

Road Surface Management System

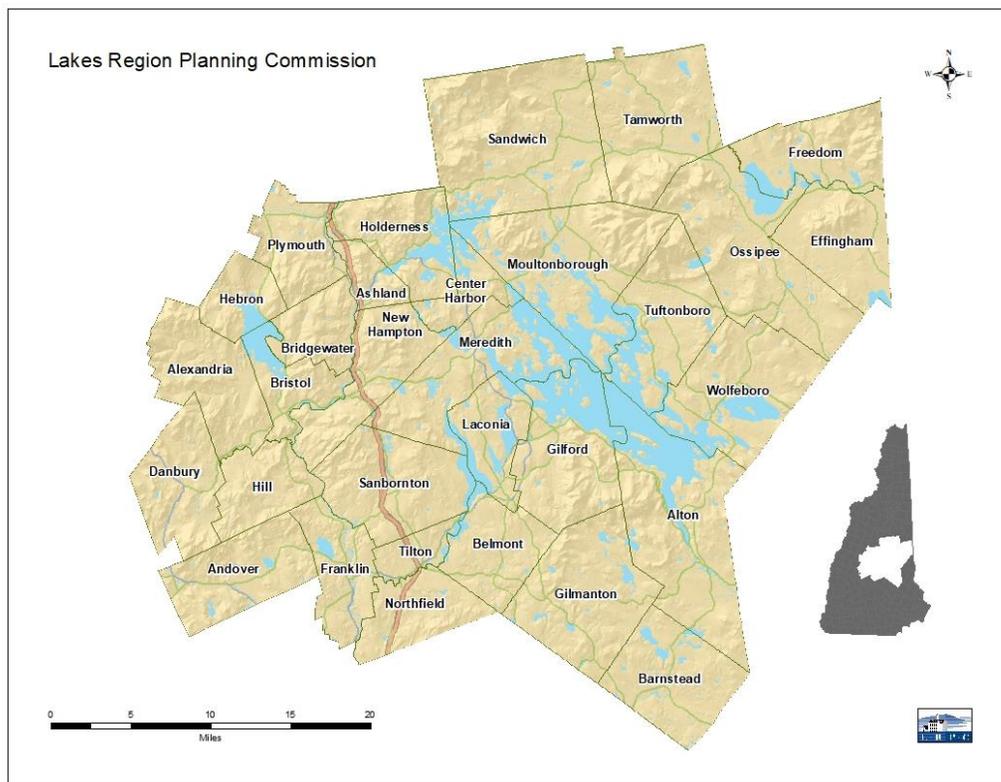
Gilmanton, NH



Gilmanton-Cracking Example

The Lakes Region Planning Commission conducted a Road Inventory, Condition Assessment, and Forecasting for the town of Gilmanton, NH. This is part of a program done in partnership with the NH Department of Transportation and UNH Technology Transfer Center. Inventory and Assessments were entered into the Road Surface Management System (RSMS) software for analysis, prioritization, and generation of repair strategies. Repair strategies and a 10-year budget plan have been prepared in partnership with the town and presented within this report.





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I. Introduction

Road infrastructure is a major investment by a community and is utilized by all residents on a daily basis. Paved roads require routine and preventative maintenance, which should be attended to before they require rehabilitation or reconstruction.

The Town of Gilmanton engaged the Lakes Region Planning Commission to conduct a road inventory data collection, identification of pavement conditions, operation of the Road Surface Management System (RSMS) software, on local-paved roads. This program was developed and is conducted in partnership with NH Department of Transportation (DOT), University of New Hampshire Technology Transfer (UNH T2), and the regional planning commissions to assist communities in planning local road maintenance. Pavement and planning resources are listed and described in Appendix A.

Approximately 50% of the paved, town-maintained roads in Gilmanton NH warranted some type of maintenance or repair at the time of the assessment (this was determined as having a Pavement Condition Index (PCI) score of less than 80). The needed repairs cannot all be done in one season or paid for all at once. However, if the work is planned and prioritized, it is possible to sustain a solid road network.

II. RSMS Data Collection and Forecasting Program Overview

After initial meetings with town officials, trained LRPC staff conducted an inventory of road conditions for all paved, town-maintained roads based on a list of roads derived from NHDOT centerline shapefiles. The field assessment considered a variety of physical characteristics including cracking, rutting, and potholes. Most of the roads were assessed in July 2020. The Road Agent evaluated each road segment for the relative amount of traffic volume and determined relative importance to the town. LRPC entered the data into the RSMS program, which developed a Pavement Condition Index (PCI) and a list of maintenance and repair recommendations. Working from RSMS reports, town officials and the Road Agent can prepare a detailed comprehensive, long-term work plan and budget.

NH DOT divided the road system into ¼-mile sections for assessment and analysis. The following tasks were conducted by LRPC using UNH T2's RSMS data collection protocols and software:

1. Drove all paved Class V roads in town and determined and documented a variety of general characteristics and several physical conditions of each section.

2. Worked with the Road Agent to characterize and document the relative priority and amount of traffic for each road segment.
3. Reviewed maintenance or repair methods by category with the Road Agent
4. Worked with the Road Agent to develop guidelines for selecting repair strategies; and applied this to all road segments.

III. Road Network Inventory and Collection Survey

Local Road Infrastructure

Multiple numbered state roads run through Gilmanton, NH 107, NH, 140, NH 106, and NH 129 NH. The town owns and maintains approximately 41 miles of paved roads and about 23 miles of unpaved roads. There are also numerous miles of private roads in Gilmanton, neither owned nor maintained by the town. The focus of this project is the Class V paved roads (owned and maintained by the town). Using the standard rate of \$19.60 per Square Yard (SY) for pavement and \$11.31/SY for gravel foundation¹, the value of Gilmanton's paved road infrastructure is approximately \$13,782,560.

