitation.

The next steps include developing a project selection and scoping process to ensure the funds allocated to the program are used effectively, developing a database that will serve as the repository of information such as the treatments performed, bi-annual data collection and cost information. These are the building blocks of a pavement management system.

Appendix A
Morristown Road Map 2024

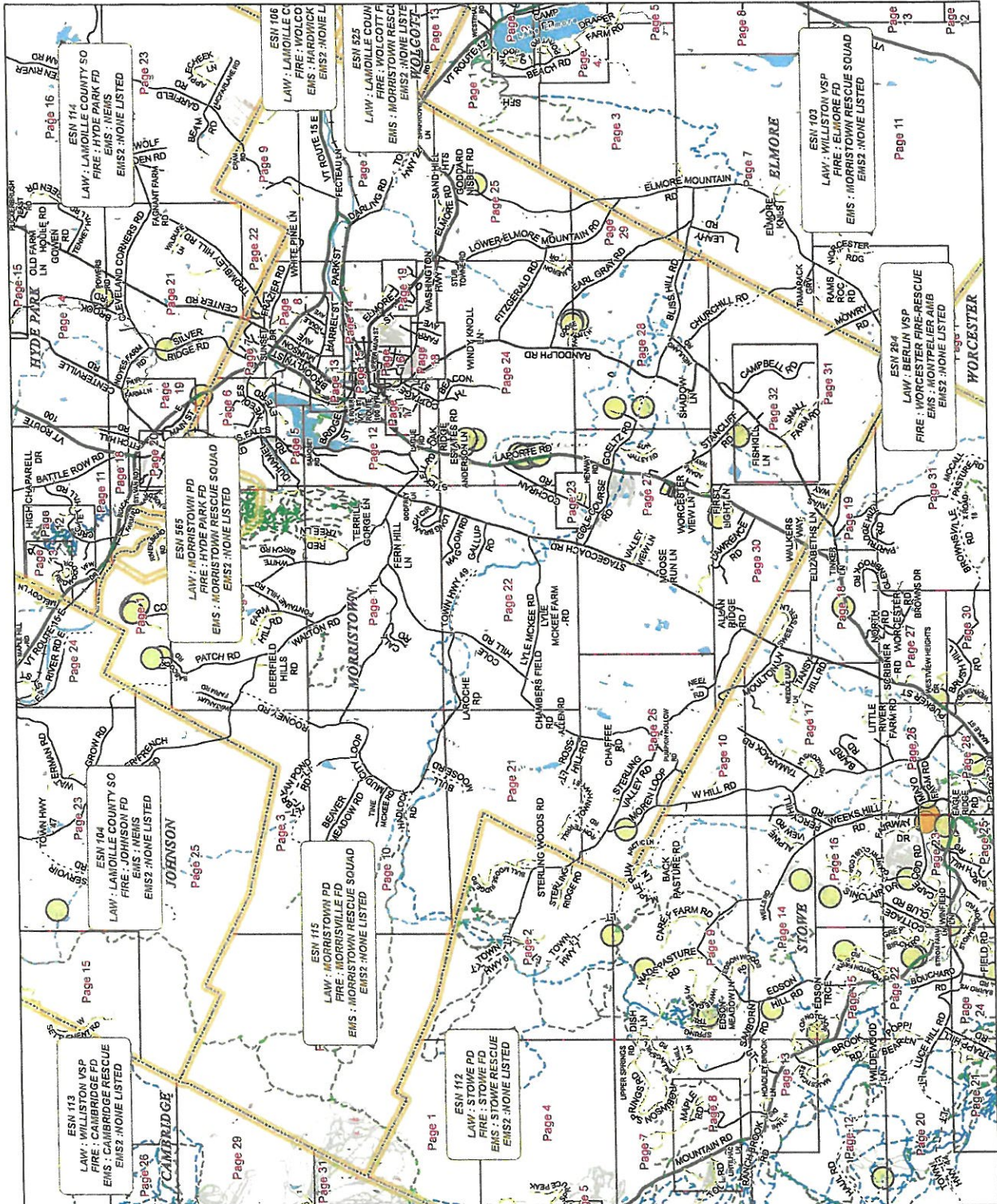


MORRISTOWN

Disclaimer: This Vermont 911 Mapbook and Public GIS data is for general reference only. Data layers that appear on the map may or may not be accurate, current, or otherwise reliable. The Enhanced 911 Board and the State of Vermont make no representations of any kind, including but not limited to the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the GIS data and Mapbook.

Phone: 802-828-4911
Email: e911.info@vermont.gov
Web site: e911.vermont.gov

5/24/2024



Legend

Roads

— Interstate Highway

— US Highway

— State Highway

— Town Highway Class 1

— Town Highway Class 2

— Town Highway Class 3

— Town Highway Class 4

— Private

— Driveway

— Discontinued Road

— Legal Trail

— Ferry

— Military - no public access

— National Forest Highway

— State Forest Highway

— Proposed

Building Footprints

Generalized Category

Accessory Building

Commercial

Community/Recreational

Development

Educational

Emergency Service

Farm

Governmental

House of Worship

Industrial

Medical

Mix Use

Multi-Residential

Single Residential

Transportation

Other

Utility

Area Footprints

Airport

Solar Field

Alpine Trail Easiest

Alpine Trail Intermediate

Alpine Trail Advanced

Alpine Trail Expert

Alpine Glade Marked

Alpine Glade Not Marked

Farm

Golf Course

Other/Cemetery

Park

Quarry

Shopping Center

Stadium/Arena

Hydrants

Municipal Hydrant

Private Hydrant

Pressurized Hydrant

Drafting Site

Dry Hydrant

Landmark

Landmark

Trails

Undefined

ATV Trail

Bike Path

Hiking Trail

Mountain Bike Trail

Multi-Use Trail Motorized

Multi-Use Trail Non-Motorized

Ski Trail

Snowmobile Trail

Boundaries

Town Line

Emergency Service Zone (ESZ)

Atlas Page

Addressing Error

Orange - Duplicated Addressed Building

Yellow - Unnumbered Building

Legend

SITES SITE TYPE		CITY / TOWN HALL	GREENHOUSE / NURSERY	OIL / GAS FACILITY	SOLAR FACILITY
**COMMERCIAL		COAST GUARD	GROCERY STORE	OTHER	SPORTS ARENA /
		COLLEGE / UNIVERSITY	HARBOR / MARINA	OTHER RESIDENTIAL	STATE CAPITOL
		COMMERCIAL CONSTRUCTION SERVICE	HAZARDOUS MATERIALS FACILITY	OUTPATIENT CLINIC	STATE GARAGE
**EDUCATIONAL		COMMERCIAL FARM	HAZARDOUS STORAGE FACILITY	PARK AND RIDE / COMMUTER	STATE GOVERNMENT FACILITY
**GOVERNMENT		COMMERCIAL GARAGE	HEALTH CLINIC	PHARMACY	STATE PARK
**INDUSTRIAL		COMMERCIAL WAREHOUSE	HELIPAD / HELIPORT / HELISPOT	PICNIC AREA	STORAGE UNITS
**OTHER COMMERCIAL		COMMUNICATION BOX	HISTORIC SITE / POINT OF INTEREST	POST OFFICE	SUBSTATION
		COMMUNICATION TOWER	HOSPITAL / MEDICAL CENTER	PRISON / CORRECTIONAL FACILITY	SUGARHOUSE
**PUBLIC GATHERING		COMMUNITY / RECREATION FACILITY	HOUSE OF WORSHIP	PRIVATE AND EXPRESS SHIPPING FACILITY	TEMPORARY STRUCTURE
**UTILITY		CONDOMINIUM	HYDROELECTRIC FACILITY	PSAP	TOWN GARAGE
ABANDONED		COURT HOUSE	ICE ARENA	PUBLIC BEACH	TOWN OFFICE
ACCESS POINT		CUSTOMS SERVICE	INSTITUTIONAL RESIDENCE / DORM / BARRACKS	PUBLIC TELEPHONE	TRAILHEAD
ACCESSORY BARN		DAY CARE FACILITY	LANDFILL	PUBLIC WATER SUPPLY INTAKE	TRANSFER STATION
ACCESSORY BUILDING		DEVELOPMENT SITE	LAW ENFORCEMENT	PUBLIC WATER SUPPLY WELL	UNKNOWN
AIR SUPPORT / MAINTENANCE FACILITY		EBS TOWER	LIBRARY	PUMP STATION	US FOREST FACILITY
AIR TRAFFIC CONTROL CENTER / COMMAND CENTER		EMERGENCY PHONE / CALLBOX	LODGING B&B / HOTEL / MOTEL / INN	RACE TRACK / DRAGSTRIP	US GOVERNMENT FACILITY
AIRPORT TERMINAL		FAIR / EXHIBITION/ RODEO GROUNDS	LOOKOUT TOWER	RAILROAD STATION	UTILITY POLE W/PHONE
AMBULANCE SERVICE		FERRY TERMINAL / DISPATCH FACILITY	LUMBER MILL / SAW MILL	RESIDENTIAL FARM	VETERINARY HOSPITAL / CLINIC
AUDITORIUM / CONCERT HALL / THEATER / OPERA HOUSE		FIRE STATION	MANUFACTURING FACILITY	REST STOP / ROADSIDE PARK	VISITOR / INFORMATION CENTER
BANK		FISH FARM / HATCHERY	MOBILE HOME	RESTAURANT	WAREHOUSE
BOAT RAMP / DOCK		FITNESS FACILITY	MORGUE	RETAIL FACILITY	WASTE / BIOMASS FACILITY
BORDER CROSSING		FOOD DISTRIBUTION CENTER	MULTI-FAMILY DWELLING	RV HOOKUP	WASTEWATER TREATMENT PLANT
BORDER PATROL		GAS STATION	MUSEUM	SCHOOL K / 12	WATER TANK
BREWERY		GATED W/ BUILDING	NATIONAL GUARD /	SEASONAL HOME	WATER TOWER
BUS STATION / DISPATCH FACILITY		GATED W/O BUILDING	NUCLEAR FACILITY	SHOOTING RANGE	WIND FACILITY / WIND TOWER
CAMP		GOLF COURSE	NURSING HOME / LONG TERM CARE	SINGLE FAMILY DWELLING	YOUTH CAMP
CAMPGROUND		GRAVEL PIT / QUARRY / MINE	OFFICE BUILDING	SKI AREA / ALPINE	
CEMETERY					

MORRISTOWN Road Name Index

ROAD NAME	PAGE(S)	ROAD NAME	PAGE(S)	ROAD NAME	PAGE(S)
ADAMS WAY	27	CHAFFEE RD	26	ELIZABETHS LN	30
ALLAN RIDGE RD	30	CHAMBERS FIELD RD	22	ELMORE MOUNTAIN RD	25,29,31
ALLEN RD	21	CHENEY LN	17	ELMORE RD	12,20,25
ALMERON DR	24,25	CHERRY AVE	16	ELMORE ST	12,14,19
ANDERSON LN	24	CHILDRENS VILLAGE RD	28	EVENTIDE LN	30
ARCTIC LN	26	CHURCHILL RD	28,31	EVERGREEN LN	30
AUDY LN	17	CINDYS WAY	30	FAIRGROUND PLZ	8
AVAS WAY	30	CLACK ST	17	FAIRWOOD HTS	19
B ST	15	CLARK AVE	16	FAIRWOOD PKWY E	12,19
BABCOCK RD	1,4	CLOVERDALE DR	27	FAIRWOOD PKWY W	19
BARNETT RD	26	COCHRAN RD	22,23,24,27	FARM HILL RD	4
BEACON HL	24	COLE HILL RD	11,21,22,26	FARR AVE	18
BEAVER MEADOW RD	3,10	COLONIAL MNR	8,12	FECTEAU LN	20
BEDELL FARM RD	26	CONGRESS ST	15,16	FELINE LOOP	15,16
BELANGER LN	12	COPLEY AVE	14,15	FENIMORE ST	13,15
BERRY AVE	6	COPLEY COUNTRY CLUB RD	14,15	FERLAND PIT RD	9,20
BEST ST	17	COTE HILL RD	1,4,11	FERN HILL LN	11
BLICKY WIG DR	32	COTTAGE ST	12,17,24	FIRST LIGHT LN	30
BLISS HILL RD	28,29	COURT ST	15	FIRST ST	23
BRIDGE ST	12,14,15	CRAM RD	9	FISHKILL LN	32
BRIGHAM ST	15	CROSS ST	13	FITZGERALD RD	24,25
BRITANY LN	22,24	DARLING RD	20	FONTAINE HILL RD	4,11
BROOK AND PINE RD	27	DAVISON RD	25	FOSS ST	12,17
BROOKLYN HTS	13	DEAR RUN AVE	24	FOUNDRY ST	15
BROOKLYN ST	8,13,15	DEERFIELD HILLS RD	4	FOURTH ST	23
BRYAN POND RD	3,10	DEMARS RD	12,19	FRAZIER RD	5,8,9,20
BULL MOOSE RD	10,21	DINKY LN	24	GALLERY LN	8
CADYS FALLS RD	5,6,12	DOCTOR TINKER ST	14,18	GALLUP RD	22
CALL RD	11	DUHAMEL RD	4,5,6	GARFIELD RD	9,20
CAMPBELL RD	31,32	DUNCAN RD	8	GEORGE ST	16
CARPENTIER FARM RD	24	E CHERRY AVE	16	GODDARD NISBET RD	25
CARROLL MOUNTAIN LN	27,30	E HIGH ST	15,16,17	GODFREY LN	11
CATAMOUNT ST	14	E OLIVE ST	15	GOELTZ RD	27,28
CENTER RD	7,8	EARL GRAY RD	24,28,29	GOLF COURSE RD	27

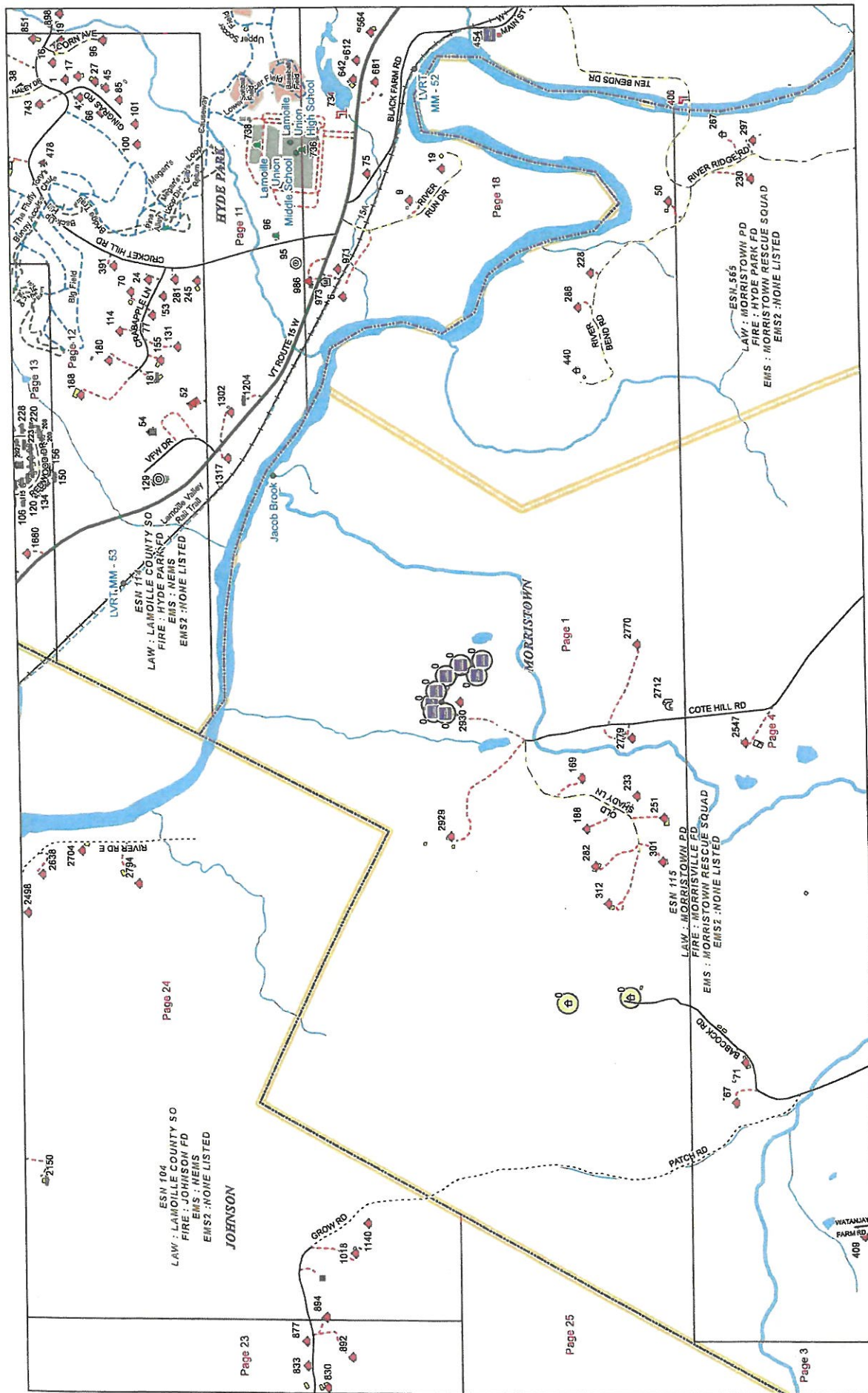
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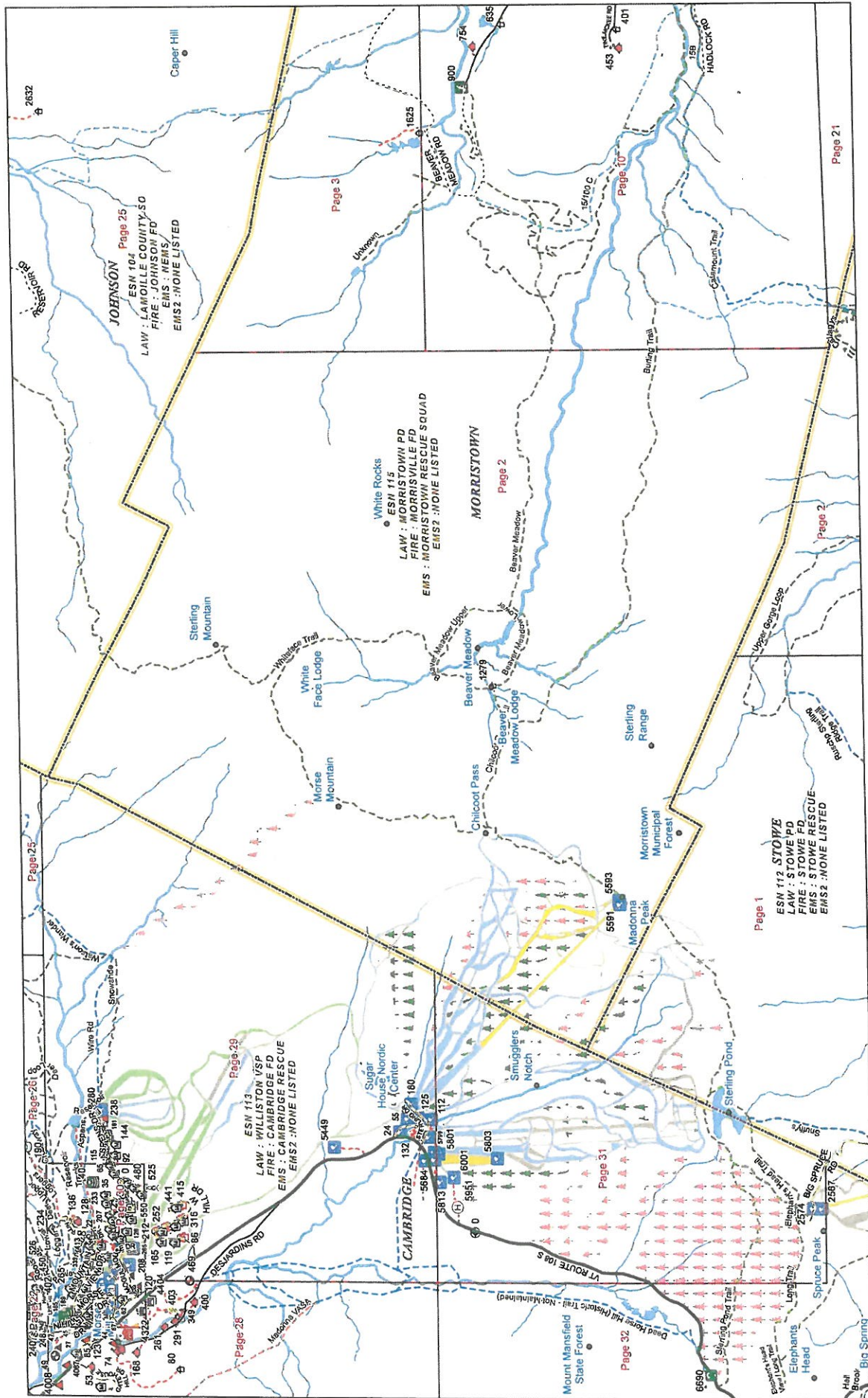
MORRISTOWN Road Name Index

