



City of Keene, New Hampshire

AMENDED AGENDA

CONSERVATION COMMISSION

Monday, December 18, 2017

4:30 PM

**2nd Floor Conference Room
City Hall**

Commission Members

Thomas P. Haynes, Chair
Brian Reilly
Councilor George Hansel
Councilor Jan Manwaring

Andrew Madison
Denise Burchsted
Eloise Clark, Alternate
Alexander Von Plinsky IV, Alternate

- 1. Call to Order**
- 2. Minutes** – November 20, 2017
- 3. Petition from Eversource Energy** – Related to the trimming and removal of trees and brush adjacent to and beneath its power lines along scenic roads
- 4. Conservation Master Plan Discussion with Barbara Richter of the NH Association of Conservation Commissions**
- 5. Stoddard Conservation Commission Letter** – Request to support HB 1343 related to protection of beavers
- 6. Election of Chair and Vice Chair**
- 7. Adoption of 2018 Meeting Calendar**
- 8. Aquatic Resource Mitigation Subcommittee Update**
- 9. Land Prioritization Criteria**
- 10. Staff Updates**
 - a) Greater Goose Pond Forest Stewardship Plan
 - b) West Street Dam
- 11. New or Other Business**
- 12. Adjournment** - Next meeting date **TUESDAY**, January 16, 2018

City of Keene
New Hampshire

CONSERVATION COMMISSION
MEETING MINUTES

Monday, November 20, 2017

4:30 PM

2nd Floor Conference Room,
City Hall

Members Present:

Thomas Haynes, Chair
Sadie Butler, Vice Chair
Councilor Jan Manwaring (Left Early)
Councilor George Hansel
Denise Burchsted
Brian Reilly
Andrew Madison
Eloise Clark, Alternate
Spark Von Plinsky IV, Alternate

Staff Present:

Tara Kessler, Planner

Members Not Present:

1) Call to Order

Chair Haynes called the meeting to order at 4:30 PM.

2) Minutes – October 16, 2017

Councilor Hansel made a motion to accept the minutes of October 16, 2017, which was seconded by Councilor Manwaring.

Chair Haynes clarified on page 2/6 (4th paragraph) it says, “Eversource will need to dig a three to four foot trench to place conduits.” This should be clarified to say the trench will be three to four feet deep.

The motion to approve the minutes as amended carried unanimously.

3) Wetland Permit by Notification – City of Keene Maintenance Dredging of Ash Swamp Brook Tax Ditch

Ms. Kessler shared information from her meeting with the City Engineer about this application. This is an application from the City of Keene to the NH Department of Environmental Services (DES) for the tax ditch portion of Ash Swamp Brook, which was dredged for emergency repair. Therefore this permit is retroactive, as the work already occurred. This permit was a condition of the emergency approval that DES granted the City for this work. In October 2017, there was a water main break that caused a drop in water pressure throughout the City. The Public Works Department found this was a major

break in the Ash Swamp Brook, in the location where a main crosses this tax ditch. The main split lengthwise (4-5 feet long split). Approximately 500,000 gallons of water were lost in the time it took to find the break and isolate the valves. That pipe had been buried 3-4 feet below the stream bed and when water was released the earth around the pipe eroded, depositing sediment in the tax ditch downstream. The City stabilized the embankments and had to do extra work where the pipe broke to recreate the flowline of the ditch. The berm of sediment downstream from the break was so tall that it would have kept water upstream from flowing. The City removed 10-15 inches of sediment along the length of the swale the week after the water main break with emergency approval from DES. As a condition of that approval, the City must submit a Permit by Notification within 30 days of completing the repair. The NH DES is not seeking Commission comments at this time but keeping them apprised of the situation.

Chair Haynes noted pictures and a map were included in the meeting packet to demonstrate this work near Meadow Road.

4) Monadnock Conservancy Request for Financial Support – Belvedere Road Parcel Acquisition

Chair Haynes welcomed Anne McBride, Land Protection Director for the Monadnock Conservancy. Ms. McBride explained the Conservancy sometimes needs financial assistance when doing work in the City of Keene, which is why she was at this meeting. The Conservancy is working to acquire Patricia Lake's property in northeast Keene, which is near the greater Goose Pond property owned by the City and the Gilsum town line. She showed an adjacent property on the map that the Conservancy has used for research, planting trees, and as a demonstration forest. Three years ago, Ms. Lake approached the Conservancy about a right-of-way through the Conservancy property to reach her property for a timber harvest. Now, Ms. Lake would like to sell her property, ideally with a conservation outcome. The Conservancy was her first choice as they are already an abutter. This property has already been reviewed by the Conservancy Land's Committee and Board of Trustees for all criteria. The Conservancy is hopeful for the opportunity to acquire this land and expand the adjacent demonstration forest. They are under contract and hope to close the purchase the land before February 2018. The Conservancy is not usually in a position to purchase land so quickly because grant writing and fundraising are required; however, the Conservancy was given a bequest three years ago that was kept undesignated and will be used toward this acquisition. Still, that is not enough money to complete the purchase. Thus, Ms. McBride requested assistance from the Commission to complete this land purchase. The property is 180 acres in total, with 130 acres in Keene and 50 acres in Gilsum. There are seven separate tax lots on the property, and it scores highly on the NH Wildlife Action Plan with both Tier 1 and Tier 2 landscapes.

Councilor Hansel asked the assessed value of the property. Ms. McBride replied she did not have the exact number with her, but there was a private appraisal.

Dr. Reilly asked about the logging history of the property. Ms. McBride replied there was logging to create a right-of-way from the Conservancy property to the Lake property

approximately three years ago and that was phase one of a three-phase harvest the Lake's were planning and the only phase to have been completed (there is still good standing oak on the property).

Councilor Hansel asked if there will be any access for recreational use on the property. Ms. McBride replied yes, there is a kiosk and small parking area with mostly woods roads, but few trails. This is open to the public currently for hunting; some areas are gated off for tree planting. This destination is more for research than recreation but is open for use. Councilor Hansel said this is a good application of the Land Use Change Tax Fund. He has always felt that if land is taken out of current use (or a conserved state) it makes sense to apply the funding placed in the Land Use Change Tax Fund from this transfer to apply towards land conservation somewhere else in the City. He does not know if the Commission can make the decision to provide this funding, but he anticipates they can write a letter to the Finance, Organization, and Planning Committee supporting this proposal. Ms. Kessler replied the Commission would be recommending that City Council allocate \$25,000 for this purpose from the Land Use Change Tax Fund. The current balance in this fund for Conservation purposes is approximately \$92,500. This total accounts for the \$30,000 recently allocated for the Goose Pond Forest Plan. It is expected that the transfer of land out of current use for Hillside Village at Wyman Road will contribute approximately \$60,000 to the Land Use Change Tax Conservation Fund. Councilor Hansel said he supports this but would like the City Assessor to review the appraisal and evaluation to ensure the money is spent appropriately.

Mr. Von Plinsky agreed with Councilor Hansel that this is an ideal use of funding. Chair Haynes agreed and added this is increasing connectivity to Goose Pond. Ms. McBride shared a topographic map of greater Goose Pond, how it connects with Surrey Lake, the Gilsum forest connection work, and more.

Ms. Kessler asked who owns the land between Goose Pond and the property being purchased. Ms. McBride replied there are at least three tax parcels and several smaller lots scattered throughout. Ms. Kessler asked if there is frontage for those smaller lots. Ms. McBride replied she believes there are class six roads that are unlikely to be developed. Councilor Manwaring agreed and said somewhere along Gilsum Road the City was gifted one acre of land. The Conservancy is interested in helping connect lands in conservation but some smaller parcels are not valuable enough.

Chair Haynes asked if the Conservancy has also approached the town of Gilsum for help. Ms. McBride replied she has worked with them in the past and they generally do not have a lot of funding. They have never gone through the process of approving funds due to political constraints. Walking Gilsum through the process would demand too much Conservancy staff time on the part of the Conservancy.

Councilor Hansel made a motion for the Conservation Commission to recommend that City Council allocate \$25,000 of the Land Use Change Tax Fund for the purposes of providing financial support to the Monadnock Conservancy in its effort to acquire 130 acres in northeast Keene and 50 acres in Gilsum from Patricia Lake for permanent

conservation, pending City staff approval of independent land assessment from the conservancy. The motion was seconded by Andrew Madison and carried unanimously.

5) Discussion with Emily Vogler Regarding Potential Research Project on West Street Dam

Chair Haynes welcomed Emily Vogler, assistant professor and head of the landscape architecture department at the Rhode Island School of Design (RISD). She is working on a research project called The Future of Dams, which is made up of more than 40 researchers – biophysical scientists, social scientists, and her team of designers and public participation in dam removal. Her team is specifically focusing on the use of public charrettes (a way of quickly generating design ideas while integrating the interests of a diverse group of people to create an innovative atmosphere where diverse stakeholders can collaborate to develop visions for the future) in the decision making process. As a designer, she has facilitated many of these charrettes to engage the public in decisions about public spaces. She thinks charrettes are relevant for dam decisions because there are often diverse stakeholders. The goal of her research is to help facilitate the community decision making process and to help communities understand the tradeoffs of alternative options (fish passage, hydropower, etc.). The researchers have no desired outcome, only a goal to facilitate and build knowledge about the public process that can help other communities make decisions. The specific aspects of her research include breaking down the charrette into three components:

- Visualization
 - Do visualizations have an impact on decision making?
 - Still pictures that create a visual of what the future might look like given different alternatives and animations to show the physical landscape changing with different alternatives.
- Communication
 - What are the ways we can improve communication during the public process?
 - A series of lab experiments before the charrettes to test the methods of helping people reach an agreement; trying to understand the dynamics of engaging people with diverse perspectives in conversations.
- Design
 - How can design be used to move beyond the binaries in dam decision making?
 - There are often many more options than just leaving or removing a dam; this design engagement process can help communities move beyond the binaries.
 - How can design be used as a tool to reinterpret the landscape?
 - How to create sense of place and community within the landscape; how to create this biophysical and cultural sense of place around dams or dam removal.

Ms. Vogler's team has been looking for a place to conduct this research, which they think can help communities like Keene in making dam removal decisions. Through her conversations with Dr. Burchsted about the West Street Dam, she thought Keene could

benefit from this process and help build knowledge for other communities. The charrette would include two workshops: 1) bring the community together to learn about the dam, share values, brainstorm possibilities through sketches and conversations, encourage “what if” thinking; 2) help the community to visualize their future ideas and tradeoffs. This allows the space to introduce people to all the options as well as their impacts. Ms. Vogler’s goal is to create an open-source toolkit for these charrettes to share with other communities in New England. She provided an example of this project in Rhode Island. She thinks there is a great need for help in making these decisions and for communities to learn from each other. Her team is in the process of choosing a dam site with the goal of beginning research and visualizations in the winter followed by the two charrettes at the end of spring. This is flexible, however, based on the City’s schedule. The goal is to use what is developed in the charrette to create a larger community survey to validate the charrette process with the community. The survey would also help to test the visualization methodology. She spent the day of this meeting exploring the West Street Dam site and history and is hopeful to engage the City in this research.

Councilor Manwaring said she thinks it is a process Keene is very familiar with; similar charrette and survey efforts have taken place in Keene so the community would not be surprised.

Mr. Madison asked for examples of this project in other communities. Ms. Vogler shared a video example of pilot testing this process in coastal Rhode Island where the dam is privately owned and the owner is not interested in selling. She provided examples of how animations can help make decisions across multiple scales.

Councilor Hansel asked the costs associated with the project. Ms. Vogler replied an advantage for the City is that the researchers would be doing this for free; this type of work could cost from \$10,000-20,000 but this research is grant funded. The goal is to work with the town in terms of organizing events and advertising, so there may be some small cost associated with organizing events.

Chair Haynes recognized Ken Bergmann, a retired KSC professor, who asked what deadline the state has imposed on the City’s decision making process. The Commission replied the deadline is indefinite. Ms. Kessler noted the City has been working diligently to repair many other dams so the dam bureau has not put too much pressure on the West Street Dam decision. Mr. Madison said with the recent weather patterns, nature may make the decision and it may not be in the City’s favor to hold off on addressing the West Street Dam. He believes that finding a solution to the structural problems is becoming more urgent each year. Mr. Bergmann asked if the dam is structurally unstable enough to be damaged in a strong storm. Mr. Madison said a good storm can take down any dam, and this is a very old and poorly maintained dam, the reservoir behind it is heavily sedimented, and there have been more severe storms. He has not seen reports about the dam’s structural integrity but his understanding is that DES is concerned and he thinks that is cause for the City to be concerned as well.

Ms. Vogler said she knows the cost of repair is something the City is concerned with and part of this research and visualization process will help the City to understand the costs associated with different alternatives. She thinks the importance of two workshops is to ensure the community is making informed decisions. Mr. Madison asked if biophysicists, hydrologists, etc. would be brought in to do a complete profile of the dam options. Ms. Vogler replied an advantage of working on this larger team is that her colleagues are interested in this research and her team can facilitate the public process but there are many other researchers looking at the biophysical and hydraulic aspects. Mr. Madison said the animations would have to be based on physical modeling; Ms. Vogler agreed there have already been a lot of studies on the West Street Dam her team could use.

Councilor Manwaring noted this was a heated topic when it was first discussed at City Council but now there is a new Council. She thinks raising this topic again is important because it has been so long; she thinks it is a great idea. Ms. Vogler agreed some of her work will help to summarize the complicated history of this dam and the public can communicate their desires to Council.

Dr. Reilly asked if there is an ideal minimum attendance for the workshops and if City Council should participate. Ms. Vogler replied charrettes vary in size but there needs to be a good representation of the community with momentum to support ideal outcomes. For this community, 50 people would be ideal. Councilor Manwaring said there would likely be many more people. Ms. Vogler said this is why she is interested in this as a research site because there are so many people surrounding this dam as opposed to other dams in rural areas.

Ms. Clark asked if this will impact City staff time and if the Commission should designate a sub-Committee for this. Dr. Burchsted clarified that she invited Ms. Vogler to the meeting because they work together and she thinks this is a great opportunity for the City. However, she will not be involved in the charrette research aspect but could hopefully contribute knowledge about sediment and existing ecological studies. She said the Commission has a certain mission regarding this dam but she thinks other perspectives should be equally considered. She said perhaps this should be a collaborative effort between the Commission and other stakeholders. Councilor Hansel suggested a presentation to Council and an introduction to other relevant committees to share this idea. Ms. Kessler noted the Council is expecting an update from West Street Hydro on December 7 and they will present at the December Commission meeting. Ms. Kessler has spoken with the Public Works Director and the Director of Parks and Recreation, who are aware of this project and are interested in learning more. However, they are cautious about the Council's feelings about the dam and respect their decision to give West Street Hydro more time to study and pursue licensing. Ms. Kessler said speaking with the new City Manager is a good idea, and ultimately there will need to be a presentation to Council to determine if this is something the City wants to take on. Ms. Kessler suggested giving City staff time to explore this opportunity further with Ms. Vogler and the new City Manager and revisit the path forward. She agreed a public Council presentation is a good idea, if the City were to consider participating. Councilor Hansel agreed with Ms. Kessler that this should be vetted by staff before taking it to

Council. Ms. Kessler recognized the need for timeliness for many stakeholders and hopes there will be a better understanding of next steps by early 2018. Ms. Vogler is willing and hopes to come back in December to meet more with town staff and officials if there is willingness. She agreed this is a way of bringing people together, even if just in organizing the event and bringing together multiple City committees.

6) Friends of Open Space Donation

Ms. Kessler reported the donation the Commission authorized in June 2017 for \$270.25 to Friends of Open Space was never processed and she is unsure why. Unfortunately, at the end of the fiscal year, Commission money goes into the General Fund and there is no way to get it back. The Commission can vote to allocate the donation from this year's budget. The annual budget is \$1,500 and an \$817 fee for NH Association of Conservation Commissions annual membership (this was the only expenditure last year) was already paid, which leaves \$683 remaining. To the City's knowledge the Commission has not consistently voted on maintaining that membership. Ms. Kessler and Chair Haynes remember voting on it in the past. Ms. Kessler said that matter was not on the agenda for this meeting, as she discovered this payment was made only very recently, and can be revisited in December. Chair Haynes agreed this is prudent as Barbara Richter is coming to the December meeting; but it is something to revisit because it is a high fee and he's unsure the Committee has benefitted accordingly.

Dr. Reilly asked if the \$1,500 annual budget has been in place a long time and how Council might feel about increasing it. Councilor Hansel replied it can be discussed next budget season and the Commission can argue the need. Chair Haynes said that could be hard because the Commission also has another large pool of money to work from.

Councilor Hansel made a motion to allocated \$270.25 from the FY18 budget to the Friends of Open Space, which was seconded by Dr. Burchsted.

Chair Haynes suggested amending the motion to \$275. The motion carried unanimously as amended.

Ms. Clark reported the Friends of Open Space have been fundraising for the pocket park and are excited to keep moving forward.

7) Public Education and Outreach

Chair Haynes noted Dr. Burchsted reached out to the Harris Center and they are interested in helping with educational outreach in Keene. He will explore that more. Also, there are opportunities with Jeff Littleton for an educational activity at Goose Pond, likely this winter. Ms. Clark Suggested Jenna Spear-O'Mara who lives in Keene. Dr. Burchsted clarified it is Brett Thelen from the Harris Center who has expressed interest.

8) Aquatic Resource Mitigation Subcommittee Update

Dr. Burchsted recalled for the last few months she has worked with Chair Haynes and Mr. Von Plinsky to come up with a potential project list for the Aquatic Resource Mitigation (ARM) fund. Projects in three different target areas were listed with the ARM

fund priorities the project meets. The question arose of what the goal of this list is and which projects are the highest priorities. A DES Representative said Keene is one of the first communities in the state to respond to the call from the Wetlands Bureau to develop a list like this. Ms. Kessler recalled this came to the Commission because Wetland Permits that were contributing to the ARM fund came before the Commission and the goal developed to determine how those funds can be used locally; but there was no clear way to prioritize how to use those funds in Keene. There was not a call from DES for communities to develop this list. This all really began with Hillside Village and Liberty Utilities major impact wetland applications. Dr. Burchsted said DES is happy to see cities working on this list of possibilities; the DES representative said the list is good as is and can be used to advocate for future projects as they develop.

Councilor Hansel asked if prioritizing projects on the list provides any advantage. Dr. Burchsted replied by asking the same question because she is unsure how it moves forward from here. Councilor Hansel said he thinks further prioritizing is advantageous because it gives Ms. Kessler more ability to advocate for a project when applying for ARM funds. Chair Haynes added there is also a time crunch when applying for these funds and knowing which projects are highest priorities would save time. Ms. Kessler said it is not only to prepare for projects that will require mitigation but the ARM fund is also a competitively distributed regional grant, so it is a matter of being prepared to apply for funding from DES. Councilor Hansel agreed the priorities should be shovel-ready projects eligible for grant money. Dr. Burchsted suggested there may be things that are high priority but not shovel-ready in terms of high interest; for example, a study of some kind that would not be applicable to the ARM fund. This way the Commission knows what high priority projects are ineligible for ARM funding as well. Councilor Hansel said he is unsure there is an advantage to using significant time to organize the projects; he said time should be spent understanding and staying up-to-date on these projects.

Dr. Reilly asked how projects become shovel-ready once they have been identified as priorities. Dr. Burchsted replied the Commission is asking which projects have already been developed as shovel-ready by City staff. Ms. Kessler said the mitigation portion of some of these projects are not always timely, finding the right fit can be difficult, and knowing details about each project may naturally help the Commission to prioritize. Councilor Hansel said it would be good for the Commission to agendize and review the project list on a semi-annual basis to monitor and evaluate.

The subcommittee agreed to meet again to preliminarily categorize and prioritize the projects and report back in December. Dr. Burchsted will share some materials with Ms. Kessler, the Planning Director, the Public Works Director, the Director of Parks and Recreation, and Barbara Skully. Ms. Kessler said once the list is complete the Commission can vote to adopt it as the list we are working with.

9) Land Prioritization Criteria

Chair Haynes said he and Ms. Kessler think a good exercise is to take the work Councilor Manwaring has prepared and create lists of Commission criteria when evaluating a piece

of land. The Commission agreed to dedicated approximately 30 minutes of future meeting time to this discussion; Ms. Kessler will share the list before the next meeting.

10) Conservation Master Plan Retreat Update

Chair Haynes reported that Barbara Richter has agreed to come in December to give a presentation; he is unsure if the wildlife expert will come as well. She will help the Commission think about prioritizing goals for the Conservation Master Plan. Ms. Clark also suggested contacting the UNH Cooperative Extension; Chair Haynes will share a packet of information before the next meeting.

11) Staff Updates

a. Greater Goose Pond Forest Stewardship Plan RFQ Updates

Ms. Kessler reported that an Ad Hoc Committee has been formed for the Greater Goose Pond Forest Stewardship Plan and that Committee will meet on December 7 or 8. The trails consultant, Josh Ryan, has already completed a preliminary assessment of the trail conditions and will work with the Committee to draft preliminary recommendations. The foresters have been collecting data and Ms. Kessler has been in regular communication with Mr. Littleton sharing historic and spatial data as well.

b. West Street Hydro

West Street Hydro will present to City Council on December 7th and to the Commission in December or January.

12) New or Other Business

Ms. Butler shared that she will be leaving the Conservation Commission for personal reasons. She expressed pride in the Commission's work and thanked members for their support. Chair Haynes thanked Ms. Butler and welcomed her to return to the Commission any time.

Chair Haynes noted that this leaves a position open. He asked Mr. Bergmann if he is interested in serving on the Commission. Mr. Bergmann replied he is retired and plans to do some traveling so he is unsure if he would be able to make the commitment; but he loves Keene and is interested in the contribution the Commission makes. Councilor Hansel noted it is not the Commission that makes the decision but the Mayor. Chair Haynes encouraged Mr. Bergmann's participation even as an alternate so he can share his expertise. Councilor Hansel suggested Mr. Bergmann send a letter (or email) of interest to the Mayor. Ms. Kessler added qualifications should be included in that letter, which helps the Mayor to make an informed decision.

The Commission agreed to formally vote on who will serve as Chair in 2018 at the December meeting. Chair Haynes is happy to continue serving. The Commission will also vote on a new Vice Chair. Mr. Von Plinsky has agreed to fill Councilor Manwaring's seat on the Commission in 2018 and Ms. Clark has agreed to fill Ms. Butler's seat. This leaves two vacancies for alternates on the Commission.

13) Adjournment – Next meeting date Monday, December 18, 2017

CONS Meeting Minutes
November 20, 2017

Hearing no further business, Chair Haynes adjourned the meeting at 6:15 PM.

Respectfully submitted by,
Katie Kibler, Minute Taker

Reviewed and edited by,
Tara Kessler, Planner

November 8th, 2017

Mayor Kendall W. Lane and City Council
Attn: City Clerk
3 Washington Street
Keene, NH 03431

Dear Mayor and Councilpersons:

This letter is to inform the City of Keene that Eversource is planning to trim and remove trees and brush adjacent to some of its power lines within the town. This work is necessary to ensure the safe distribution of power and to improve reliability of electric service for our customers. Maps highlighting the areas to be trimmed and a list of hazardous trees on the scenic roads is enclosed.

According to Eversource records, Chapman, Concord Hill, Concord, Daniels Hill, Felt, Hurricane, Langley, Moore Farm, Peg Shop, Stearns, and Whitcombs Mill Roads have been designated as scenic roads by the City. Please consider this letter to be a request from Eversource for a public hearing for the purpose of the trimming and removal of trees and brush on these and any other scenic roads within the proposed work area pursuant to RSA 231:158. Please inform this office of the date, time, and place of said hearing so that we may have a representative present.

Eversource specifications call for removal of brush and limbs less than four inches in diameter which are located within eight feet to the side of, ten feet below or fifteen feet above conductors. Larger trees or limbs which present a threat to Eversource lines or other equipment because of decay or other defect will be removed on a case by case basis. All work will be performed in accordance with accepted arboricultural standards.

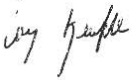
Eversource has contracted with Asplundh Tree Expert Company to perform the actual trimming of trees. Eversource requires that our trimming contractors contact each landowner where trees are to be trimmed prior to commencement of work on that property. Individual concerns will be addressed at this time.

All brush and limbs cut on roadside locations will be chipped. In wooded, undeveloped locations, these chips may be dispersed into the woods, taking care not to allow chips to accumulate in piles or in ditches. Near developed land, the chips will be blown into a truck and disposed of off-site. The chips make a good mulch and are often given to nearby property owners for landscaping purposes. If a central dumping location could be arranged, Eversource would be happy to make any unclaimed chips available to the Town at no cost. Brush and limbs cut on inaccessible lines will be stacked to the side of the right-of-way and cut low to the ground. All wood will be left on site unless otherwise directed by the landowner. Work on roads designated as scenic will begin on approval. Work on roads designated as scenic and roads not designated as scenic is scheduled to begin sometime at the end of this year and the remainder of 2018.

If you have any questions or comments, please feel free to contact me by U.S. mail at the above address, e-mail at cory.keefe@eversource.com, or telephone at 603-933-2761.

Thank you for your concern and assistance.