Identification and Characterization of Sections

Roads were segmented into roughly quarter-mile sections by NH DOT, based mainly on road geometry. There were 168 sections defined for the nearly 41 miles of roads assessed. Segments ranged in length from 84 to 1,900 feet, about 75% were a quarter of a mile (1,320') or less. The sections are shown in Appendix B. The town's Road Agent reviewed each segment and characterized its local importance and the relative volume of traffic that it handles, each on a five-point scale.

Pavement Condition Rating

In many New Hampshire communities rating the condition of paved road sections has been based on a process similar to "common informal practice" in which local highway personnel rely heavily on visual inspections and experience to schedule maintenance activities. To a point, this can work fine. However, one problem with the informal approach is that experience is very difficult to transfer from one person to another. It also can be difficult to objectively explain maintenance decisions to local governing bodies.

¹ All States Materials Group

RSMS applies a comprehensive condition rating technique based on sound engineering and management practices. These techniques enable the user to draw objective, consistent, and easy-to-explain conclusions.

Researchers and practitioners have developed a set of pavement condition rating scales based on visual inspection. A road section is inspected, and the **severity** and **extent** of surface distresses are recorded. The RSMS distress characteristics for pavement include:

Road Pavement Distresses

- Longitudinal/transverse cracking
- Alligator cracking
- Edge cracking
- Patching/potholes
- Drainage
- Rutting
- Roughness



An example of Alligator Cracking



An example of Longitudinal Cracking

Personnel trained in RSMS condition assessment determined conditions from a vehicle, driving over each segment at least three times with closer inspection where necessary. LRPC staff used a tablet and RSMS software to enter the road condition information for each section (Appendix C). The Condition information is put through the SADES Forecasting software resulting in the PCI of each segment which would range from 1 to 100 where 100 represents top condition. In Gilmanton segment Pavement Condition Indexes ranged from 19 to 100. The overall network PCI was 74.2. This number is calculated based on the data collection of the all the road segments collected in Gilmanton. Appendix E represents the pavement conditions at the time of the assessment, grouped into five categories.

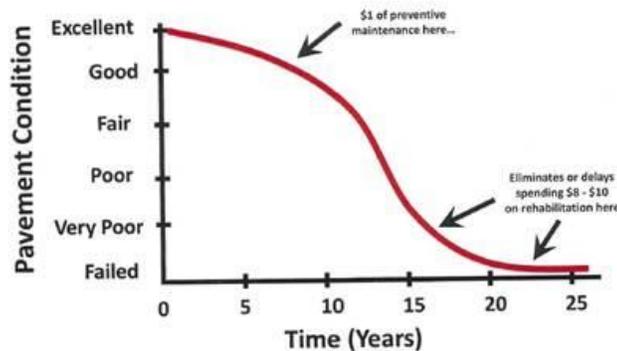
IV. Approaching Road Repair Needs

Pavement Preservation

With time, all roads deteriorate. The exact rate will vary based on local conditions. **Pavement preservation** is a program employing a network level, long-term strategy that enhances pavement performance by using an integrated, cost-effective set of practices that extend the pavement life, improve safety, and meet motorist expectations. Pavement preservation is a set of non-structural applications to preserve the surface, including minor rehabilitation as well as preventative and routine maintenance ranging from crack sealing to thin overlays.

All too frequently, municipal officials set priorities by the “worst first” approach; they give the most deteriorated roads the highest priorities. Such roads are also the most expensive to repair, which commits a large amount of town funds to only a few roads; communities then find that inadequate funds remain to accomplish the relatively inexpensive preventative and routine maintenance necessary to extend the life of the rest of the road network. These roads have low to moderate deterioration and can have their useful lives extended significantly at a lower cost by utilizing pavement preservation strategies. Further details on pavement preservation are available through UNH T2 and NH DOT (Appendix A).

Life of Pavement



V. Selection of Maintenance and Repair Options

Maintenance and Repair Options

In meeting with the Gilmanton's Road Agent, materials on a wide variety of potential repair strategies (nearly twenty) were provided and discussed (See associated document, *RSMS Repair Strategies*). Some strategies are more applicable than others based on conditions, expense, even the amount of sunshine received on site. Generally, in addition to deferred maintenance, the repairs fall into three broad types: Preservation Maintenance, Repair & Overlay, and Rehabilitation & Reconstruction.

1. Deferred Maintenance: No action required. The road section is in very good condition. No cost involved.
2. Preservation Maintenance: Sealing cracks and patching potholes for specific small areas; routine maintenance should include cleaning ditches and culverts. Crack sealing, patching, ditch, and culvert cleaning, and mowing of shoulders and adjacent areas are essential to get the intended service life from a section of pavement. Examples include crack, fog, sand, and chips seals as well as isolated patch & shim.

Routine maintenance can usually be performed by the town's road crew, at relatively low cost and should be included in the town's annual budget. Roads requiring routine maintenance are slowly but surely deteriorating. Adequate funds should be made available consistently across annual budgets to ensure that roads in good condition remain so.

3. Repair and Overlay: Coating of the surface and chip seals or thin overlays are used to prevent or slow further deterioration. Hot mix asphalt (HMA) overlays and milling are examples of these type of strategies.

Repair and overlay are performed on roads that are in sufficiently good condition and require inexpensive repair to extend road life. Much of the work may be within the public works department's capability.

4. Rehabilitation and Reconstruction: These include major repairs of the road surface such as an asphalt overlay after surface preparation treatments or the excavation of the road base, the replacement and often the addition of aggregate, and new paved surface. The road

including its sub-base has deteriorated to such an extent that the base must be replaced or stabilized. Such conditions are usually caused by too long a period of inadequate maintenance, and by poor subsurface drainage. In the latter conditions, appropriate repair and/or new construction of ditches and culverts should be included in the project. Full Depth Reclamation (FDR) projects fall into this repair type. Contractors usually perform rehabilitation repairs.