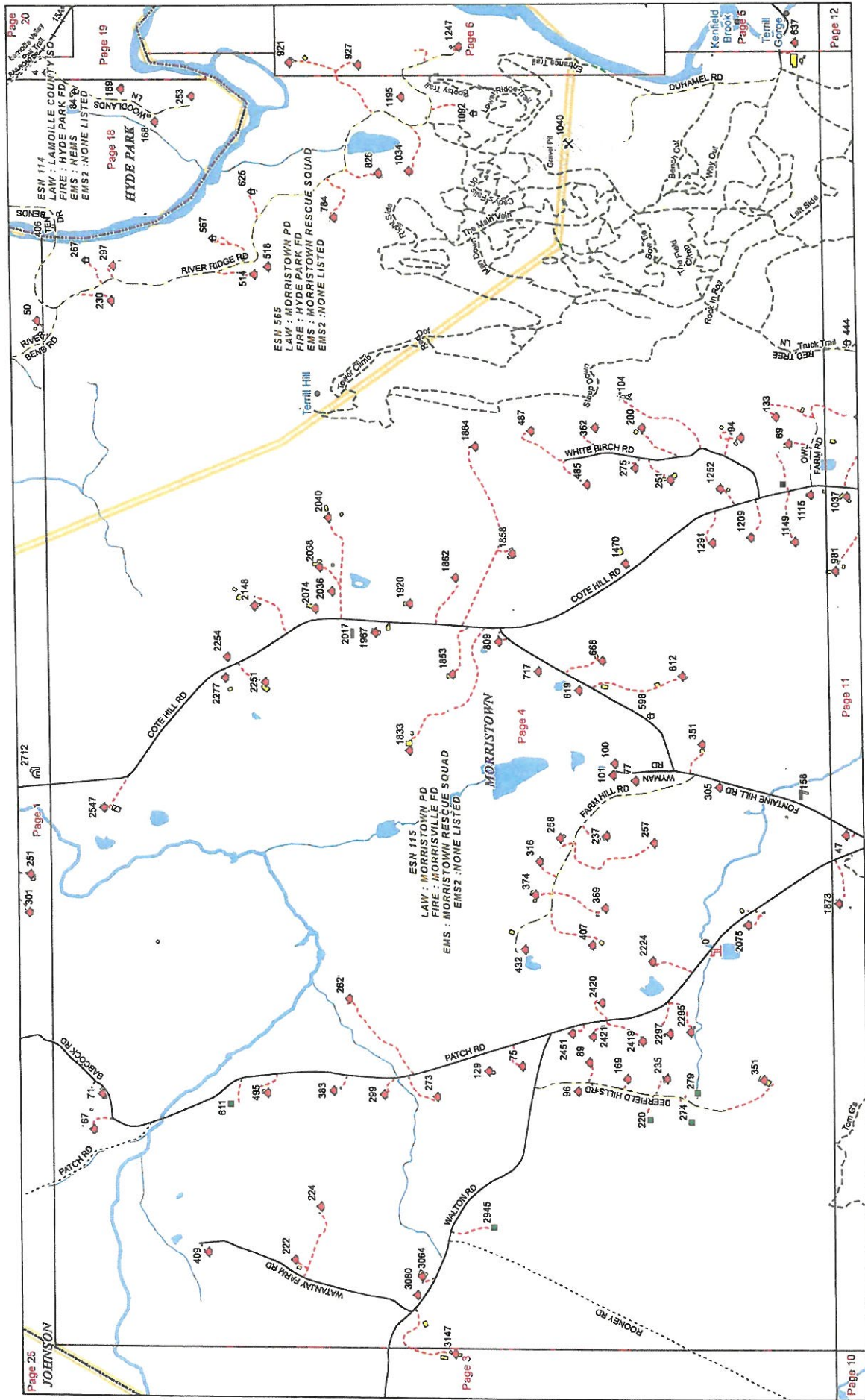
ROAD NAME	PAGE(S)	ROAD NAME	PAGE(S)	ROAD NAME	PAGE(S)
GOODELL AVE	8	LAWRENCE RD	30	N RIVER ST	13,14
GOOSE FARM LN	24,28	LAZY LN	20	NEEDLES EYE RD	6,7
GORDON LN	14,16,17	LEDGE RD	24	NEEL RD	26
GRAY FARM RD	32	LEO AND LOIS LN	9,20	NEULAND RD	28
GREEN MOUNTAIN DR	32	LEPPER RD	8	NORTHGATE AVE	8
GRIGGS RD	6	LESLIE SMALL LN	30,31	NORTHGATE PLZ	8
HADLOCK RD	10	LILY LN	19	OAK RIDGE ESTATES RD	12,24
HAPPY HEART WAY	27	LINCOLN ST	16	OLD CREAMERY RD	13
HARREL ST	8,13	LOATI LN	19	OLD SHADY LN	1
HARRISON AVE	16	LONG BRANCH CIR	11,22	OLIVE ST	16
HENWAY RD	27	LOWER ELMORE MOUNTAIN RD	24,25,29	OWL FARM RD	4
HIDDEN CV	6	LOWER GORDON LN	16,17	PAINES AVE	19
HILLTOP LN	24	LOWER MAIN ST	15	PARK ST	12,14,15,20
HOME ACRE ST	14	LYLE MCKEE FARM RD	22	PATCH RD	1,4
HORSE HEAVEN HL	12	LYLE MCKEE RD	22	PINEWOOD EST	6
HOULE AVE	8	MAC MILLER RD	12	PLANE VIEW RD	27
HOWARD ST	16	MAGOON RD	22	PLEASANT ST	15
HUTCHINS ST	15	MANOSH MEADOWS LN	12	POPE MEADOW DR	12,19
INDUSTRIAL PARK DR	8	MANSFIELD AVE	18	PORTLAND ST	13,15
JAMES RD	8	MAPLE ST	15,16	PRIVATE RIDGES RD	25
JERSEY CT	17	MAYO RD	27	PROFESSIONAL DR	8
JERSEY HTS	15,16,17	MEADOW DR	24	PUMPKIN HOLLOW RD	26
JERSEY WAY	12,17	MILLER BRIDGE RD	12	RAIL TRAIL LN	13,14
JOES POND RD	30,31	MOOSE RUN LN	27	RAILROAD ST	15
JOPSON LN	30	MOREN LOOP	26	RANDOLPH RD	16,17,18,24,28,30,31,32
KIDDER FARM LN	31	MOREY FARM RD	24	RED PINE ESTS	7
LACLAIR RD	6	MORRISTOWN CORNERS RD	11,12	RED TREE LN	4,11
LAGUE RD	12	MORRISVILLE PLZ	8	RICHMOND ST	15
LAKE LAMOILLE DR	5,6	MOULTON LN	30	RIVER BEND RD	1,4
LAKE RIDGE LN	13	MOUNTAIN VIEW MEADOWS RD	27	RIVER RIDGE RD	1,4,6
LANGDELL RD	7,8	MOUNTAIN VIEW PLZ	8	ROLLING MEADOWS EST	22
LANPHEAR RD	8	MOWRY RD	31	RON TERRILL RD	21,26
LAPORTE RD	12,17,24,27,30	MUD CITY LOOP	10,11,21,22	ROONEY RD	3,4,10
LAROCHE RD	22	MUNSON AVE	8	ROSE ALY	12

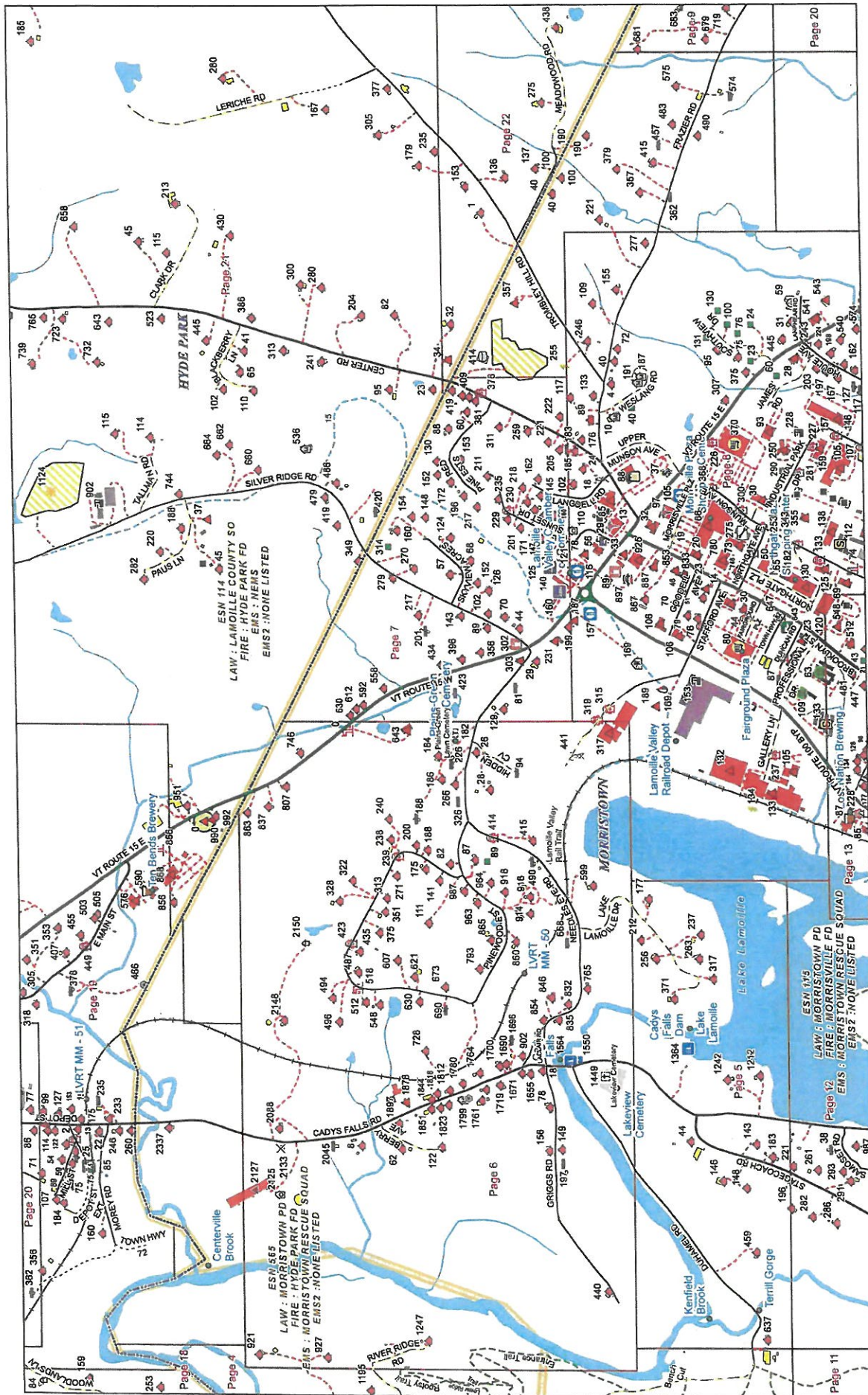
MORRISTOWN Road Name Index

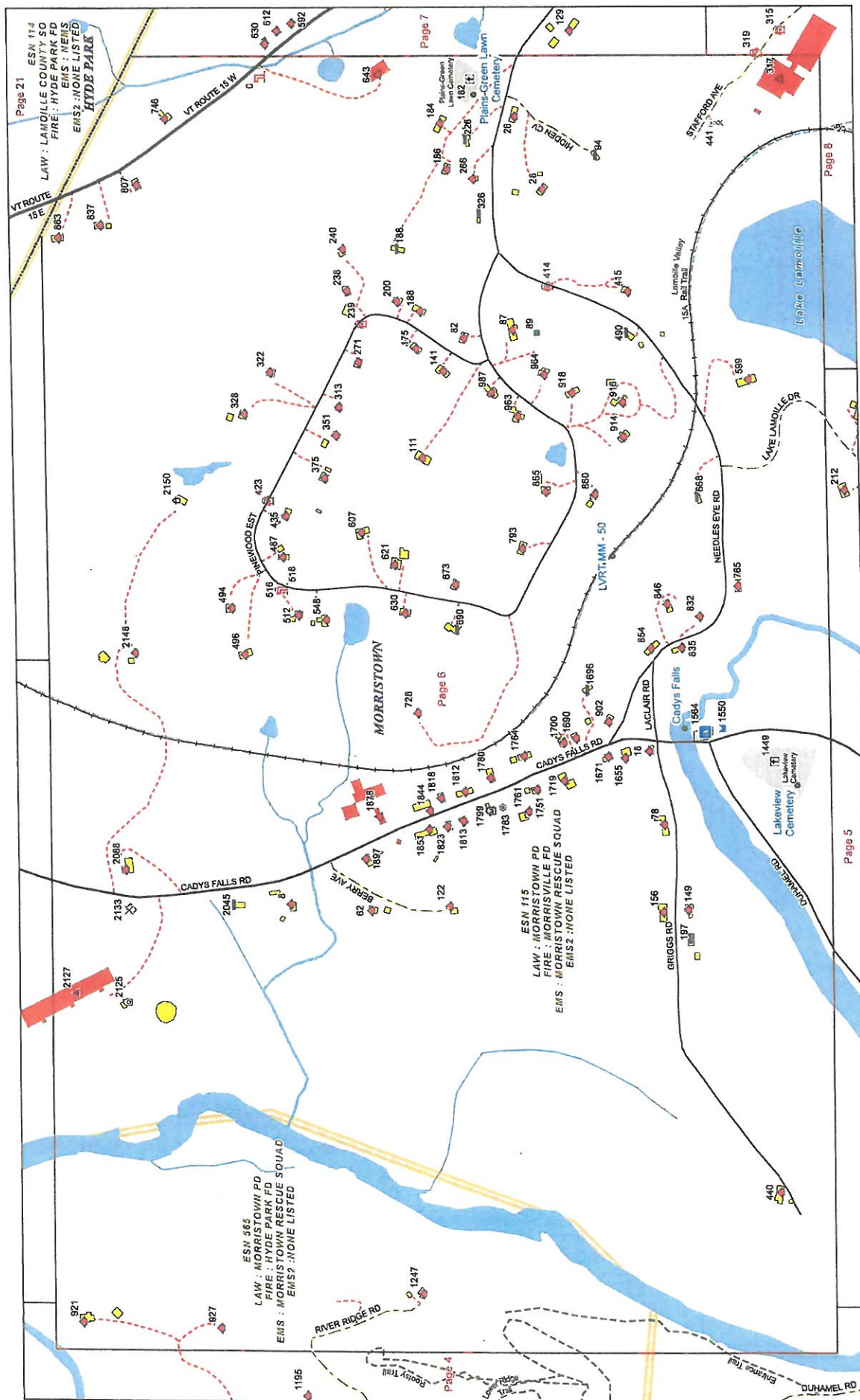
ROAD NAME	PAGE(S)	ROAD NAME	PAGE(S)	ROAD NAME	PAGE(S)
ROSS HILL RD	21	TAMARACK HILL RD	27	WESLANG RD	8
RUE BENOIT RD	32	TERRILL GORGE LN	11	WESTSIDE CT	13
RYDER BROOK RD	27	THIRD ST	23	WESTVIEW ST	19
S RIVER ST	14	TINE MCKEE RD	10	WHISKEY RUN	27
SAMOSSET RD	12	TOWN HWY 22	20	WHITE BIRCH RD	4
SAND HILL HTS	20,25	TOWN HWY 42	3	WHITE PINE LN	9
SAND RIDGE RD	25	TOWN HWY 43	10	WILKINS ST	13
SECOND ST	23	TOWN HWY 49	22	WINDY KNOLL LN	24
SHADOW LN	28	TOWN HWY 61	21,26	WINTER ST	16
SHOLAN RD	27	TOWN HWY 7	26	WOODS EDGE RD	19
SILVER RIDGE RD	7	TOWN HWY 82	8	WOODWAY DR	32
SKYVIEW ACRES	7	TOWNE HILL DR	25	WORCESTER VIEW LN	27
SMALL FARM RD	31,32	TROMBLEY HILL RD	5,8	WYMAN RD	4
SMALL POND RD	27,30	TWISTY MAPLE DR	26		
SOUTH ST	16	UNION ST	15		
SOUTHVIEW DR	8	UPPER MAIN ST	14,15		
SPARROW LN	20	UPPER MUNSON AVE	8		
SPRING HILL RD	25	VALLEY VIEW LN	27		
SPRING ST	18	VANASSE RD	30		
STAFFORD AVE	6,8	VERMONT MADE ACRES	9,20		
STAGECOACH RD	5,11,12,22,27,30	VFW ST	15		
STANCLIFF RD	27,31,32	VISTA VW	30,31		
STEARNS RD	9	VT ROUTE 100 BYP	8,12,13,14,17		
STERLING CT	17	VT ROUTE 15 E	8,12,20		
STERLING VALLEY RD	21,26,30	VT ROUTE 15 W	6,7,8		
STICKELL RD	12,24	W HIGH ST	15		
STONE ST	16	W HILL RD	26		
STUB TOWNE RD	24	WABUN AVE	13		
SUGAR HOUSE LN	27,30	WALKERS WAY	30		
SUGAR HOUSE RIDGE RD	30	WALTON RD	3,4,11		
SUGARWOODS RD	19	WARD POND RD	12,17,18		
SUMMER ST	15,16	WASHINGTON HWY	12,16,17,18,24,25		
SUN VALLEY RD	27	WATANJAY FARM RD	4		
SUNSET DR	7,8	WELCH WAY	20		