Respectfully,



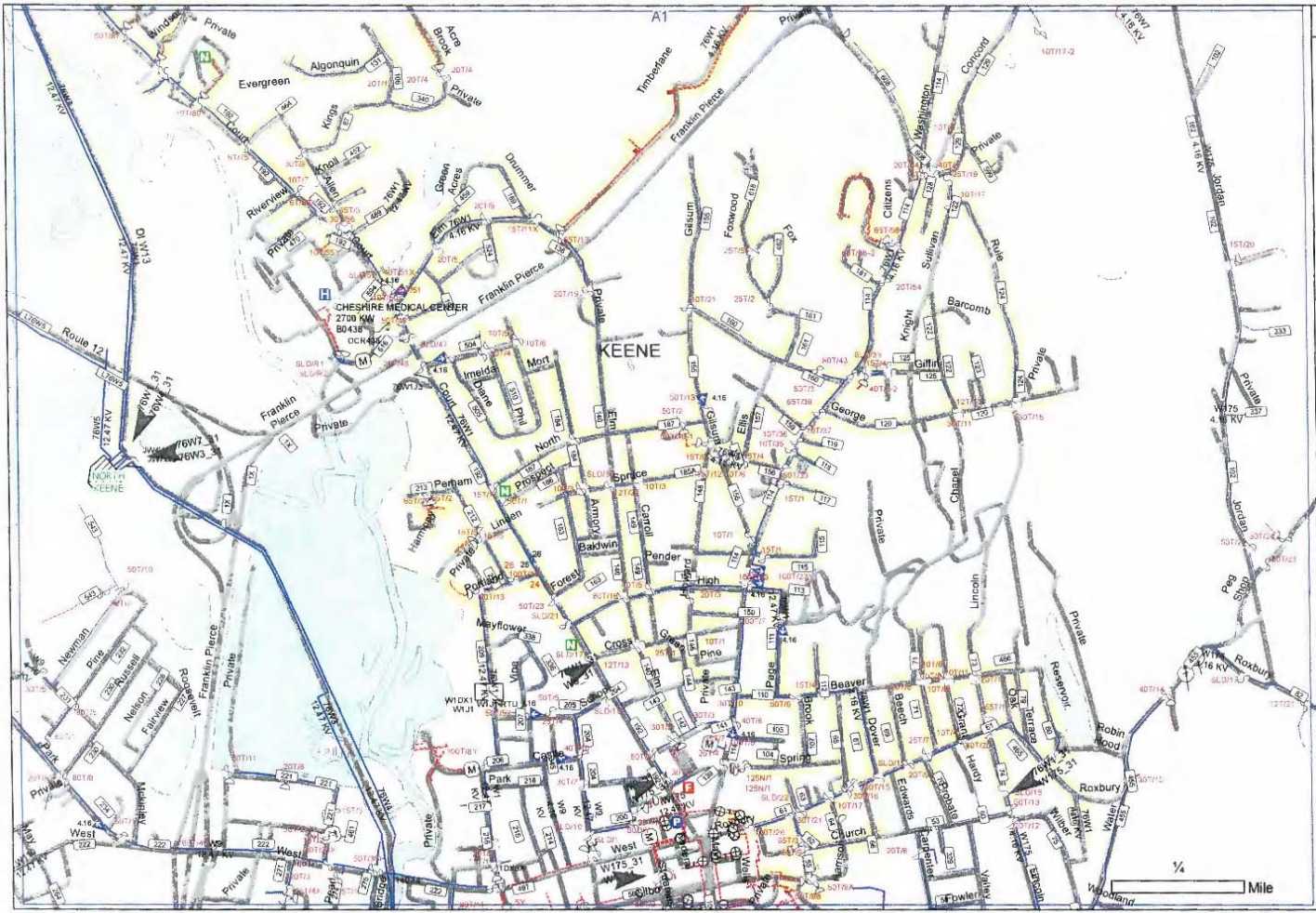
Cory J. Keefe (ATTN: Vegetation Management)
Utility Arborist
Eversource Energy (ACRT)

Tree List for Keene Scenic Roads

Street	Line #	Pole From	Pole To	Description
Chapman Road	30	10		17" maple across road.
Chapman Road	30	13	14	23" rotten maple.
Chapman Road	30	14	15	19" dying ash; 36"+ rotten ash.
Chapman Road	101	13		24" oak close to phase.
Chapman Road	542	9		10" dead cherry.
Concord Road	129	9	10	28" dying pine wth woodpecker holes.
Concord Road	129	11	12	7" dead pine.
Concord Road	129	28		5.2" dead pine.
Concord Road	129	32	33	10.1", 8.1" yellow birches with trunk rot.
Concord Road	129	33	34	7" dead ash.
Concord Road	129	33	34	34" dead pine across road.
Daniels Hill Road	222	111X		19" maple with mushrooms.
Daniels Hill Road	222	112		13" dead birch across road.
Daniels Hill Road	222	113	114	28" dying hemlock.
Daniels Hill Road	222	126	127	33" rotten maple.
Daniels Hill Road	222	127	128	31" rotten oak.
Daniels Hill Road	454	8	9	Two 7" dead cherries across road.
Felt Road	249	2	3	13" leaning pine; 10" dead pine.
Felt Road	249	8	9	8" dead pine.
Hurricane Road	248	20	21	36"+ rotten oak.
Hurricane Road	248	33	34	35" rotten pine.
Hurricane Road	248	43	44	15" dead white birch.
Hurricane Road	248	43	44	15" pine with basal rot.
Hurricane Road	248	44		16" rotten pine; 17" dead pine.
Hurricane Road	248	49	50	15" dead white birch.
Hurricane Road	248	56		22" dead ash.
Hurricane Road	248	56	57	32" dead ash.
Hurricane Road	248	63	64	26" dying ash.
Hurricane Road	248	65	66	22" dying maple.
Hurricane Road	248	67	68	19" dying maple.
Hurricane Road	248	70	71	14" ash with broken top.
Hurricane Road	248	77	78	34" rotten oak.
Hurricane Road	567	2	3	16" hollow maple.
Hurricane Road	567	2	3	20" maple with woodpecker holes.
Hurricane Road	567	3	4	11" dead maple.
Hurricane Road	567	5	6	12" maple with scarring.
Hurricane Road	567	5	6	12" maple with heavy damage.
Hurricane Road	567	6		24" dead maple across road.
Hurricane Road	567	6	7	22" maple with rot at base.
Hurricane Road	567	7	8	14" ash with heavy lean across road.
Hurricane Road	567	9	10	15" maple with rot at base.
Langley Road	222	131	132	28" rotten maple.
Langley Road	222	148	149	13" dead basswood.
Langley Road	222	149	150	21" dead hemlock.
Langley Road	222	151	152	13" dead pine.
Langley Road	222	153	154	25" dead ash.

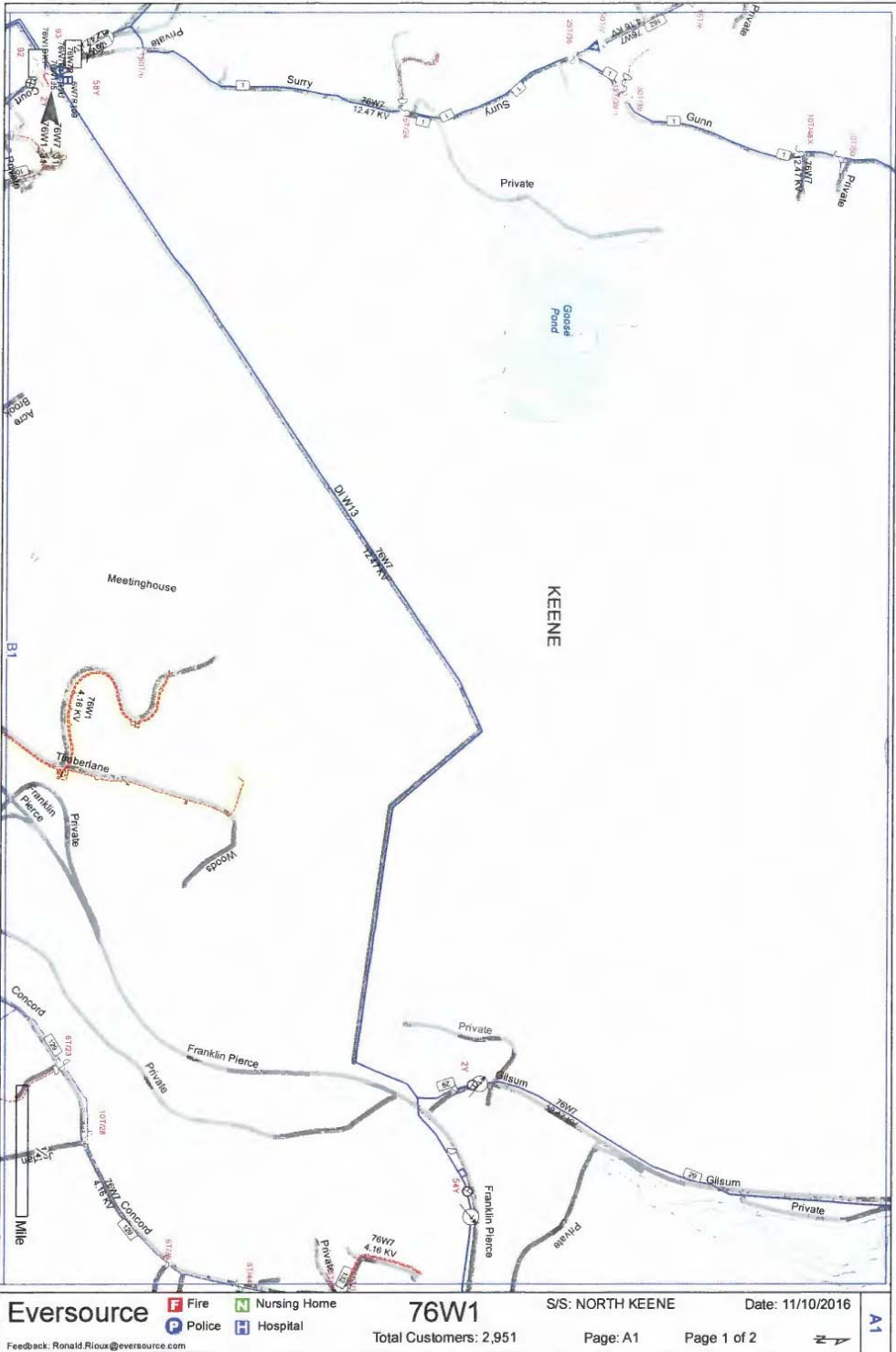
Tree List for Keene Scenic Roads

Old Concord Road	129	6	7	8.2" dead white birch across road.
Peg Shop Road	455	18	19	Two 10" dying ashes.
Peg Shop Road	455	37		19" rotten basswood.
Peg Shop Road	455	39		14" dead elm.
Stearns Road	262	9	10	29" rotten ash.

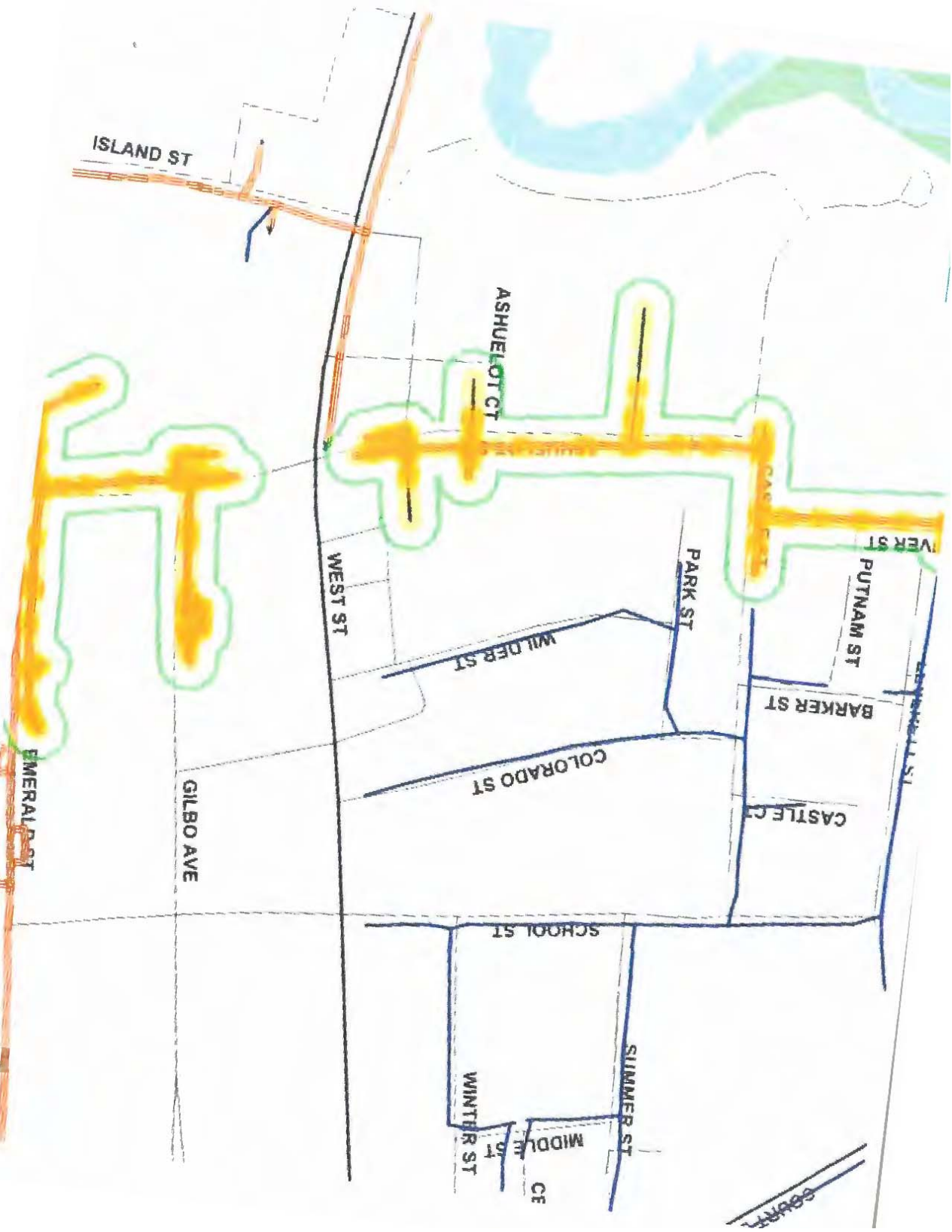


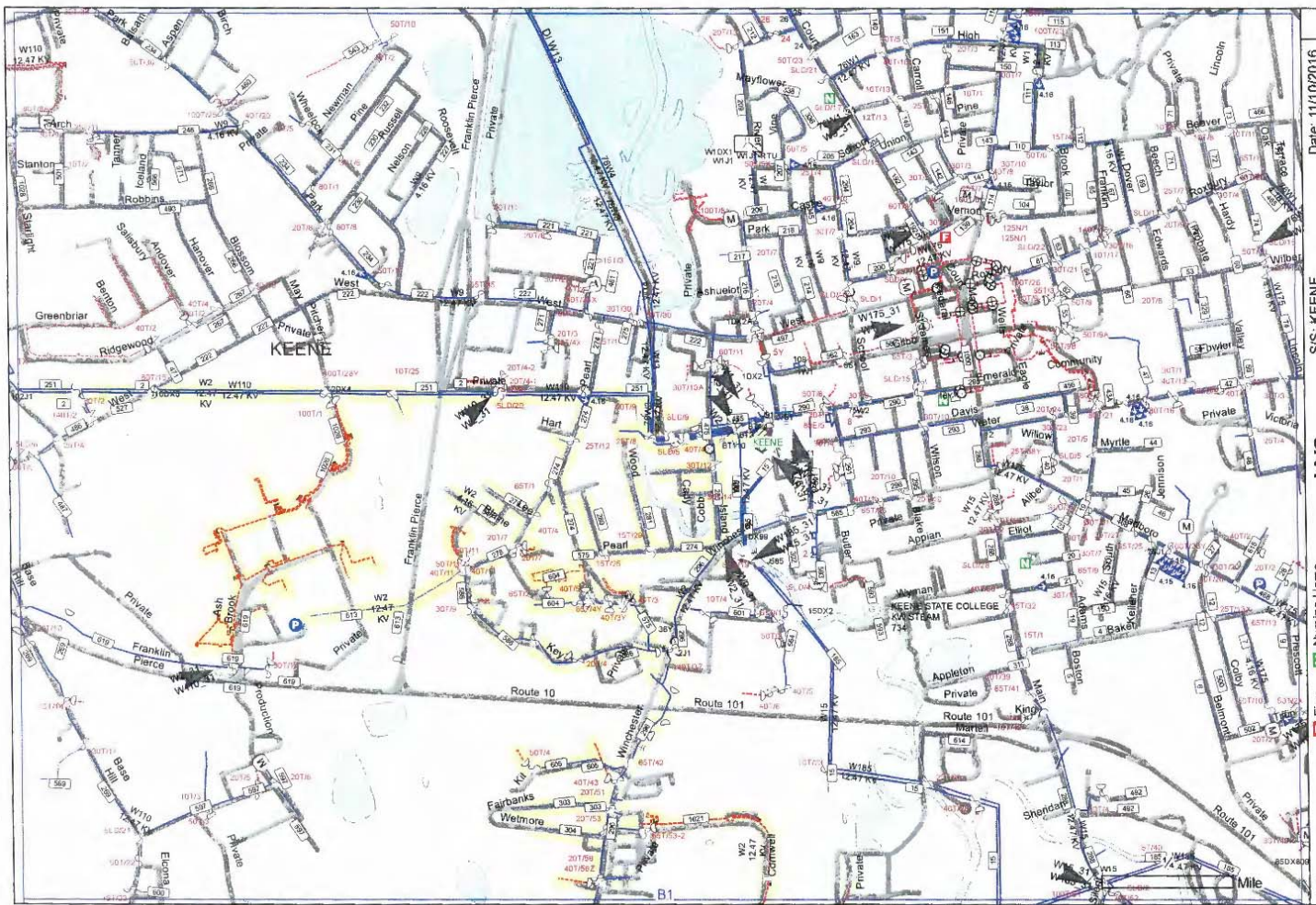
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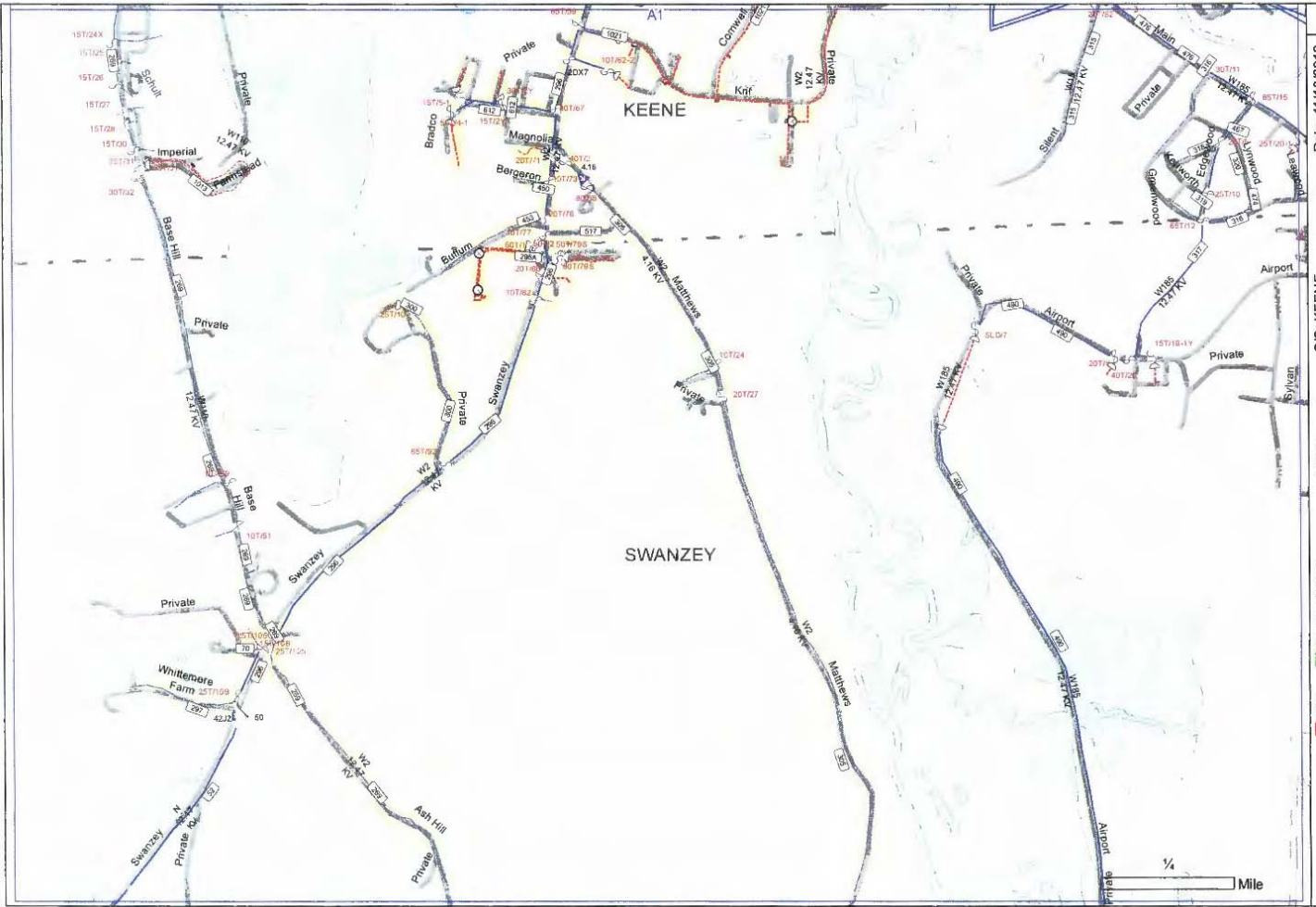
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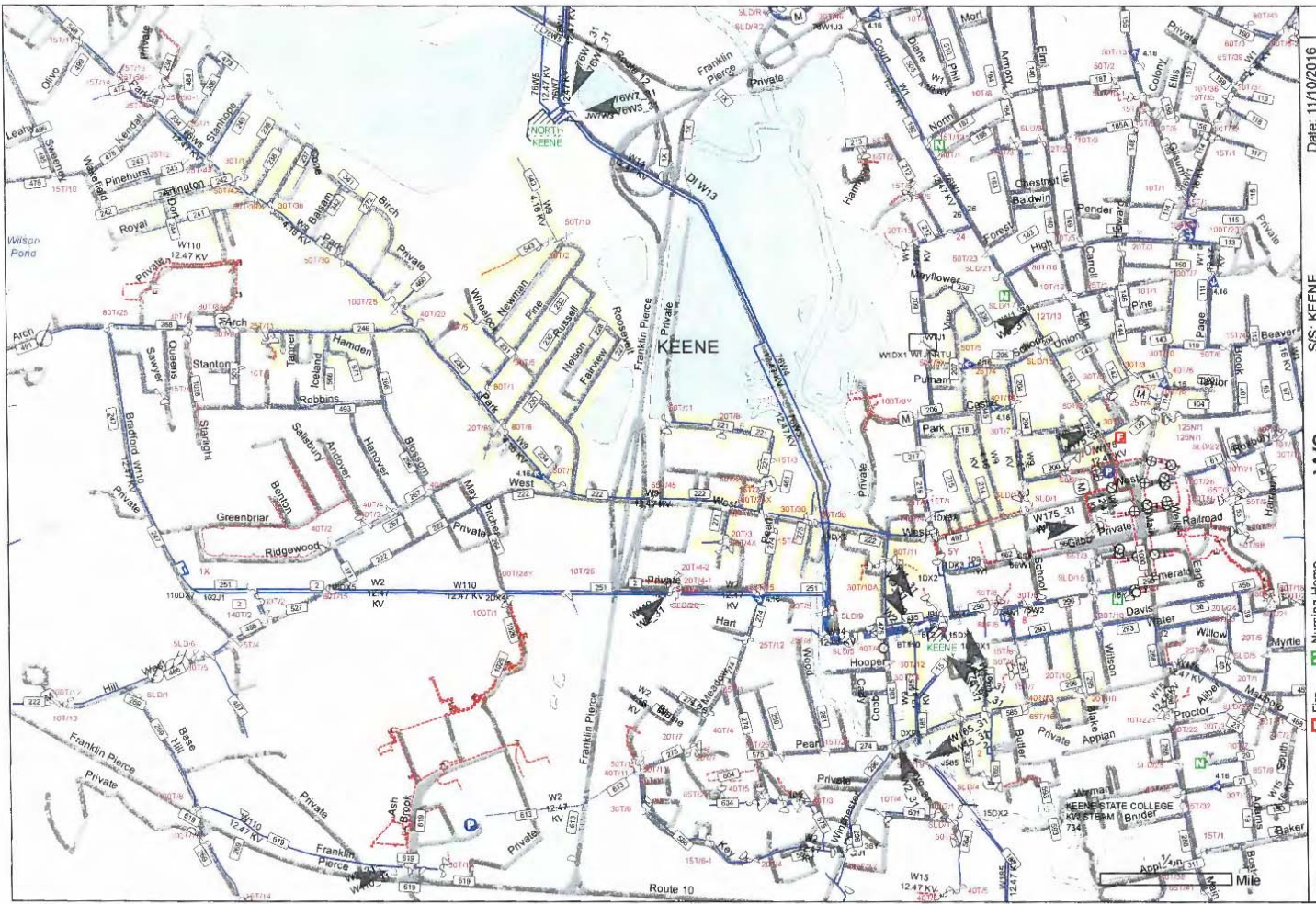