Before town officials attempt to fund rehabilitation repairs out of annual budgets, they should consider the impact on routine and preventive maintenance. It is much less expensive in the long run to keep good roads in good condition than to let them deteriorate to the point where they need rehabilitation. On the other hand, roads needing rehabilitation are rapidly deteriorating and will become much worse quickly without adequate funding.

Reconstruction is so costly that it can absorb a large portion, if not all, of a municipality's annual budget, and therefore allow too small a budget for routine and preventative maintenance. Municipalities should consider funding this sort of work through long-term planning such as Capital Improvements Program (CIP) and use of Capital Reserve Funds and bonds. Resources for information about and assistance with CIPs are listed in Appendix A.

VI. Forecasting

In addition to generating a Pavement Condition Index for each road segment, the RSMS software forecasts what PCI could be anticipated annually if various repair strategies (or nothing at all) were applied over the next 9-10 years. The software not only projects the PCI of individual segments but also the full road network.

Based on the information entered into the RSMS Forecasting program, the tool can:

- Calculate a Pavement Condition Index (PCI)
- Calculate a road segment Priority
- Suggest maintenance/repairs
- Calculate estimated repair costs
- Estimate the amount of extended life span resulting from developed reports

The RSMS Forecasting program is not a project-level tool. Its focus is on the network as a whole. It is up to the town to make decisions regarding repairs. It provides a set of recommended repair alternatives consistent with the repair strategy for each road section's drainage and condition. The program lists twenty different maintenance and repair options. The RSMS Repair Strategies

document lists a range of possible treatments with costs ranging from \$0.40/SY to \$25.50/SY. These prices include the typical labor costs.

The maintenance & repair option typically used in Gilmanton:

1. Crack Sealing
 - a. Crack Seal-Major
 - b. Crack Seal-Minor
2. Overlay
 - a. HMA Overlay (1.25")
 - b. HMA Overlay (1")
 - c. HMA Overlay (2")
3. Rehabilitate and Rebuild
 - a. 8" Reclaim and Pave

After LRPC staff reviewed repair strategies and budgets, an RSMS forecast for Gilmanton was drafted and reviewed by the Town's Road Agent and Town Administrator. The steps taken in the forecasting process were:

1. The Forecast was created following a budget of approximately \$150,000 over the 10-year period. (In fact, most years, the expenditures were closer to \$160,000) This would just maintain the overall Pavement Condition Index (PCI) by the end of the 10 years having an average network PCI of 74.1 (starting PCI is 74.2). (The detailed can be found in the addendum).
2. A list was created of the ¼ mile road segments, then sorted by priority (calculated by input from the road agent). The roads were ranked based on the calculation of traffic volume and importance giving it a priority number 0-100. Roads that appeared at the top of priority list were Middle Route, Shellcamp Road, and Stage Road. When forecasting repairs are recommended the priority score is considered for choosing repairs.
3. There was an intent to spread the work and repairs throughout the entire town instead of focusing on a specific location in the town. The town wanted to see an overall improvement of the roads PCI and maintain those roads with an Excellent and Good PCI.
4. After some discussion of the results, a second forecast was run, utilizing an increased budget (\$200,000) for years 2-10. Using Scenario 2 would improve the overall Pavement Condition Index (PCI) by the end of the 10 years having an average network PCI of 77.1 (starting PCI is 74.2).

VII. Conclusion

The resulting schedule of maintenance and repair strategies (Addendum) addresses the priorities listed above while staying close to the stated budgets of approximately \$150,000 and a raised budget of \$200,000 (total budget of town being \$300,000, saving costs for drainage, and other roadway updates). The forecasting scenario recommendations chosen based on PCI and the priority ranking (calculated by the town importance and the town local traffic ratings).

Scenario 1:

The initial PCI of 74.2 is the Pavement Condition Index score before any repairs take place in the 2021 year. If no repairs were to take place during the forecasted 10-year period, the PCI for Gilmanton would drop to 49.1 instead of the estimated 74.1 after suggested repairs. While there may not be an increase in the overall PCI, the overall network ends up with no roads rating Failed or Poor, and instead having more roads rating Fair, Good or Excellent. After the ten years of repair and maintenance, forecasting indicates that the PCI of segments will range from 57 to 96, showing an overall better roadway rating (starting PCIs ranged from 19 to 100). Over the ten years, 43.64 miles of roadway would be repaired and maintained. It is recommended that Gilmanton maintains their current Town Repair Budget or increase even further to maintain their high PCI roadway system.

Scenario 2:

Scenario 2 looks at what an increased repair and maintenance budget for paved roads of \$200,000 compared to the original \$150,000 would do for the overall PCI network of Gilmanton's road system. Again, the initial PCI of 74.2 is the Pavement Condition Index score before any repairs take place in the 2021 year. If the town were to choose to raise their budget to the scenario 2, the PCI would see an increase compared to scenario 1. After all repairs following scenario 2, the overall PCI would be 77.1 compared to 74.1, a difference of 3 points. After the ten years of repair and maintenance, forecasting indicates that the PCI of segments will range from 62 to 96, showing an overall better roadway rating (starting PCIs ranged from 19 to 100). Over the ten years, 53.14 miles of roadway would be repaired and maintained.

Road segments with a higher PCI are less likely to need repairs within the next couple years compared to road segments with ratings in the failed or poor range, which would need more immediate action to raise the PCI. After the ten years of forecasting, many of Gilmanton's roads will not need immediate and drastic repairs to maintain the roadway PCI rating.

The "reports" list the actions to be taken each year, the associated costs, and the resulting network PCI. Maps in Appendix E show the anticipated PCI for each segment in 2025 and 2030 based on this schedule.

The schedule provides a guide for the town to follow utilizing pavement maintenance and repair strategies that have been employed by the Road Agent in the past. With the current

budget and strategy, the pavement condition (PCI) is maintained and increases slightly, but if the town of Gilmanon were to see a decrease in the funding for road maintenance and repair, there could be a drop in the PCI rating (road conditions) for the town. To keep this plan current, it is recommended that all road surface work be tracked annually and that the condition assessment be repeated in five years.