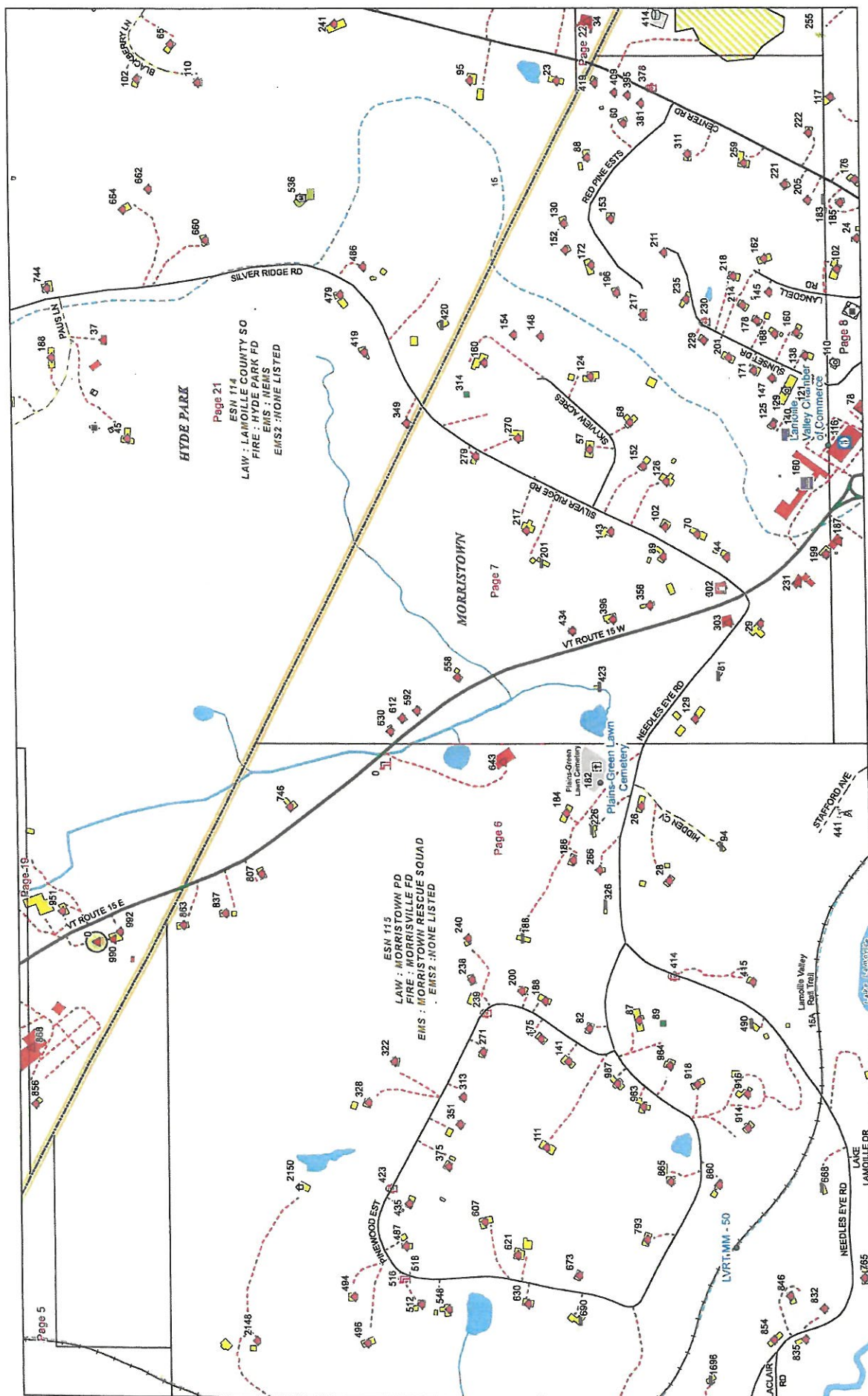


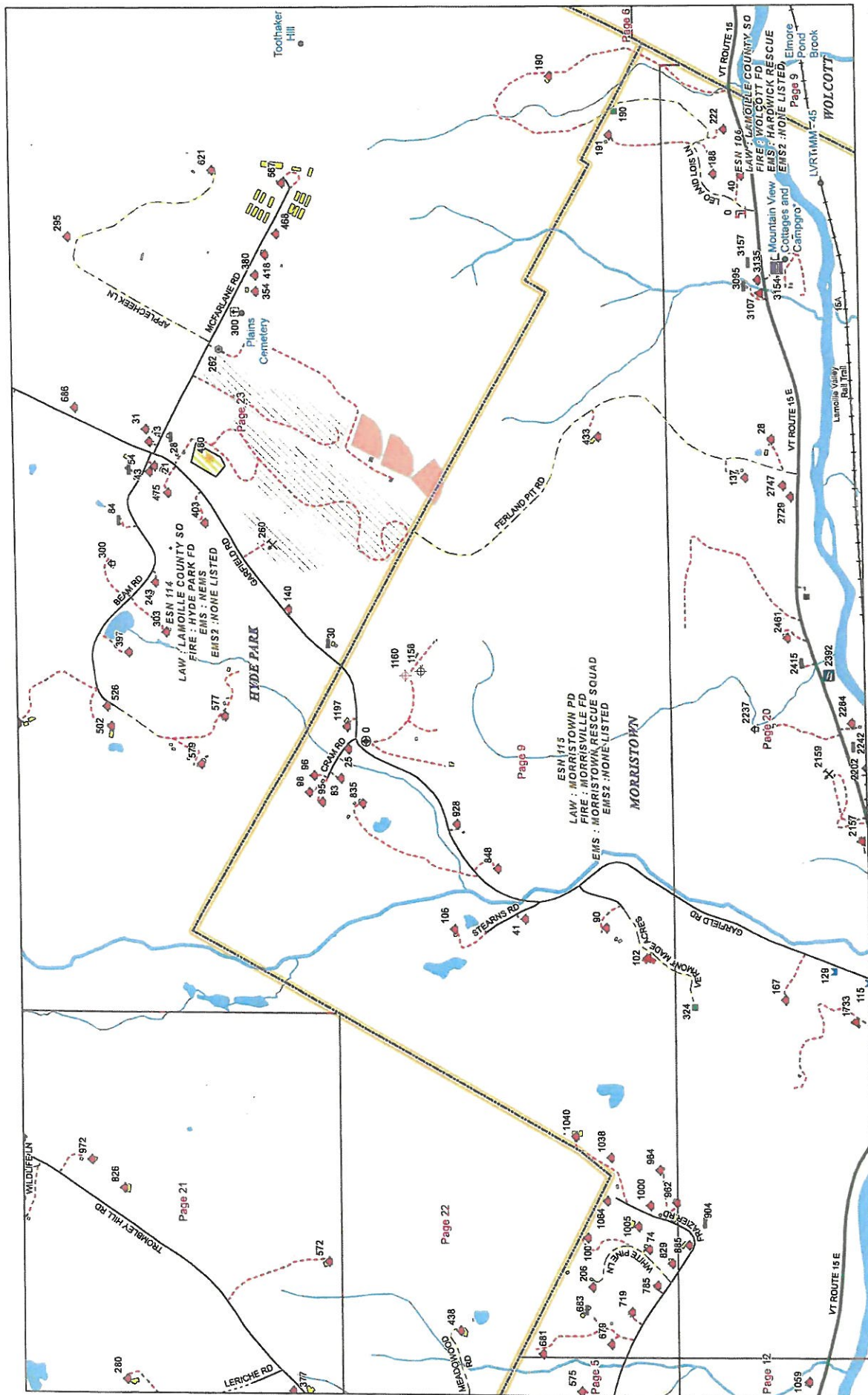


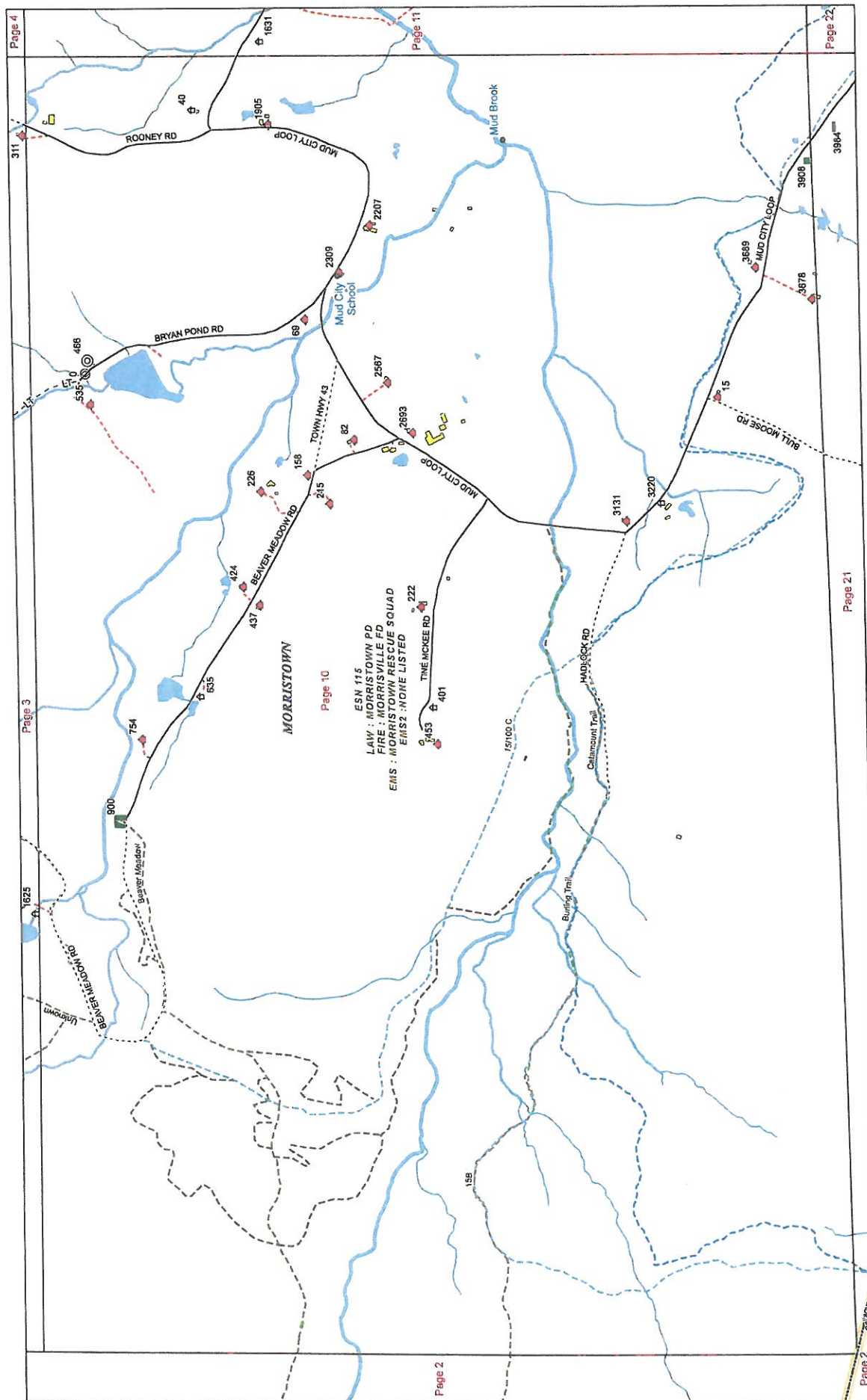


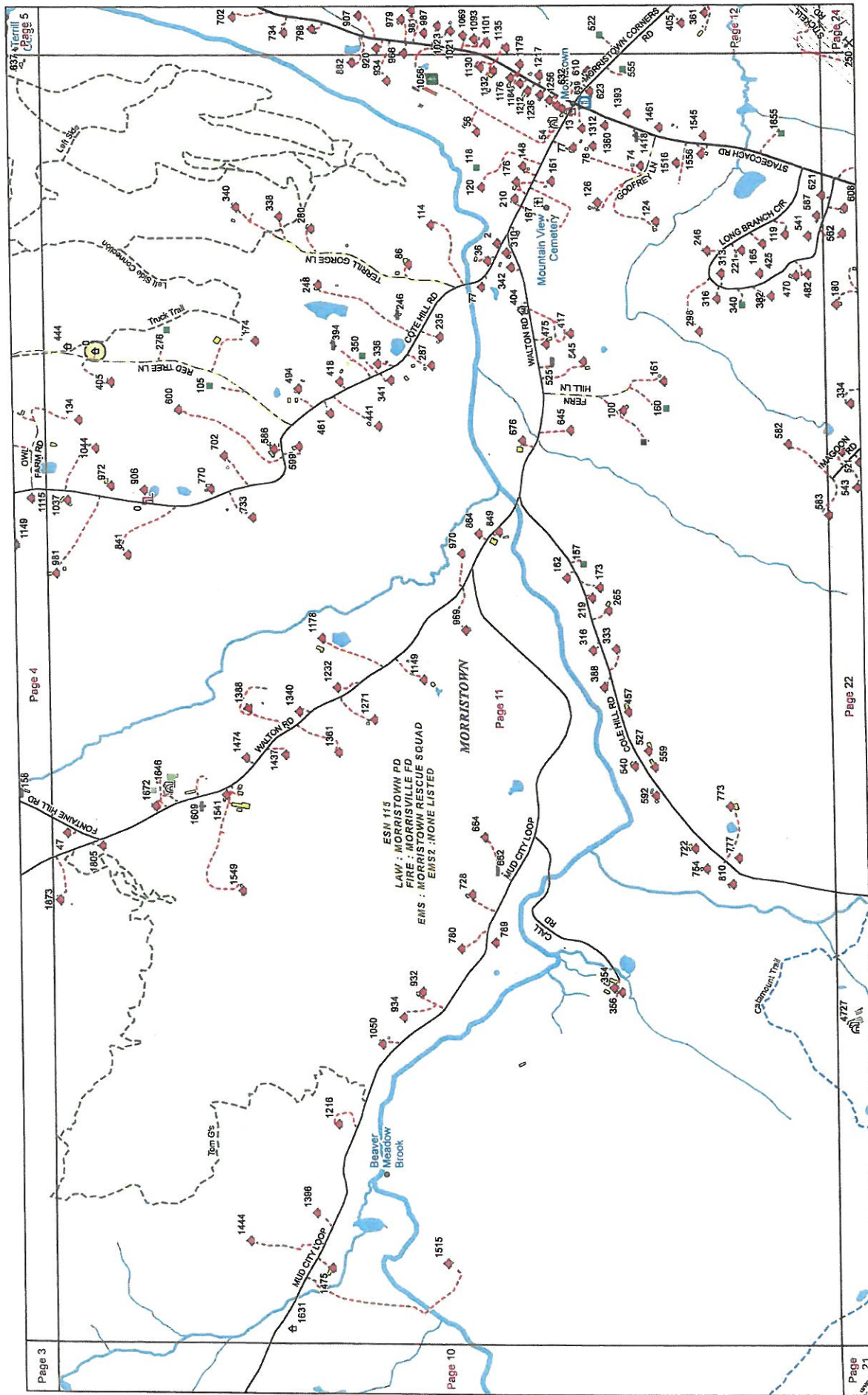


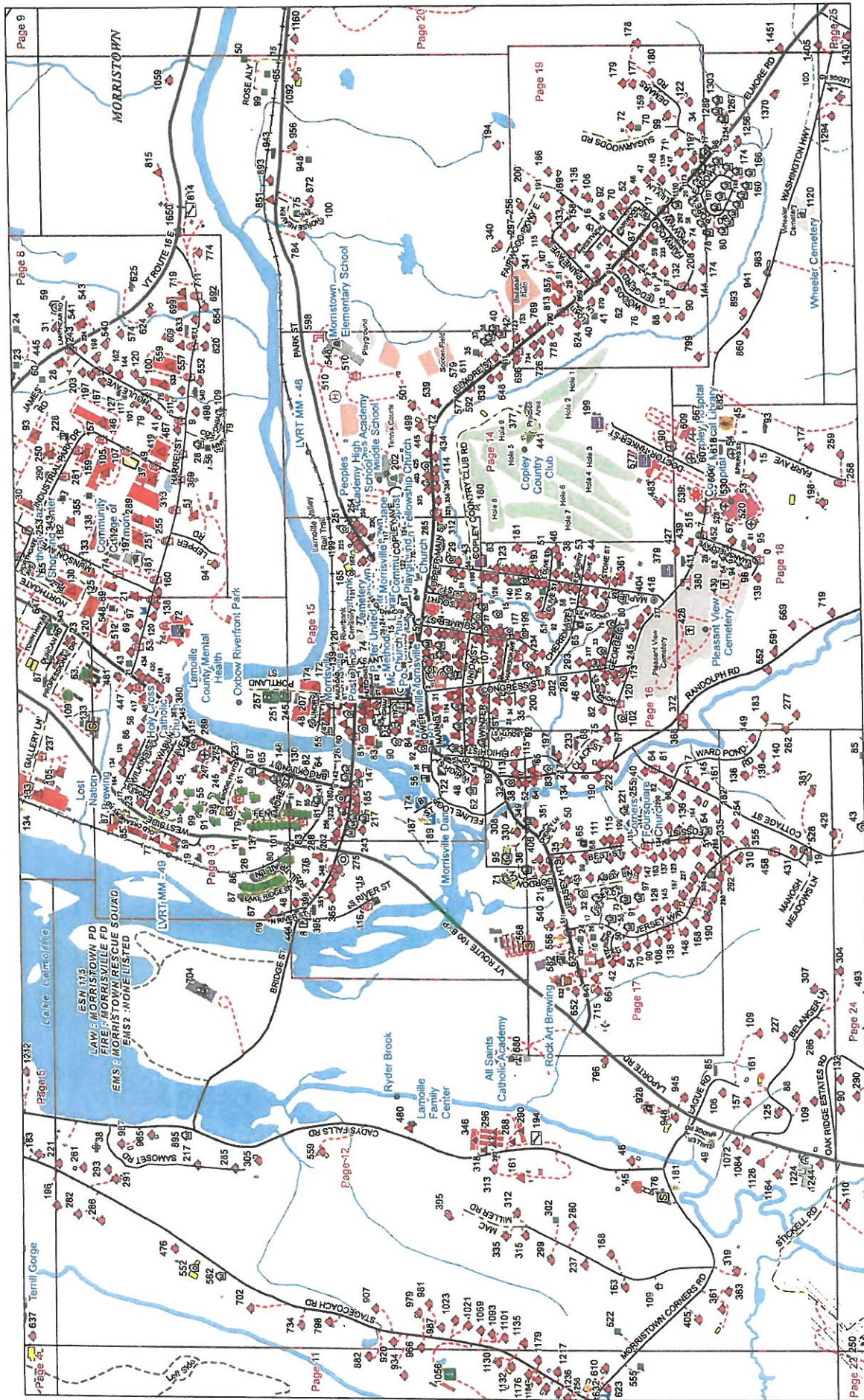


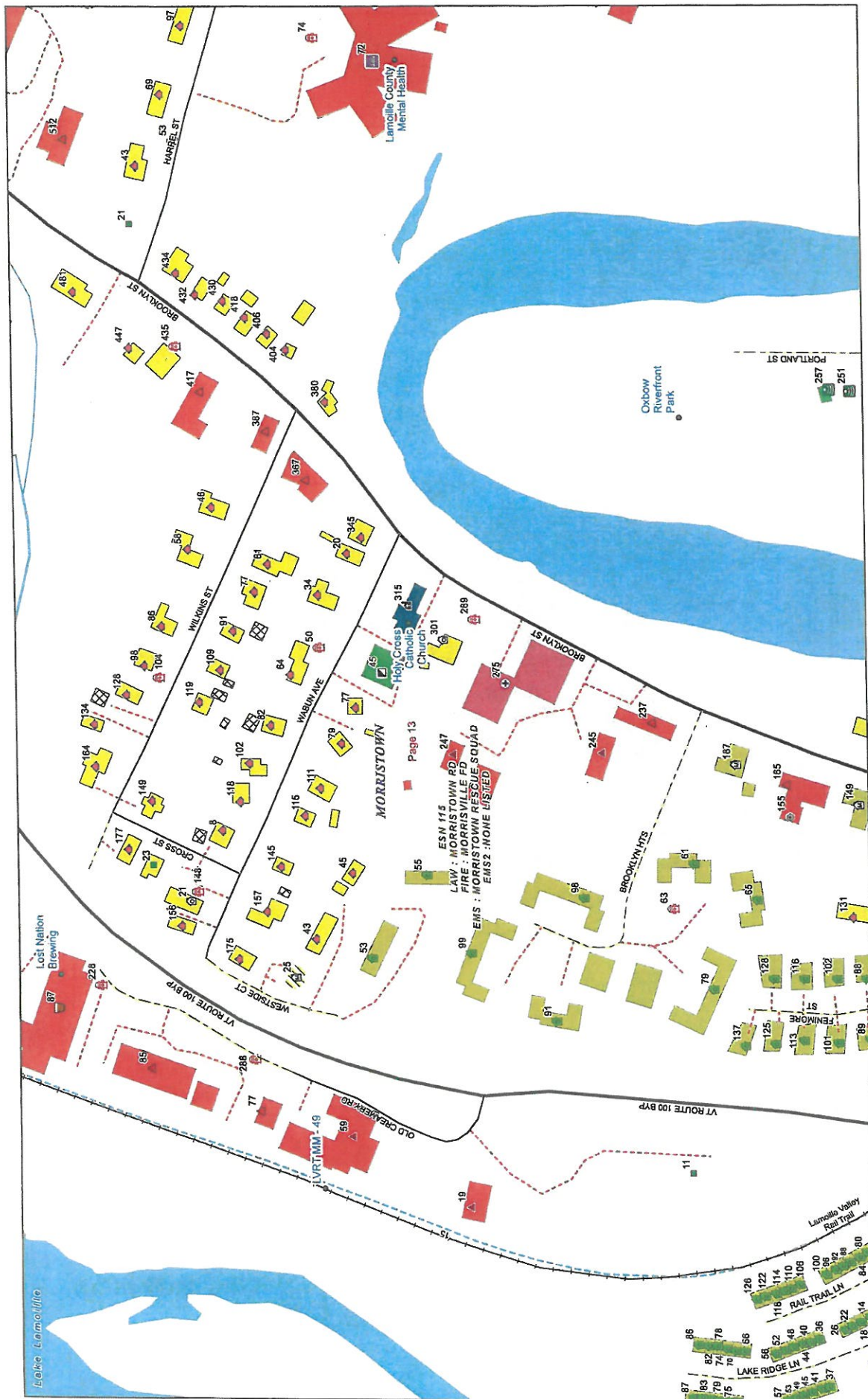


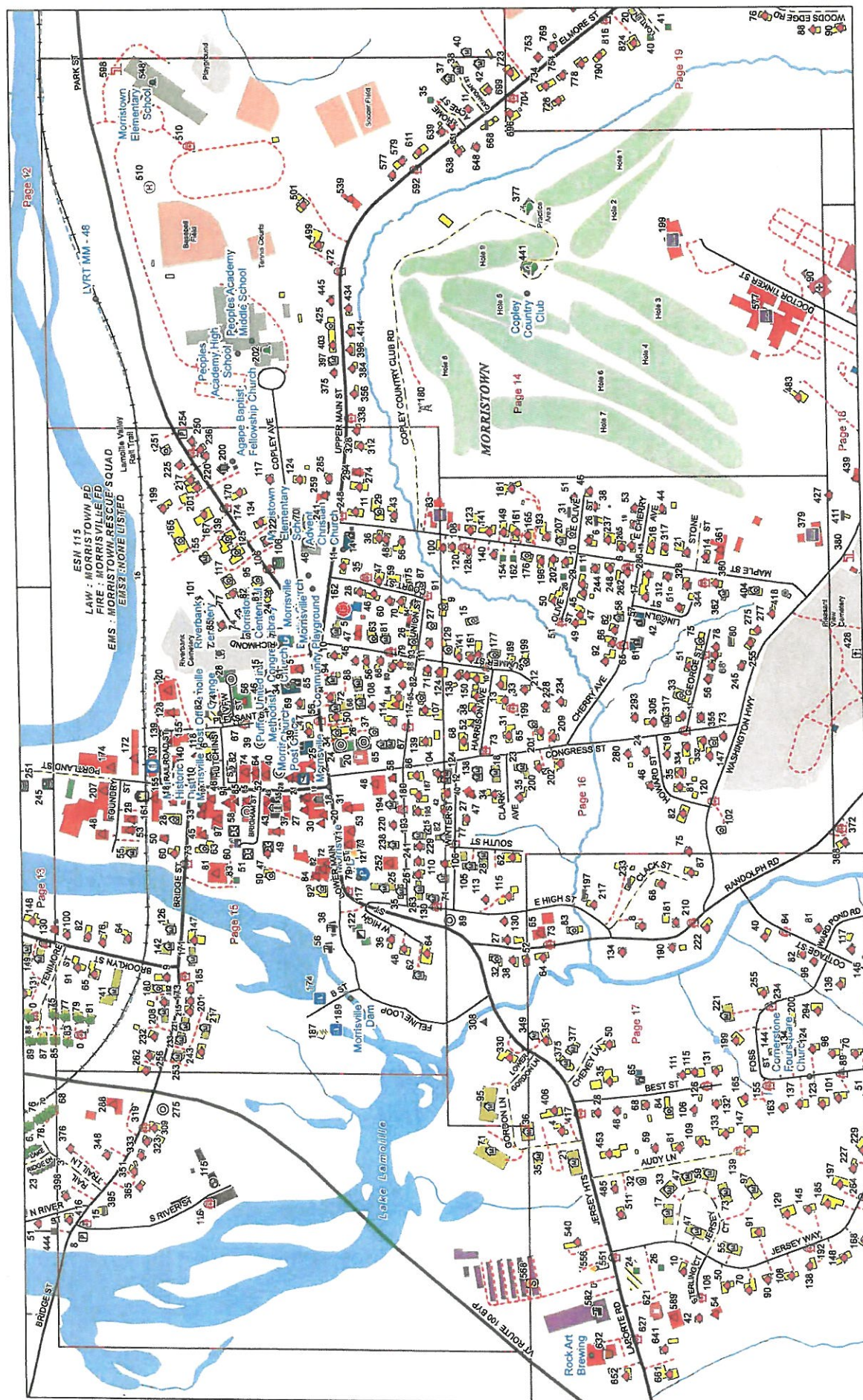


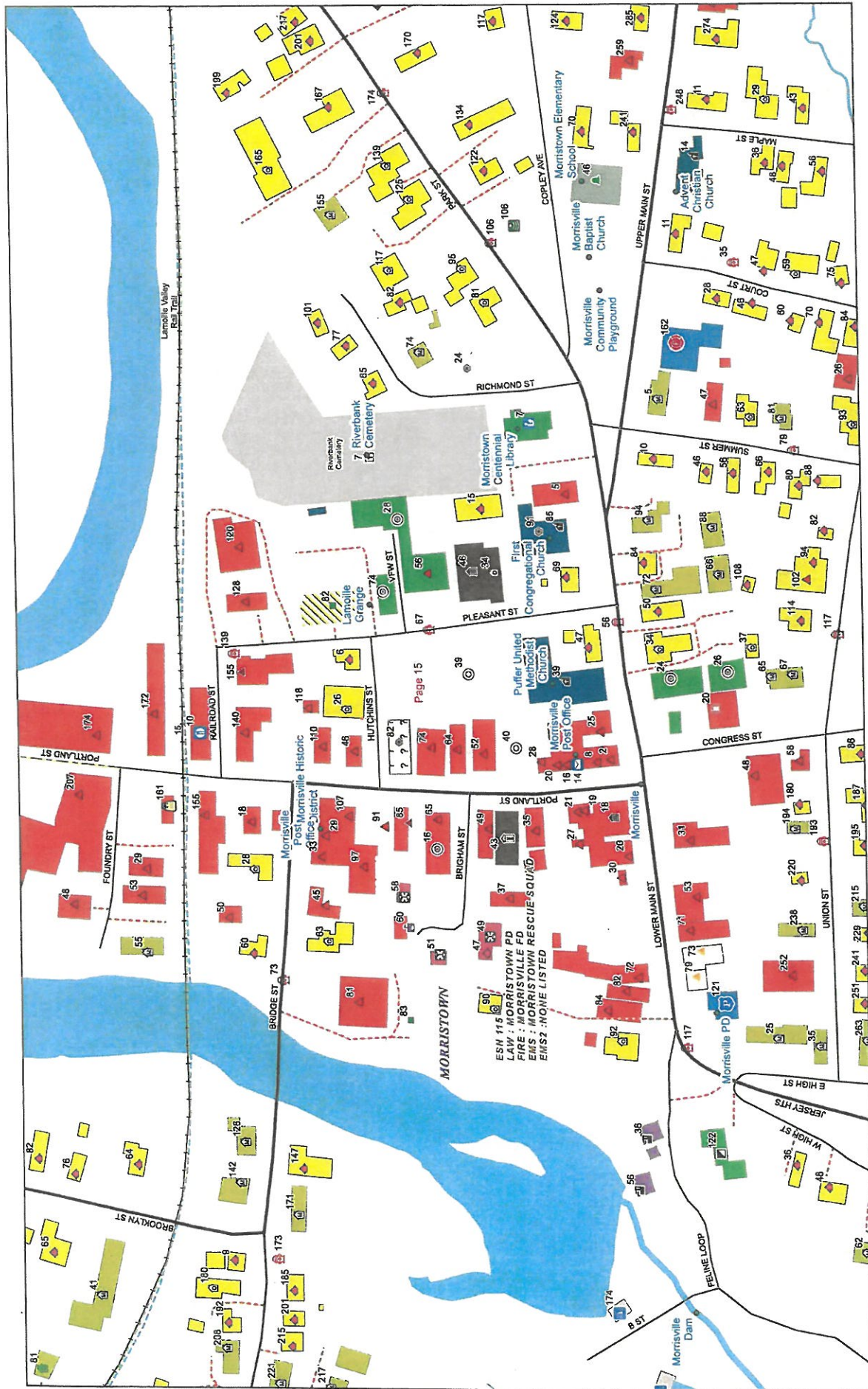


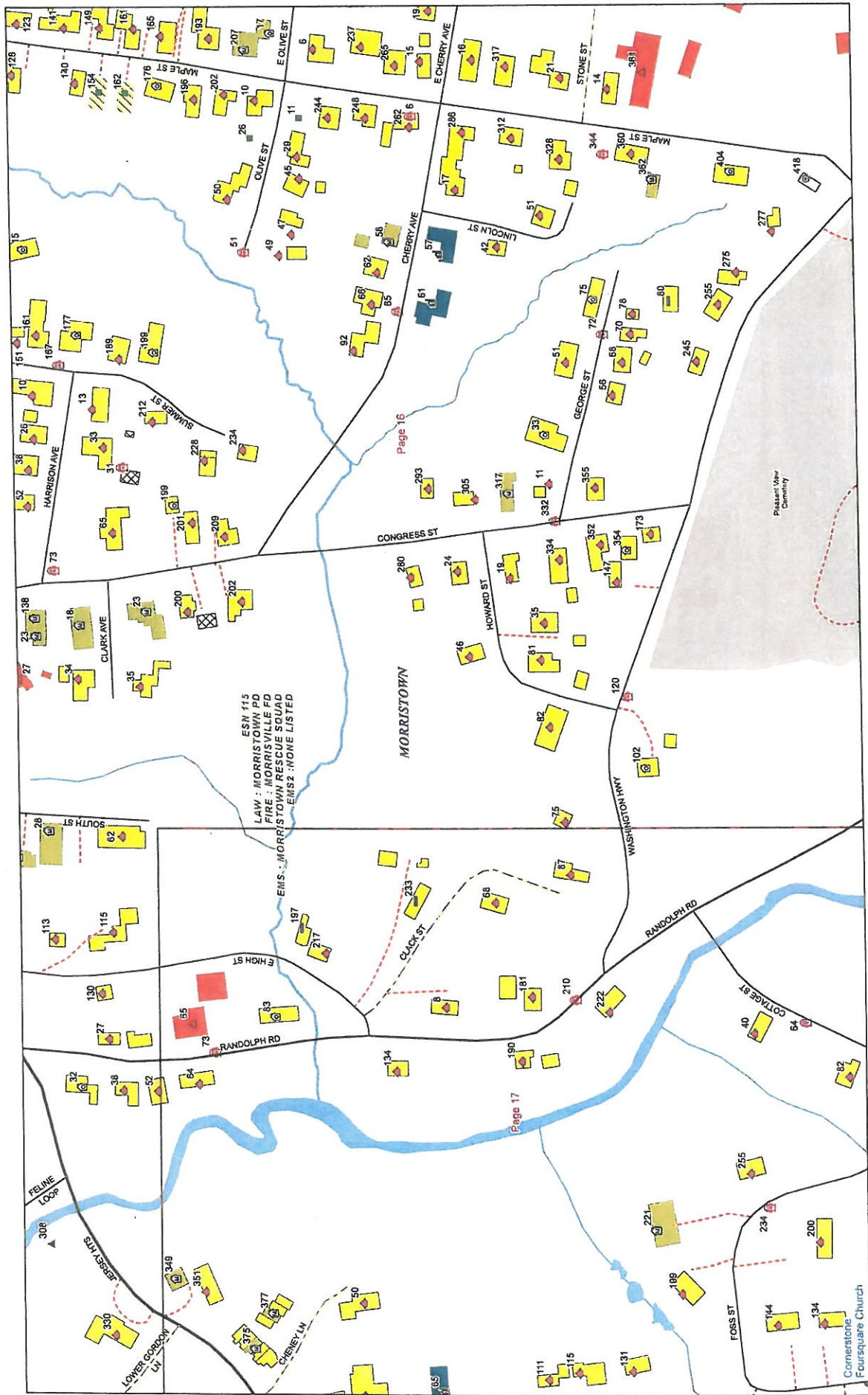


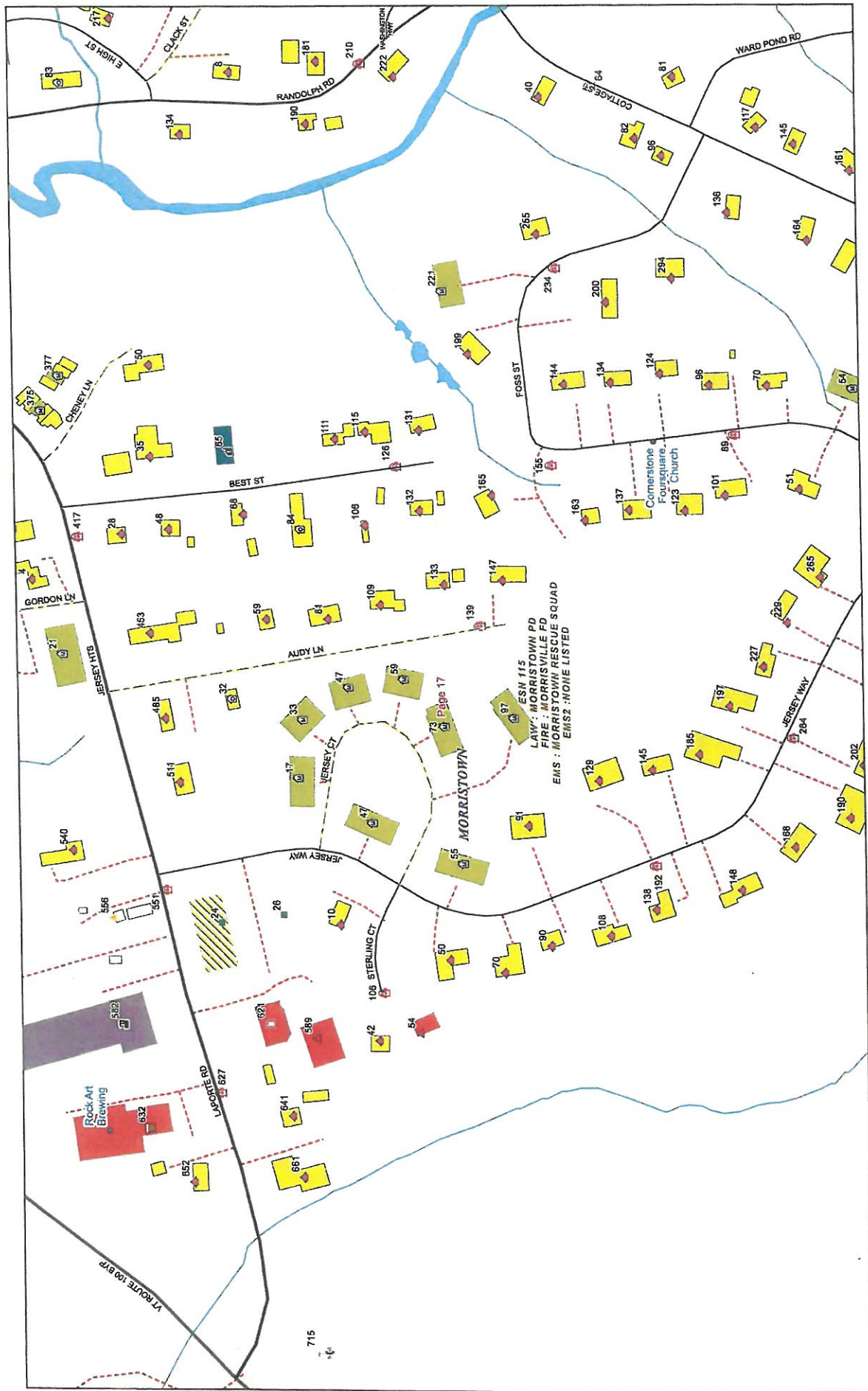


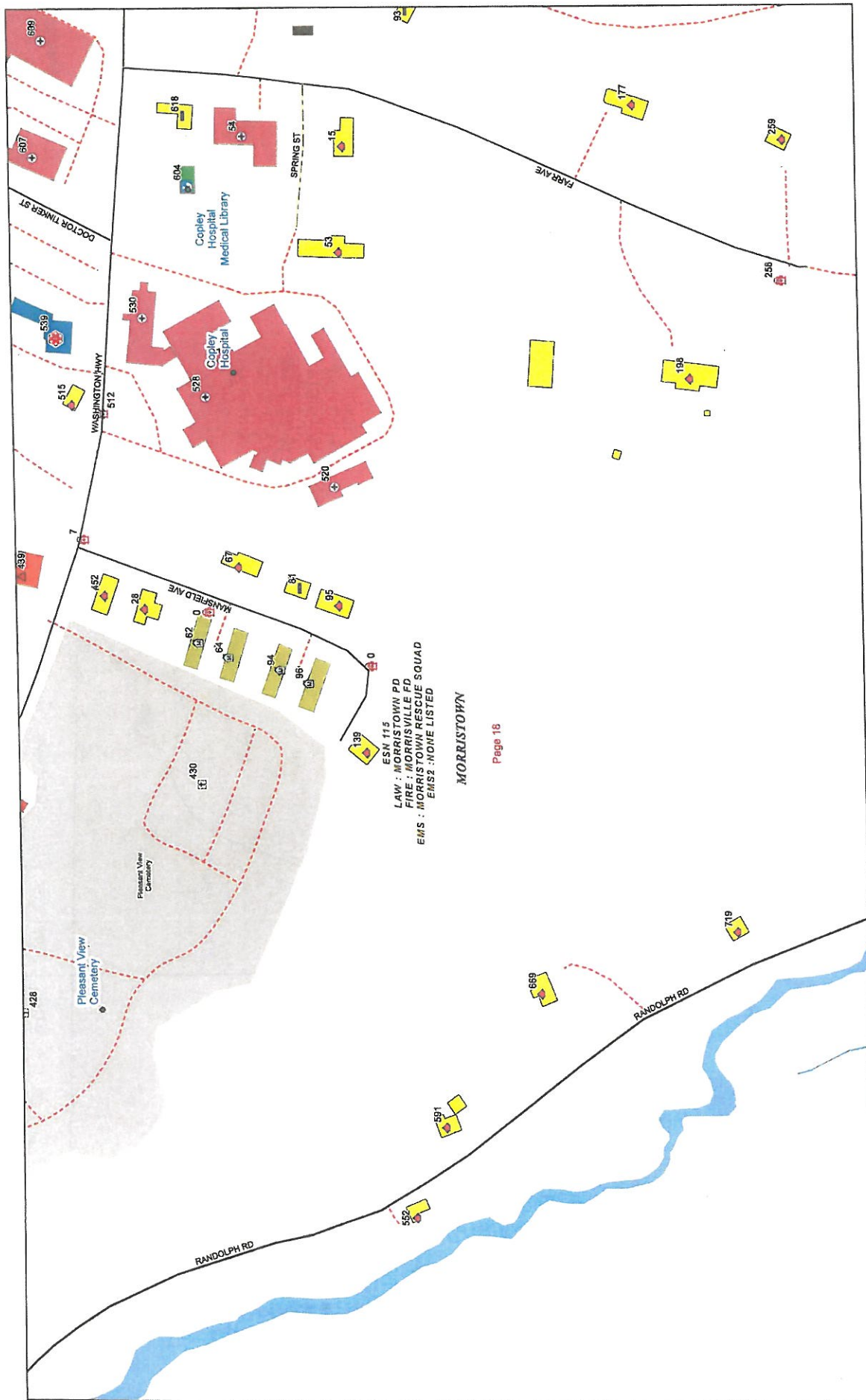


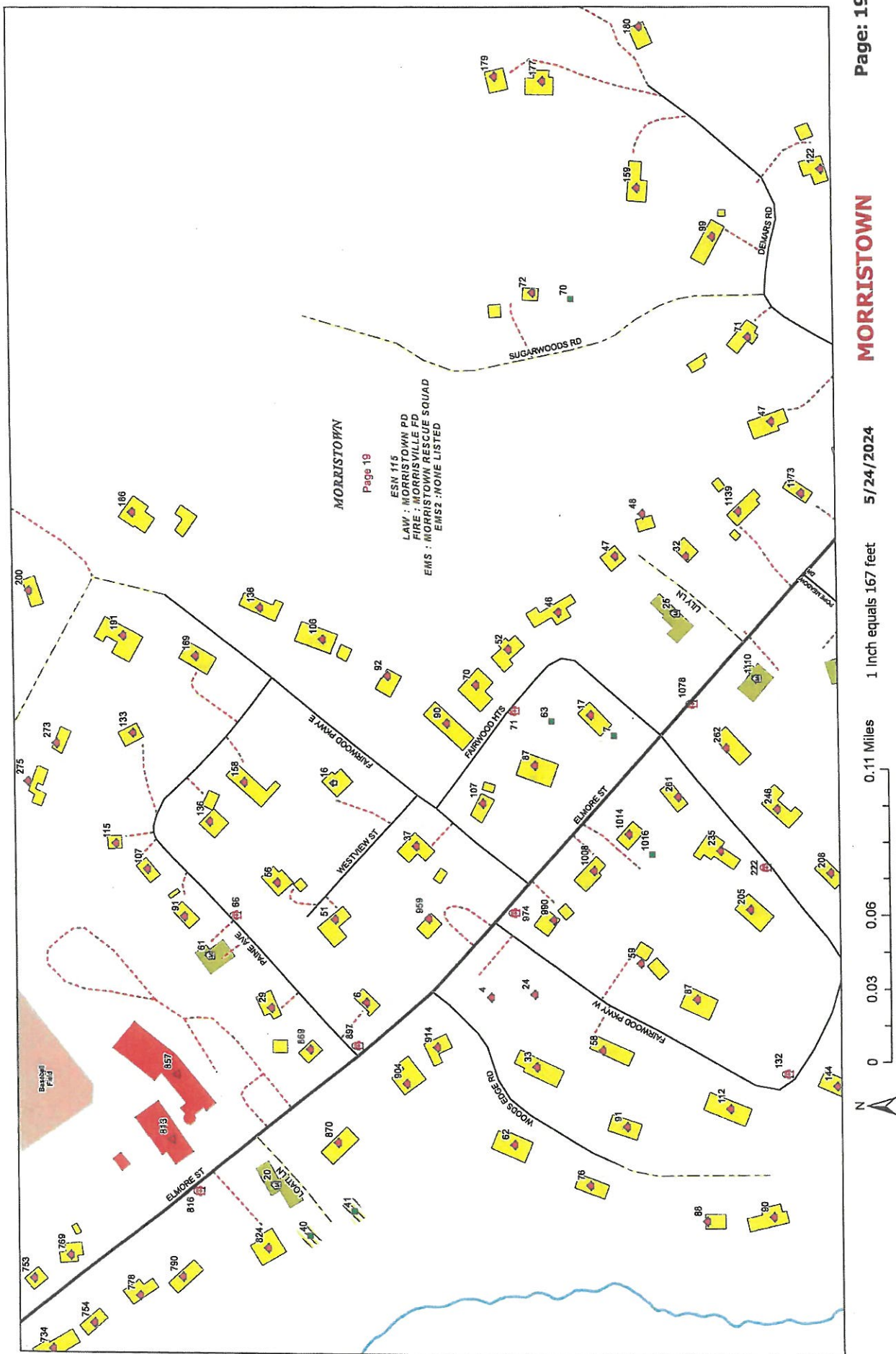


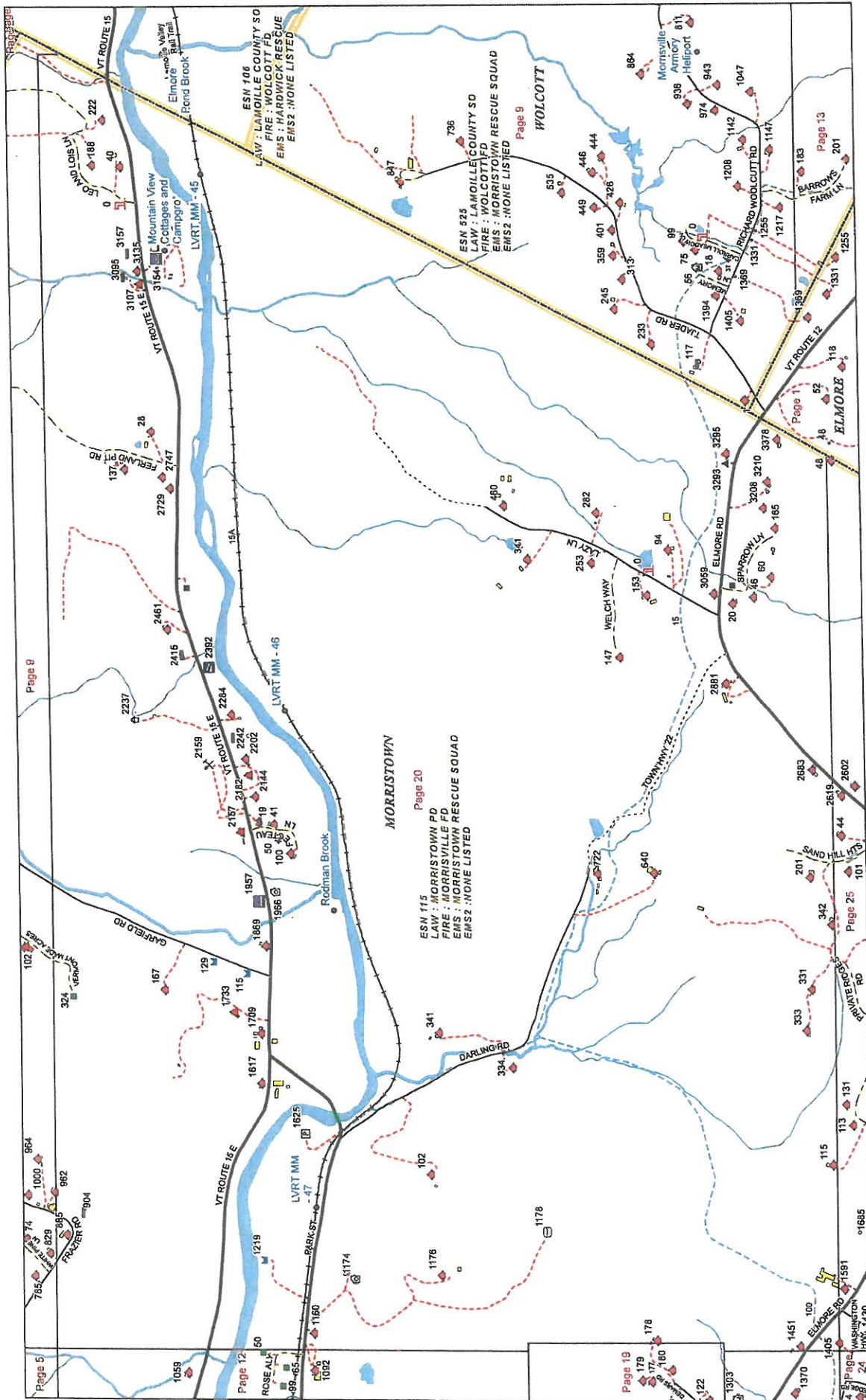


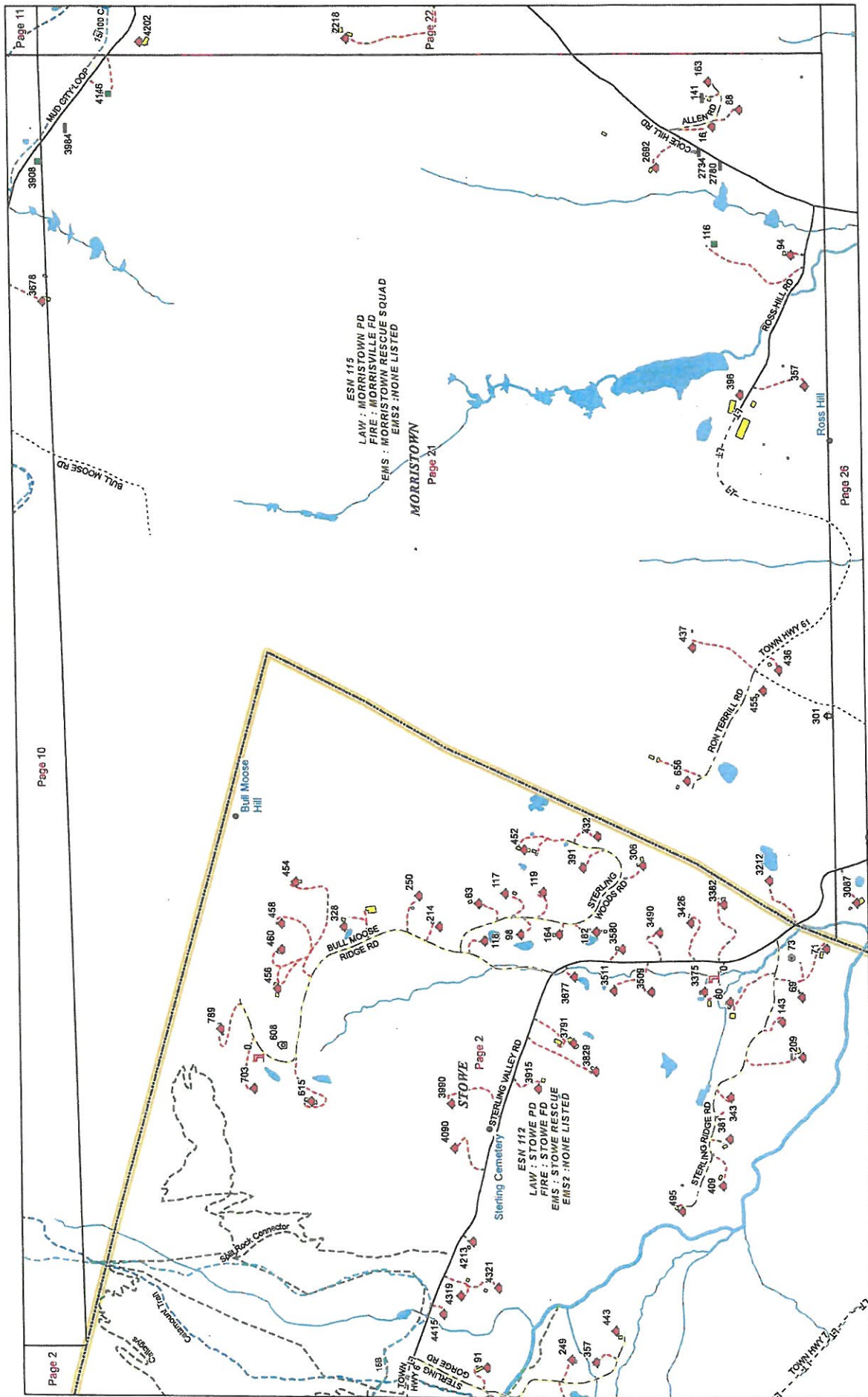


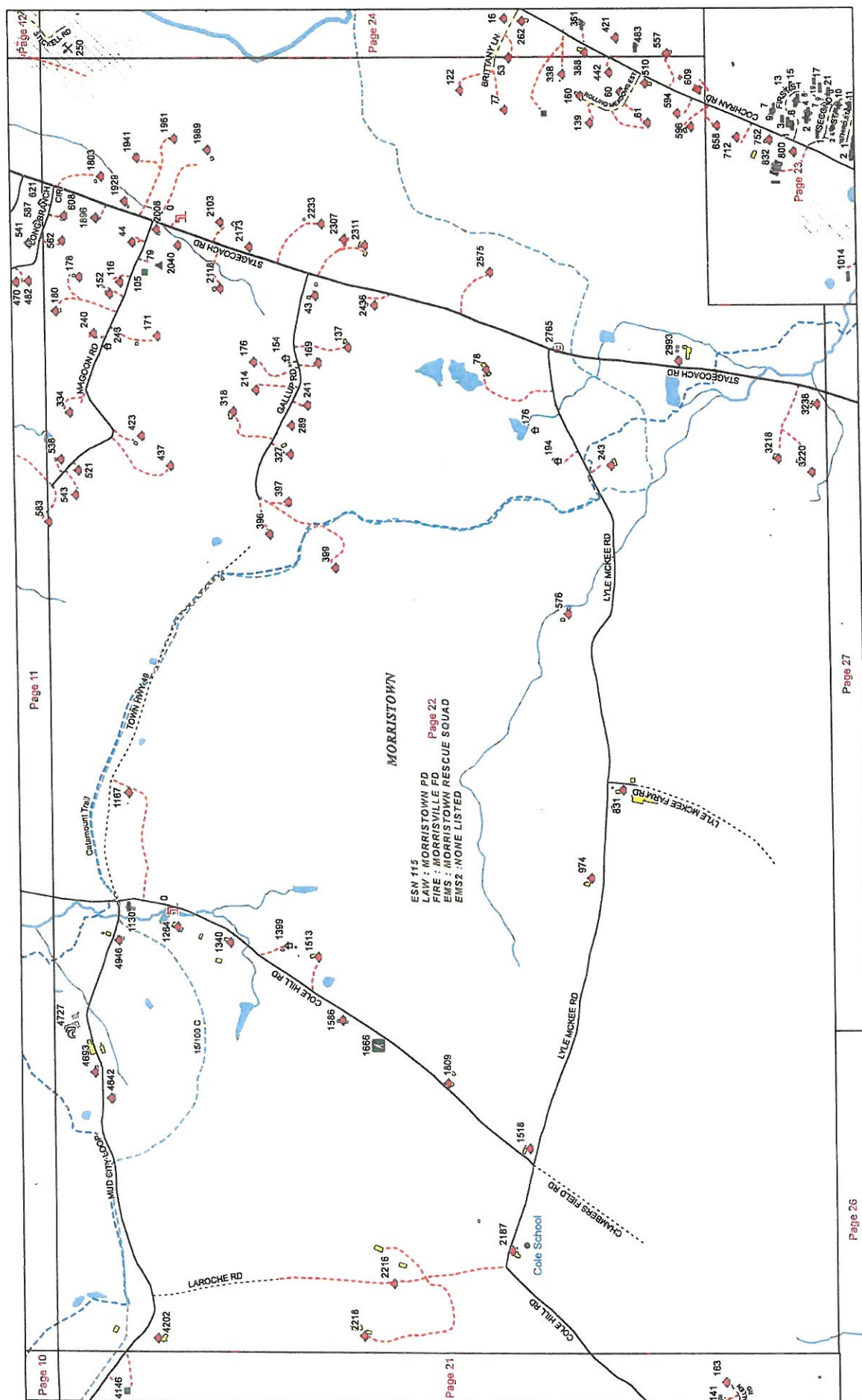


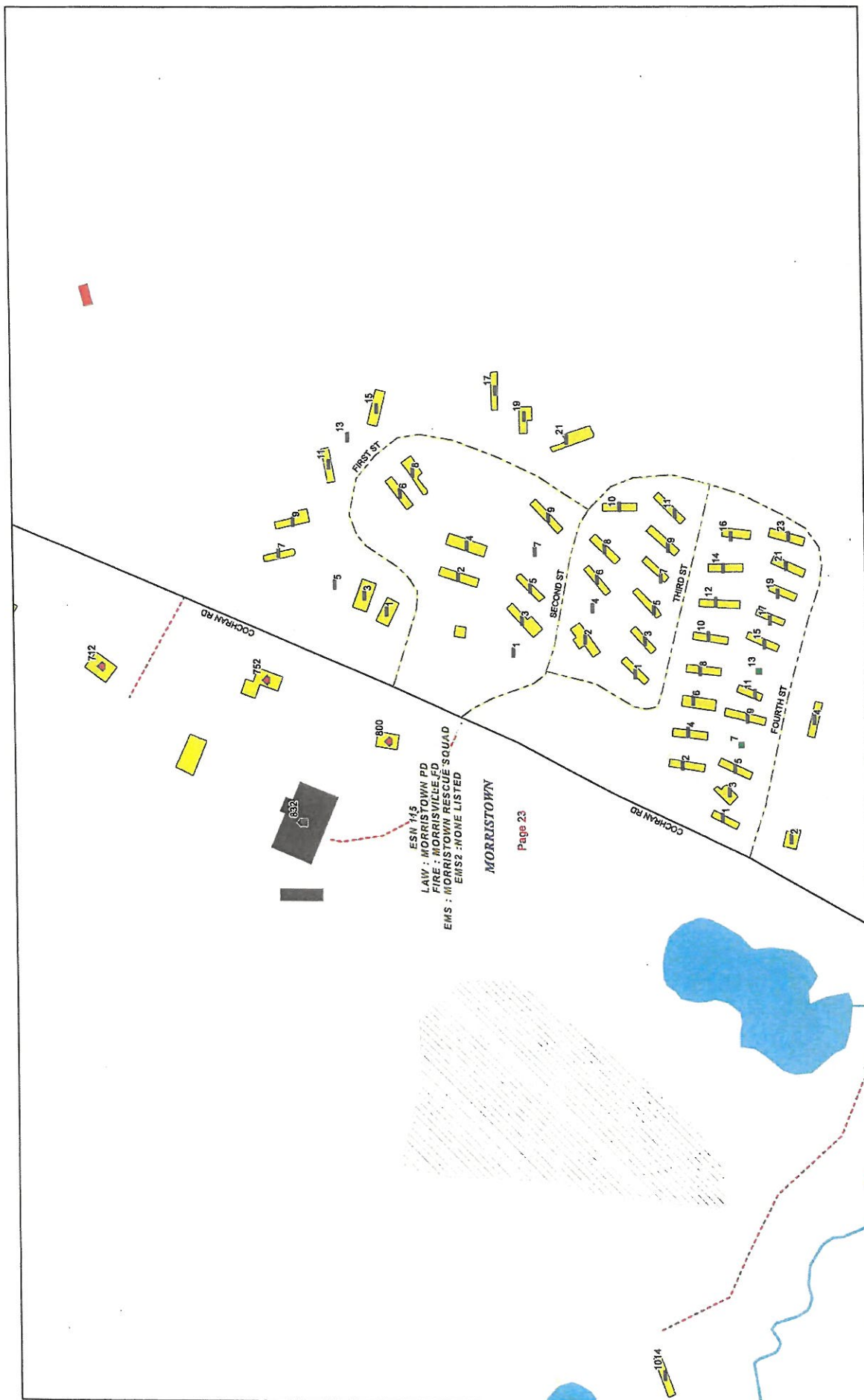


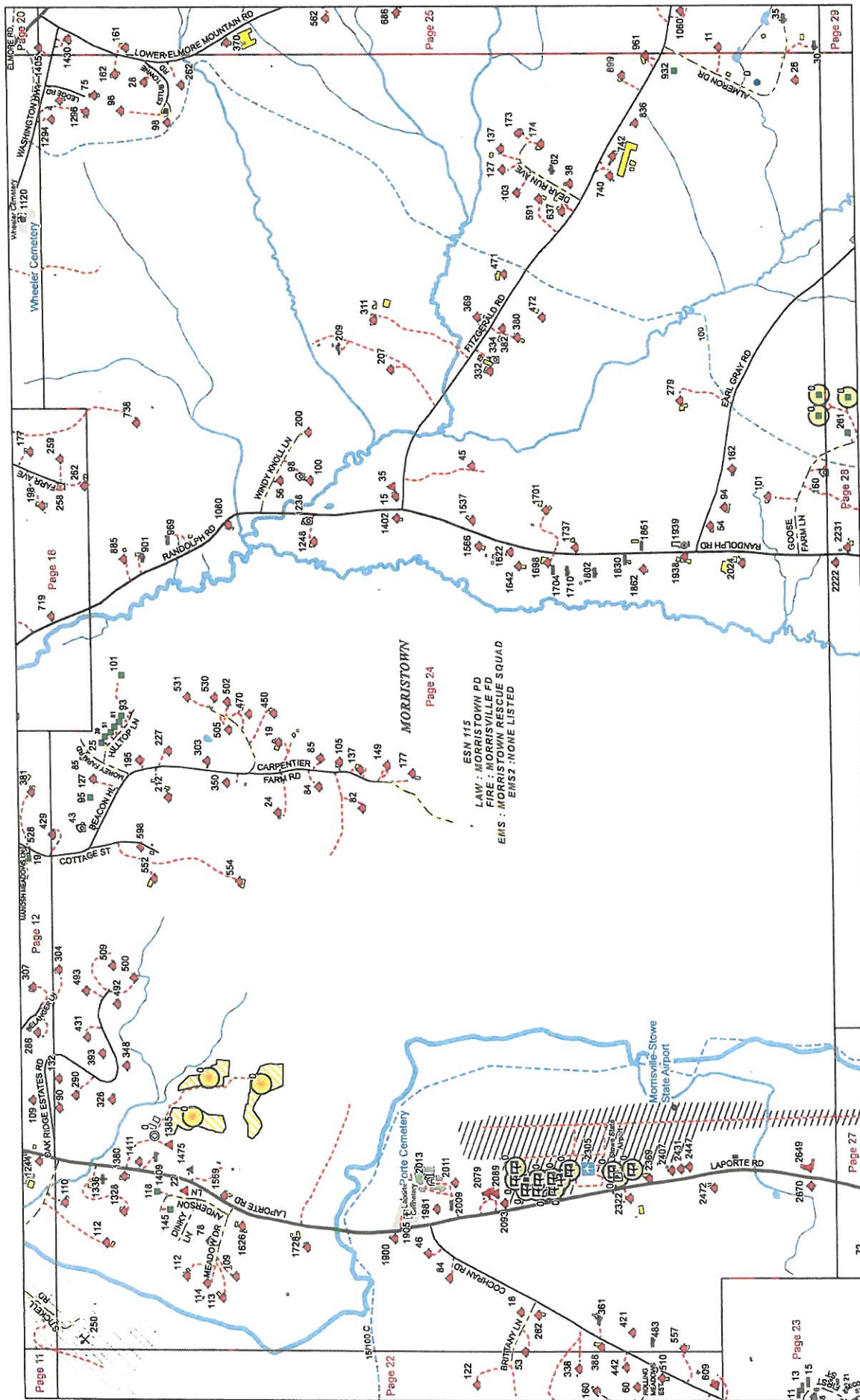


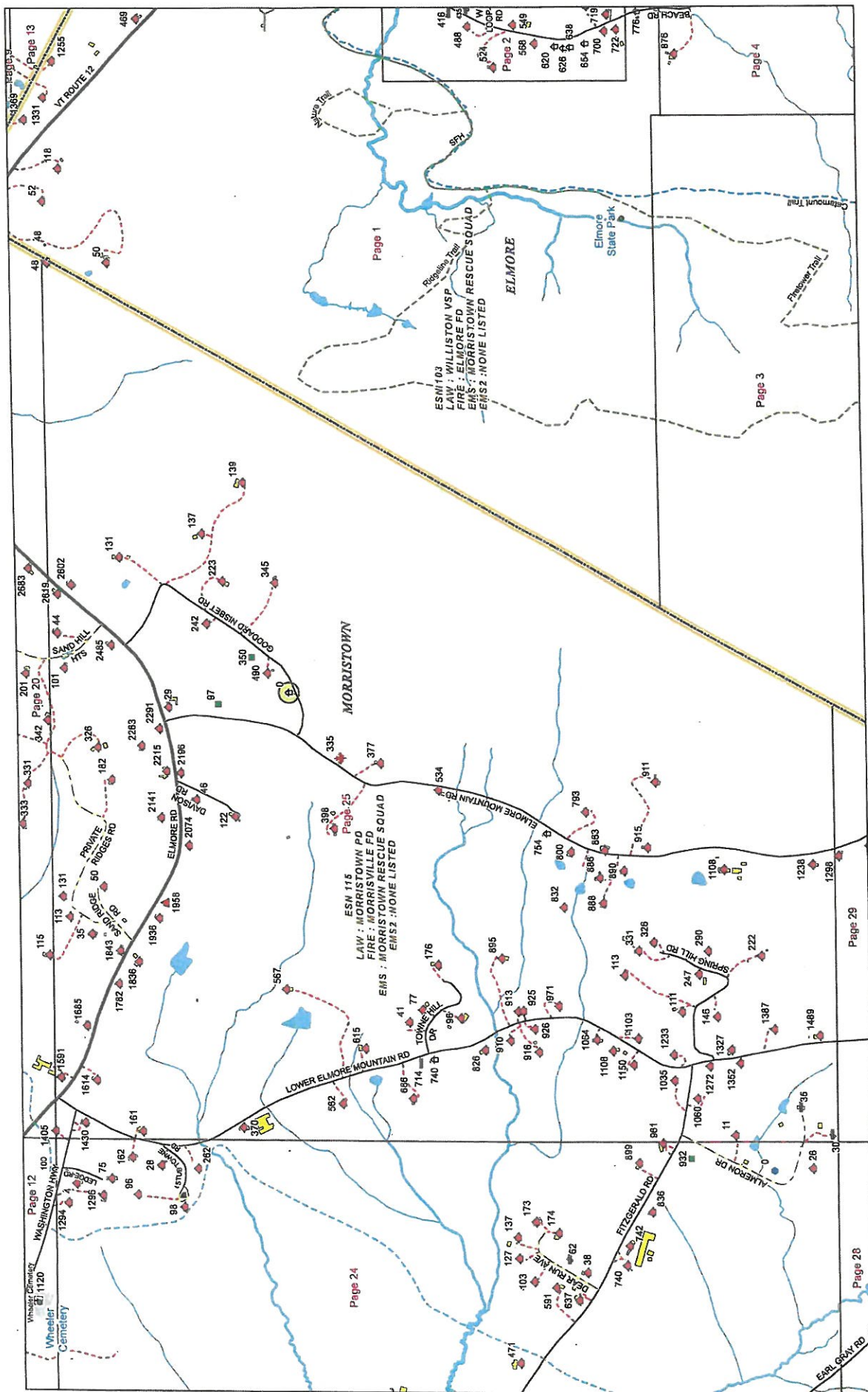


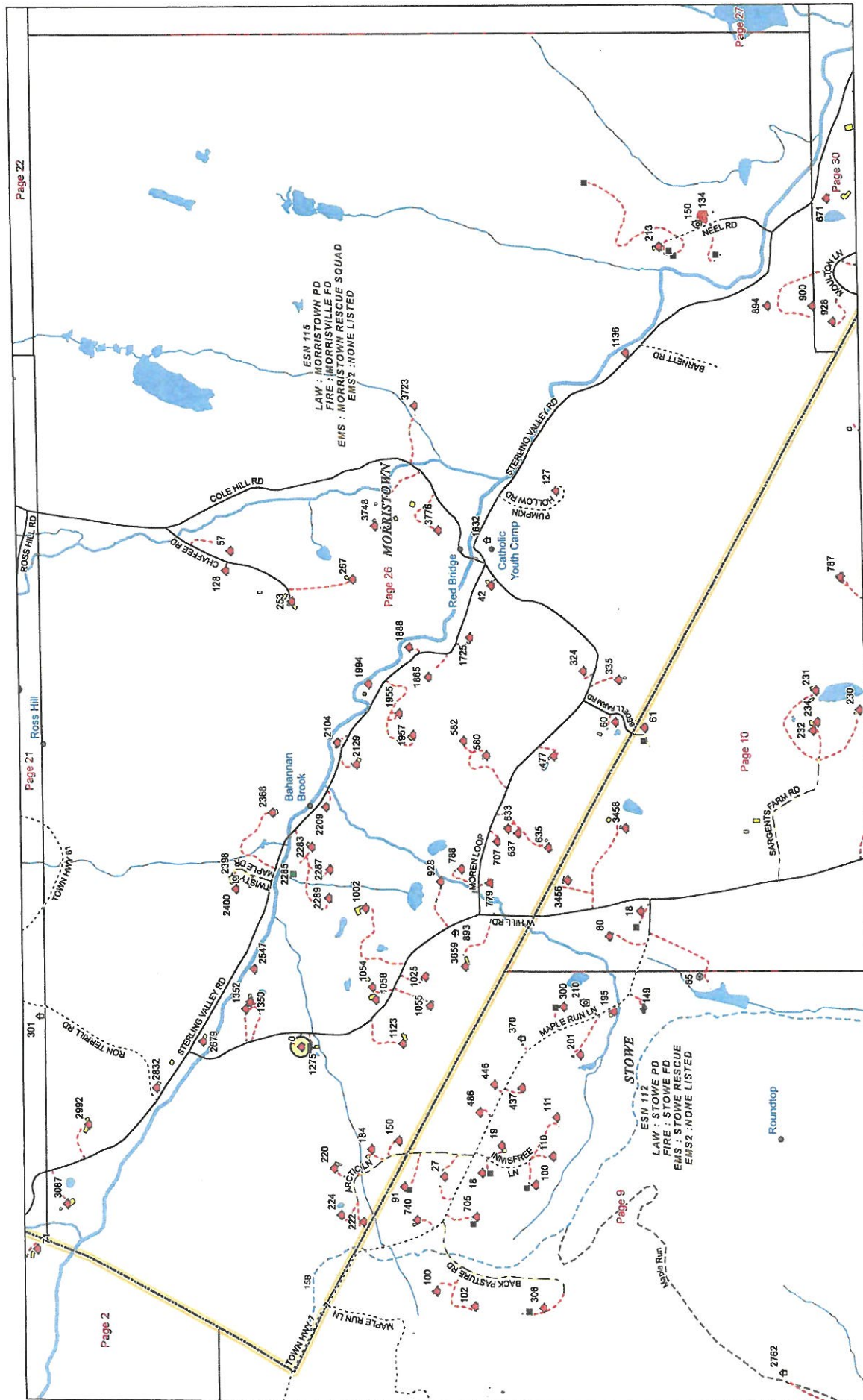


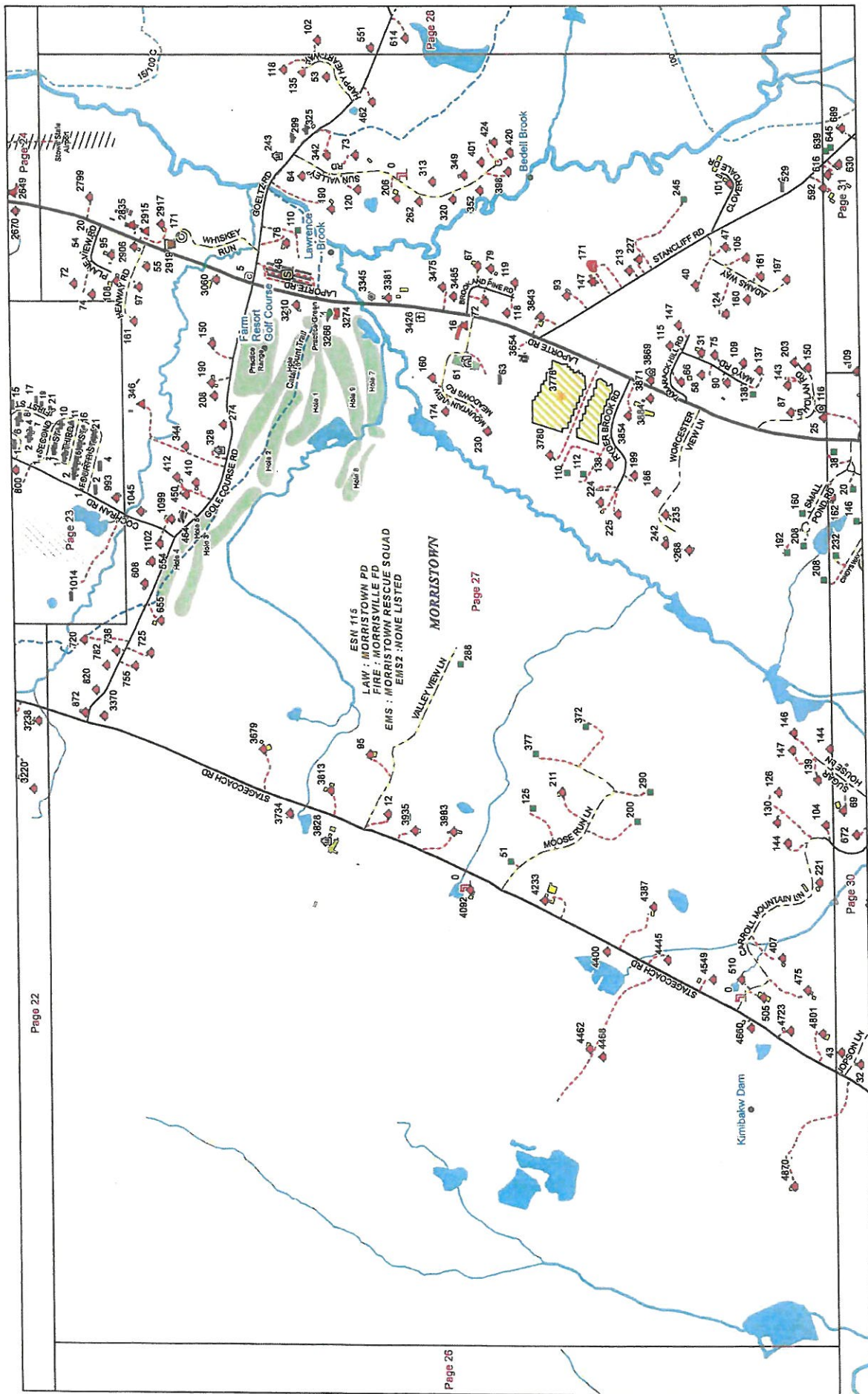


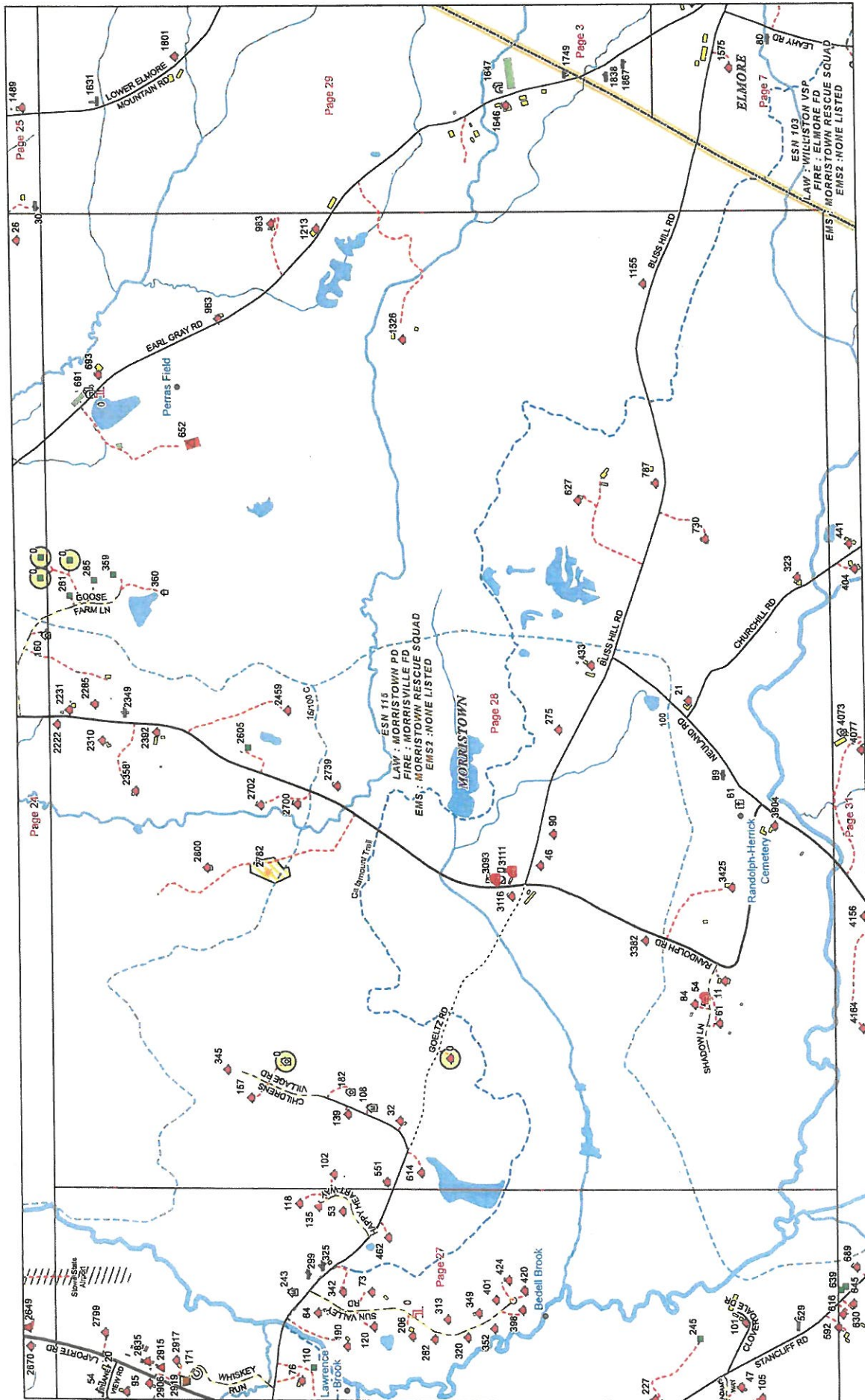


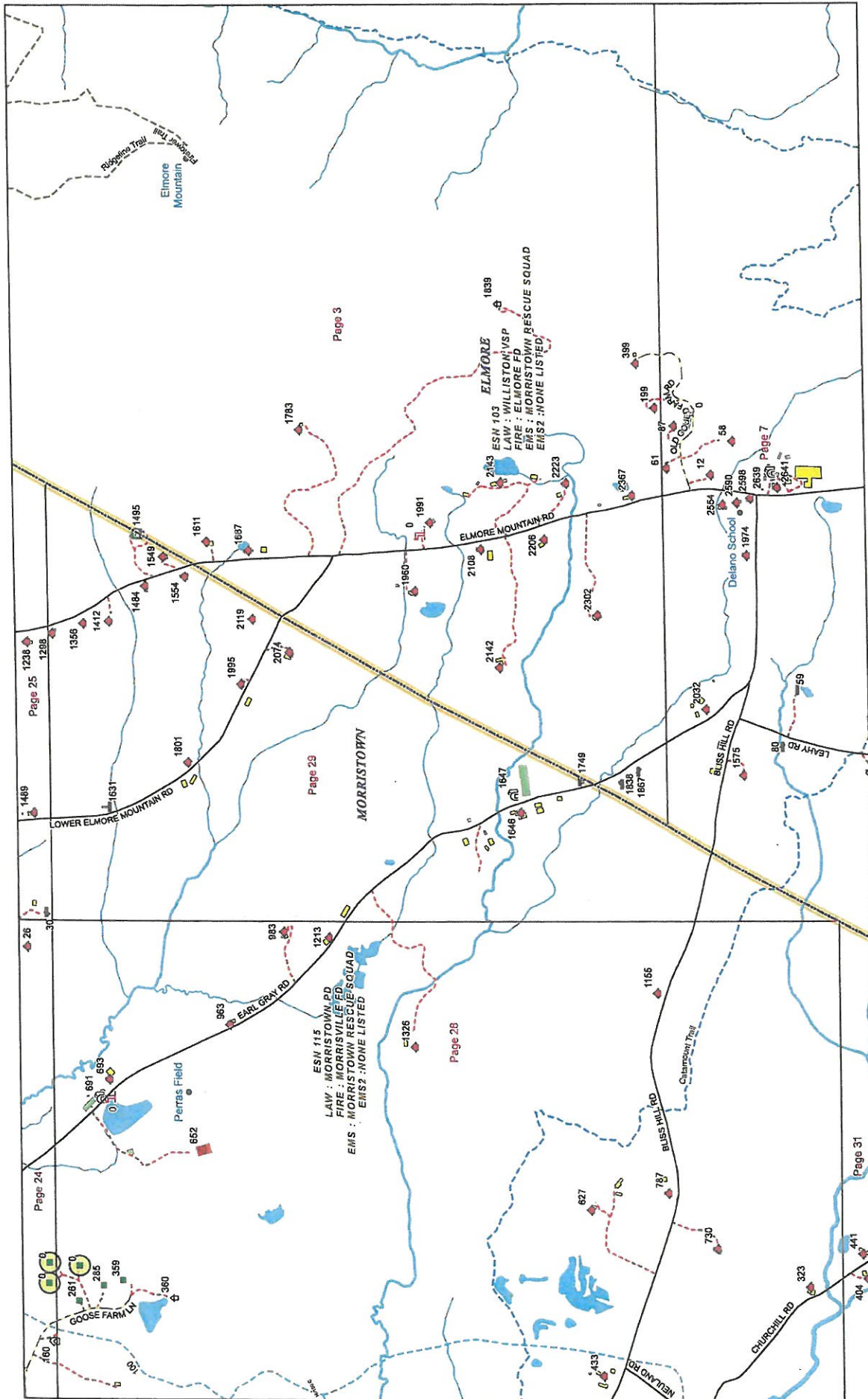


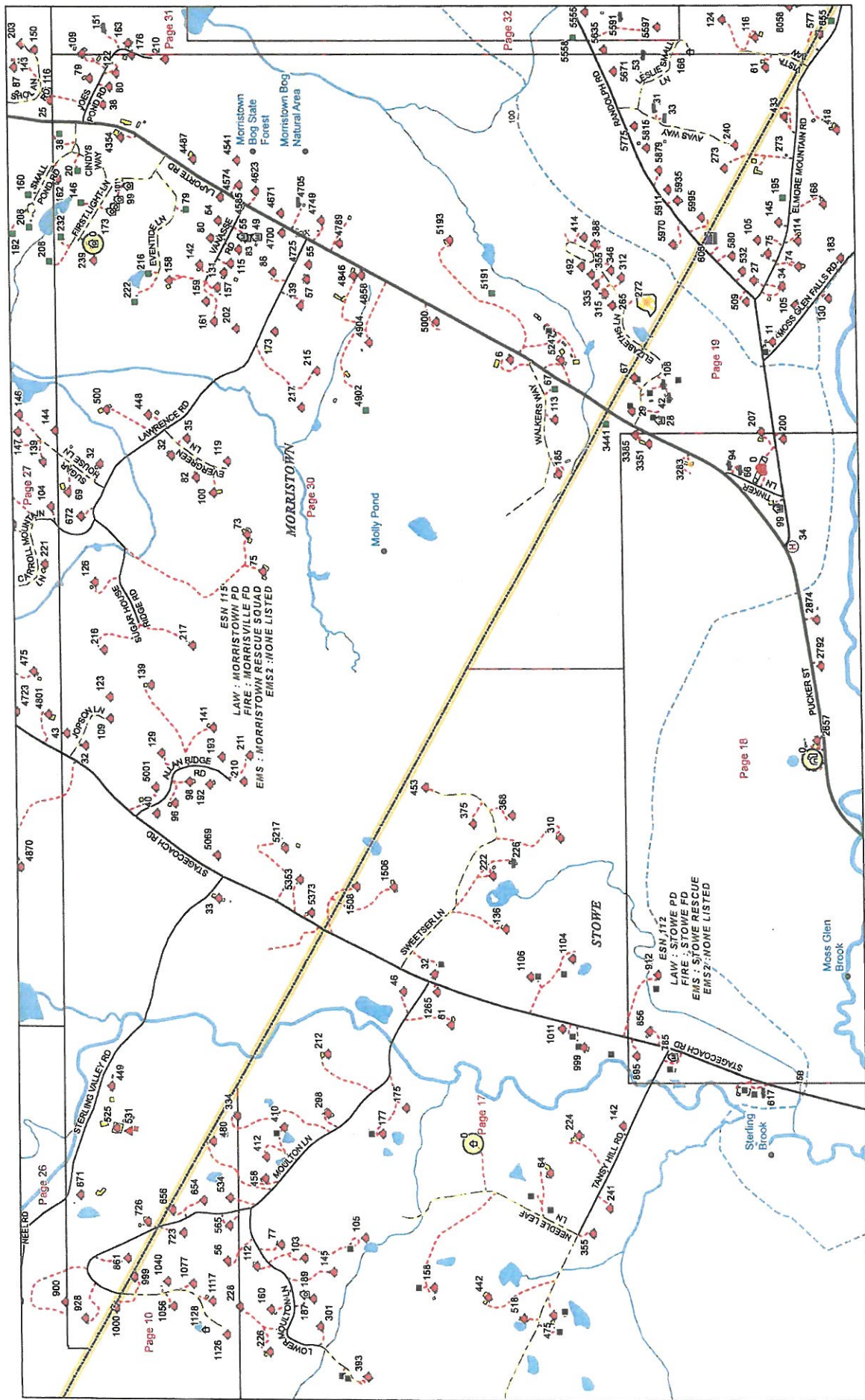


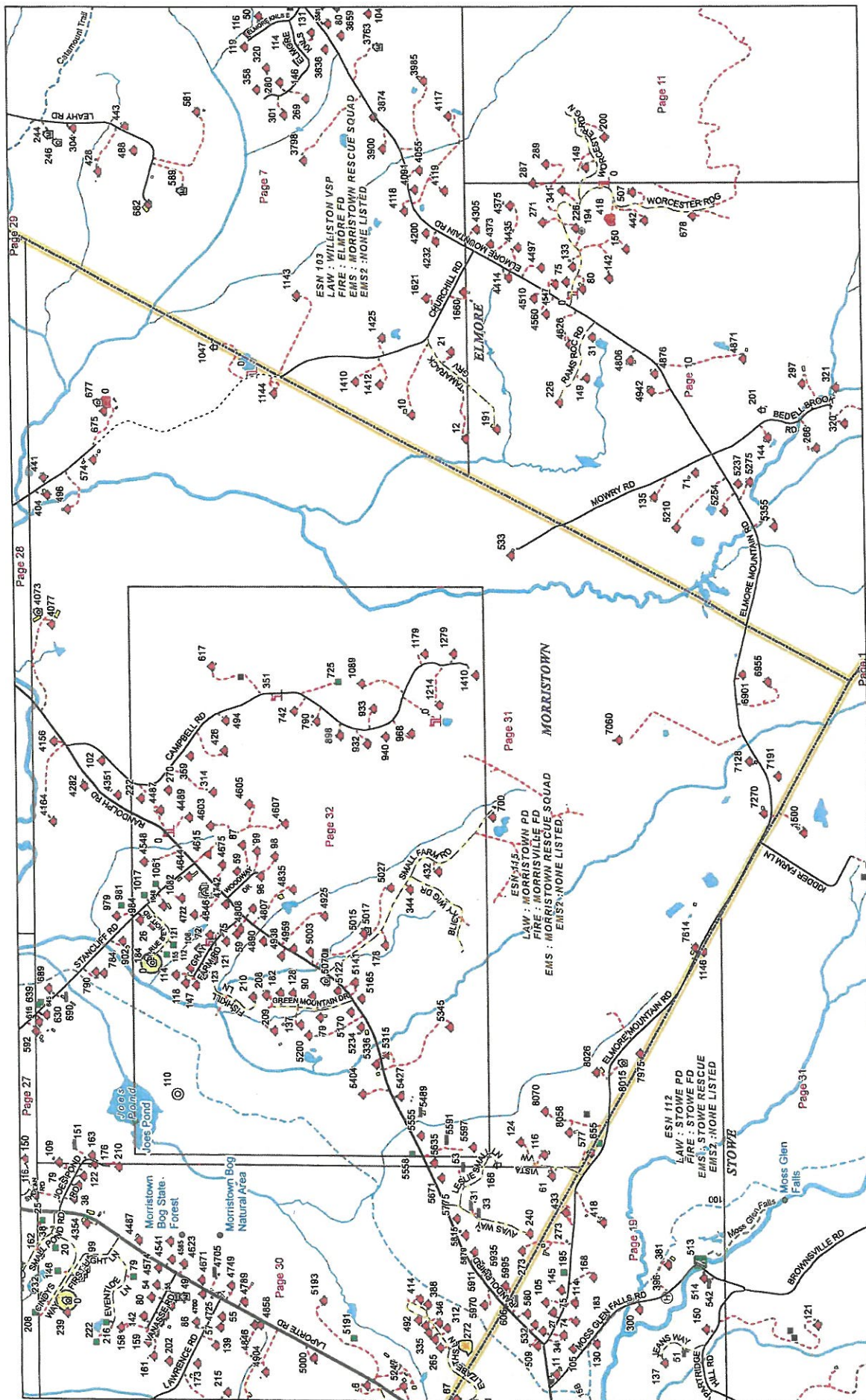


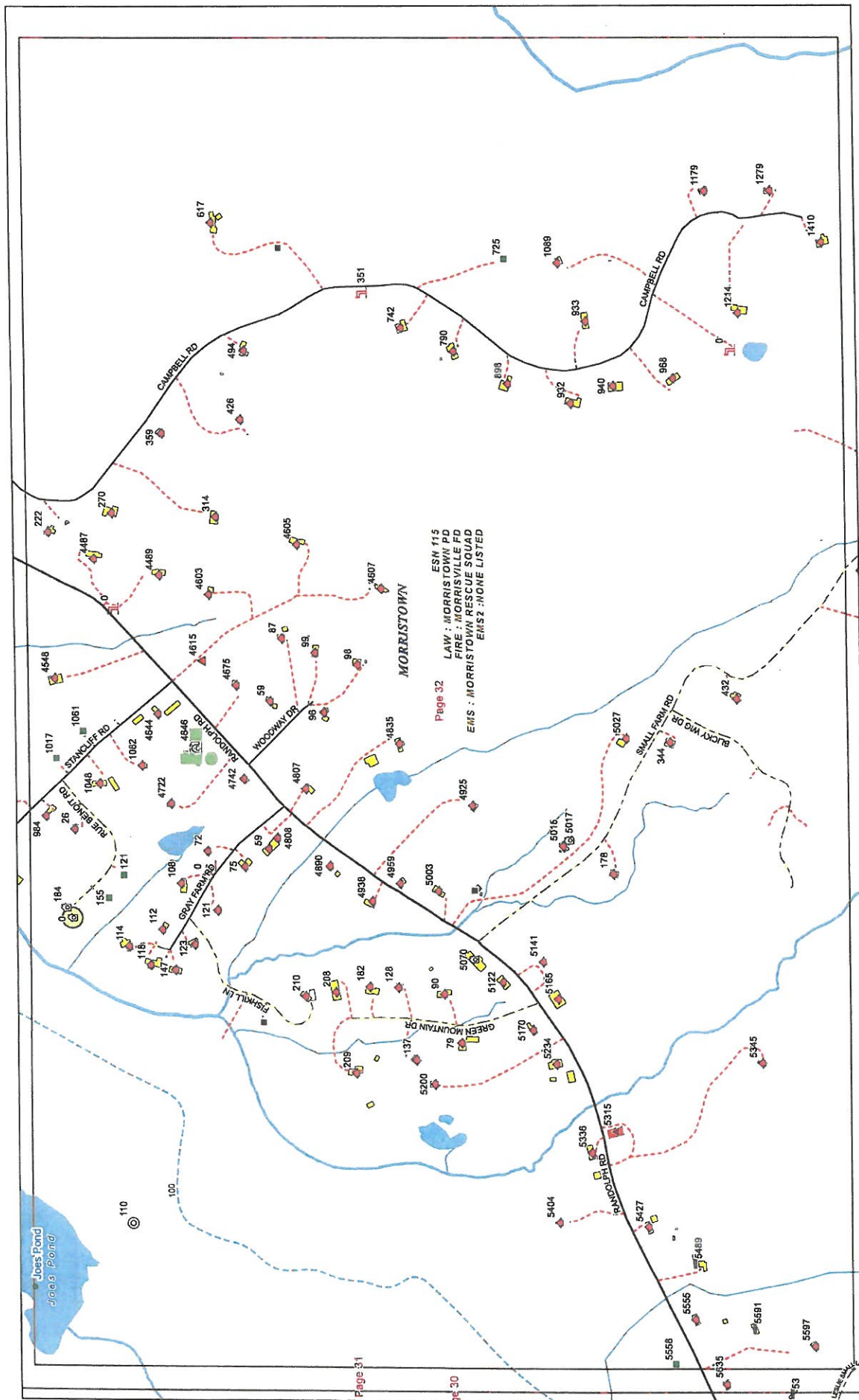












Appendix B1
Morristown Mileage 2023

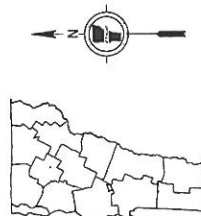
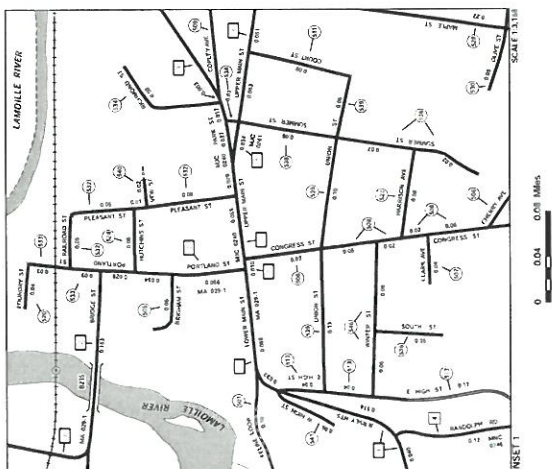


Appendix B2