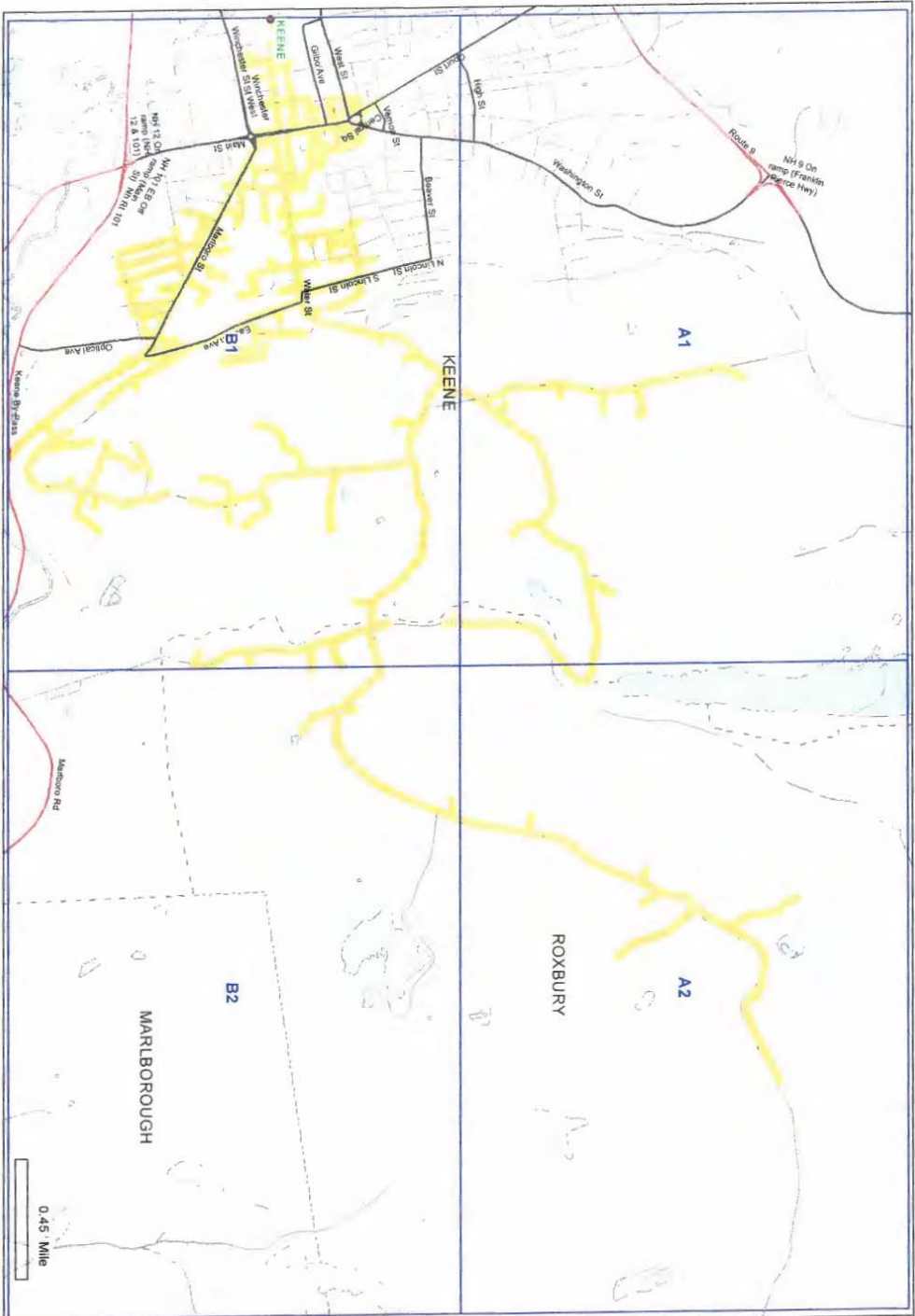
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Eversource

Keysheet

W175

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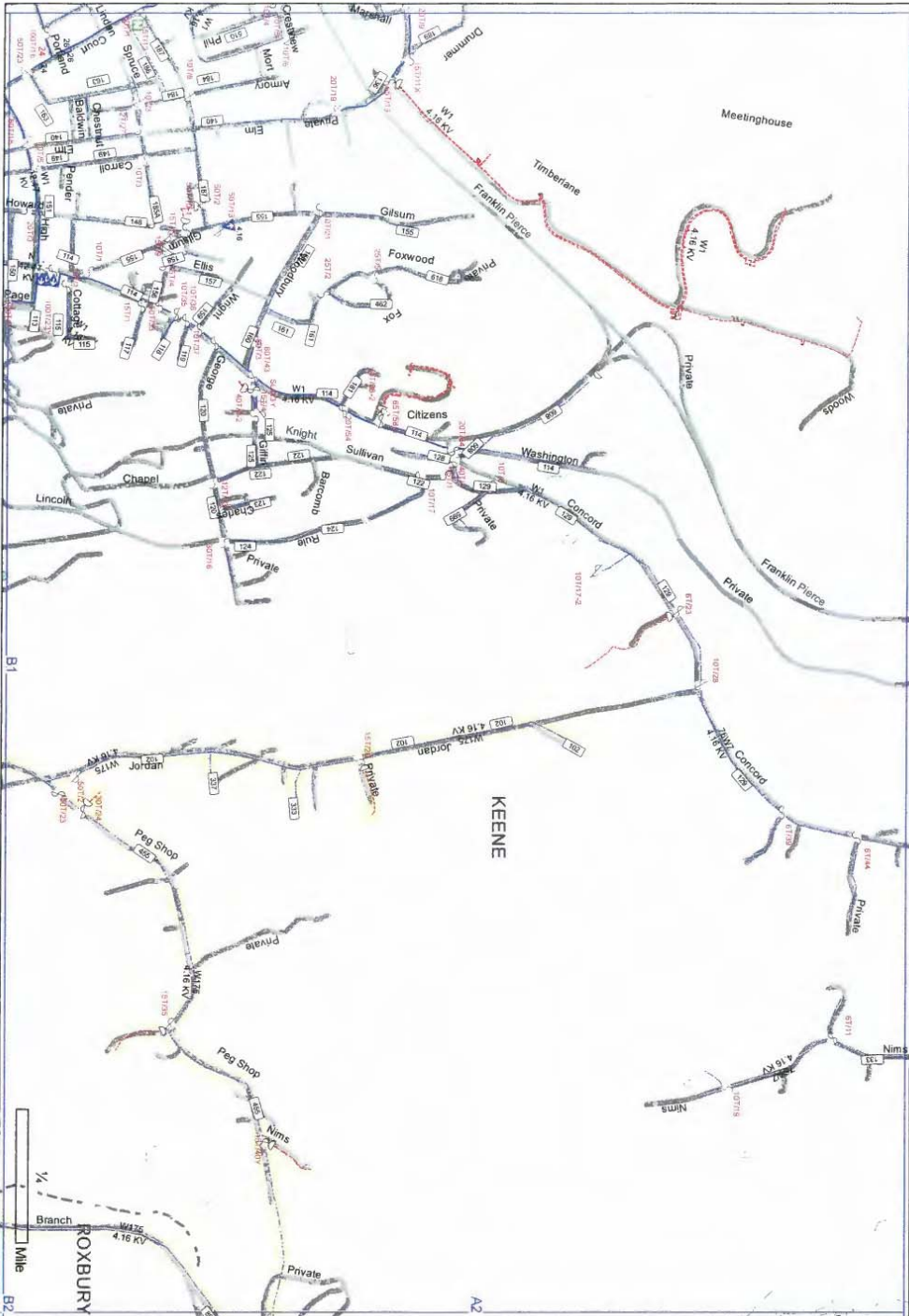
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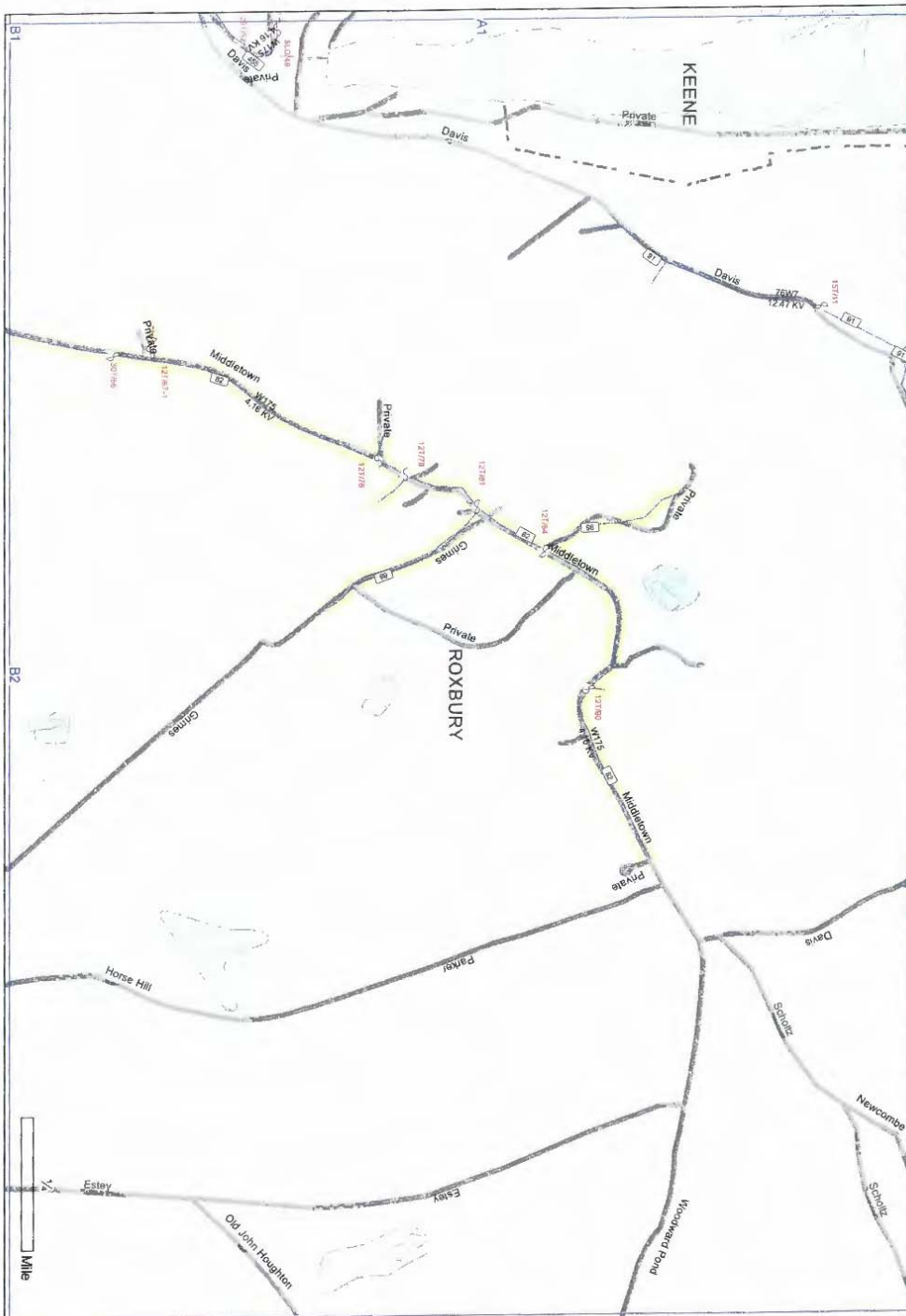
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4 Pages excluding keysheet





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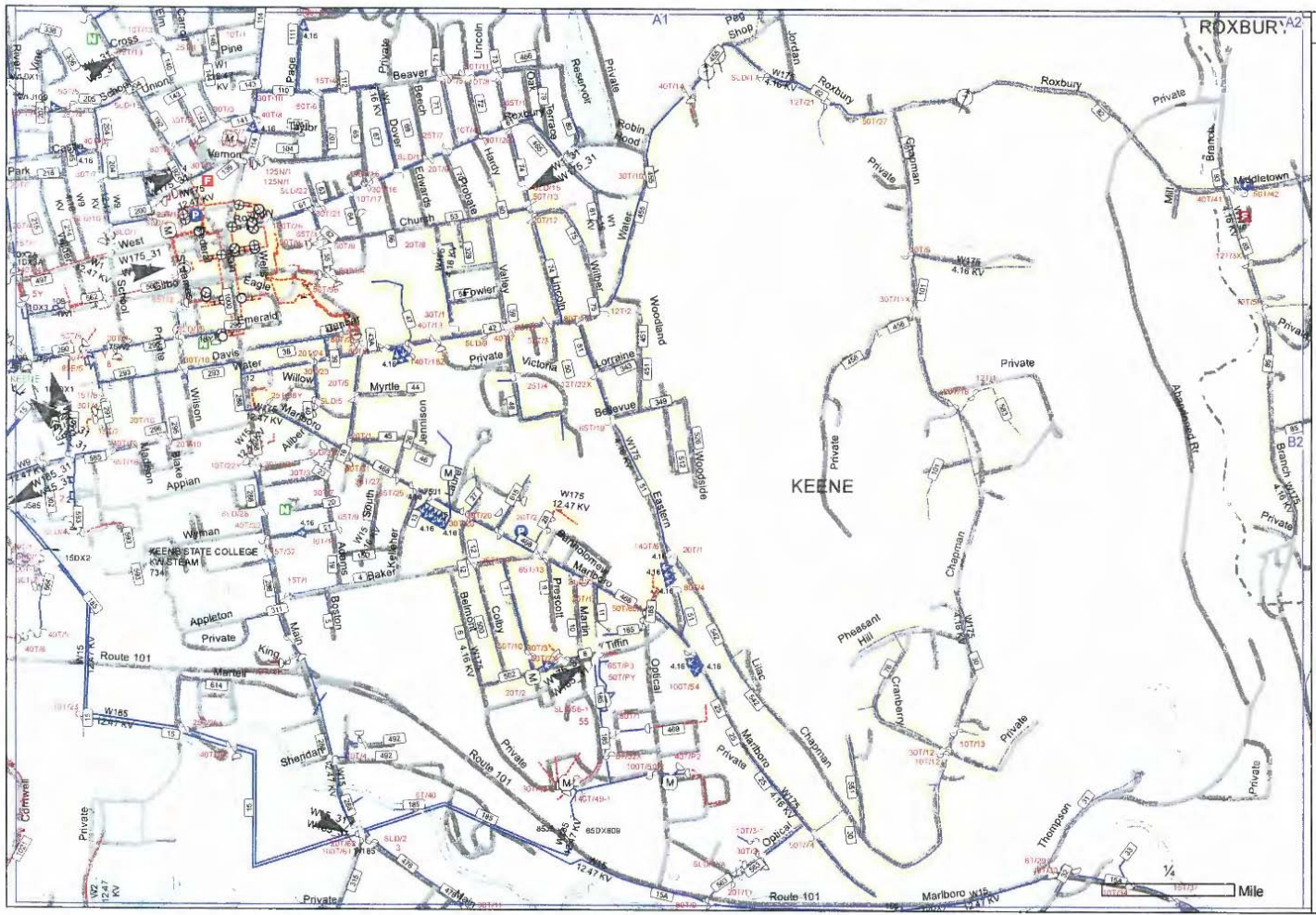
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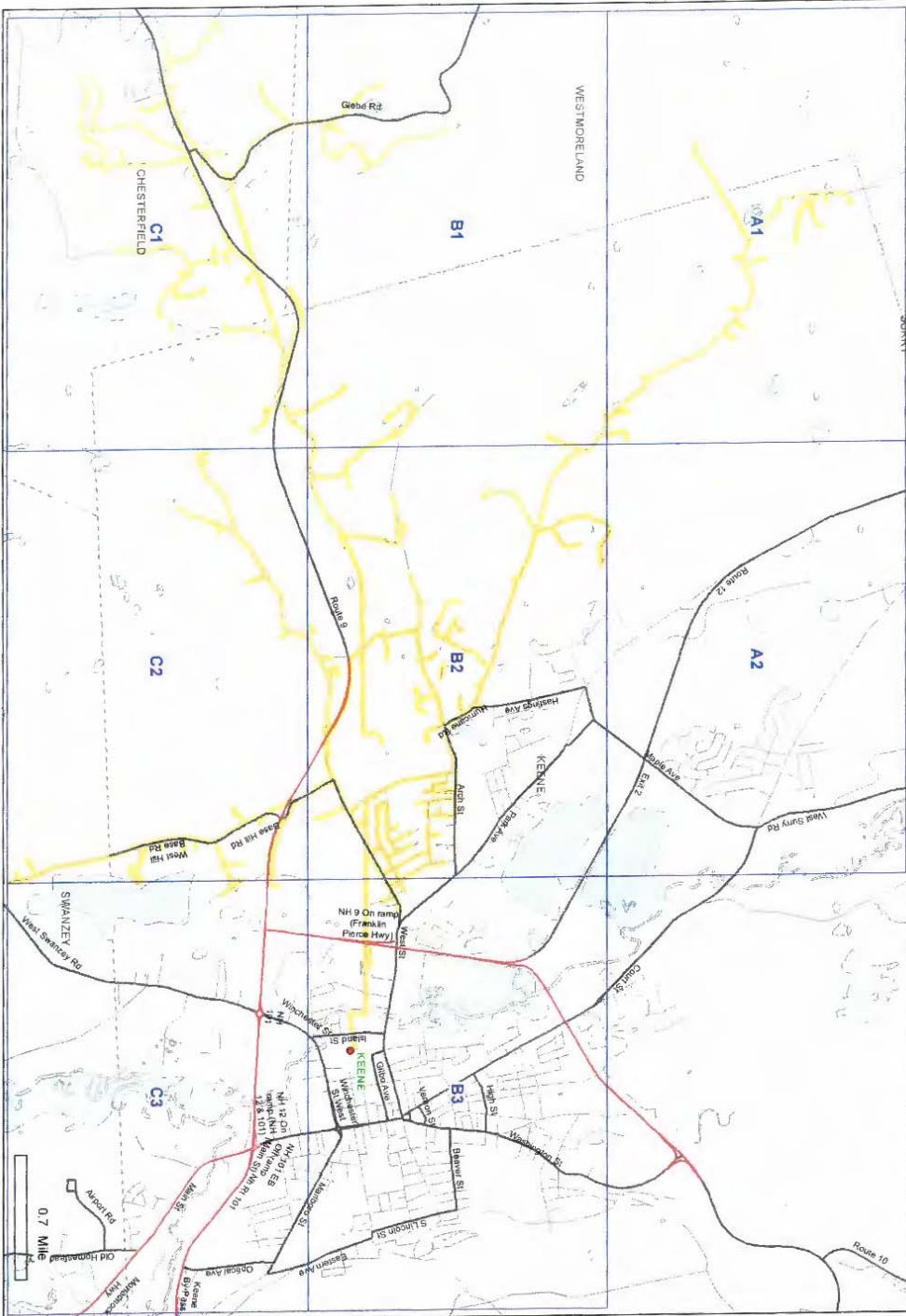
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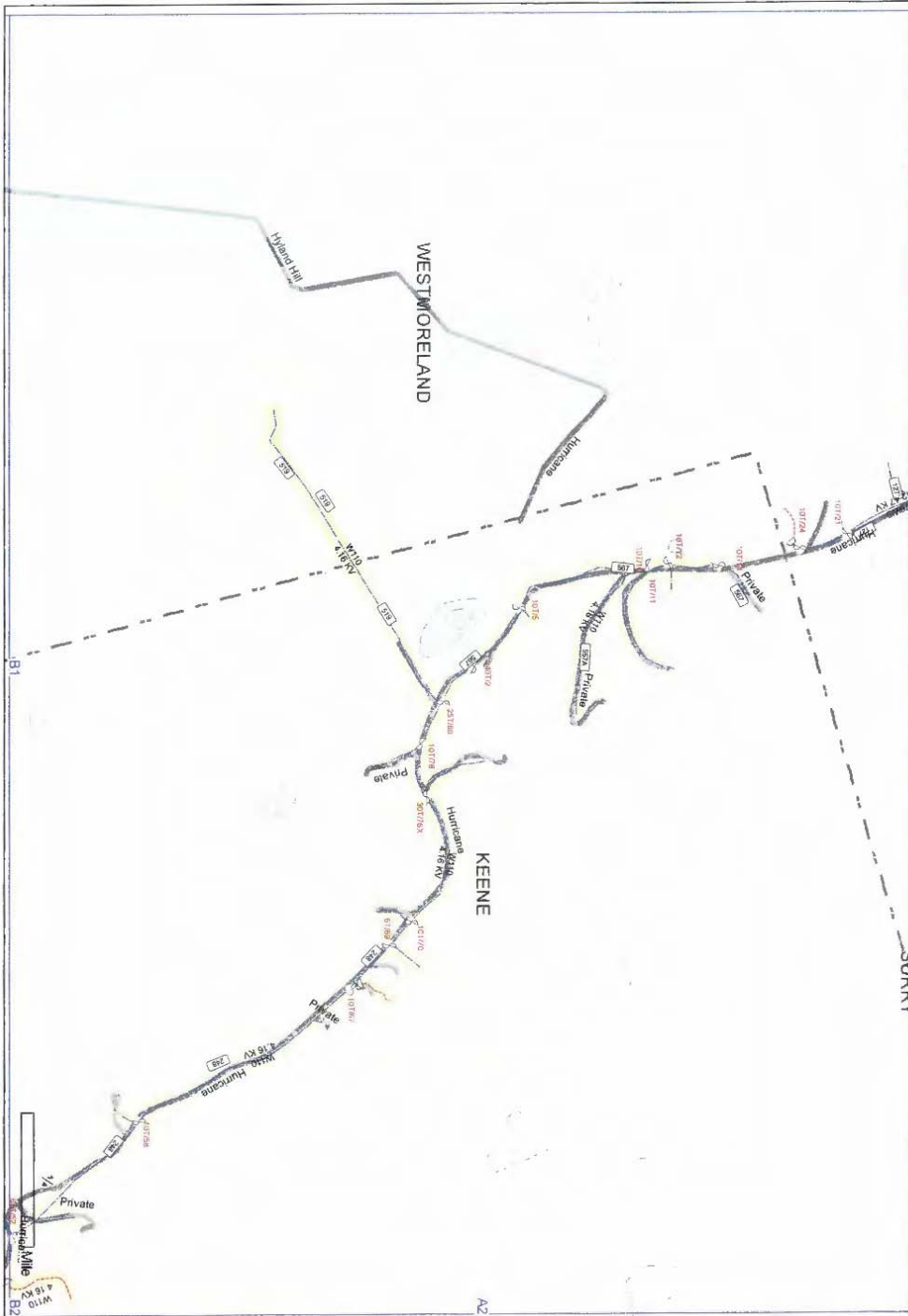
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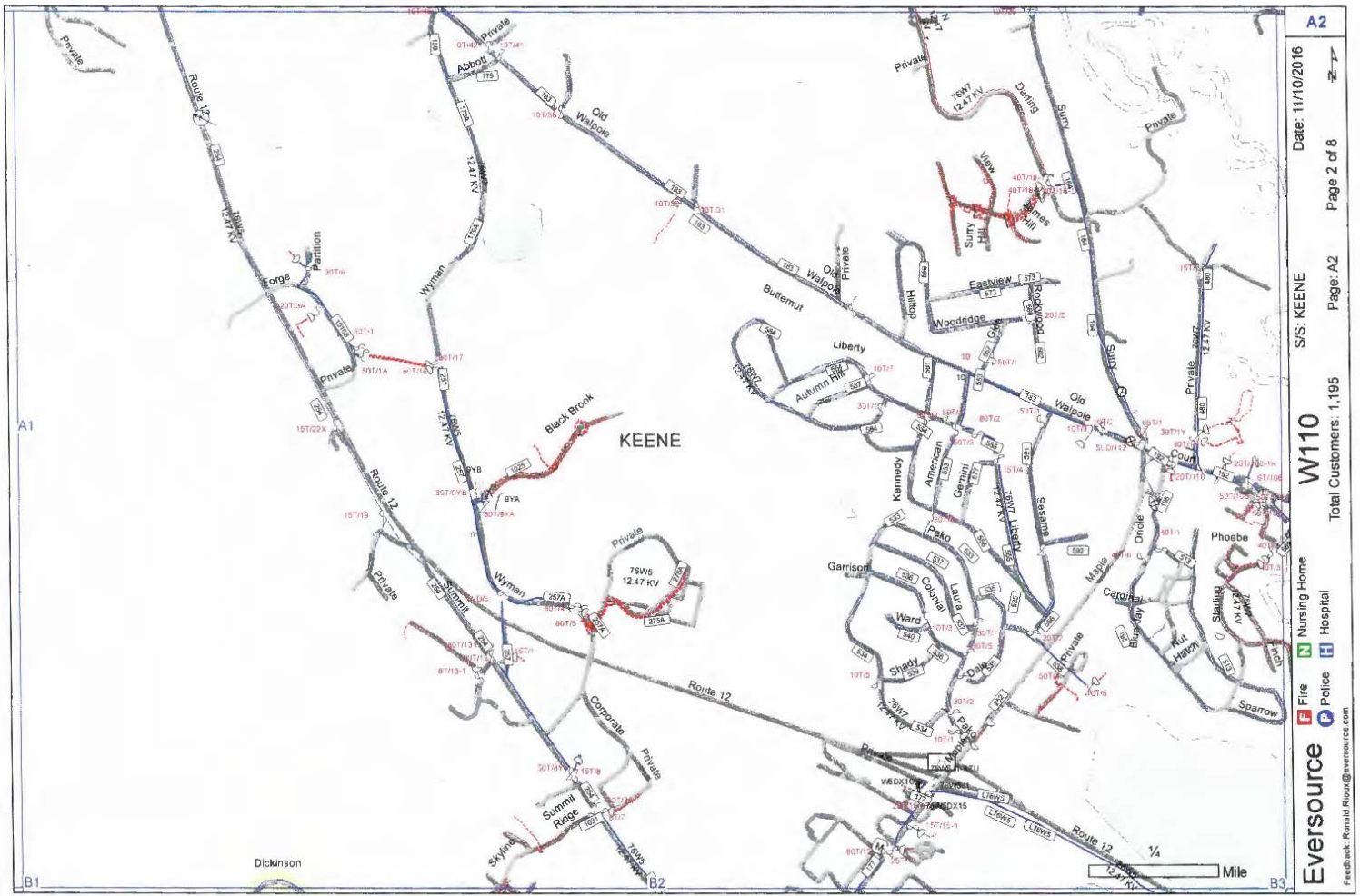