Appendix A

Useful Resources

University of New Hampshire Technology Transfer (UNH T²)

- SADES (Statewide Asset Data Exchange System)- Establishes a primary transportation inventory of assets including a maintainable condition assessment process for many state and local agencies.
 - <https://nhsades.com>
- Road Scholar Program- The Road Scholar Program establishes educational and training requirements for municipal level highway practitioners and recognizes those who have successfully completed specified T2 Center workshops.
 - <https://t2.unh.edu/roads-scholar-program>
- T2 Workshops- Provides workshops relative to roadway materials, basics of a good road, maintenance techniques, drainage techniques, and many other technical assistance topics. Many of these sessions are offered for municipal officials.
 - <https://t2.unh.edu/workshop-descriptions>

New Hampshire Department of Transportation (NH DOT)

- Provides information and support regarding statewide and municipal transportation projects
 - <https://www.nh.gov/dot/projects/index.htm>

New Hampshire Municipal Association (NHMA)

- Provides information about the benefits of implementing a Capital Improvement Plan
 - <https://www.nhmunicipal.org/TownAndCity/Article/586>

Lakes Region Planning Commission (LRPC)

- Provides more information about the SADES program that LRPC participates in and other transportation services provided by LRPC
 - <https://www.lakesrpc.org/servicestransportation.asp>
- Can assist municipalities in establishing a Capital Improvement Program

Appendix B
Map of Road Segments

Appendix C

SADES Road Surface Management System Specification Guide

- 1) General Information
 - a. Assessment Date
 - b. Observer(s)/Organization
 - c. Road Name
 - d. Road Alias
 - e. Town Name
 - f. Surface Type
 - g. Shoulder Type
 - h. Road Surface Width
 - i. Number of Lanes
 - j. Last Year Surveyed
- 2) Longitudinal/Transverse Cracking
 - a. Severity
 - b. Extent
- 3) Alligator Cracking
 - a. Severity
 - b. Extent
- 4) Edge Cracking
 - a. Severity
 - b. Extent
- 5) Patching/Potholes
 - a. Extent
- 6) Drainage
 - a. Condition
- 7) Rutting
 - a. Severity
 - b. Extent
- 8) Roughness
 - a. Condition
- 9) Frost Heave
 - a. Severity
- 10) Factors
 - a. Traffic Volume
 - b. Importance
- 11) Local Knowledge
 - a. Interview with Local Knowledge
 - b. Interview Comments
- 12) General Comments

Appendix D Summary Tables

Annual Repair Cost and PCI

Gilmanon Forecast - Scenario 1

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Average PCI After Repairs	76.19	74.15	72.24	72.19	69.66	71.61	71.23	70.82	71.70	74.14
Average PCI Without Repairs	74.23	70.89	67.70	64.66	61.75	58.98	56.33	53.80	51.38	49.07
Total Miles Treated	1.99	1.84	1.91	5.39	0.84	8.82	3.82	4.15	6.27	8.12
Total Repair Cost	\$158,834	\$155,720	\$169,078	\$154,265	\$164,188	\$159,235	\$159,202	\$159,656	\$164,561	\$158,748

Annual Repair Cost and PCI

Gilmanon Forecast - Scenario 2

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Average PCI After Repairs	76.19	74.59	73.12	73.23	71.39	73.18	73.66	73.30	74.26	77.08
Average PCI Without Repairs	74.23	70.89	67.70	64.66	61.75	58.98	56.33	53.80	51.38	49.07
Total Miles Treated	1.99	2.59	2.41	5.89	1.34	9.16	6.39	4.47	8.52	9.89
Total Repair Cost	\$158,834	\$201,665	\$199,129	\$198,261	\$196,182	\$202,091	\$200,057	\$197,071	\$196,762	\$204,793

Annual Repair Cost by Repair Category

Gilmanon Forecast - Scenario 1

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Crack Sealing	\$0	\$0	\$1,686	\$30,099	\$1,438	\$56,427	\$15,564	\$28,085	\$49,743	\$63,571	\$246,612
Overlays	\$119,589	\$104,416	\$89,720	\$66,864	\$0	\$102,809	\$143,638	\$40,646	\$20,981	\$95,177	\$783,839
Rehabilitate and Rebuild	\$39,245	\$51,305	\$77,671	\$57,302	\$162,750	\$0	\$0	\$90,925	\$93,837	\$0	\$573,036
Total	\$158,834	\$155,720	\$169,078	\$154,265	\$164,188	\$159,235	\$159,202	\$159,656	\$164,561	\$158,748	\$1,603,487