Morristown Village Mileage

No.	THW.	LENGTH IN MILES	CLAS.	4	TOWN ROAD NAME
501	0.14	0.14	1	1	FLING LANE
502	0.05	0.05	1	1	B ST
503	0.05	0.05	1	1	IRISHMAN ST
504	0.06	0.06	1	1	CLARK ST
505	0.19	0.19	1	1	CLARK ST
506	0.19	0.19	1	1	CLARK ST
507	0.06	0.06	1	1	CONGREGATE ST
508	0.08	0.08	1	1	CONGREGATE ST
509	0.11	0.11	1	1	CONGREGATE ST
510	0.21	0.21	1	1	COURT ST
511	0.09	0.09	1	1	COURT ST
512	0.11	0.11	1	1	CLARK ST
513	0.25	0.25	1	1	E HIGH ST
514	0.05	0.05	1	1	CONGREGATE ST
515	0.10	0.10	1	1	CONGREGATE ST
516	0.10	0.10	1	1	CONGREGATE ST
517	0.25	0.25	1	1	FLING LANE
518	0.31	0.31	1	1	1055 ST
519	0.31	0.31	1	1	1055 ST
520	0.07	0.07	1	1	CONGREGATE ST
521	0.08	0.08	1	1	CONGREGATE ST
522	0.02	0.02	1	1	HARRISON ST
523	0.02	0.02	1	1	HARRISON ST
524	0.05	0.05	1	1	HUTCHINS ST
525	0.05	0.05	1	1	HUTCHINS ST
526	0.05	0.05	1	1	HUTCHINS ST
527	0.11	0.11	1	1	MANCIEFOLD AVE
528	0.09	0.09	1	1	MANCIEFOLD AVE
529	0.06	0.06	1	1	MANCIEFOLD AVE
530	0.05	0.05	1	1	MANCIEFOLD AVE
531	0.05	0.05	1	1	MANCIEFOLD AVE
532	0.05	0.05	1	1	MANCIEFOLD AVE
533	0.05	0.05	1	1	MANCIEFOLD AVE
534	0.09	0.09	1	1	MANCIEFOLD AVE
535	0.09	0.09	1	1	MANCIEFOLD AVE
536	0.05	0.05	1	1	MANCIEFOLD AVE
537	0.02	0.02	1	1	MANCIEFOLD AVE
538	0.02	0.02	1	1	MANCIEFOLD AVE