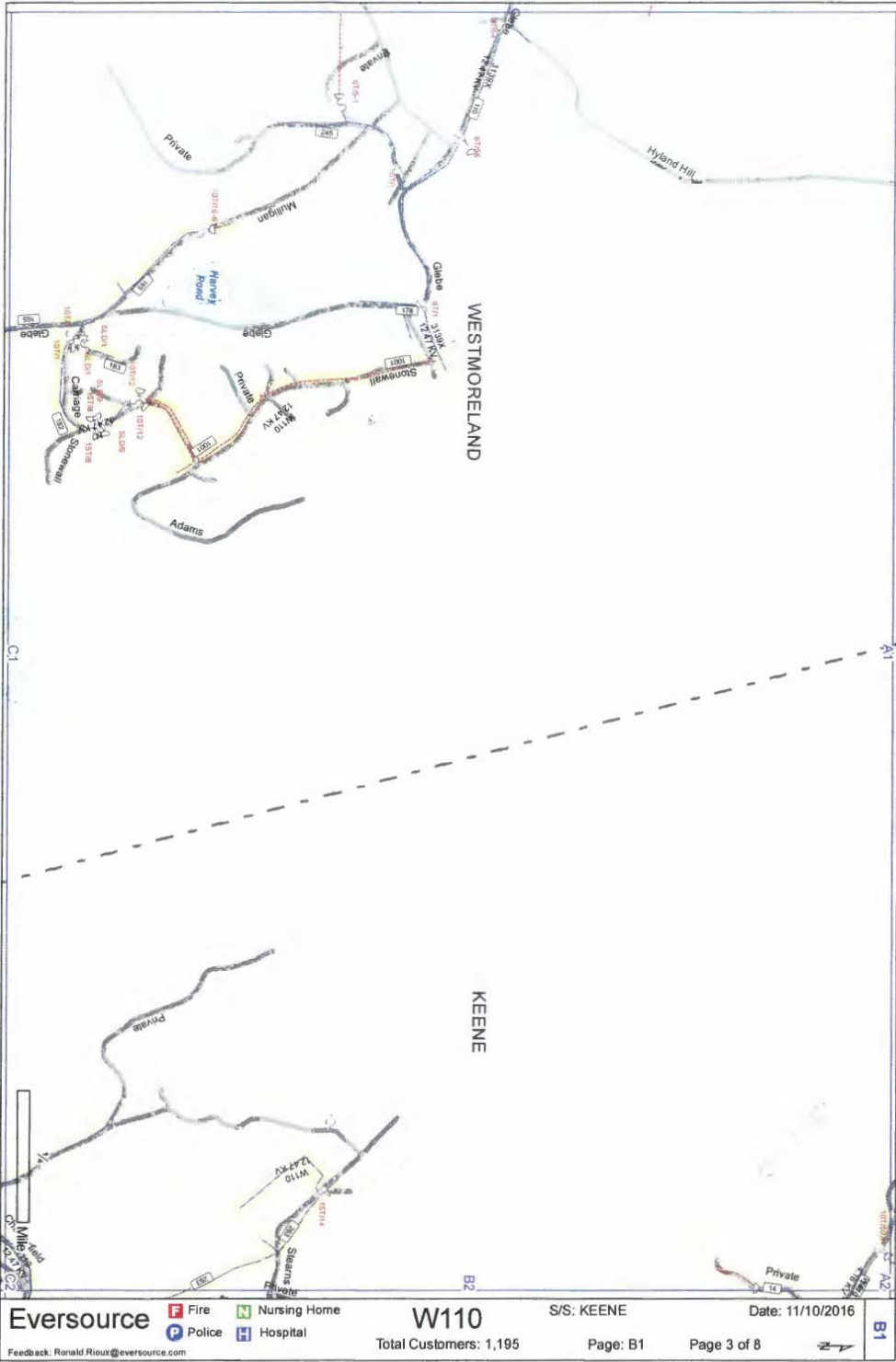


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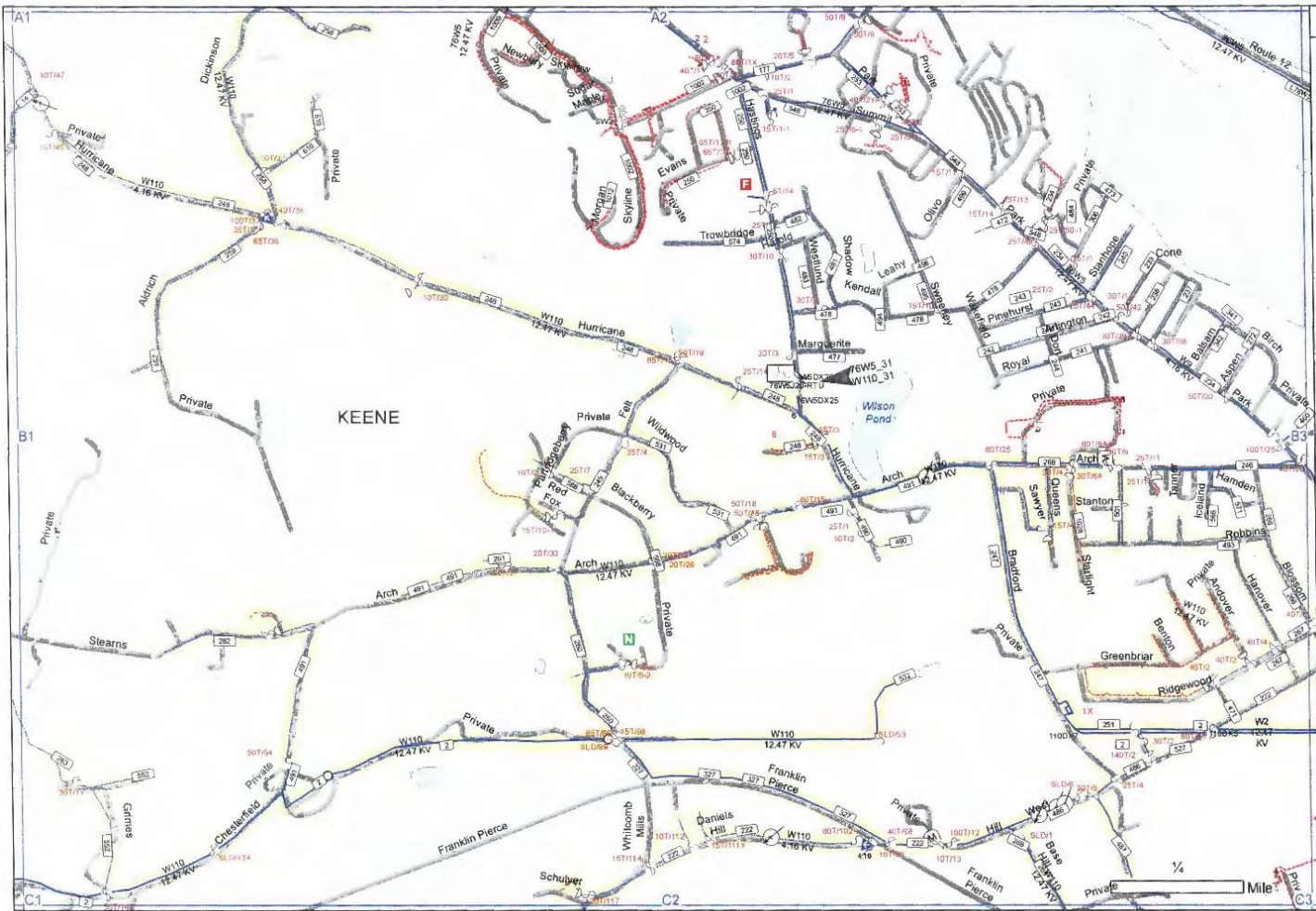


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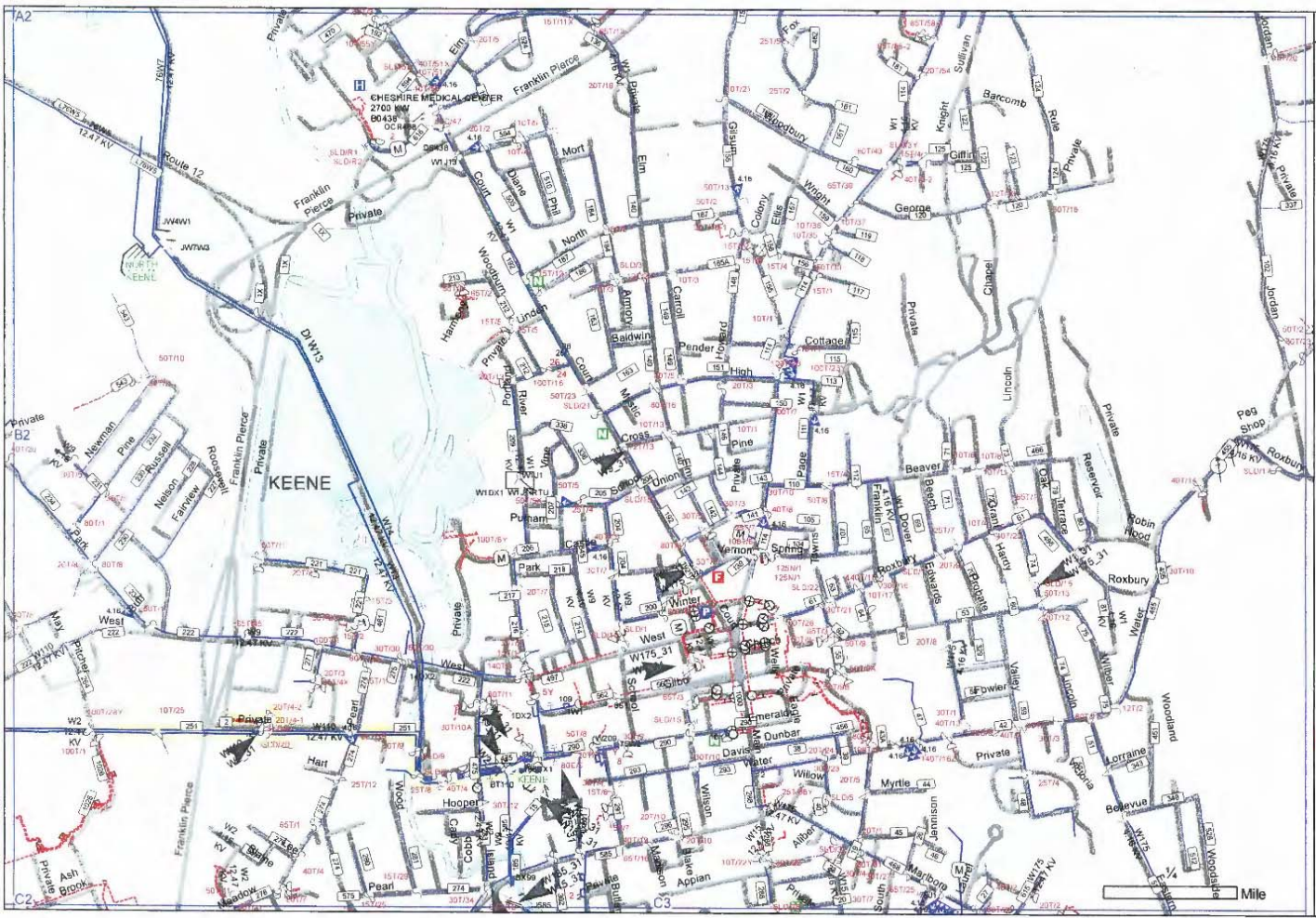


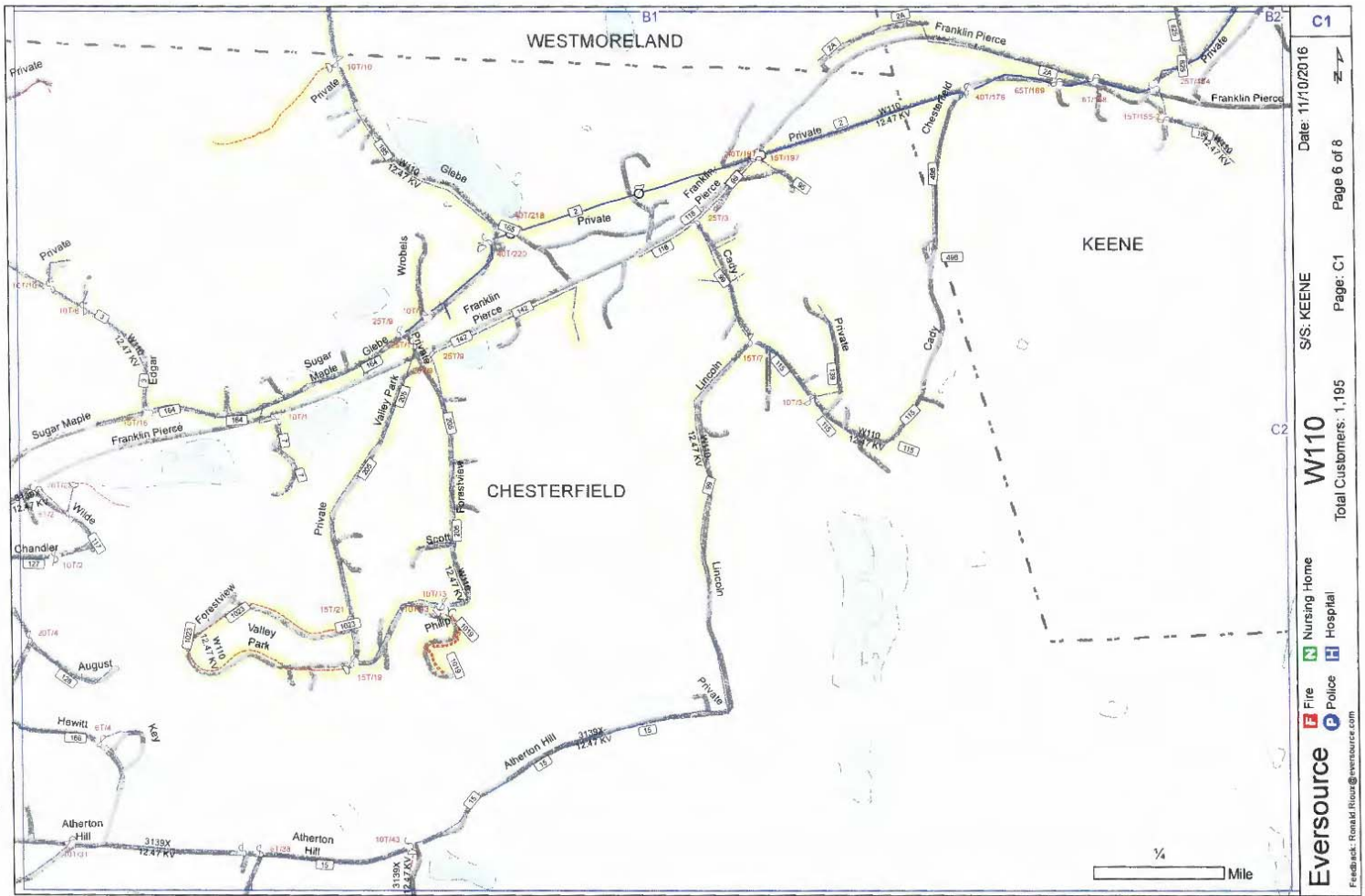


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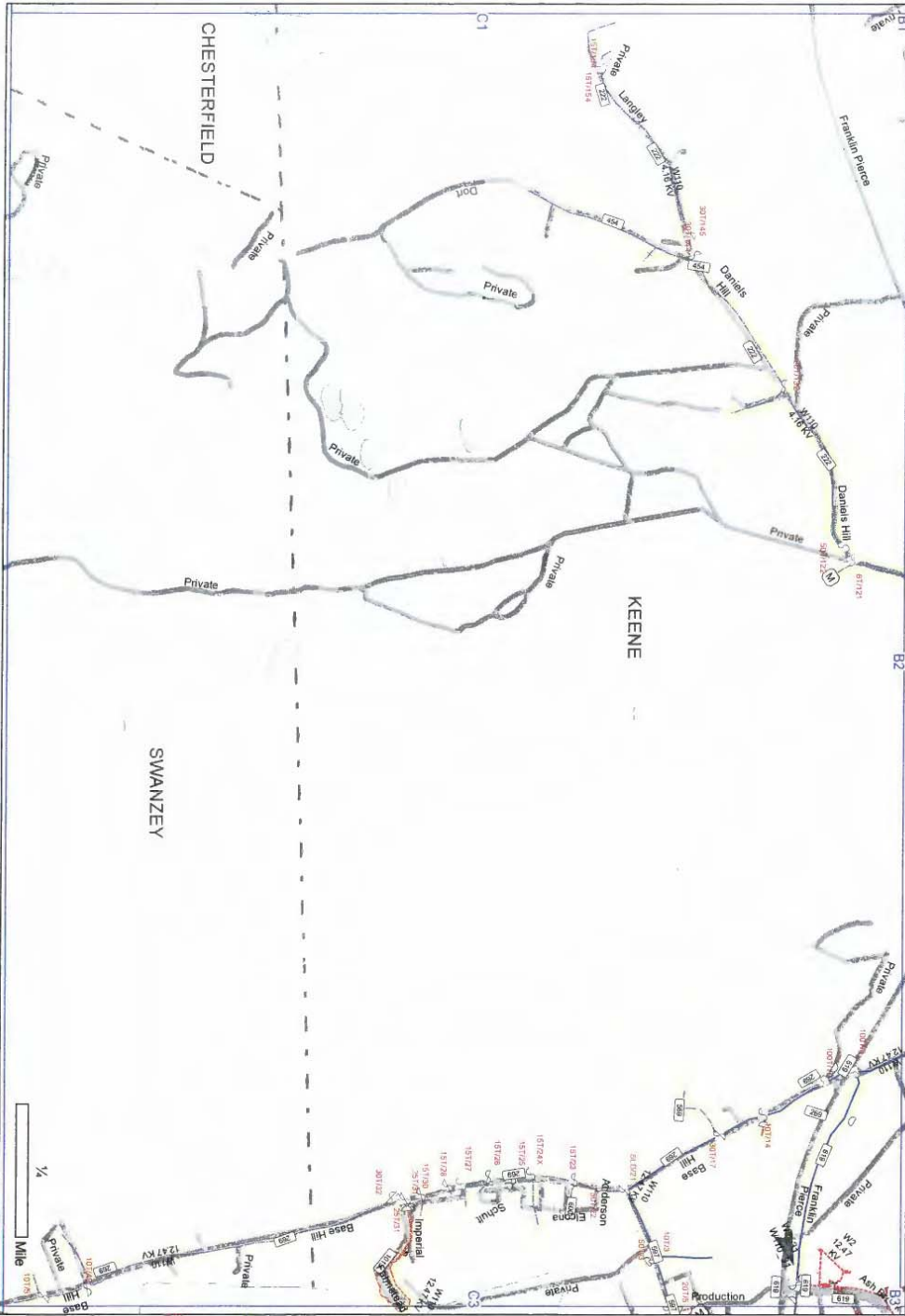


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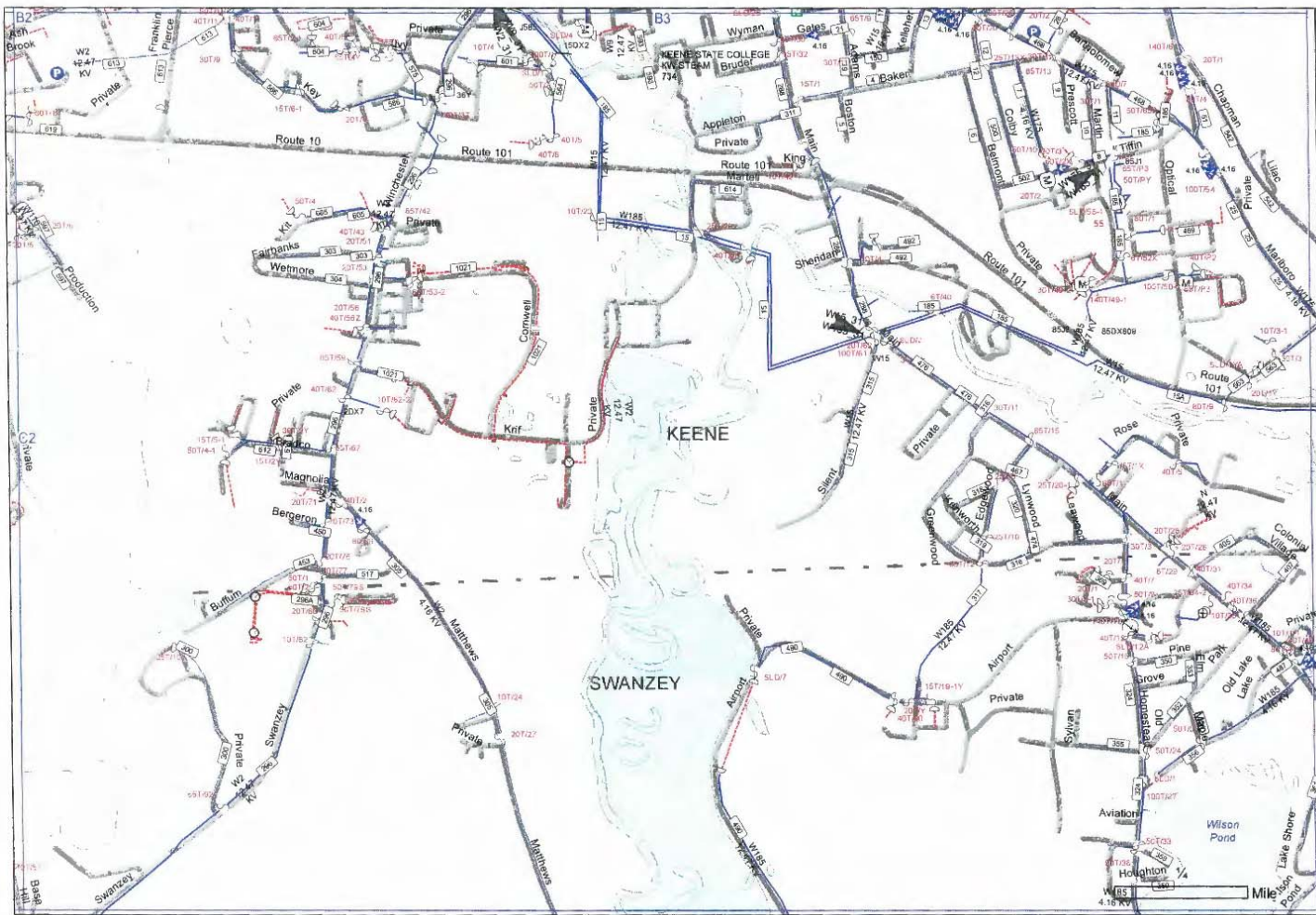