Annual Repair Cost by Repair Category

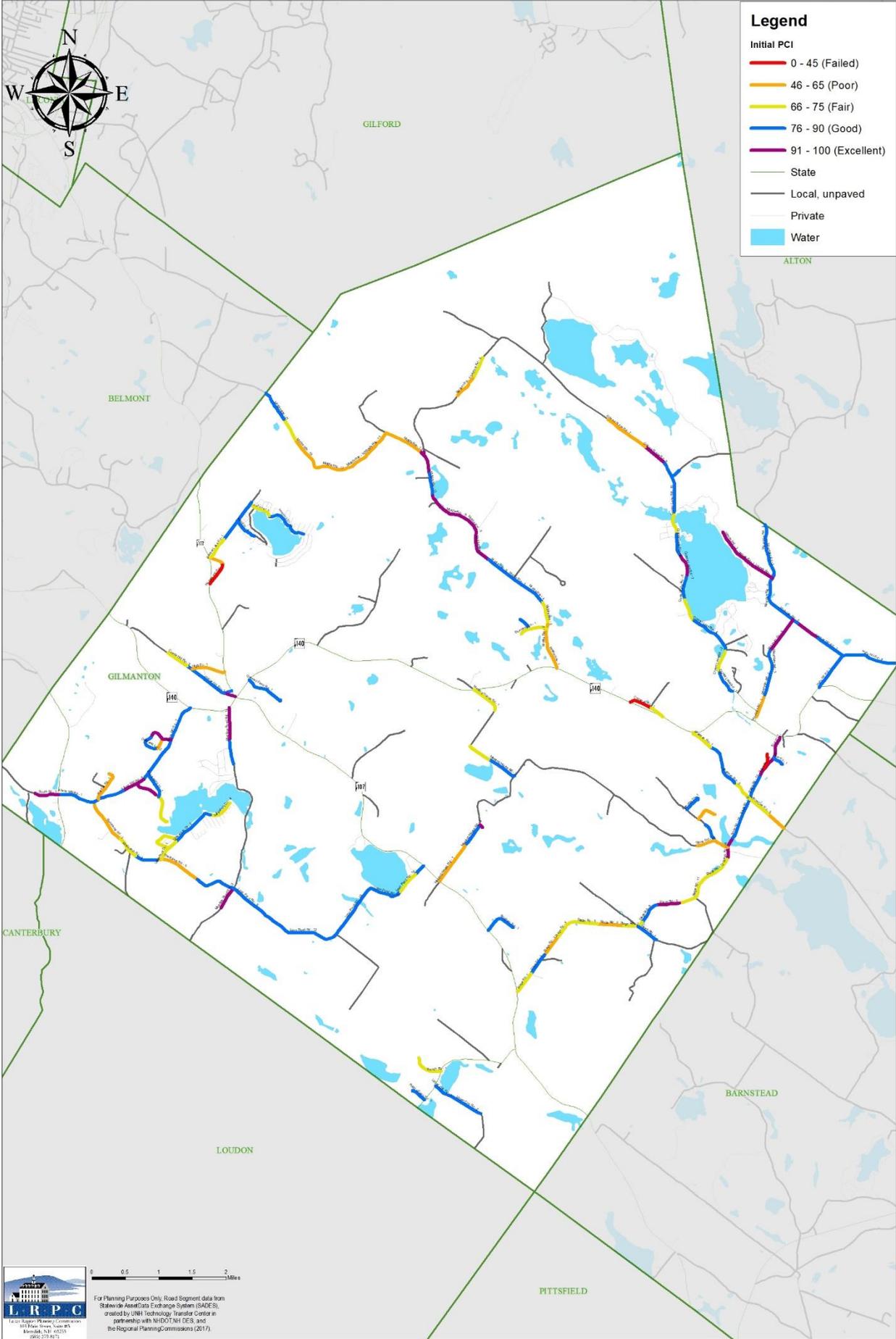
Gilmanon Forecast - Scenario 2

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Crack Sealing	\$0	\$0	\$1,686	\$28,455	\$1,438	\$55,380	\$36,710	\$30,615	\$67,633	\$76,319	\$298,234
Overlays	\$119,589	\$150,360	\$119,772	\$112,504	\$31,994	\$146,711	\$163,347	\$75,532	\$35,292	\$128,474	\$1,083,574
Rehabilitate and Rebuild	\$39,245	\$51,305	\$77,671	\$57,302	\$162,750	\$0	\$0	\$90,925	\$93,837	\$0	\$573,036
Total	\$158,834	\$201,665	\$199,129	\$198,261	\$196,182	\$202,091	\$200,057	\$197,071	\$196,762	\$204,793	\$1,954,845

Appendix E
Pavement Condition Index (PCI) Maps
Initial PCI Map

Gilmanton, NH Initial Pavement Condition Index (PCI)

PCI Average: 74.2



For Planning Purposes Only. Road Segment data from Statewide Asset Data Exchange System (SADES), created by UNH Technology Transfer Center in partnership with NH DOT/NH DES, and the Regional Planning Commissions (2017).



NH DOT/DES/SADES/ASSETS/PCI_2017_01

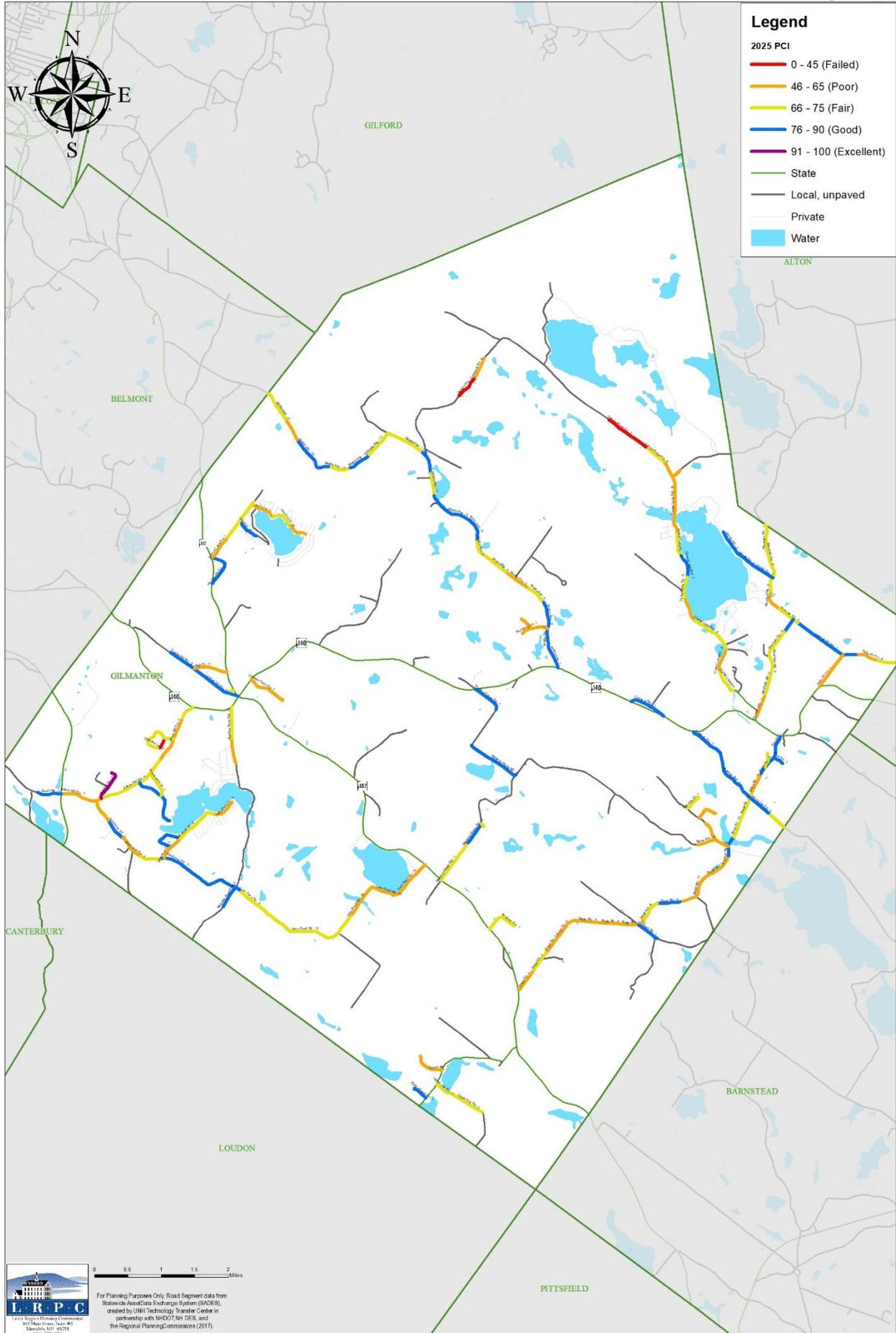
5-Year Forecasted Pavement Condition Index (PCI)