539	0.20	0.20	1	1	MANCIEFOLD AVE
540	0.18	0.18	1	1	MANCIEFOLD AVE
541	0.06	0.06	1	1	MANCIEFOLD AVE
542	0.17	0.17	1	1	MANCIEFOLD AVE
543	0.17	0.17	1	1	MANCIEFOLD AVE
544	0.06	0.06	1	1	MANCIEFOLD AVE
545	0.16	0.16	1	1	MANCIEFOLD AVE
546	0.16	0.16	1	1	MANCIEFOLD AVE
547	0.14	0.14	1	1	MANCIEFOLD AVE
548	0.18	0.18	1	1	MANCIEFOLD AVE
549	0.18	0.18	1	1	MANCIEFOLD AVE
550	0.05	0.05	1	1	MANCIEFOLD AVE
551	0.05	0.05	1	1	MANCIEFOLD AVE
552	0.05	0.05	1	1	MANCIEFOLD AVE
553	0.05	0.05	1	1	MANCIEFOLD AVE
554	0.05	0.05	1	1	MANCIEFOLD AVE
555	0.05	0.05	1	1	MANCIEFOLD AVE
556	0.05	0.05	1	1	MANCIEFOLD AVE
557	0.05	0.05	1	1	MANCIEFOLD AVE
558	0.05	0.05	1	1	MANCIEFOLD AVE
559	0.05	0.05	1	1	MANCIEFOLD AVE
560	0.05	0.05	1	1	MANCIEFOLD AVE
561	0.05	0.05	1	1	MANCIEFOLD AVE
562	0.05	0.05	1	1	MANCIEFOLD AVE
563	0.05	0.05	1	1	MANCIEFOLD AVE
564	0.05	0.05	1	1	MANCIEFOLD AVE
565	0.05	0.05	1	1	MANCIEFOLD AVE
566	0.05	0.05	1	1	MANCIEFOLD AVE
567	0.05	0.05	1	1	MANCIEFOLD AVE
568	0.05	0.05	1	1	MANCIEFOLD AVE
569	0.05	0.05	1	1	MANCIEFOLD AVE
570	0.05	0.05	1	1	MANCIEFOLD AVE
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573	0.05	0.05	1	1	MANCIEFOLD AVE
574	0.05	0.05	1	1	MANCIEFOLD AVE
575	0.05	0.05	1	1	MANCIEFOLD AVE
576	0.05	0.05	1	1	MANCIEFOLD AVE