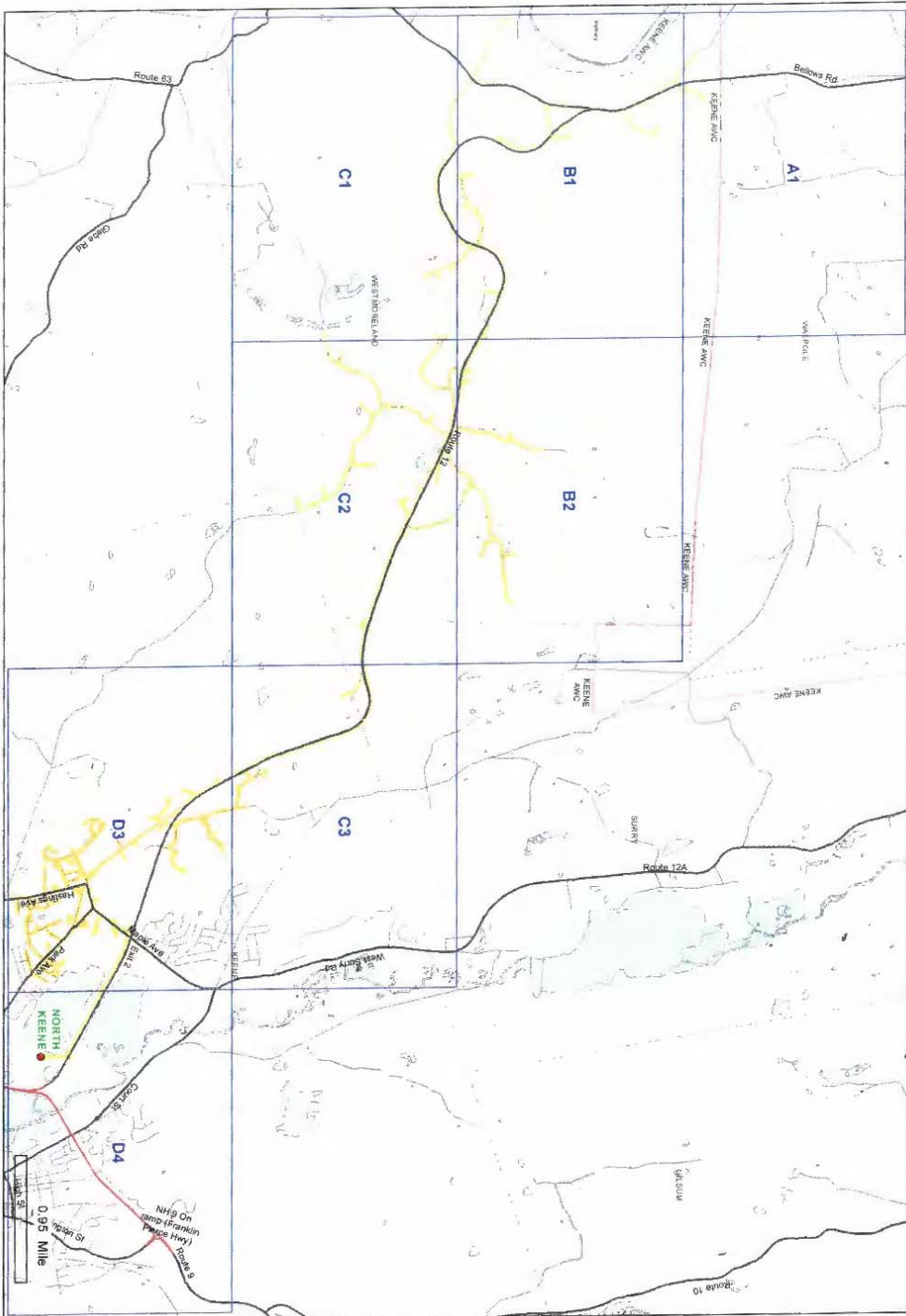
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 Feedback: Randall.House@eversource.com



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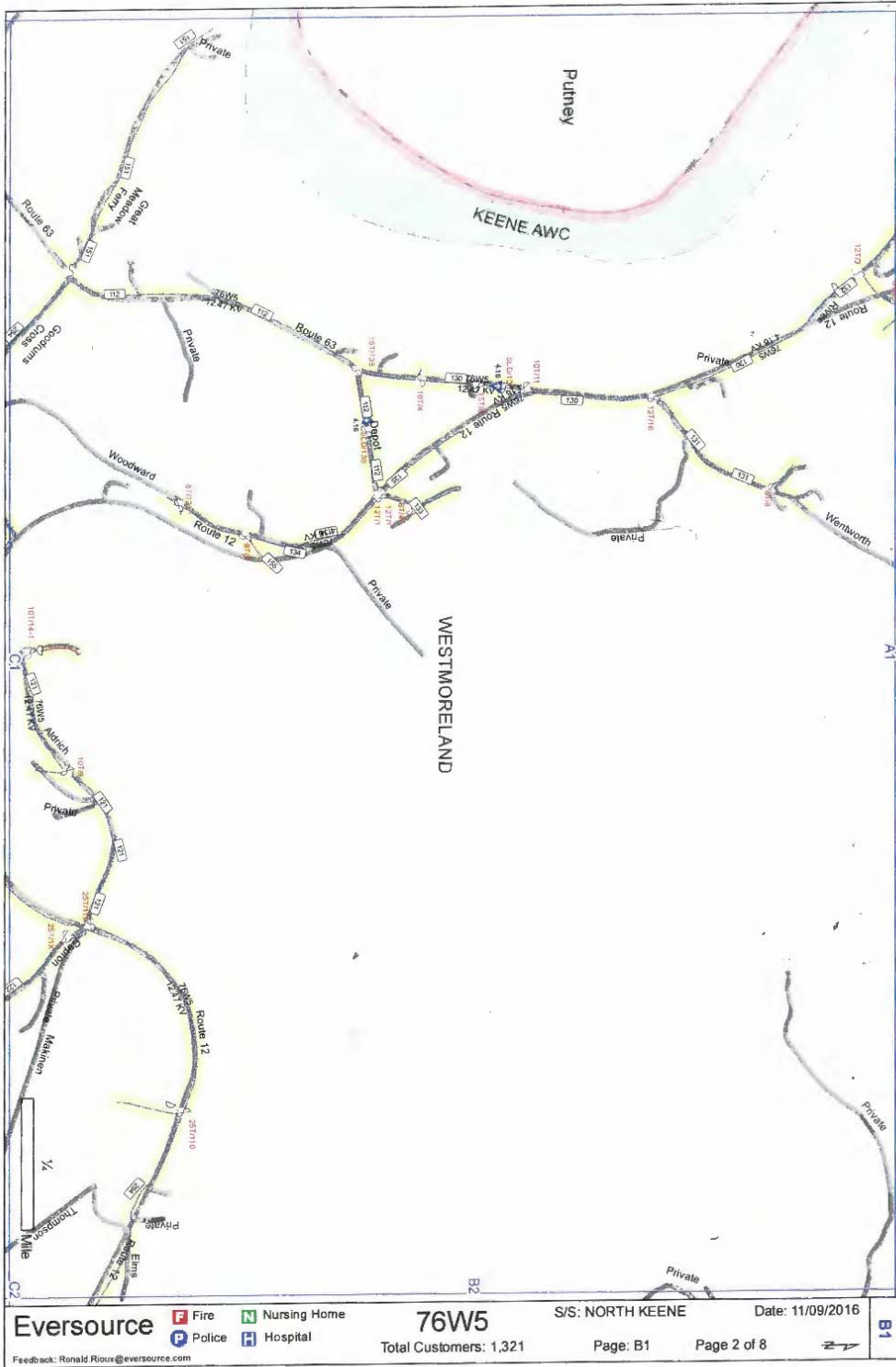
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- P Police
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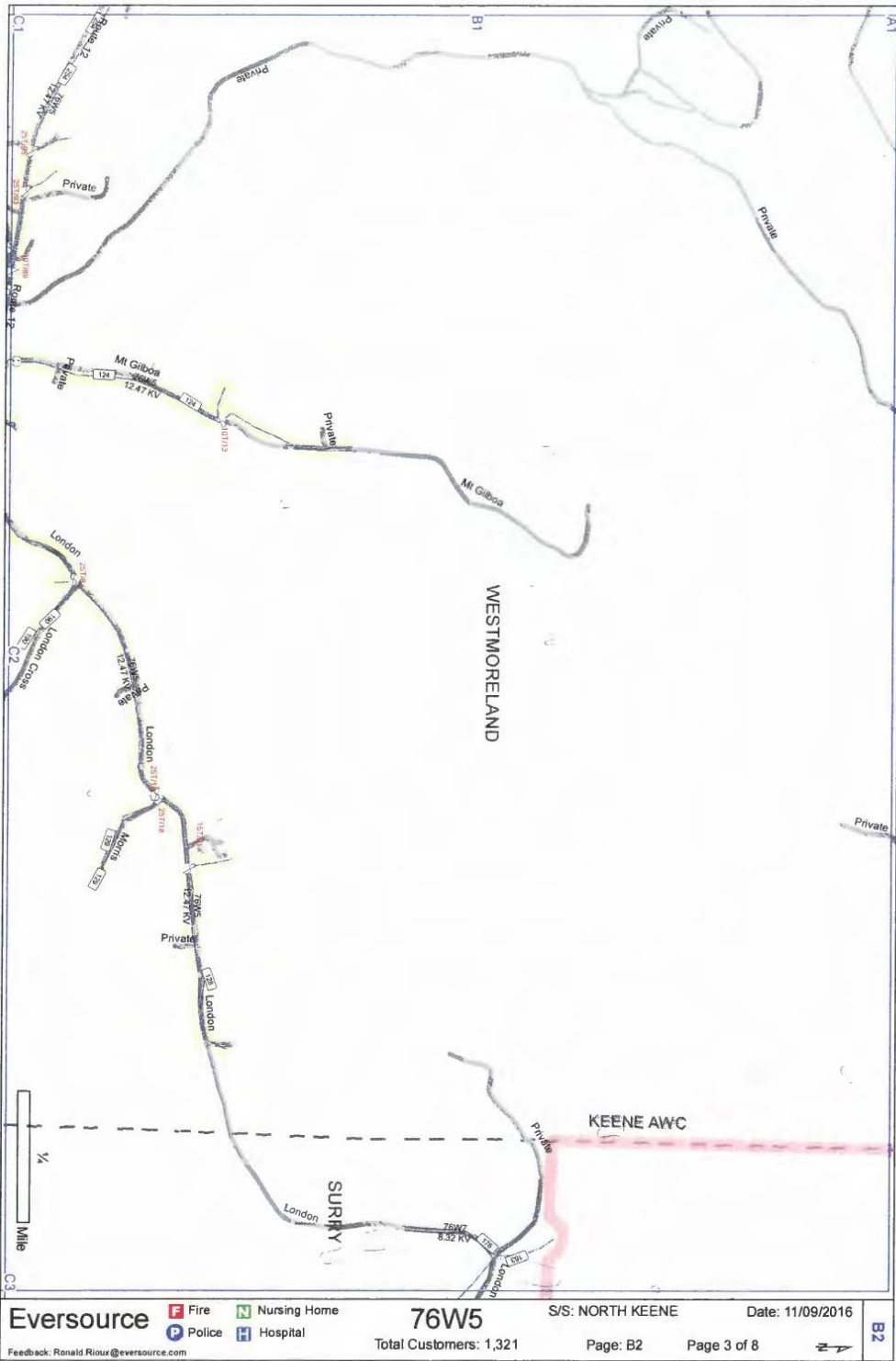
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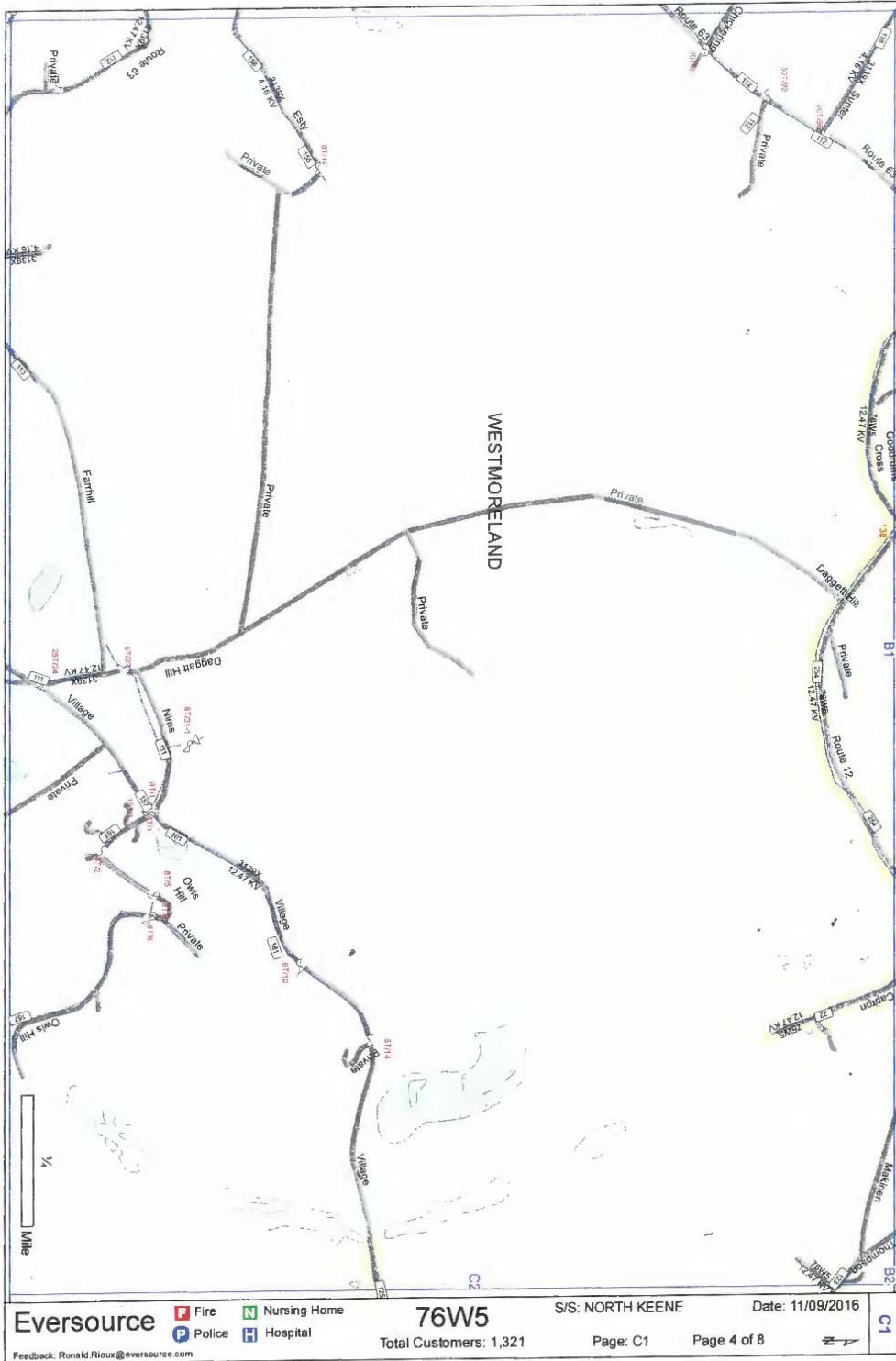