Map

Budget Scenario 1:
(Approximately \$150,000)

Gilmananton, NH: Scenario 1 2025 Pavement Condition Index (PCI)

PCI Average: 69.7



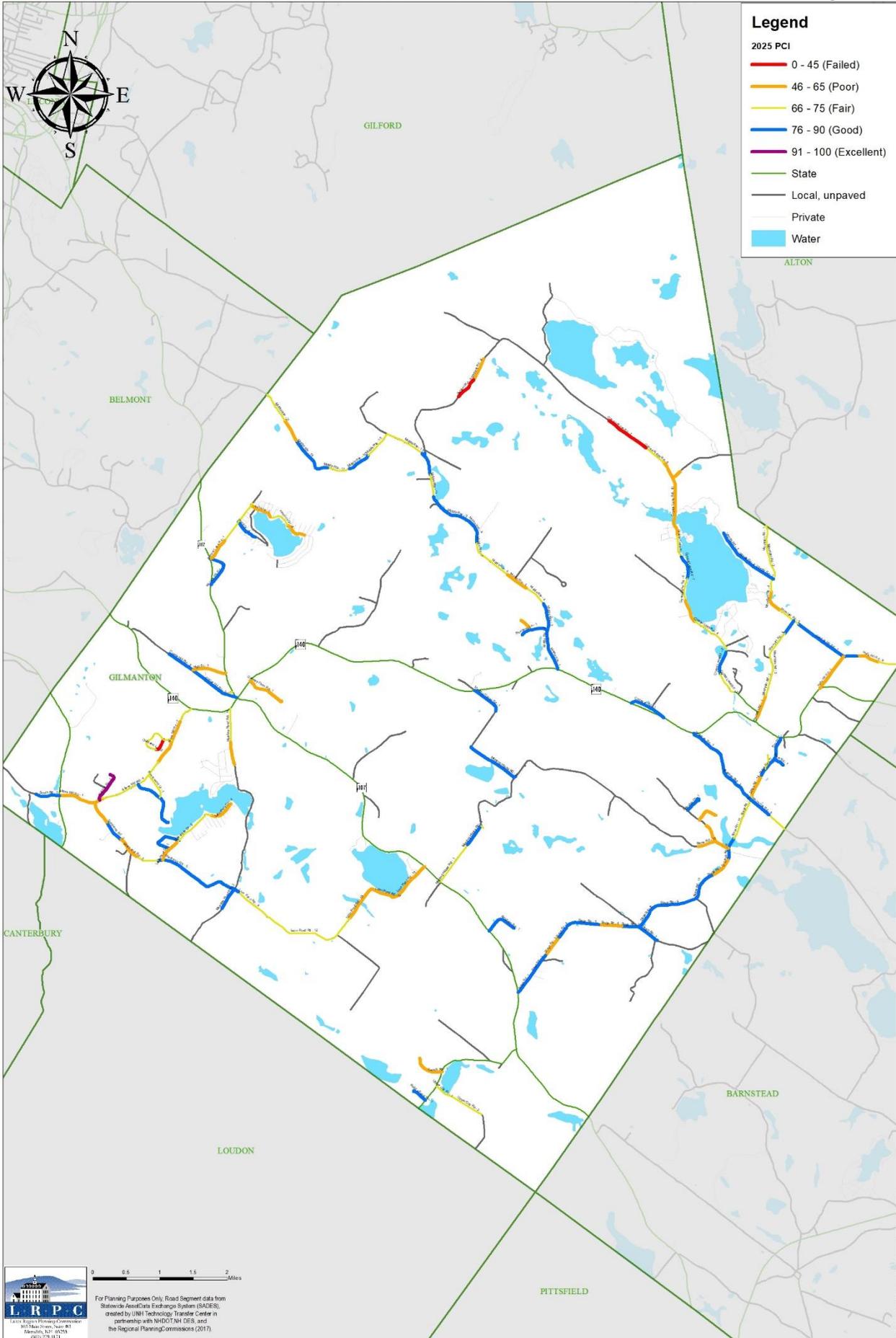
5-Year Forecasted Pavement Condition Index (PCI)