577	0.05	0.05	1	1	MANCIEFOLD AVE
578	0.05	0.05	1	1	MANCIEFOLD AVE
579	0.05	0.05	1	1	MANCIEFOLD AVE
580	0.05	0.05	1	1	MANCIEFOLD AVE
581	0.05	0.05	1	1	MANCIEFOLD AVE
582	0.05	0.05	1	1	MANCIEFOLD AVE
583	0.05	0.05	1	1	MANCIEFOLD AVE
584	0.05	0.05	1	1	MANCIEFOLD AVE
585	0.05	0.05	1	1	MANCIEFOLD AVE
586	0.05	0.05	1	1	MANCIEFOLD AVE
587	0.05	0.05	1	1	MANCIEFOLD AVE
588	0.05	0.05	1	1	MANCIEFOLD AVE
589	0.05	0.05	1	1	MANCIEFOLD AVE
590	0.05	0.05	1	1	MANCIEFOLD AVE
591	0.05	0.05	1	1	MANCIEFOLD AVE
592	0.05	0.05	1	1	MANCIEFOLD AVE
593	0.05	0.05	1	1	MANCIEFOLD AVE
594	0.05	0.05	1	1	MANCIEFOLD AVE
595	0.05	0.05	1	1	MANCIEFOLD AVE
596	0.05	0.05	1	1	MANCIEFOLD AVE
597	0.05	0.05	1	1	MANCIEFOLD AVE
598	0.05	0.05	1	1	MANCIEFOLD AVE
599	0.05	0.05	1	1	MANCIEFOLD AVE
600	0.05	0.05	1	1	MANCIEFOLD AVE
TOTAL	8.16	8.00			

MILEAGE SUMMARY	
CLASS 1	
TH-1	
TH-2	
TH-3	
CLASS 2	
TH-4	
TH-5	
CLASS 3	
STATE HIGHWAY	
VT-15A	
ALT VT-100	
TOTAL	

TOTAL, TRAVELED HIGHWAYS, FEB. 10, 2023: 14,285
(includes Class 4 and Legal Trail Mileage)



VERMONT
GENERAL HIGHWAY MAP
Village of Morrisville
LAMOILLE COUNTY
Transportation District #6

Prepared by the
Vermont Agency of Transportation
Division of Policy, Planning and Intermodal Development