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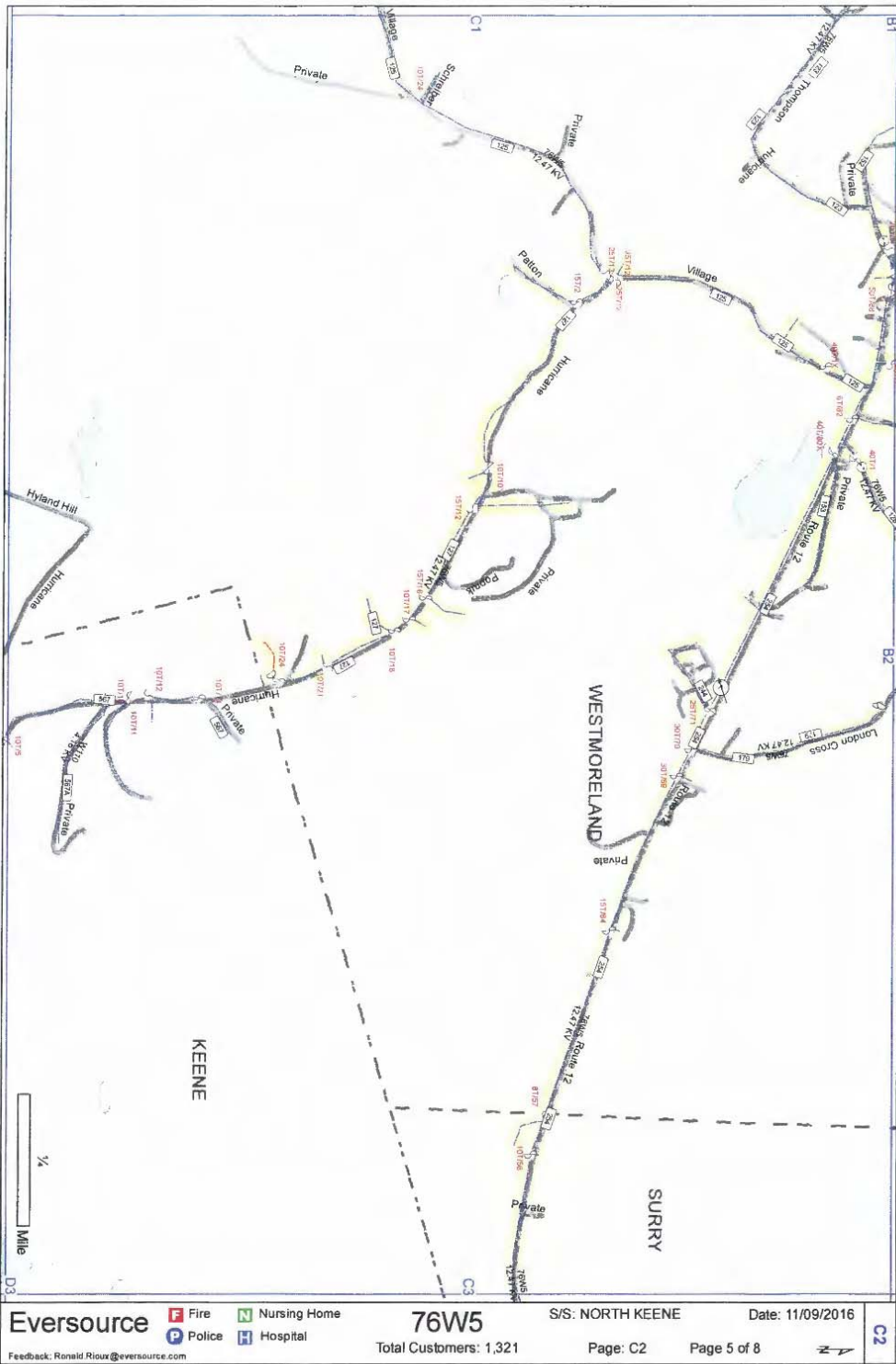
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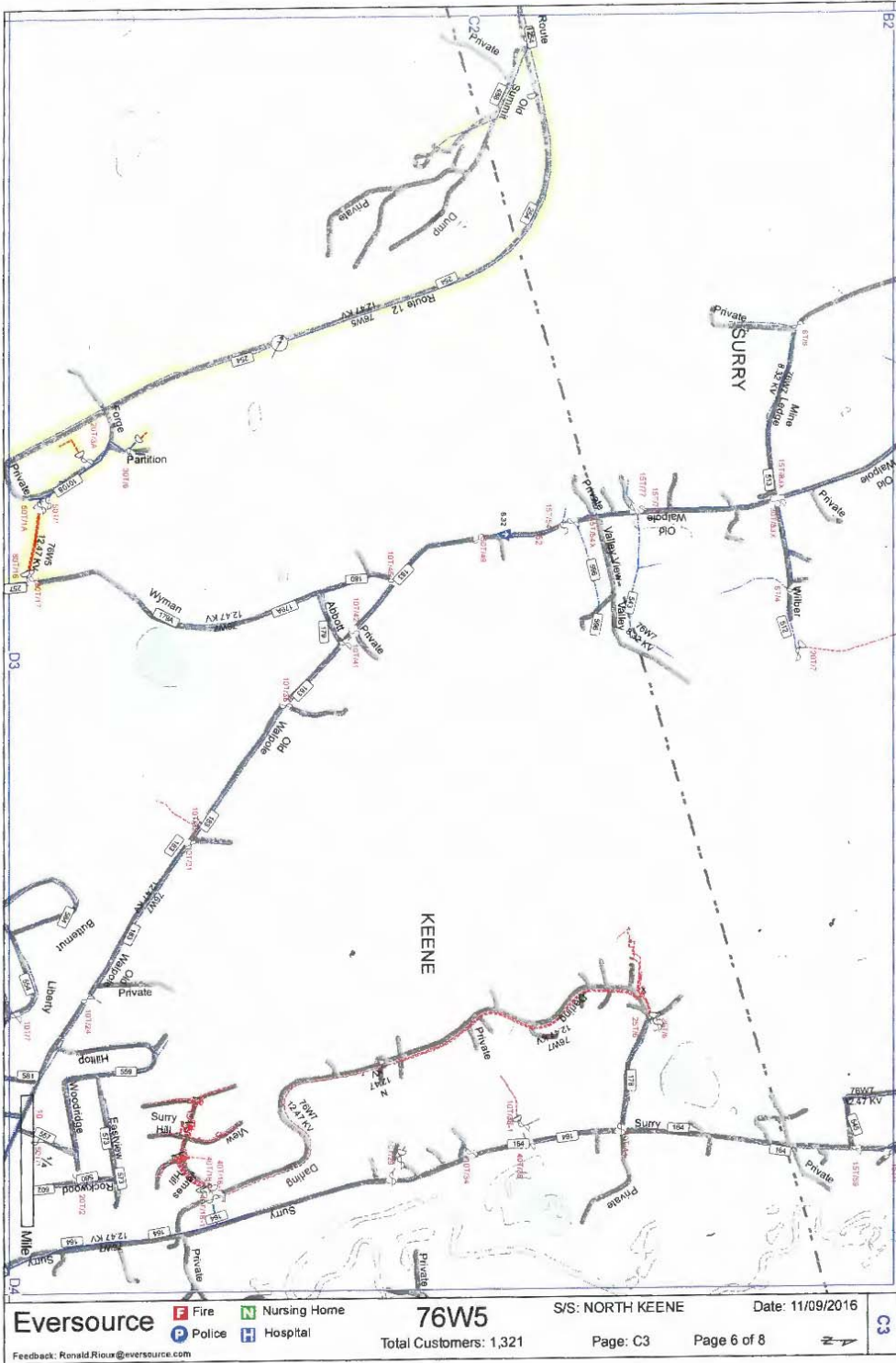
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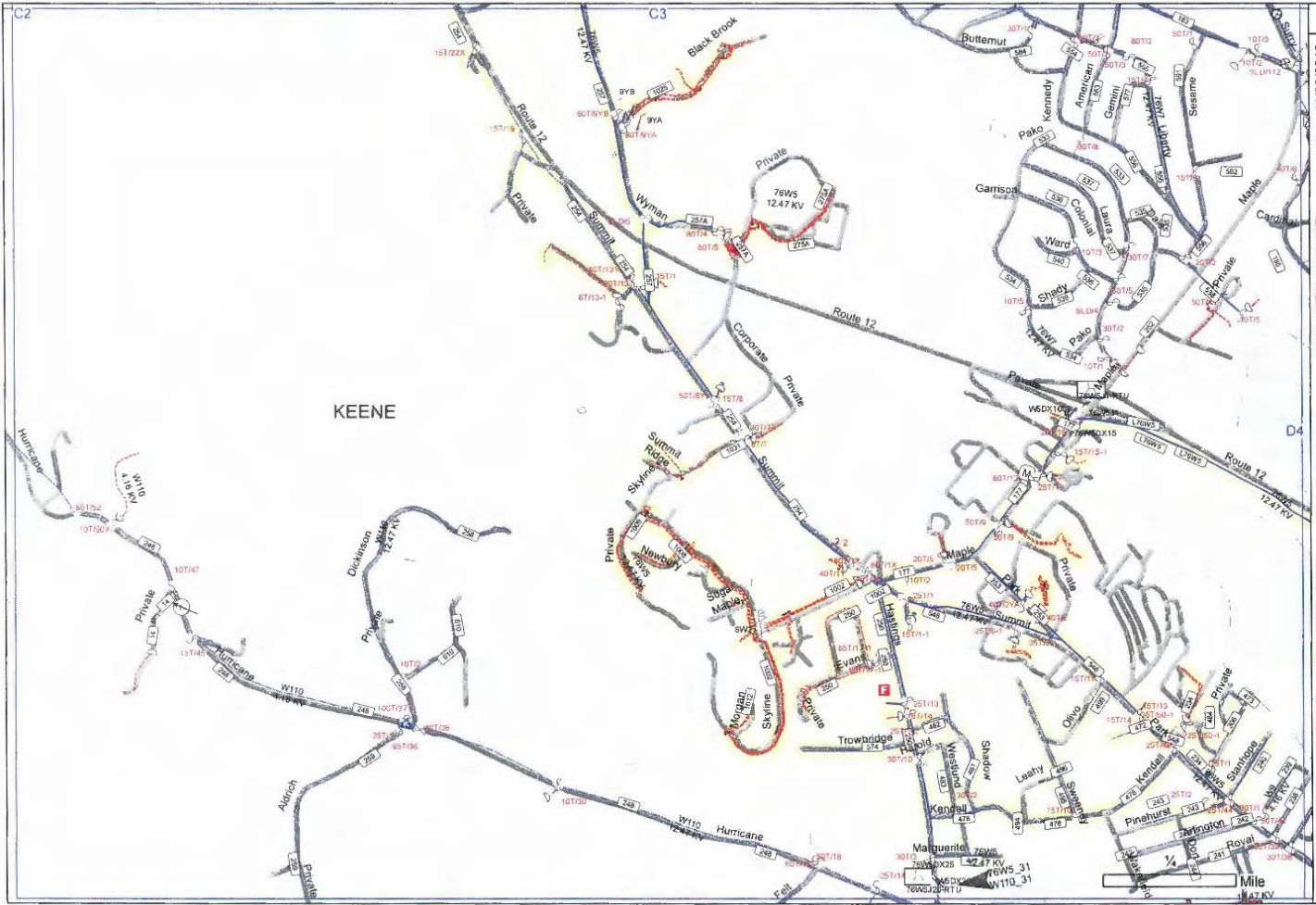
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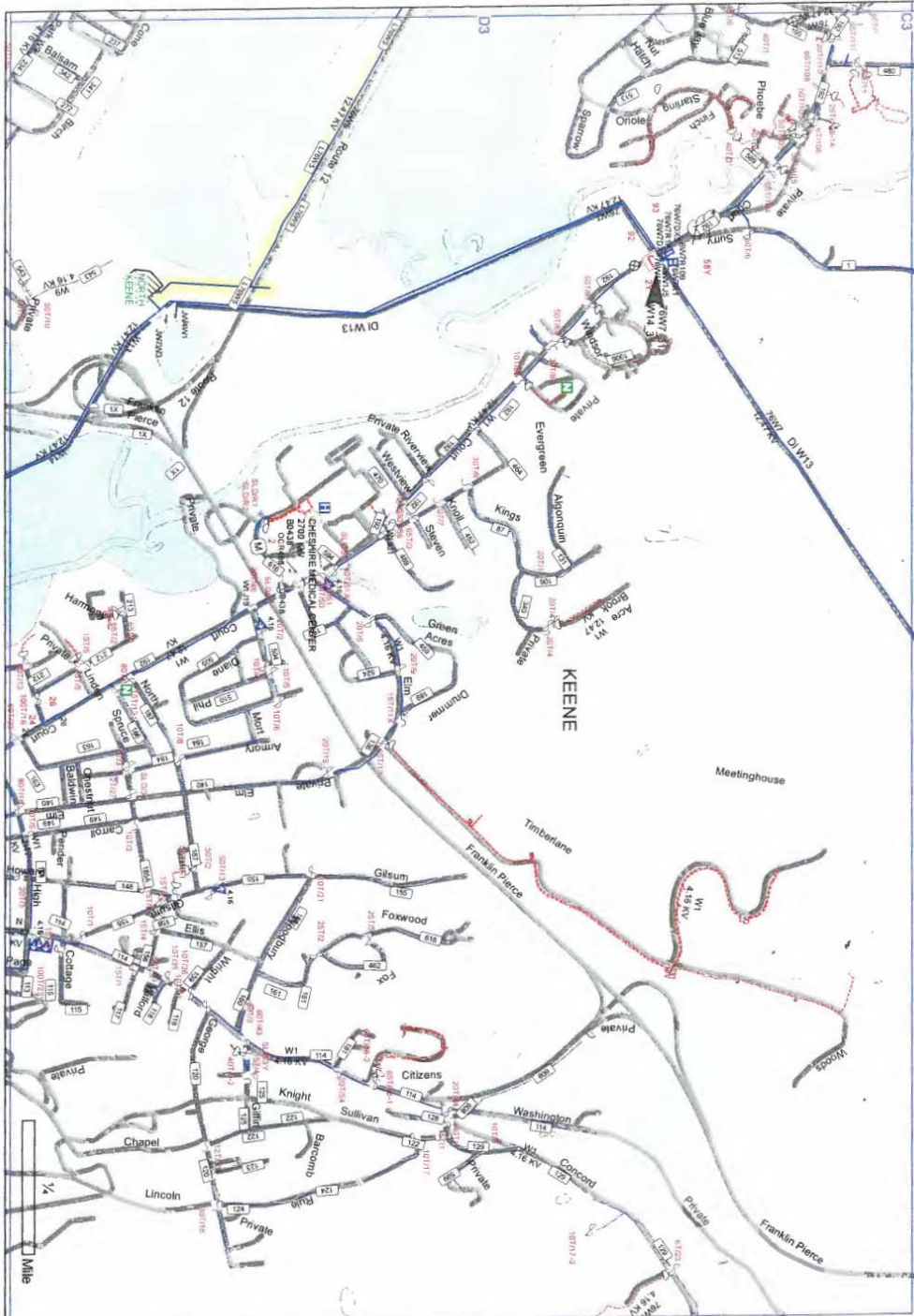
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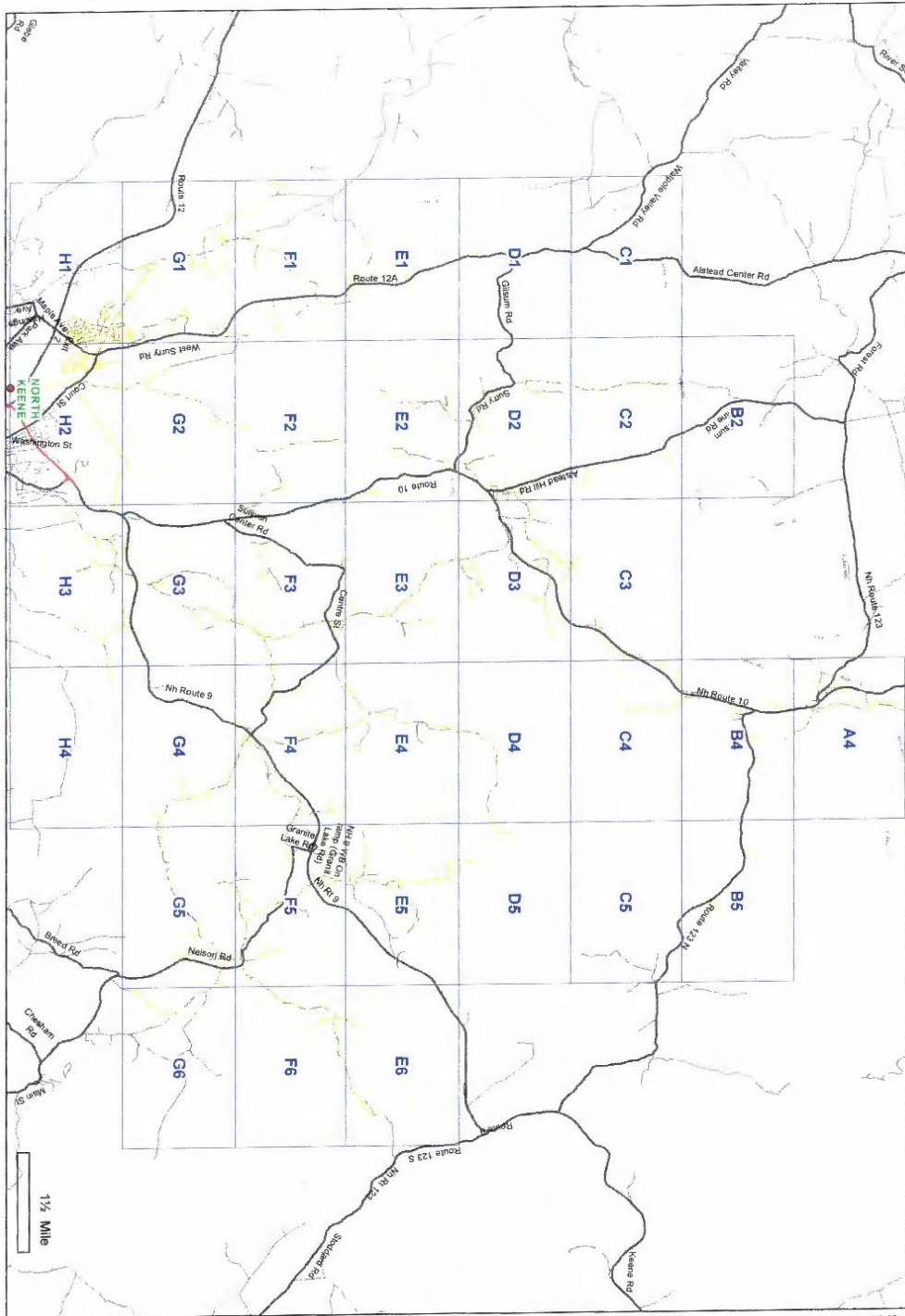
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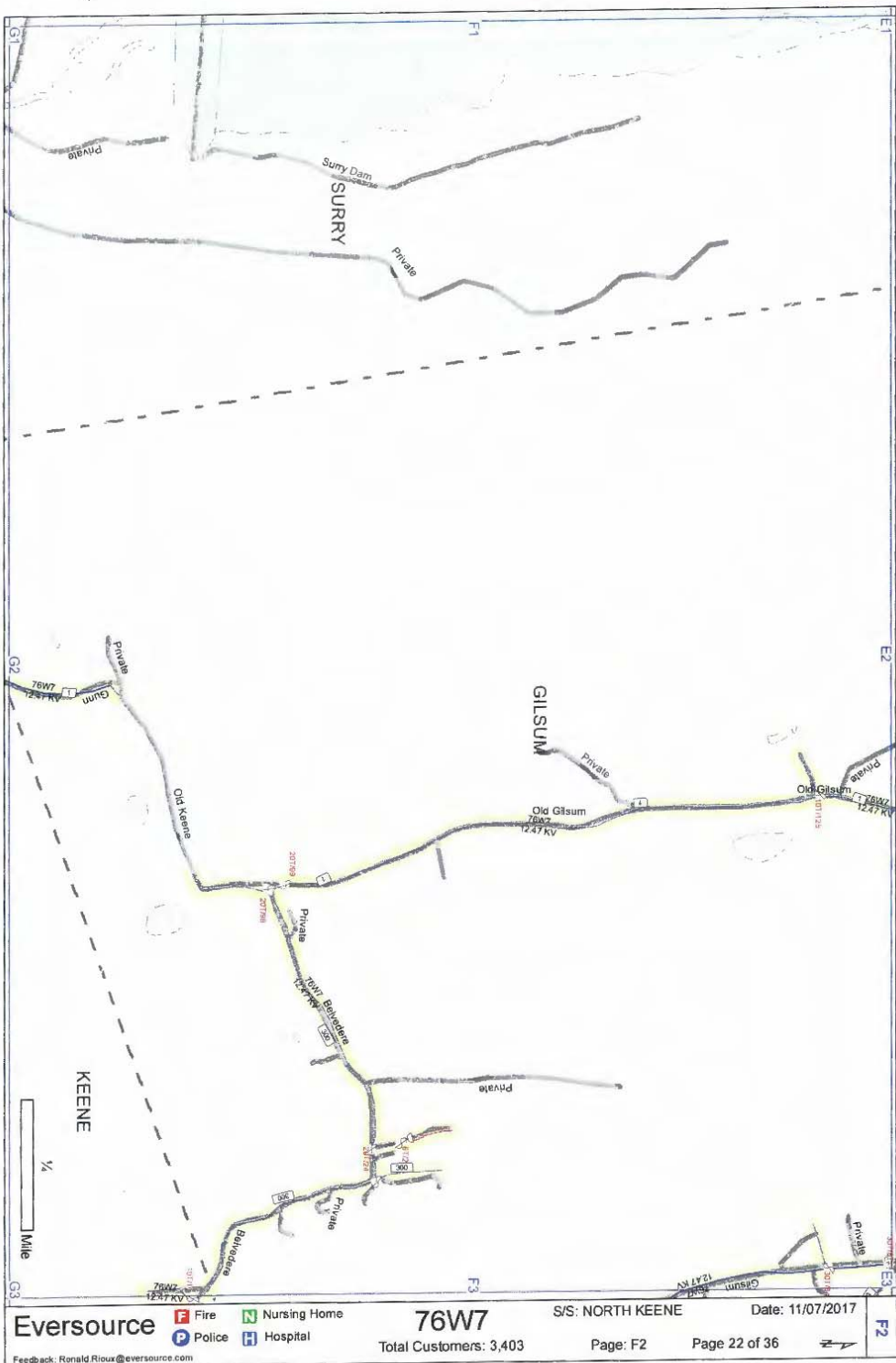
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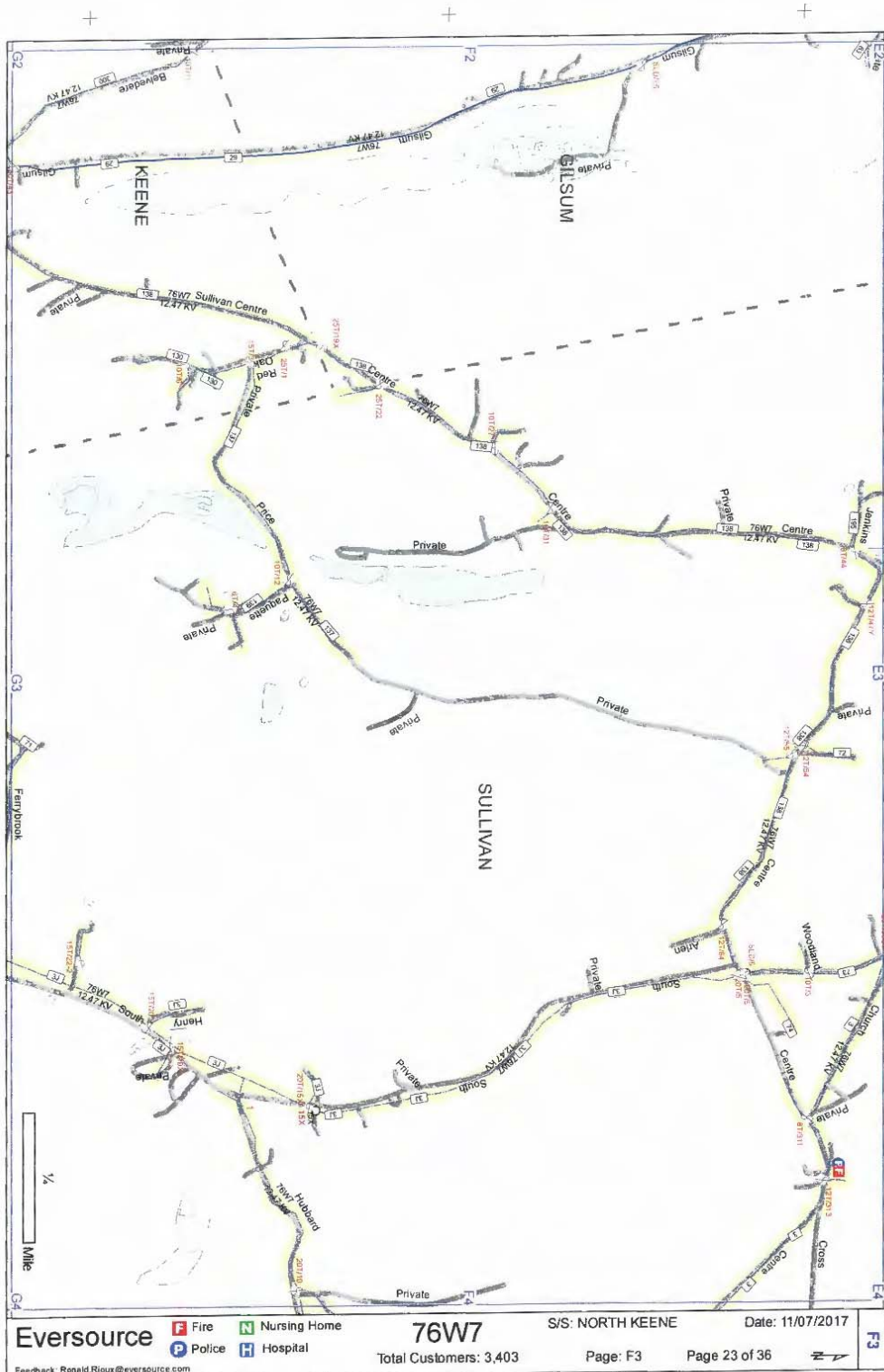
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 Page 22 of 36

Feedback: Ronald.Rioux@eversource.com



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Total Customers: 3,403

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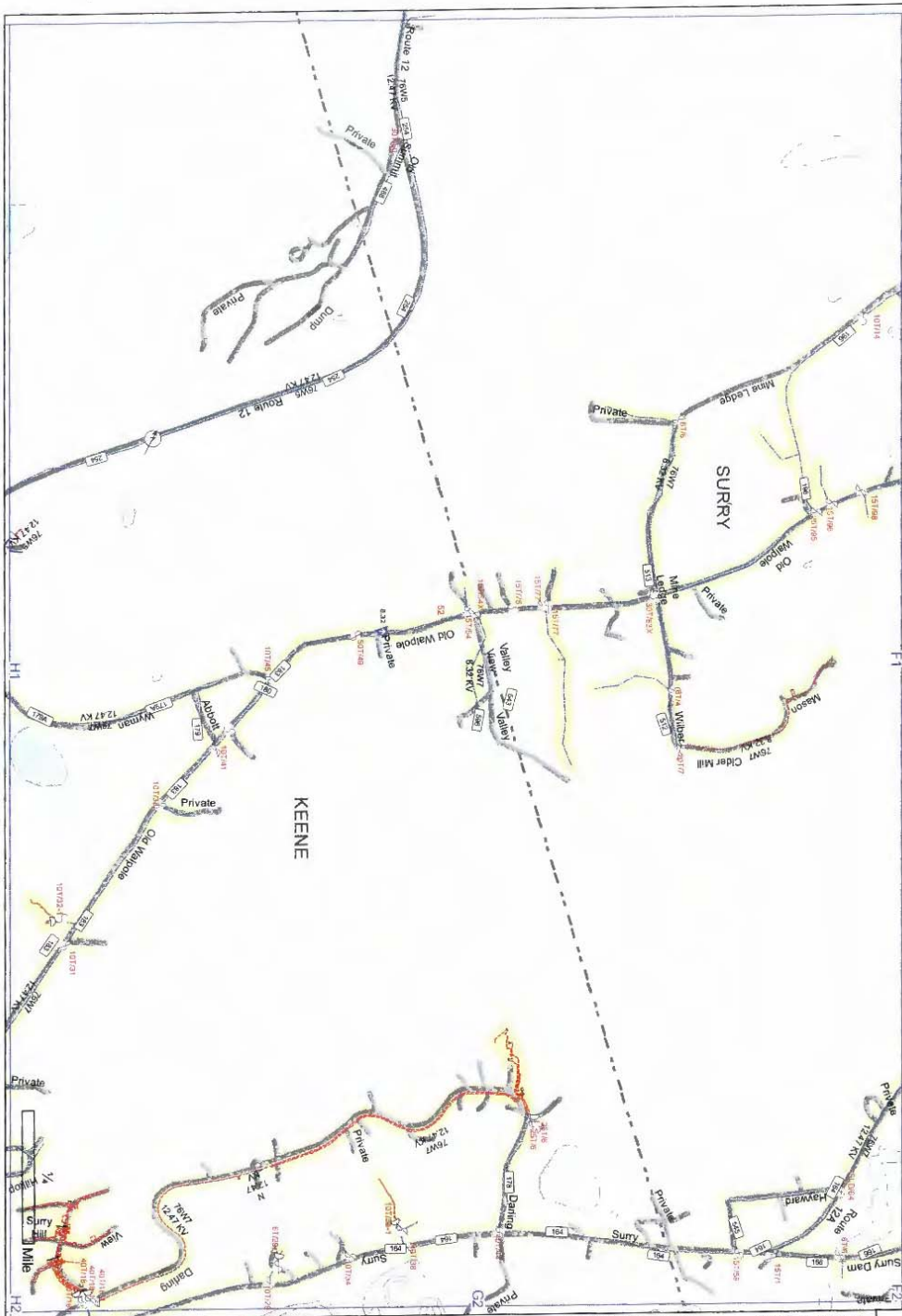
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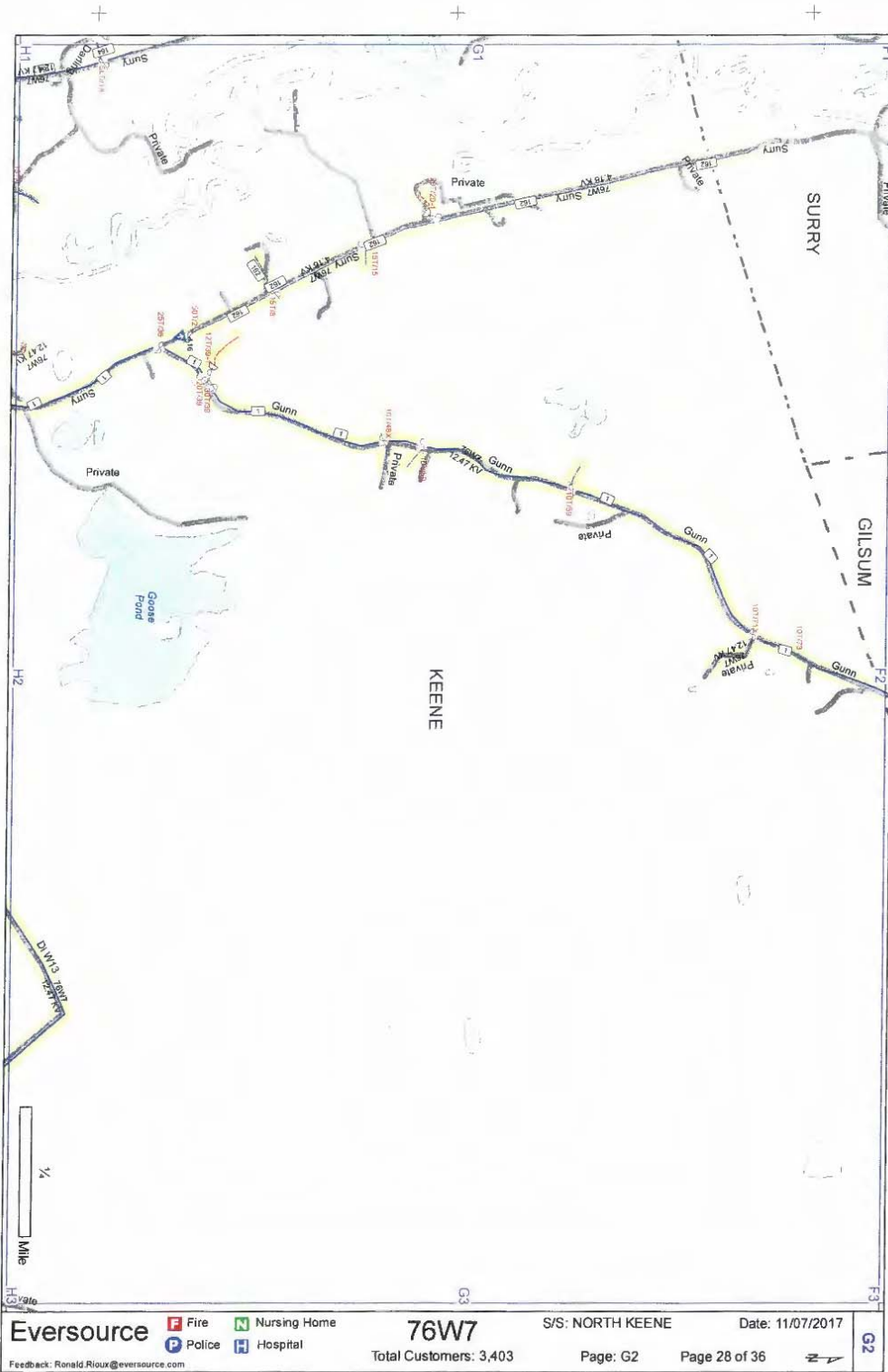
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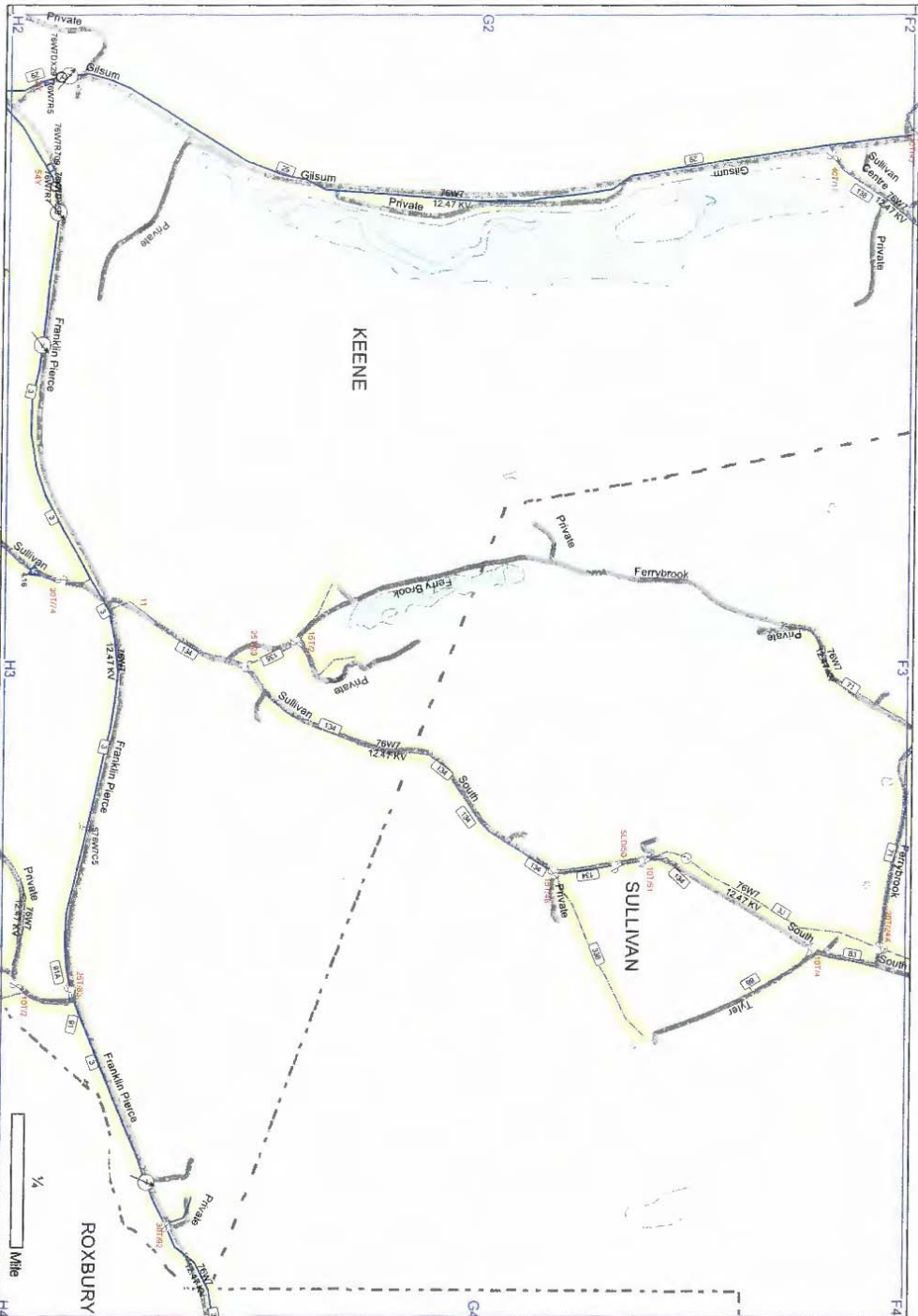
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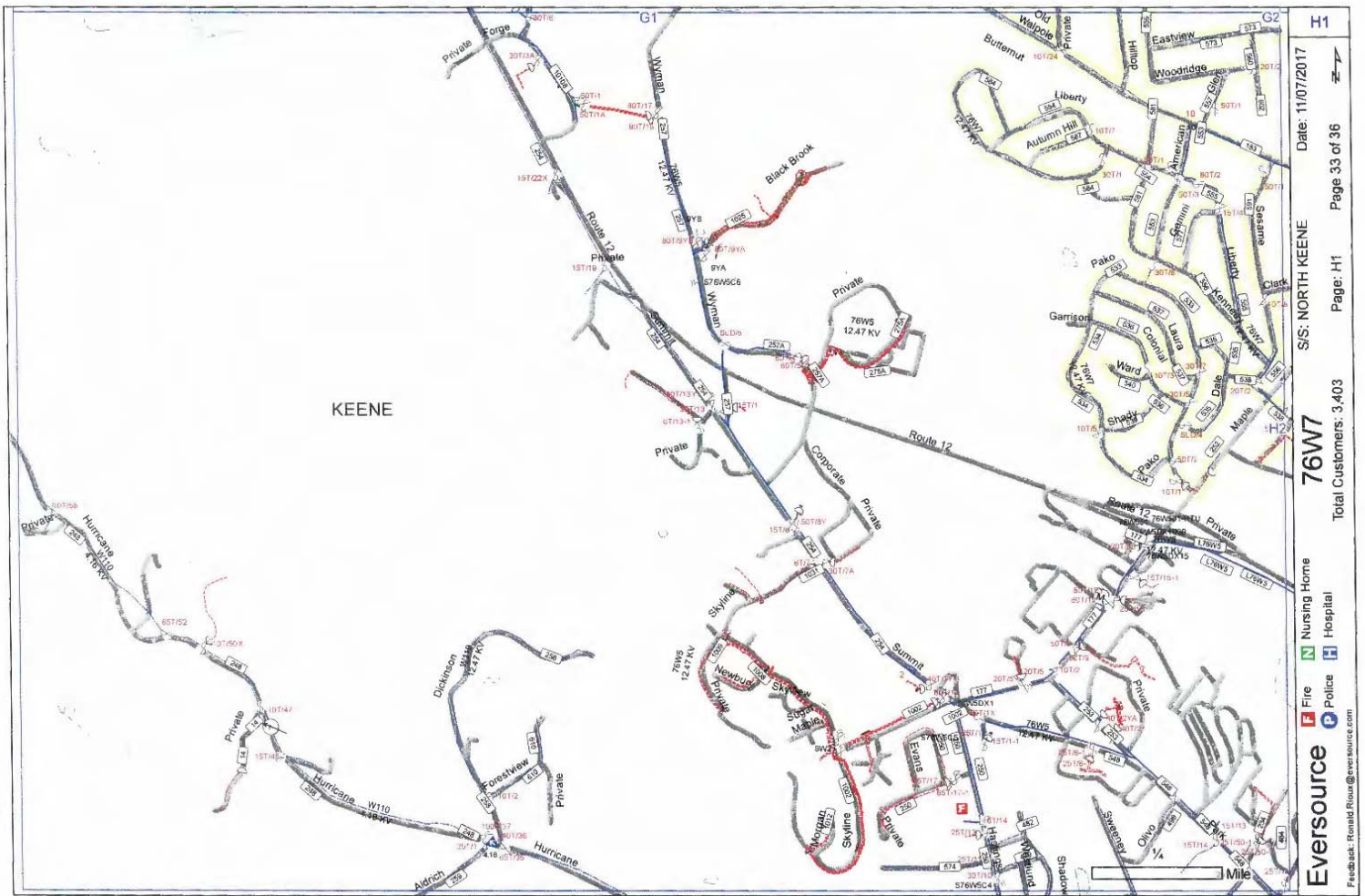