Map

Budget Scenario 2:
(Approximately \$200,000)

Gilmanon, NH: Scenario 2 2025 Pavement Condition Index (PCI)

PCI Average: 71.4



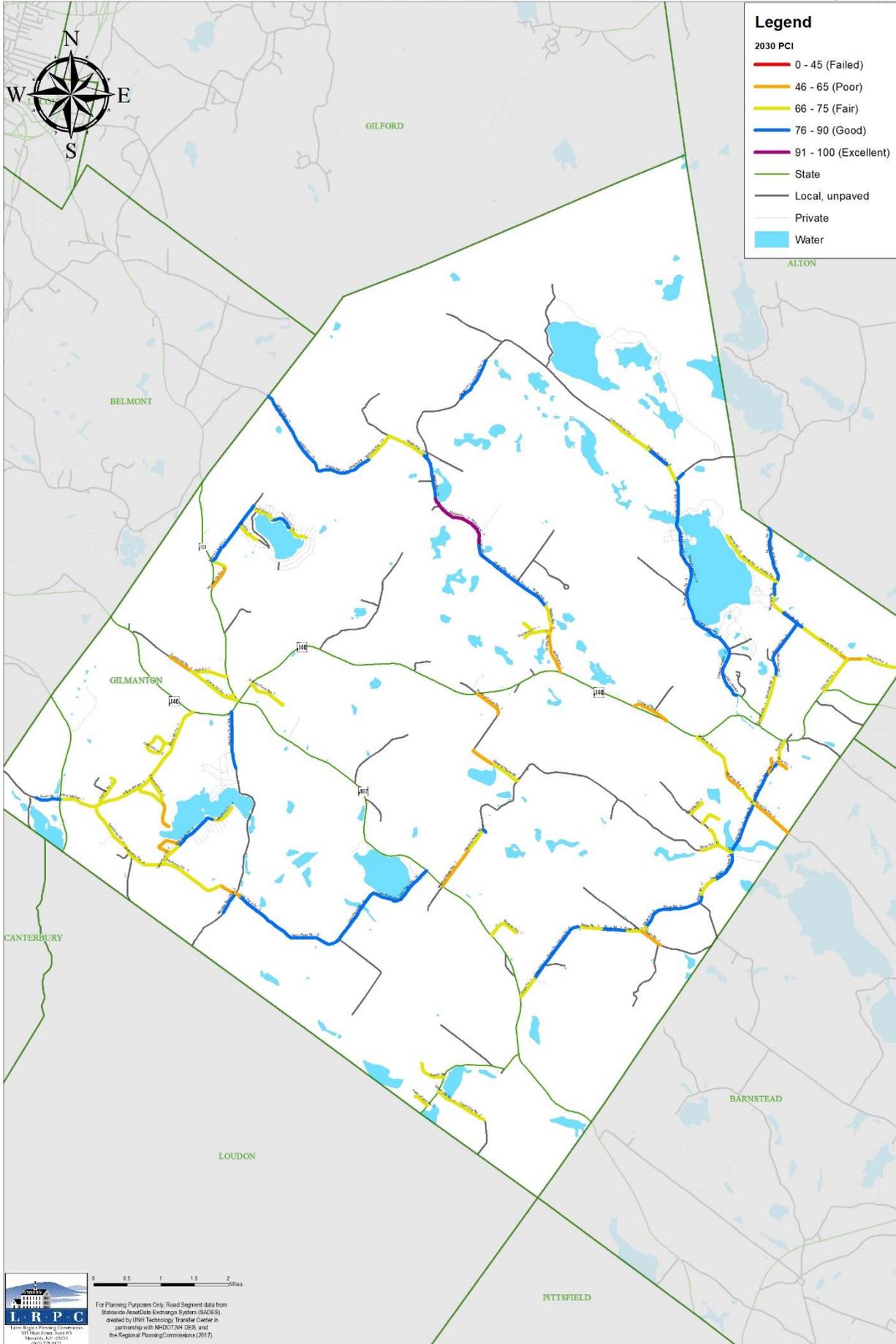
10-Year Forecasted Pavement Condition Index (PCI)

Map

Budget Scenario 1:
(Approximately \$150,000)

Gilmanon, NH: Scenario 1 2030 Pavement Condition Index (PCI)

PCI Average: 74.1



For Planning Purposes Only. Road Segment data from Statewide Asset/Date Exchange System (SAGES), created by UNH Technology Transfer Center in partnership with NHDOT/NH DES and the Regional Planning Commissions (2017).

Map data courtesy of Esri, DeLorme, Garmin, IGN, Intermap, iDB, GEBCO, USGS, AeroGRID, IGN, Esri, Swisstopo