In cooperation with
U.S. Department of Transportation
Federal Highway Administration

As of February 10, 2023

Map prepared June 05, 2023

SCALE 1-E 72E

0.1 0.2

Miles

	0	0.1	0.2	0.3
0	0.0000	0.0000	0.0000	0.0000
1	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000
31	0.0000	0.0000	0.0000	0.0000
32	0.0000	0.0000	0.0000	0.0000
33	0.0000	0.0000	0.0000	0.0000
34	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000
36	0.0000	0.0000	0.0000	0.0000
37	0.0000	0.0000	0.0000	0.0000
38	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000
42	0.0000	0.0000	0.0000	0.0000
43	0.0000	0.0000	0.0000	0.0000
44	0.0000	0.0000	0.0000	0.0000
45	0.0000	0.0000	0.0000	0.0000
46	0.0000	0.0000	0.0000	0.0000
47	0.0000	0.0000	0.0000	0.0000
48	0.0000	0.0000	0.0000	0.0000
49	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
51	0.0000	0.0000	0.0000	0.0000
52	0.0000	0.0000	0.0000	0.0000
53	0.0000	0.0000	0.0000	0.0000
54	0.0000	0.0000	0.0000	0.0000
55	0.0000	0.0000	0.0000	0.0000
56	0.0000	0.0000	0.0000	0.0000
57	0.0000	0.0000	0.0000	0.0000
58	0.0000	0.0000	0.0000	0.0000
59	0.0000	0.0000	0.0000	0.0000
60	0.0000	0.0000	0.0000	0.0000
61	0.0000	0.0000	0.0000	0.0000
62	0.0000	0.0000	0.0000	0.0000
63	0.0000	0.0000	0.0000	0.0000
64				