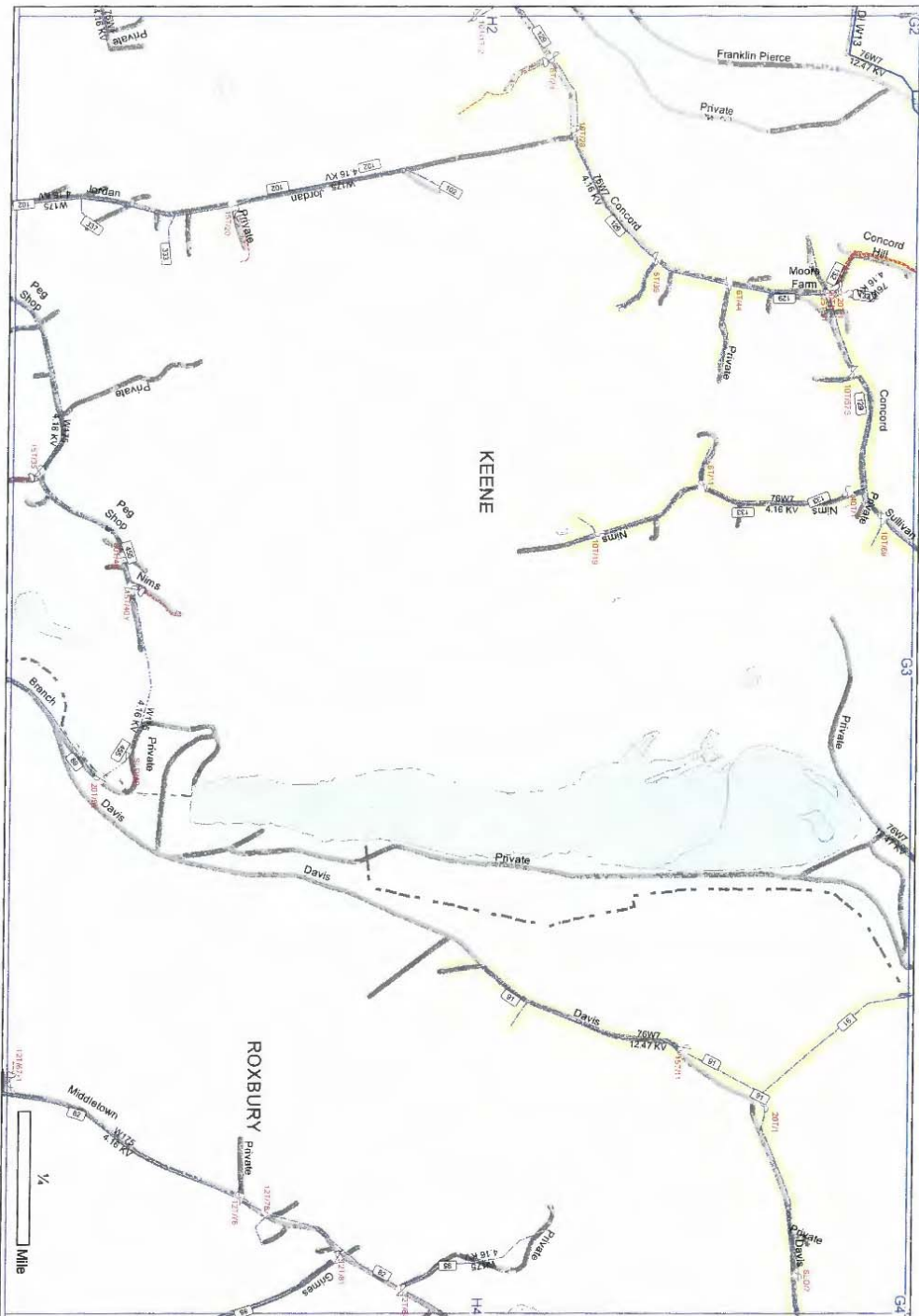
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Eversource Fire Nursing Home Police Hospital
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 Total Customers: 3,403 Page: G3 Page 29 of 36

Feedback: Ronald.Rioux@eversource.com





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Preparing a Conservation Plan

INTRODUCTION

Conservation of land, water and other natural features and resources is a priority for many New Hampshire communities. In order to implement conservation projects in a manner that protects what a community or region values the most requires some type of plan. To be effective, such a plan would be based on an inventory of the features and resources in a geographic area of interest. By compiling information on the identification, location and attributes of natural features and resources, community or regional groups can develop a plan to protect these features and resources through voluntary and/or regulatory means.

A conservation plan can be a vision for the future ecological health of an area. It typically includes reference to a natural resources inventory, a description of important features and an action plan to protect these features over a long period of time.

WHY CREATE A CONSERVATION PLAN?

A conservation plan may be created to:

- Identify and describe the most important natural features and resources in a geographic area
- Promote conservation of these natural features and resources
- Guide municipal or private voluntary land conservation planning
- Document conservation priorities and recommended policies in a municipal master plan
- Suggest regulatory protection for some features and resources

POSSIBLE COMPONENTS OF A CONSERVATION PLAN

Conservation plans are each unique, reflecting the physical, biological and social realities in their geographic areas of interest. However, conservation plans share some common ground with regard to content. A conservation plan typically includes:

- A statement of purpose
- Goals
- References to documents that support the work
- Review of a natural resource inventory
- Interpretation of the inventory
- Landscape level considerations - watersheds, biological needs of wildlife, etc.
- Recommended types and levels of protection for identified features and resources
- An action plan indicating what is to be done, by whom and when.

These components are described in more detail below:

1. STATEMENT OF PURPOSE

This section describes why the project is being done and how it is intended to be used.

2. GOALS

This section of a conservation plan states the reason(s) for the plan as well as the expected results of its application. Examples of goals might include protecting the water resources of a town, maintaining or improving local biological diversity, preserving prime agricultural lands or productive managed forest lands, conserving large blocks of open space or protecting scenic views. In addition to the protection of certain natural features and resources, a conservation plan may include goals related to public education, incorporating recreational opportunities into conservation planning, or conserving resources for other human use (such as public water supply protection).

3. REFERENCES TO DOCUMENTS THAT SUPPORT CONSERVATION PLANNING

There may be documentation of public support for a conservation plan in existing documents such as a community's master plan, zoning ordinance or a community survey. Referencing such statements of public policy can be used to decide the type, nature and scope of a conservation plan and how it is used. In turn, the conservation plan may influence future revisions to master plans and local land use controls. A conservation plan, however, does not have to include a regulatory component and can focus more exclusively on voluntary conservation options. However, neither voluntary nor regulatory conservation approaches alone can adequately protect all natural features and resources and a combination of both often provides the most thorough protection. Regulatory measures usually are less than optimal for resource protection but are uniformly applied. Voluntary techniques can provide an ideal level of protection but will only occur through the agreement of private landowners.

4. REVIEW OF A NATURAL RESOURCES INVENTORY

A thoughtful conservation plan should be created with a knowledge and understanding of the identification, location and attributes of natural features and resources. This is accomplished by conducting a natural resources inventory prior to beginning a conservation plan, or using an existing inventory. Natural resources information is typically presented in the form of maps and a report that contains information about the mapped features and documentation of the inventory process.

A comprehensive natural resources inventory might be organized to include the following:

Basic Inventory - Easily obtained and useful data

Town Boundaries	Potential & known non-point pollution sources
Transportation networks	Topography
Utility networks	Conservation lands
Surface waters	Important agricultural soils
Groundwater (aquifers)	Wildlife Action Plan data
Wetlands	Unfragmented blocks of open space lands
Watersheds (regional)	

Detailed inventory - More work collecting data & a higher level of detail

Watersheds (local)	Agricultural lands assessment
Floodplains	Productive forest soils
Wetland evaluations	Managed forest lands & tree farms
Undeveloped shorelands	Detailed wildlife habitat assessment
Potential future public water supplies	
Cultural features (archaeologic & historic sites, scenic areas, etc.)	

These features and resources are usually presented on maps that show multiple features and resources organized around a common theme such as water resources.

5. INTERPRETATION OF THE NATURAL RESOURCES INVENTORY

This section of a conservation plan expands on the natural resources inventory review, describing the information in the natural resources inventory: what important features and resources were revealed through the inventory, where concentrations of features and resources occur and where important features and resources occur together (“co-occur”) in the landscape. This step results in identification of the geographic areas that would be most significant as part of a comprehensive conservation plan for a community, watershed or other geographic area.

6. LANDSCAPE LEVEL CONSIDERATIONS

This includes looking at the connectivity of habitats, integrity of aquatic and wetland systems, etc. Interconnectedness is the norm for components of ecosystems and human communities. The interrelationships of these components occur on many different scales, some of which bear no relation to municipal boundaries. This factor, coupled with the cumulative effects of human use of land and continuing population increase, requires thought about “big picture” issues, especially as related to water systems and wildlife biology. An effective conservation plan, should, for example, include consideration of the watershed context for streams, rivers, ponds, lakes, wetlands and estuaries. On the other hand, wildlife habitat and biological diversity conservation planning requires consideration of the biological requirements of species and natural communities, including connection of habitats, spatial relationships among habitats and the potential needs for species to adapt (by migrating, for example) to changing habitat conditions in the future.

Below are some suggestions for what to include in a conservation plan that focuses on water resource or wildlife habitat conservation.

Water Resources Protection

If **water resource protection** is a primary concern in a conservation plan, these general principles may be appropriate:

- Prioritize and protect local watersheds, riparian areas with buffers, wetlands and surrounding uplands
- Limit impervious areas
- Maintain natural hydrologic levels where possible
- Avoid soil erosion
- Control toxic materials
- Minimize road density

Voluntary approaches to water resource conservation might include:

- Acquisition of riparian conservation easements
- Land acquisition
- Best management practices defined and promoted
- Public education.

Regulatory approaches to water resource conservation might include:

- Establishment of public policy in the municipal master plan
- Setbacks, which specify a distance certain activities must occur from water or wetlands
- Buffers, which specify a distance certain activities must occur from water or wetlands and the character of the land between the activity or land use and the water or wetland.
- Best management practices required (e.g., performance-based zoning).

Wildlife Habitat Conservation

Some principles of conservation biology that might be considered when planning for *habitat conservation* include:

- Make conservation areas as large as possible
- Connect smaller areas near one another to create a bigger unit
- Locate areas close to each other
- Provide travel routes for animals by connecting reserves
- Include representative natural communities
- Include habitats for rare species or communities
- Work within watersheds when possible
- Include landscape variety (elevation, etc.)

Voluntary approaches to habitat conservation might include:

- Acquisition of conservation easements
- Land acquisition
- Managing wildlife habitats
- Public education

Regulatory approaches to habitat conservation might include:

- Establishment of public policy in the municipal master plan
- Requirement that subdivisions allow for continued movement of wildlife across roads
- Cluster or “open space” or “conservation” zoning
- Surface water and wetland protection measures will protect some habitat components for some species that associate with these habitat types.

7. RECOMMENDED TYPES AND LEVELS OF PROTECTION FOR ITEMS OF INTEREST

In this section of a conservation plan, recommendations for the protection of identified and perhaps prioritized features and resources are given. For example: Maintain or restore shorelands of lakes and ponds in a naturally vegetated condition within 100 feet of the water or for rare species or natural communities, permanently protect land on which the feature occurs from development, plus a buffer surrounding it sufficient to ensure its long term viability.

Recommendations may also include statements of preference for particular types of conservation, either voluntary or regulatory. Examples: The preferred voluntary conservation technique is acquisition of conservation easements because..., or a floodplain ordinance should be implemented to control development in these environmentally sensitive areas.

8. ACTION PLAN

An action plan will indicate what is to be done, by whom and when to accomplish the goals of the plan. An action plan will usually require and include a **time line** for and a **budget** that estimates costs associated with implementation of the plan and the proposed sources of funds.

March 2013

**PURPOSE AND GOALS OF THE KEENE CONSERVATION PLAN –
(distilled from Keene ConComm retreat 2014)**

PURPOSE: To establish clear long-term goals and priorities as a context for decisions related to conservation, protection, and preservation of Keene’s natural resources.

GOALS:

- To update and coordinate a comprehensive natural resources inventory (NRI) for the City of Keene.
- To relate priorities to long-range community values identified in the 2011 Keene Comprehensive Master Plan as well as to values and goals identified by SWRPC and other regional initiatives, the NH Wildlife Action Plan, and other long-range planning processes.
- To identify current and future threats to the City’s natural resources, and strategies for addressing those threats.
- To use the Conservation Plan to assist the City in the process of re-writing its Land Use Code.
- To provide context, guidance, and reference for the rotating volunteer membership of the Conservation Commission, for the Commission’s advisory roles and for its decisions regarding allocation of available funds.
- To provide a framework for public education and advocacy regarding the wise use of publicly- and privately-held natural resources within the City.
- To establish expectations of periodic updates to the NRI and to the Commission’s priorities and goals.

Suggested by UNH Cooperative Extension in Developing a Conservation Plan:

- Statement of Purpose
- Goals
- Reference to supporting documents
- Review NRI
- Interpretation of NRI
- Landscape-level considerations (eg watershed)
- Recommended types and levels of protection
- Action Plan

- <Periodic Review and Update>

Natural Resource Conservation Service (NH): What is Conservation Planning?

FROM <http://www.nrcs.usda.gov/wps/portal/nrcs/main/nh/technical/cp/>

Conservation planning involves more than considering individual resources. It focuses on the natural systems and ecological processes that sustain the resources. The planner strives to balance natural resource issues with economics and social needs.

The conservation planning process helps achieve the following goals:

- Help protect, conserve, and enhance natural resources.
- Design alternatives that meet local resource quality criteria for identified resource issues.
- Include the consideration of human concerns toward achieving sustainable agriculture
- Consider the effects of planned actions on interrelated geographical areas (i.e. within a watershed, within an aquifer, etc.)
- Consider and explain the interaction between biological communities and society.
- Focus on ecological principles.
- Assist with development of plans, regardless of scale, which will help achieve the client's and society's objectives.
- Identify where knowledge, science, and technology need to be advanced.

The Natural Resources Conservation Service uses a nine step planning process whenever it begins a project. The purpose of the steps is to develop and implement plans that protect, conserve, and enhance natural resources within a social and economic perspective.

1 - Identify Problems and Opportunities: Everyone needs a reason to plan. Planning can start with a problem, an opportunity, shared concerns, or a perceived threat. Initial opportunities and problems are first identified based on readily available information provided by the client(s). There may be information available through the County Conservation Districts or through a larger-scale conservation plan. The Little River Salt Marsh Restoration Project is an excellent example of how this process worked on an area-wide scale, with multiple stakeholders and objectives.

2 - Determine Objectives: During this step, the stakeholders identify their objectives. A conservationist guides the process so that it includes both the stakeholder needs and values and the resource uses and on-site and off-site ecological protection. Objectives may need to be revised and modified as new information is learned later in the inventory and analysis stages. Objectives may not be finalized until Step 4 of the planning process.

3 - Inventory Resources: In this step, appropriate natural resource, economic and social information for the planning area is collected. The information will be used to further define

the problems and opportunities. It will also be used throughout the entire process to define alternatives and to evaluate the plan. It is important that as much information as possible can be collected so that the plan will fit both the needs of the landowner and the natural resources. Inventories can range from a farmstead or small watershed all the way up to a complete inventory of resources for a state or the entire nation, such as with the NRCS National Resources Inventory or the Soil Survey Program.

4 - Analyze Resource Data: Study the resource data and clearly define existing conditions for all of the natural resources, including limitations and potential for the desired use. This step is crucial to developing plans that will work for a landowner and their land. It also provides a clear understanding of the baseline conditions will help to judge how effective a project is after it has been put into place.

5 - Formulate Alternatives: The purpose of this step is to achieve the goals for the land, by solving all identified problems, taking advantage of opportunities, and meeting the social, economic, and environmental needs of the planning project. With NRCS conservation planning, we often can help landowners formulate alternatives based on cost-sharing programs that help offset the financial expense of implementing conservation practices.

6 - Evaluate Alternatives: Evaluate the alternatives to determine their effectiveness in addressing the clients' problems, opportunities and objectives. Attention must be given to those ecological values protected by law or executive order.

7 - Make Decisions: At this point the landowner chooses which project or plan will work best for their situation. The planner prepares the documentation. In the case of an area-wide plan, public review and comment are obtained before a decision is reached.

8 - Implement the Plan: Technical assistance is provided to help with the installation of adequate and properly-designed conservation practices. At this point in NRCS conservation planning, our conservation engineers step in and make designs based on our technical standards. Also, assistance is given in obtaining permits, land rights, surveys, final designs, and inspections for structural practices.

9 - Evaluate the Plan: Conservation planning is an ongoing process that continues long after the implementation of a conservation practice. By evaluating the effectiveness of a conservation plan or a practice within a plan, stakeholders can decide whether to continue with other aspects of an overall area-wide plan.

GUIDING DOCUMENTS

Keene Comprehensive Master Plan (2011)

http://www.ci.keene.nh.us/sites/default/files/UNE_Baseline_10-9-09.pdf

#2 of 6 Vision Areas: A unique natural environment

- *The natural environment addresses the natural areas (green spaces, plants and animals, hillsides and waterways) within and around our city, as well as the man-made areas (green infrastructure, parks, agriculture, and gardens). For our future, achieving a unique natural environment means achieving community sustainability & creating green infrastructure*
- *Open spaces and greenways connections: trails and bicycle pathways, greenway connections, parks, natural resources, open space preservation and restoration, urban forestry*
- *Future land use & policy (Transfer of Development Rights Program)*

City of Keene Department of Parks and Recreation:

Active and Passive Recreation Management Plan (2012)

<http://www.ci.keene.nh.us/sites/default/files/Keene%20APRMP%20FINAL%2006%2011%2012%20corrected.pdf>

In surveys conducted in developing the plan, 58% responded that “More open space and conservation land” was very important, and 80% that “More pedestrian and bike paths and trails” was very important.

Key Issue #3: Manage and Sustain Natural Resources

Recommendation: Establish a park and open space amenity donation program

Recommendation: Engage the community in outdoor and environmental activities

Southwest Regional Planning Commission:

Southwest NH Natural Resource Plan (2014)

<https://drive.google.com/file/d/0B7moH6fetqkPOF81WE1Hb3NrS00/view>

Ashuelot River Local Advisory Council:

Ashuelot River Corridor Management Plan (2006)

http://www.swrpc.org/files/data/library/natural_resources/ASHLAC%20PLAN%202006%20Update.pdf

From Stone Arch Bridge to confluence of the Ashuelot and The Branch:

Management Goals

- provide public access for instream and riparian recreation (e.g. canoeing, kayaking, fishing, swimming, walking, and biking) outside of City-owned lands;
- manage public access within City-owned park land;
- maintain or rehabilitate forested riparian buffer;

- reduce NPS threats: turf management (nutrients, pesticides, herbicides), storm water runoff and soil erosion (sediment, nutrients, sewage), and road salt impacts;
- describe the extent and nature of known subsurface contamination sites and expedite state and City clean-up programs;
 - locate and repair leaks as may exist in the municipal sewer lines;
 - preserve undeveloped floodplain areas;
 - continue development and protection of Keene area riparian public land; and
 - integrate corridor management and land conservation (permanent protection) with existing Keene park land in and near the corridor, e.g. Goose Pond and Ashuelot River Park
 - increase upstream signage alerting paddlers to the dam on the Ashuelot River in Ashuelot River Park and the dam on The Branch downstream of the Cheshire Stone Arch Bridge.

FRIENDS OF OPEN SPACE - PRIORITIES EVALUATION 2014

NH Wildlife Action Plan (2005; update in process 2015) NH Fish and Game

http://www.wildlife.state.nh.us/Wildlife/wildlife_plan.htm

The New Hampshire Fish and Game Department has worked together with partners in the conservation community to create the state's first Wildlife Action Plan. The plan, which was mandated and funded by the federal government through the State Wildlife Grants program, provides New Hampshire decision-makers with important tools for restoring and maintaining critical habitats and populations of the state's species of conservation and management concern. It is a pro-active effort to define and implement a strategy that will help keep species off of rare species lists, in the process saving taxpayers millions of dollars.