Kilometers

to satisfy state or federal laws or

Appendix C
Morristown PCA Table

Street Name	Town Highway Number	Classification	Begin Milepoint	End Milepoint	Length	Curbing	Drainage	Pavement Structure	Thermal Cracking	Structural Cracking	Rating	Raveling	Ride Quality	Dominant Defect	Overall Pavement Condition	General Observations
Best Street	548	3	0.000	0.130	0.130	Y	Y	UNKNOWN	Y	N	N	Y	FAIR	RAVELING	POOR	Under construction Til portion has 3 segments, structural and block cracking, one inok.
Brick Street	2	1			0.740			UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
	5	2	0.000	0.210	0.210	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
			0.210	0.500	0.290	N	N	UNKNOWN	Y	Y	N	N	POOR	STRUCTURAL	POOR	
			0.510	0.740	0.230	Y	Y	UNKNOWN	N	N	N	Y	GOOD	RAVELING	GOOD	Back section newer, front section has minor distress
Brighton Street	505	3	0.000	0.060	0.060	N	N	UNKNOWN	N	N	N	Y	GOOD	RAVELING	GOOD	Overall good, some wheel rutting, and reflective grading
Brooklyn Street	2	1	0.000	0.250	0.250	Y	Y	UNKNOWN	N	N	N	Y	GOOD	RAVELING	GOOD	
			0.260	0.435	0.175	Y	Y	UNKNOWN	N	N	N	Y	GOOD	RAVELING	GOOD	
Cady's Falls Road	2	2	0.000	0.230	0.230	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	Overall in poor condition and ride is deteriorating
			0.260	0.500	0.240	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
			0.510	0.740	0.230	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
			0.750	1.000	0.250	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
			1.010	1.260	0.250	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
			1.270	1.520	0.250	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
			1.530	1.780	0.250	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
			1.790	2.040	0.250	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
			2.050	2.300	0.250	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
			2.310	2.560	0.250	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	Lower section is older, upper section recently resurfaced
Cassell Road	7	2	0.000	0.250	0.250	N	N	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	FAIR	
			0.260	0.500	0.240	N	N	UNKNOWN	N	Y	N	N	GOOD	N/A	GOOD	Very poor and lot of shape, fiber, rutting, embankment/ditch failure
Cherry Avenue	506	3	0.000	0.190	0.190	N	N	UNKNOWN	Y	Y	Y	N	VERY POOR	STRUCTURAL	VERY POOR	Isolated structural failures
Cherry Road	54	3	0.000	0.250	0.250	N	N	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	FAIR	
			0.260	0.500	0.240	N	N	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	FAIR	
			0.510	0.760	0.250	N	N	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	FAIR	
			0.770	1.020	0.250	N	N	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	FAIR	
			1.030	1.280	0.250	N	N	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	FAIR	
Congress Street	508	3	0.000	0.380	0.380	Y	Y	UNKNOWN	Y	Y	Y	Y	FAIR	RAVELING	POOR	Patches, wheel path failure no bound
Copier Avenue	509	3	0.000	0.220	0.220	Y	Y	UNKNOWN	Y	N	N	N	FAIR	RAVELING	POOR	Controlling side cracking
Cote Hill Road	7	3	0.000	0.100	0.100	N	N	UNKNOWN	Y	Y	N	N	POOR	STRUCTURAL	VERY POOR	Loss of shape, very poor and breaking up this pavement
			0.110	0.260	0.150	N	N	UNKNOWN	Y	Y	N	N	POOR	STRUCTURAL	VERY POOR	
			0.270	0.520	0.250	N	N	UNKNOWN	Y	Y	N	N	POOR	STRUCTURAL	VERY POOR	Subbase failure, loss of shape, thin pavement
Cottage Street	510	3	0.000	0.200	0.200	N	N	UNKNOWN	Y	Y	N	N	POOR	STRUCTURAL	POOR	Very poor pavement, extensive grading
Court Street	511	3	0.000	0.090	0.090	Y	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	Failed, extreme structural cracking, pot hole, very poor
Demars Road	88	3	0.000	0.180	0.180	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	Isolated deterioration, structural, and surface cracking
East Cherry Avenue	512	3	0.000	0.060	0.060	N	Y	UNKNOWN	Y	Y	N	Y	FAIR	RAVELING	POOR	Severe potholes, aggregate and base failure
East High Street	513	3	0.000	0.020	0.020	N	N	UNKNOWN	Y	Y	N	N	POOR	STRUCTURAL	VERY POOR	Severe potholes, aggregate and base failure
East One Street	514	3	0.000	0.020	0.020	N	N	UNKNOWN	Y	Y	N	N	POOR	STRUCTURAL	VERY POOR	Severe potholes, aggregate and base failure
Elmore Street	3	1	0.000	0.250	0.250	Y	Y	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	GOOD	Low sidewalk, minor wheel path failures
			0.260	0.500	0.240	Y	Y	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	GOOD	
			0.510	0.750	0.240	Y	Y	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	GOOD	
			0.760	1.000	0.240	Y	Y	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	GOOD	
			1.010	1.250	0.240	Y	Y	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	GOOD	
Farwood Heights	515	3	0.000	0.110	0.110	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	Extensive structural cracking, holding shape, ride is ok for now
Farwood Parkway East	516	3	0.000	0.200	0.200	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	Extensive structural cracking, holding shape, ride is ok for now
Farwood Parkway West	517	3	0.000	0.200	0.200	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	Extensive structural cracking, holding shape, ride is ok for now
Farr Avenue	518	3	0.000	0.250	0.250	Y	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	VERY POOR	Short segment good, mostly very poor beyond armory
Farr Street	519	3	0.000	0.210	0.210	N	N	UNKNOWN	Y	Y	Y	Y	POOR	STRUCTURAL	VERY POOR	Very poor, subbase failure, weak structure, longitudinal grading
Foundry Street	520	3	0.000	0.040	0.040	Y	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	Good condition, but excessive curb reveal
Garfield Road	18	3	0.000	0.260	0.260	N	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	Recently resurfaced, some chatter from the paver, bank failure at 1.1 miles
			0.270	0.510	0.240	N	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	
			0.520	0.760	0.240	N	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	
			0.770	1.010	0.240	N	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	
			1.020	1.260	0.240	N	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	
			1.270	1.510	0.240	N	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	
George Street	521	3	0.000	0.080	0.080	N	N	UNKNOWN	N	Y	N	N	POOR	STRUCTURAL	POOR	Extensive cracking, extensive rutting, lateral fault with road
Goodell Ave	84	3	0.000	0.120	0.120	N	N	UNKNOWN	Y	Y	Y	Y	FAIR	STRUCTURAL	POOR	Low volume, fatigue cracking, ride ok for road
Harold Street	16	3	0.000	0.250	0.250	Y	N	UNKNOWN	Y	Y	N	Y	GOOD	STRUCTURAL	GOOD	Nothing to report
			0.260	0.500	0.240	N	N	UNKNOWN	Y	Y	N	Y	GOOD	STRUCTURAL	GOOD	
			0.510	0.750	0.240	N	N	UNKNOWN	Y	Y	N	Y	GOOD	STRUCTURAL	GOOD	

Street Name	Town Highway Number	Classification	Begin Milepoint	End Milepoint	Length	Curbing	Drainage	Pavement Structure	Thermal Cracking	Structural Cracking	Rutting	Reinforcing	Ride Quality	Dominant Defect	Overall Pavement Condition	General Observations
Narrison Avenue	522	3	0.000	0.030	0.030	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	The structure resulting in widespread fatigue cracking
Rocky Avenue	523	3	0.000	0.250	0.250	N	N	UNKNOWN	Y	N	N	N	GOOD	THEMAL	GOOD	Overall good
Howard Street	523	3	0.000	0.050	0.050	Y	Y	UNKNOWN	Y	Y	N	N	FAIR	DELAMINATION	POOR	Fed it Washington very poor - remainder fair. Spot 50/50
Waters Street	524	3	0.000	0.050	0.050	Y	Y	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	Recently resurfaced
Industrial Park Drive	105	3	0.000	0.250	0.250	N	N	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	FAIR	
Jersey Heights	1	3	0.000	0.552	0.552	N	N	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	FAIR	
Jersey Way	525	3	0.000	0.552	0.552	Y	Y	UNKNOWN	Y	Y	Y	Y	GOOD	RAVELING	GOOD	Overall good condition
Lake Road	91	3	0.000	0.120	0.120	N	N	UNKNOWN	N	Y	N	N	GOOD	STRUCTURAL	VERY POOR	Very poor, subbase failure, weak structure, longitudinal cracking
Uncle Street	526	3	0.000	0.050	0.050	N	N	UNKNOWN	N	Y	N	N	GOOD	STRUCTURAL	VERY POOR	Paved with highway project, holding shape and condition
Lower Limone Mountain Road	37	3	0.000	1.240	1.240	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	Slide is tolerable for the road
			0.000	0.250	0.250	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	Mostly very poor
			0.250	0.750	0.750	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
			0.750	1.000	1.000	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
			1.000	1.240	1.240	N	N	UNKNOWN	Y	Y	N	N	POOR	STRUCTURAL	POOR	
Lower Main Street	1	1	0.000	0.098	0.098	Y	Y	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
			0.000	0.098	0.098	Y	Y	UNKNOWN	Y	Y	N	N	GOOD	RAVELING	GOOD	Nothing to report
Marshall Avenue	527	3	0.000	0.110	0.110	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	Two sections, first by Washington is good, second by highway project is poor
Maple Street	528	3	0.000	0.210	0.210	Y	Y	UNKNOWN	Y	Y	N	N	FAIR	THEMAL	FAIR	Reflective cracking associated with drainage, centerline cracking, isolated structural failures
			0.210	0.440	0.440	Y	Y	UNKNOWN	Y	Y	N	N	FAIR	THEMAL	FAIR	
Merrillman Corners Road	33	3	0.000	0.550	0.550	N	N	UNKNOWN	Y	N	N	N	GOOD	THEMAL	GOOD	VT 100 B bridge fair, remainder is good
			0.550	0.660	0.660	N	N	UNKNOWN	Y	N	N	N	GOOD	THEMAL	GOOD	crack seal candidate
Union Avenue	85	3	0.000	0.660	0.660	N	N	UNKNOWN	Y	N	N	N	GOOD	THEMAL	GOOD	
			0.660	0.840	0.840	N	N	UNKNOWN	Y	N	N	N	GOOD	THEMAL	GOOD	Overall good condition, light wear in wheel paths, minor cracking
Nearby Eye Road	11	3	0.000	0.350	0.350	N	N	UNKNOWN	Y	Y	N	N	GOOD	RAVELING	GOOD	
			0.350	0.500	0.500	N	N	UNKNOWN	Y	Y	N	N	GOOD	RAVELING	GOOD	Very poor with fatigue cracking, loss of shape, rough ride
Northgate Avenue	101	3	0.000	0.110	0.110	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
Old Cemetery Road	531	3	0.000	0.090	0.090	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
Orin Street	530	3	0.000	0.090	0.090	Y	Y	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
Pine Avenue	531	3	0.000	0.130	0.130	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
Park Street	532	3	0.000	0.266	0.266	Y	Y	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
Pleasant Street	532	3	0.000	0.180	0.180	Y	Y	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	Overall very good
Pope Meadow Drive	532	3	0.000	0.240	0.240	N	N	UNKNOWN	N	Y	N	N	GOOD	STRUCTURAL	FAIR	Random cracking, centerline joint cracking, rutting, reflective cracking
Portland Street	533	3	0.000	0.128	0.128	Y	Y	UNKNOWN	Y	Y	N	N	GOOD	STRUCTURAL	FAIR	Holding shape, reflective cracking
			0.128	0.266	0.266	Y	Y	UNKNOWN	N	N	N	N	GOOD	THEMAL	GOOD	Very poor, reflective cracking, rutting, loss of shape
			0.266	0.490	0.490	Y	Y	UNKNOWN	N	N	N	N	GOOD	THEMAL	GOOD	Some reflective cracking
			0.490	0.640	0.640	N	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	Isolated reflective cracking
			0.640	0.840	0.840	Y	Y	UNKNOWN	N	N	N	N	GOOD	THEMAL	GOOD	Isolate centerline cracking, minor cracking, overall good condition
			0.840	1.090	1.090	Y	Y	UNKNOWN	N	N	N	N	GOOD	THEMAL	GOOD	Half of this line is structural poor
			1.090	1.240	1.240	N	N	UNKNOWN	N	Y	N	N	GOOD	STRUCTURAL	FAIR	Building narrower shoulders, deterioration of this overlay, inverted crown, centerline defects
			1.240	1.390	1.390	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	FAIR	Multiple sections that vary in condition, some spot leveling performed
			1.390	1.540	1.540	N	N	UNKNOWN	N	Y	N	N	POOR	STRUCTURAL	VERY POOR	
			1.540	1.790	1.790	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			1.790	2.040	2.040	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			2.040	2.290	2.290	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			2.290	2.540	2.540	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			2.540	2.790	2.790	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			2.790	3.040	3.040	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			3.040	3.290	3.290	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			3.290	3.540	3.540	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			3.540	3.790	3.790	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			3.790	4.040	4.040	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			4.040	4.290	4.290	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			4.290	4.540	4.540	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			4.540	4.790	4.790	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			4.790	5.040	5.040	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			5.040	5.290	5.290	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			5.290	5.540	5.540	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			5.540	5.790	5.790	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	
			5.790	6.040	6.040	N	N	UNKNOWN	N	Y	N	N	FAIR	STRUCTURAL	POOR	

Street Name	Town Highway Number	Classification	Begin Milepoint	End Milepoint	Length	Curbing	Drainage	Pavement Structure	Thermal Cracking	Structural Cracking	rutting	Revolving	Ride Quality	Dominant Defect	Overall Pavement Condition	General Observations
Richmond Street	534	3	0.000	0.000	0.000	N	N	UNKNOWN	Y	Y	Y	N	VERY POOR	SHAPE	VERY POOR	Heaving and heaving, and of shape, very poor ride quality
Silver Ridge Road	12	3	0.000	0.250	0.250	N	N	UNKNOWN	Y	Y	Y	N	FAIR	STRUCTURAL	POOR	Northbound lane has more fatigue cracking, rutting at gravel very rough
South Street	536	3	0.000	0.050	0.050	Y	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	New development, large curb reveal, maybe additional pavement? Some delamination and potholes, section west of VT 100 curbed, fewer approaches to VT 100
Stallard Avenue	23	3	0.250	0.100	0.150	N	N	UNKNOWN	Y	Y	Y	Y	FAIR	STRUCTURAL	FAIR	Nothing to report
Stagecoach Road	5	2	0.000	0.250	0.250	N	N	UNKNOWN	Y	Y	N	Y	FAIR	STRUCTURAL	FAIR	
			0.250	0.500	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			0.500	0.750	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			0.750	1.000	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			1.000	1.250	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			1.250	1.500	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			1.500	1.750	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			1.750	2.000	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			2.000	2.250	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			2.250	2.500	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			2.500	2.750	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			2.750	3.000	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			3.000	3.250	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			3.250	3.500	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			3.500	3.750	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			3.750	4.000	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			4.000	4.250	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			4.250	4.500	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			4.500	4.750	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
			4.750	5.000	0.250	N	N	UNKNOWN	N	Y	N	Y	POOR	STRUCTURAL	VERY POOR	
Standfill Road	77	3	0.000	0.100	0.100	N	N	UNKNOWN	Y	Y	N	N	GOOD	THERMAL	GOOD	Two segments, one fair the other very poor, reflective cracking
Summer Street	538	3	0.000	0.100	0.100	Y	Y	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
Tommy Hill Road	13	3	0.000	0.250	0.250	N	N	UNKNOWN	Y	Y	Y	N	POOR	STRUCTURAL	POOR	
Union Street	539	3	0.250	0.250	0.000	N	N	UNKNOWN	Y	Y	Y	N	VERY POOR	STRUCTURAL	VERY POOR	West end has curb/ramp, not on east end, reflective cracking, isolated thermal and structural
Upper Main Street	1	3	0.000	0.100	0.100	Y	Y	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	FAIR	Nothing to report
VFW Street	540	3	0.000	0.000	0.000	N	N	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	Recessed curb faces
West High Street	541	3	0.000	0.000	0.000	Y	N	UNKNOWN	Y	N	N	Y	FAIR	BARRELING	FAIR	Centerline cracking, stripping of asphalt
Webb Avenue	542	3	0.000	0.120	0.120	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	Failure cracking at centerline, suggests weak asphalt base
Webb Road	23	3	0.000	0.250	0.250	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	VERY POOR	Loss of shape, very poor, breaking up, thin pavement
			0.250	0.500	0.250	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
			0.500	0.750	0.250	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
			0.750	1.000	0.250	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
			1.000	1.250	0.250	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
Washington Highway	543	3	1.250	1.400	0.150	N	N	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	Pavement transition at end very poor, don't end at bar?
			0.000	0.250	0.250	Y	Y	UNKNOWN	N	N	N	N	GOOD	N/A	GOOD	
			0.250	0.500	0.250	Y	Y	UNKNOWN	Y	Y	N	N	GOOD	THERMAL	GOOD	Failure cracking at centerline, suggests weak asphalt base
			0.500	0.750	0.250	N	N	UNKNOWN	Y	Y	N	Y	POOR	STRUCTURAL	POOR	Sidewalk flush with pavement, back cracking
Wilkes Street	545	3	0.000	0.160	0.160	N	Y	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	
Winter Street	546	3	0.000	0.160	0.160	Y	Y	UNKNOWN	Y	Y	N	N	VERY POOR	STRUCTURAL	VERY POOR	
Woods Edge Road	547	3	0.000	0.050	0.050	N	N	UNKNOWN	Y	Y	N	N	FAIR	STRUCTURAL	POOR	

GPI

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CLIFTON G. PARKER, 1906-1988

OCTOBER 16, 2024

Brent Raymond
Morristown Town Manager
43 Portland Street
Morrisville, Vermont 05661

Re: Jersey Heights/Best Street Public Right of Way

Dear Brent;

Pursuant to our phone conversation I have reviewed the Sargent Law Office, PLLC file regarding the history of the Town's acquisition of roads within the H.A. Manosh, Inc. Jersey Heights residential subdivision.

Please see attached a summary of my findings.

Please let me know if you need any further information from our files.

Thank you,
Julia J. Compagna, Esq. (S)
Associate Attorney

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SUMMARY

After the Morristown Selectboard duly warned a NOTICE OF HEARING TO LAY OUT A TOWN HIGHWAY pursuant to the authority of Title 19, Vermont Statutes Annotated, to determine if the public good, necessity, and convenience of the inhabitants of the Town of Morristown required the following highways be laid out: "Access Strip from Route 100," "Jersey Way, So-Called," and "Best Street Extension, So-Called" a public meeting was held on October 22, 2007.

The warned public hearing was followed by a Selectboard Report and Order that "the highway as laid out and surveyed, be established." The acquisition of land from H.A. Manosh, Inc. was for public highway purposes.

A Warranty Deed from H. A. Manosh, Inc. to Town of Morristown dated November 14, 2007 was recorded in Book 144, Page 533, Morristown Land Records. It contains metes and bounds descriptions of the "The Access Strip from Route 100, "Jersey Way, So-Called" and "Foss Street, So-Called Best Street Extension," acquired by the Town of Morristown. These lands were a *portion* of the premises developed as a residential subdivision by H.A. Manosh, Inc.

The above warranty deed reserves in part a 50' Right of Way to H.A. Manosh, Inc. for access to lands retained by Grantor, H.A. Manosh, Inc. Said right of way is located between Lots 9 and 10 and were retained as access for possible future development by H.A. Manosh, Inc.

The parcel acquired by the Town of Morristown for public highway purposes is subject to terms and conditions of permits of record including State of Vermont Subdivision, State of Vermont Land Use, and *State of Vermont Stormwater Discharge* permits. The Town of Morristown recognizes that the purchase of the parcel of land they acquired for public highway purposes, requires the Town to contribute a percentage share in the operation of the stormwater discharge system serving the subdivision, pursuant to Discharge Permit #3015.

The residential parcels/lots in the subdivision are also subject to terms and conditions of the same permits of record including State of Vermont Subdivision, State of Vermont Land Use, and *State of Vermont Stormwater Discharge* permits. The private lots are required to contribute a percentage share in the operation of the stormwater discharge system serving the subdivision, pursuant to Discharge Permit #3015.

Non-compliance with any of the above-referenced permits affects the marketability (ability to sell or refinance property) of each parcel in the subdivision.

For purposes of permit oversight, the Town became the "permittee" for Discharge Permit #3015. Assuming oversight of a permit, does not automatically mean the Town assumed 100% ownership of the stormwater discharge system.

In a September 17, 2007 directive from James Pease, Analyst-Biologist/Stormwater Section, Vermont Department of Environmental Conservation to the Town of Morristown, Mr. Pease advised **"They (the Town) are responsible for what is in the public right of way as far as drainage infrastructure, annual inspection and annual fees per impervious acre. There would need to be a homeowners' association to cover the fees and any infrastructure in private ownership."** *A significant portion of the stormwater system is located on privately owned lots outside the public right of way.*

The State of Vermont has since revised their requirement that a homeowners' association must form, and has acknowledged that a public/private partnership between the Town and the residential lot owners

could exist simply by virtue of the existing easements on each lot for the stormwater system infrastructure.

Engineer Tyler Mumley conducted an analysis of what percentage of stormwater system cost responsibility lies with the Town, and what percentage of stormwater cost responsibility lies with private lot owners. He did so by calculating overall impervious surfaces (paved roads, paved private driveways, rooftops, etc.) and then determined how much was attributed to the public highway right of way, including sidewalks. This resulted in the 34%/66% ratio presented in public hearings on a proposed special tax assessment for private lot owners. This analysis resulted in a more favorable ratio for private lot owners, as opposed to other methods of calculating percentages.

By working as a public/private partnership, residential lot owners benefit from access to public grant money for costs associated with bringing the system into permit compliance, which they would otherwise have to pay for without the benefit of grant assistance.

By working as a public/private partnership, residential lot owners have the ability to bond their costs over a 20-year period as a special tax assessment, thereby paying small increments over a period of time.