Maintain wildlife database, Assess threats to wildlife health, map landscape potential for wildlife habitat, corridors, and buffers. Protect riparian/shoreland habitats and other wildlife corridors. Protect unfragmented blocks and other key habitats. Develop a comprehensive land protection support program.

NH Forest Resources Plan (2010) – NH Division of Forests and Lands

NH Forest s Assessment

<http://www.nhdf.org/library/pdf/Planning/NH%20Statewide%20Assessment%202010%20update.pdf>

Criterion 1: Conservation of Biological Diversity

Criterion 2: Maintenance of Productive Capacity of Forest Ecosystems

Criterion 3: Maintenance of Forest Ecosystem Health and Vitality

Criterion 4: Conservation and Maintenance of Soil and Water Resources

Criterion 5: Maintenance of Forest Contribution to Global Carbon Cycles

Criterion 6: Maintenance and Enhancement of Long-term Multiple Socio-economic Benefits to Meet the Needs of Societies

Criterion 7: Legal, Institutional, and Economic Framework for Forest Conservation and Sustainable Management

NH Forest Resources Strategies

<http://www.nhdfi.org/library/pdf/Planning/NH%20Forest%20Resource%20Strategies%20Final.pdf>

Public entities at all levels of government develop stewardship plans for their forest lands to provide the people they represent with a sound rationale for decision-making, to ensure the optimum benefits from this public asset are received for the long term to protect the environment and to serve as an example for other forest owners.

NH Climate Action Plan (2009) - NH Dept of Environmental Services

http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/documents/nhcap_final.pdf

Keene Climate Action & Adaptation Plan (2007)

http://www.ci.keene.nh.us/sites/default/files/Keene%20Report_ICLEI_FINAL_v2_1.pdf

OPPORTUNITY: WETLANDS AND SUB-SURFACE WATERS PROTECTION AND MANAGEMENT

Goal A: Increase the protection of existing and future wetlands to maintain the ability of these systems to

naturally recharge aquifers and decrease stormwater run-off.

- *Target A: Develop a wetlands management strategy by 2010 that includes the identification of and recommendation to preserve key wetland areas in the City that will reduce the impact of a flooding event.*
- *Target B: Develop a City-wide hydrologic study identifying the hydrologic areas, particularly those most susceptible to changes in climate and develop management plans, by 2010.*
- *Target C: Incorporate wetland and sub-surface waters protection into the comprehensive master plan.*
- *Target D: Update all relevant City standards to consistently support the protection of wetlands and sub-surface waters, whether during plan review, construction, or during operations.*

Goal B: Educate the public about wetland protection as a climate adaptation strategy.

- *Target A: Develop a guide for homeowners, developers, architects, etc., by 2009, to educate them about the significance of wetlands and their role in adapting to climate change.*
- *Target B: Devise a public outreach campaign/presentation.*
- *Target C: Incorporate wetland education into Earth Week and Community Planning Month activities.*

Goal C: Increase Keene's water storage capabilities in the face of drought conditions.

- *Target A: Create a watershed management plan.*
- *Target B: Protect aquifer recharge areas.*
- *Target C: Devise greywater storage and reuse systems to recycle and utilize water resources more efficiently.*

-

OPPORTUNITY: FAUNA AND FLORA

Goal A: Integrate into recently published state wildlife action plan.

- *Target A: Align City policies to support goals of New Hampshire wildlife action plan by 2010.*

Goal B: Protect habitats and migration routes.

- *Target A: Identify existing and future potential animal migration routes and techniques for crossing protection, and coordinate installation of crossing route protection infrastructure, by 2012.*
- *Target B: Develop a habitat protection program and finance options by 2010.*
- *Target C: Establish conservation-related standards for rural development to protect migration routes. Utilize these regulations to ensure habitat connections, or corridors, to allow animal movement.*

Goal C: Devise land use regulations to preserve forests.

- *Target A: Require sustainable forest management plans for all commercial logging conducted in the City.*
- *Target B: Create a ban on clear-cutting existing forested areas for building lots in the City and create standards for preparing a forested site for development.*

OPPORTUNITY: AGRICULTURE

Goal A: Increase Keene's food security.

- *Target A: Develop a food security plan for Keene by 2010.*
- *Target B: Incorporate the food security policy and actions into planning efforts by 2012.*
- *Target C: Create a local food security baseline and increase local food production by 20% within five years. The baseline should be completed by 2010, as part of the food security planning process.*
- *Target D: Identify and protect prime agricultural soils through ordinance, conservation measures, or other protection measures.*

Goal B: Research and identify what crops will be productive in our region with a warmer climate and changing soil composition.

- *Target A: Identify research currently underway.*
- *Target B: Develop a "Farmer's Guide" and a residential growers guide that will identify appropriate crops by 2010.*

Purpose (distilled from Keene ConComm retreat 2014)

To establish clear long-term goals and priorities as a context for decisions related to conservation, protection, and preservation of Keene’s natural resources.

Background and context:

Purpose in creating a Plan.

Why are we creating a Conservation Plan? See guiding documents

Distinctions among conservation, protection, and preservation

Goals (Updated from June 2015 retreat)

- *To update and coordinate a comprehensive natural resources inventory (NRI) for the City of Keene.*
- *To relate priorities to long-range community values identified in the 2011 Keene Comprehensive Master Plan as well as to values and goals identified by SWRPC and other regional initiatives, the NH Wildlife Action Plan, and other long-range planning processes.*
- *To identify current and future threats to the City’s natural resources, and strategies for addressing those threats.*
- *To use the Conservation Plan to assist the City in the process of re-writing its Land Use Code.*
- *To provide context, guidance, and reference for the rotating volunteer membership of the Conservation Commission, for the Commission’s advisory roles and for its decisions regarding allocation of available funds.*
- *To provide a framework for public education and advocacy regarding the wise use of publicly- and privately-held natural resources within the City.*
- *To establish expectations of periodic updates to the NRI and to the Commission’s priorities and goals.*

Process of developing the plan

(To date, process has been “top-down” although with significant public input to Comprehensive Master Plan and Parks and Recreation Management Plan)

Identification of existing regulatory protections at national, state, and municipal levels

Natural Resources Inventory

- Existing maps and documentation in Keene Comprehensive Master Plan
- KSC Conservation Plan May 2015
- Add/catalog/ provide maps:

- Existing open space not under protection (eg utility transmission lines, open space around reservoirs and other public works facilities not necessarily within City boundaries)
- Large private blocks of forest or agricultural land not under permanent protection
- Private lands under permanent easement protection (Monadnock Conservancy map?)

Interpretation of NRI

- Analysis at watershed level, with attention to aquifer recharge, surface and groundwater protection, water quality protection, and flooding issues
- Analysis of need and potential for habitat protection, wildlife corridors
- Analysis of forest blocks and contribution to CO2 storage/sequestration
- Analysis for present and future agricultural potential
- Analysis for present and future bike and pedestrian corridors

Identification of potential threats

- Water supply, water quality, flood potential
- Invasive species
 - Non-native invasive plants: impact on habitat
 - Non-native insects: threat to forest health
- Habitat loss and fragmentation: land use conversion
- Air quality

Recommended types and levels of protection

- Municipal zoning and regulatory protections
- Municipal practices (eg DPW water management)
- Conservation easements: how to have terms of easement foresee future needs re: climate change?
- Public education

Action Plan

- Land and water protection priorities
 - Easement priorities: watershed, habitat, and corridor protection
 - Zoning and regulatory recommendations
- Management plans
 - For specific City-owned lands without existing NRIs and management plans
 - For general management eg update of tax-ditch management practices, update Forest Management Plan, develop plans for management of invasive species
- Funding

Plan for periodic review and update

Annotated bibliography

To NH Conservation Commissions,

I am writing on behalf of Stoddard Conservation Commission, asking your Conservation Commission to support HB 1343. This bill benefits conservation by strengthening the protection of beavers mainly through better reporting of beavers taken out of season and the removal of their dams. In recent years as high as 1880 beavers were trapped out of season each year, and there were no recorded reasons why. The reporting serves as a gentle reminder of existing beaver protection law, as well as provide NH Fish and Game with valuable information.

The following is link to the bill. The bill is also attached as pdf for your convenience.

http://www.gencourt.state.nh.us/bill_Status/billText.aspx?sy=2018&id=1307&txtFormat=pdf&v=current

We have prepared the following letter (also attached as pdf) in support of the bill, inviting your Conservation Commission to join in the signing.

https://docs.google.com/document/d/1xhKwbJ7_wE0Wbe-p7M7X-IEeA8WsWtv-y38A2XEAwv0/edit?usp=sharing

Or you may prefer to write your own letter to the legislators. You can find some reasons why the bill benefits conservation in the joint letter. References to support those arguments can be found at the end of this document.

If your Conservation Commission chooses to join in signing our letter, please email us at nhstoddardcc@gmail.com, and we will send our joint letter with the name of your Conservation Commission included to various legislators as the bill progresses.

The bill will first go to the Fish and Game and Marine Resources House Committee. That could happen as early as next January. One email to HouseFishandGameCommittee@leg.state.nh.us will reach all the committee members. The bill will then go to the full House for voting. If it passes the House, the next stop would be the Energy and Natural Resources Committee of the Senate, followed by voting in the full Senate. You can find your State Representatives and Senators here:

<http://www.gencourt.state.nh.us>

Please let us know if you have any questions. Thank you for your attention. And we wish you Happy Holidays!

References:

1. Beavers create young forests as habitat for New England cottontail and other wildlife:
<http://www.concordmonitor.com/young-forests-ecology-environment-cottontail-songbird-12908739>
2. Beavers help clean polluted waters:
<https://potomac.org/blog/2016/1/19/beaver-dam-nitrogen-water>
3. Beaver devices are effective and cheaper than lethal means in the long term. Refer to P. 7 for cost savings:
<http://www.martinezbeavers.org/wordpress/wp-content/docs/VARreport2006-1.pdf>

Best regards,

Helen Tam-Semmens

Stoddard Conservation Commission member

nhstoddardcc@gmail.com

To (NH Legislators):

We, the undersigned NH Conservation Commissions, are writing to ask for your support for HB 1343. This bill benefits conservation by strengthening the protection of beavers mainly through better reporting of beavers taken out of season and the removal of their dams.

RSA 210:9, Protection of Beaver, has been in place since 1939. Legislators have long recognized the importance of beavers being a keystone species, their dams are valuable in creating and supporting large ecosystems. The beaver ponds generate nutrient-rich aquatic plants for moose and other wildlife. And when the ponds dry up, they become early successional forests providing important habitats for many game and nongame species including the New England cottontail, deer, grouse and songbirds. Such young forests are lacking in NH nowadays, causing some conservation biologists to call for some NH landowners to clear-cut their land. But landowners are often reluctant to do so due to clear-cutting being unsightly. Beavers, on the other hand, create young forests naturally and beautifully for us.

Beaver dams also moderate water flow and keep water on the land longer, hence alleviate droughts as well as major floods downstream. And the wetlands they create help purify our drinking water.

The problem with RSA 210:9 is that it has not been fully implemented by the Fish and Game Department. RSA 210:9 mandates that the Department issue a special permit unless the destruction of beaver dam is to protect property. However, no special permit form has even been created because the Department has found “virtually no occasion to use the statute,” assuming that all beavers taken out of season and all beaver dams removed were to protect property. This is according to Paul Sanderson, legal coordinator of Fish and Game Department. Presently, the number of beavers taken out of season are reported to the Department, but not the destruction of beaver dams. In recent years, as high as 1880 beavers were trapped out of season each year and there were no recorded reasons why.

There are anecdotal reports that some beaver dams in NH are being destroyed for reasons other than the protection of property, such as to gain land mass. Some landowners said they were pressured to remove their beavers and beaver ponds even when there were no clear threats of road or bridge damage or submersion. They plan to testify during the bill hearing.

HB 1343 seeks to change the reporting of beaver taken and beaver dam removed from “may” to “shall.” A summary of actual or potential damage to property, as well as non-lethal options considered will also be included. Studies show that non-lethal methods without requiring the removal of beaver dams are effective and generally cheaper in the long run than lethal means. The bill also clarifies that existing law requires a special permit for the removal of beaver dams or houses unless there is real or potential threat to property.

We sincerely urge you to support this bill. Thank you for your consideration.

Best regards, (a list of all the Conservation Commissions in NH agreed to signing this letter)

HB 1343 - AS INTRODUCED

2018 SESSION

18-2294
04/10

HOUSE BILL **1343**

AN ACT relative to the protection of beavers.

SPONSORS: Rep. Matthews, Rock. 3; Rep. Francese, Rock. 18

COMMITTEE: Fish and Game and Marine Resources

ANALYSIS

This bill adds provisions for the protection of beavers and beaver dams and requires the executive director of the fish and game department to include advice on beaver control on its public website.

Explanation: Matter added to current law appears in ***bold italics***.
 Matter removed from current law appears [~~in brackets and struckthrough.~~]
 Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Eighteen

AN ACT relative to the protection of beavers.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 1 Protection of Beaver. Amend RSA 210:9 to read as follows:

2 210:9 Protection of Beaver.

3 I. No person shall destroy or disturb or interfere in any manner with the dams or houses of
4 beaver, **except as provided in paragraph II**, without first obtaining a special permit from the
5 executive director.

6 II. Notwithstanding paragraph I, or any other provision of law or rule of the executive
7 director or the department of environmental services, a landowner, the landowner's agent, or any
8 town ~~[or]~~, municipal, or state official or employee, **or their agent**, may destroy beaver, remove
9 beaver dams, or install beaver pipes or beaver fences on property under their control to protect
10 property, public highways, or bridges from **actual or potential** damage or submersion. Dam
11 removal **and the installation of beaver pipes or fences** shall be allowed without a permit under
12 RSA 482-A if machinery does not enter the water and filling or dredging in or adjacent to surface
13 water, wetlands, or their banks does not occur. Removal shall be done in a gradual manner that
14 does not allow a sudden release of impounded water so as to cause erosion, siltation, or a safety
15 hazard downstream.

16 II-a. For purposes of paragraph II, the term "beaver pipes" means no more than 3
17 temporary structures with the widest dimension no larger than 15 inches that is placed in a beaver
18 dam to allow water passage to maintain a specific water surface elevation, and the term "beaver
19 fences" means posts and fencing installed at culverts in such a manner as to either encourage or
20 discourage beaver damming against the fence.

21 III. The executive director ~~[may]~~ **shall** require the reporting of beaver taken **and beaver**
22 **dams removed** pursuant to ~~[paragraph]~~ **paragraphs I and II** by rules made in accordance with
23 RSA 541-A. **The report shall include a summary of actual or potential damage or**
24 **submersion protection measures taken and a list of non-lethal options considered for each**
25 **project.**

26 IV. Skins or unskinned carcasses taken under this section shall be sealed pursuant to RSA
27 210:8 before such skins or unskinned carcasses are sold or given away.

28 V. The executive director or his **or her** agents shall provide advice relative to beaver
29 control techniques, **including beaver pipes and beaver fences**, when requested, **and shall post**
30 **such advice on the fish and game department's public Internet website.**

31 2 Effective Date. This act shall take effect 60 days after its passage.



CONSERVATION COMMISSION

2018 Meeting Schedule

All meetings are on the 3rd Wednesday of each month at 4:30PM
in City Hall, 2nd Floor Conference Room

Site Visit, if needed, at 3:30PM

TUESDAY, January 16 (Monday Holiday)

TUESDAY, February 20 (Monday Holiday)

Monday, March 19

Monday, April 16

Monday, May 21

Monday, June 18

Monday, July 16

Monday, August 20

Monday, September 17

Monday, October 15

Monday, November 19

Monday, December 17

1.) Refine wildlife habitats/natural communities as mapped as part of the New Hampshire Wildlife Action Plan (NH Fish and Game 2015)

2.) Map additional on-site habitats and rare natural communities

3.) The habitats and related at-risk species most common in Keene are:

rivers and streams:

- Dwarf wedge mussel
- Wood turtle
- Bald eagle
- Osprey

wetlands and swamps:

- Northern harrier
- Least bittern
- Pied-billed grebe
- Great blue heron (rookery)
- American bittern

floodplain forests:

- Jefferson salamander
- Northern leopard frog
- Wood turtle
- Red shouldered hawk

Vernal pools

- Jefferson salamander
- Eastern ribbon snake

4.) Work with Keene State College and Antioch New England Graduate School to monitor species at greatest risk.

5.) Educate and Encourage citizens to create a backyard wildlife habitats that provide food, water, shelter and safe places to raise young.

6.) Work with Friends of Open Space to develop corridors for wildlife through purchase of properties. *work with land trusts such as Monadnock Conservancy too.*



LAND PROTECTION GUIDELINES

CRITERIA

We seek to conserve land that will support or enhance ...

Clean Water

- Land overlying aquifers and aquifer recharge areas
- Frontage on rivers, streams, lakes, ponds, and reservoirs
- Wetlands, floodplains, buffer areas, and riparian zones

Forestry and Agriculture

- Tracts of woodland with sufficient size, appropriate soils, and other attributes that support responsible forest management, including the production of timber and other forest products
- Farmlands and open fields with prime soils and other attributes that support agriculture or have the potential to support agriculture

Wildlife and Special Natural Areas

- Large tracts of undeveloped habitat and corridors important for wildlife
- Land containing ecologically significant or rare natural communities or species
- Priority land as identified in the New Hampshire Wildlife Action Plan
- Other lands which increase the diversity and viability of wildlife populations, including fields, riparian areas, and land contiguous to existing protected natural areas

Recreation, Scenery, and Cultural Resources

- Land that offers opportunities for appropriate outdoor recreation by the public
- Scenic views, ridgelines, and other aesthetic areas
- Landscapes that preserve the region's cultural and historic heritage

Collaboration and Leverage

- Land that can best be protected in collaboration with citizen groups, municipalities, non-profit organizations, public agencies, and other important partners
- Land whose conservation has the clear potential to leverage additional land conservation projects

PRIORITIES

In general, we will favor land and projects that...



- Readily meet two or more of the above criteria
- Abut, enlarge, or provide linkages to existing conservation areas
- Are threatened by a change in use that will undermine identified conservation values
- Have been designated for protection by a municipality, public agency, land trust, or citizen group
- Offer meaningful public environmental education opportunities
- Benefit a wide range of people and enjoy demonstrated public support

In general, we are disinclined to pursue land projects that ...

- Do not readily meet two or more of the above criteria
- Are insufficient in size to protect the conservation values at stake
- Pose actual or potential hazards from man-made substances or structures
- Have title problems or encumbered ownership that cannot be easily resolved
- Present obstacles to effective, responsible monitoring and stewardship
- Could be better protected by another private or public organization
- Require changes to our standard easement that are disproportionate to the land's values
- May cost the Conservancy good will or disproportionate amounts of staff time or money

Adopted by the Board of Trustees February 2002; reviewed by the Lands Committee April 2007

Society for Protection of Forests

Goals ;

Conserve at least 25 percent of open space in each community

Protect sustainably-managed forests to support our forest-based economy

Secure key habitats to preserve the biodiversity of our native plants and animals

Keep our waters clean to ensure we all have enough clean drinking water

Save our productive farmlands so that every community can benefit from healthy, locally grown food.

Community

Forestland

Wildlife Habitat

Water

Agricultural Soils

NH Audubon

Since acquiring its first sanctuary in the 1960s, NH Audubon has been committed to the conservation of ecologically important lands. As of 2014, NH Audubon currently owns 39 sanctuaries totaling over 7,400 acres and holds 26 easements totaling over 2,500 acres. Including our other land interests, that's over 10,000 acres conserved.

Our land conservation policy focuses on acquiring land that would add to the protection, management or educational value of existing sanctuaries.

Other priorities include conserving land that:

Creates or aids in creating unfragmented tracts of wildlife habitat determined to be significant according to the New Hampshire Wildlife Action Plan

Is suitable for linking tracts of wildlife habitat determined to be significant according to the New Hampshire Wildlife Action Plan

Is within an Important Bird Area, as defined in the New Hampshire Important Bird Area Program, or is significant to preserving or linking such areas

Is of exceptional ecological value, including exemplary natural plant communities identified by the New Hampshire Natural Heritage Bureau

Is near population centers and is suitable for use in nature study or conservation education

Is acquired in conjunction with conservation partners that enhances our mission and supports and strengthens our relationship with our partners and the public

Harris Center:

Super Sanctuary of 34,500 acres, a cluster of protected lands.

Hanover Con. Comm.

Protect Appalachian Trail + Connecticut River

Fill in missing links between protected spaces

Upper Valley Land Trust



1 Productive farmland

Our goal: Supporting and promoting healthy local food and opportunities for those who grow it.

MORE...



2 Unfragmented forest and natural habitat

Our goal: Supporting the working forest economy and connecting the places plants and animals need to adapt and thrive.

MORE...



3 Stream corridors, shoreline of rivers and ponds, wetlands and floodplains

Our goal: Protecting clean water and resilient ecosystems.

SECTION VII. CONSERVATION AND OPEN SPACE

A. INTRODUCTION

The Conservation and Open Space Section is intended to guide the protection of the City's natural resources and environment while promoting the appropriate and efficient use of land and water within the City of Concord in a manner consistent with the economic, physical, and social needs and desires of the citizens of Concord. Appropriate uses of open space have been identified as recreation, public service and safety, resource production, and environmental protection while providing the maximum and multi-purpose use of open space by the citizens of Concord. Open space in Concord is intended to be a system, interconnected and interrelated, and therefore, the links among major open space areas, as well as between the open areas and developed areas, must be defined

The Conservation and Open Space Use Section consists of a review of existing protected lands with a focus on additions to the protected land inventory that have occurred since the last Master Plan was adopted in December 1993. Conservation and open space goals are articulated, and applied to and interpreted upon the landscape of the City, and as displayed on maps that indicate how land in Concord should be preserved and protected. Policies and recommendations to guide the implementation of the Future Open Space Plan complete this Section of the Master Plan.

B. CONSERVATION AND OPEN SPACE GOALS

When the City Council established the Conservation Commission in 1971, it set forth for the Commission the goal of "protecting, promoting and developing the natural resources...and for protecting the watershed resource of the City" and mandated the Conservation Commission, in conjunction with the City Planning Board, to prepare "a conservation and open space plan" as the major objective in achieving this goal, noting that the plan shall be based "on the concept of multiple use of natural resources and open space".

Specific conservation and open space goals are as follows:

1. To develop a coherent interconnected system of permanently protected open spaces designed to provide areas for recreation, public service and safety, resource production, and to protect sensitive environmental features.
2. To foster the wise and proper development and management of the City's land and water resources so as to ensure sustainable productive use of the same, while avoiding environmental degradation, personal injury, and property damage.
3. To maximize the multiple use of open space to the extent that such use does not adversely affect the primary function of the open space.
4. To maximize the opportunities for the citizens of Concord to have access to public open space through linkages between the City's villages and neighborhoods and the open space system.

5. To protect and enhance surface and ground water quality, and maximize the potential for the use of these water resources as potable water supplies.
6. To protect and enhance the air quality of the region.
7. To preserve prime and significant agricultural soils for agricultural uses, and to encourage the retention and diversification of agricultural uses within the city.
8. To encourage the use of best management practices of forest resources on both public and private land within the City in order to maintain a continuing, sustainable timber harvest from the same, and to encourage multiple use of this forest resource.
9. To retain habitat for the City's indigenous species of wildlife, including migratory species and those species that have been identified as endangered, to provide adequate area that will foster the perpetuation of these species, and allow for their movement through and within the City.
10. To protect and maintain exemplary natural communities and rare plant species that have been identified within the City.
11. To maintain and enhance scenic views and natural vistas from the City's roads and public properties where possible.
12. To preserve open space within the Urban Growth Boundary (UGB) to protect environmentally sensitive natural features, to provide non-structured recreational opportunities, and to serve as amenity features within neighborhoods.

C. THE CITY'S NATURAL RESOURCES

1. Water Resources

Much of Concord's land and its use are influenced by the City's extensive water resources. Concord is located in the watershed of the Merrimack River, and the City's other major rivers, the Contoocook, Soucook, and Turkey Rivers), are all tributaries of the Merrimack. There are 14 Great Ponds (10 acres or more in size) within the City as well as several smaller private ponds and many brooks and streams.

In the citywide rezoning of 2001, a Shoreland Protection (SP) District was adopted, supplanting the former Streambank and Shoreline (SS) District, paralleling and expanding upon the protections offered in the NH Comprehensive Shoreland Protection Act (RSA 483-B). The SP District, which was recommended in the 1993 Open Space Plan, encumbers the area within 250 feet of the shoreline of the rivers and Great Ponds, and establishes two buffer zones with differing levels of permitted activities and including restrictions on the removal of trees and shrubs. The entire SP District has a list of prohibited land uses that apply therein.

Penacook Lake is the City's primary source of potable water, although it is augmented by water pumped from the Contoocook River. A Penacook Lake Watershed Protection District was created by the City Council in the 2001 rezoning of the City which increased the minimum lot size to 4 acres and imposed restrictions on certain land uses that were deemed to represent a hazard to the water quality.