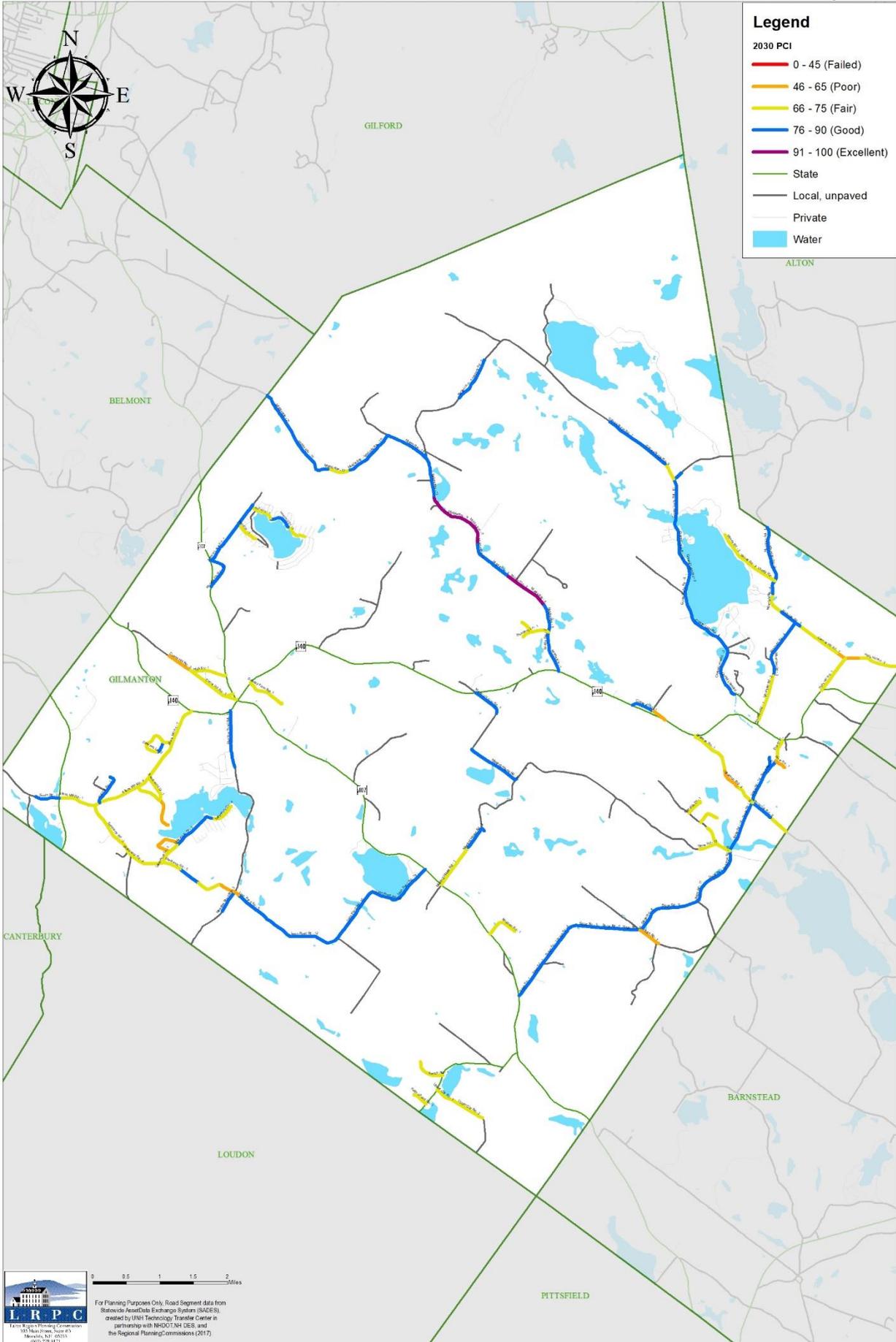
10-Year Forecasted Pavement Condition Index (PCI)

Map

Budget Scenario 2:
(Approximately \$200,000)

Gilmanton, NH: Scenario 2 2030 Pavement Condition Index (PCI)

PCI Average: 77.1



Appendix F

SADES Data Collection Program

SADES Data Collection Program and Lakes Region Planning Commission (LRPC)

The SADES (Statewide Asset Data Exchange System) is a joint program among regional planning commissions, NHDOT, NHDES and UNH T² that establishes a primary transportation asset inventory system and maintainable condition assessment process for many state and local agencies. This unique approach to statewide asset management utilizes modern technology for accurate, sustainable, efficient, and cost-effective data collection and analysis. Even though the UNH Technology Transfer Center (UNH T²) has made asset management software packages available for over 25 years, alignment of recent technological changes with new electronic devices and software advances has made dynamic data management much more manageable.

The SADES training program brings LRPC technicians and planners together with experts from NHDOT, NHDES, UNH T², and the private sector to learn about structural and environmental factors, how to inventory and assess the condition of these factors, and how to efficiently use the state-wide data collection system. By requiring this training of all technicians along with rigorous quality assurance and quality control (QA/QC) and ongoing technical support, a high standard and level of consistency is assured.

SADES Training is required, and on-going support provided to LRPC planners and technicians in the use of the SADES inventory and analysis and forecasting software. The development, piloting, and implementation of these transportation management modules was completed in large and small communities across the state to ensure that the software formulas could accommodate and properly reflect the conditions encountered in most New Hampshire communities.

Trained and certified LRPC planners and technicians can utilize the SADES protocol to inventory and assess the following transportation assets:

Stream Crossings and Culverts.
Pedestrian Infrastructure.
Pavement Conditions (RSMS).
Guardrails



Addendum
Repair Detail By Year

Scenario 1

Year	Street	Order ID	Repair Category	Repair	Miles Treated	Cost
2021	Edgerly Rd	1	Rehabilitate and Rebuild	8" Reclaim and Pave	0.16	\$39,245
	Meeting House Rd	1	Overlays	HMA Overlay (1.25")	0.25	\$16,319
	Meeting House Rd	2	Overlays	HMA Overlay (1.25")	0.34	\$22,258
	Middle Rte	13	Overlays	HMA Overlay (1.25")	0.25	\$16,302
	Middle Rte	14	Overlays	HMA Overlay (1.25")	0.25	\$16,309
	Middle Rte	15	Overlays	HMA Overlay (1.25")	0.25	\$16,330
	Middle Rte	17	Overlays	HMA Overlay (1.25")	0.25	\$16,319
	White Oak Rd	6	Overlays	HMA Overlay (1.25")	0.23	\$15,753
	Total for Year 2021					1.99
2022	Cogswell Rd	1	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$51,305
	Meeting House Rd	1	Overlays	HMA Overlay (1.25")	0.34	\$21,726
	Meeting House Rd	1	Overlays	HMA Overlay (1.25")	0.25	\$14,549
	Middle Rte	16	Overlays	HMA Overlay (1.25")	0.25	\$16,847
	Middle Rte	18	Overlays	HMA Overlay (1.25")	0.25	\$16,839
	Middle Rte	19	Overlays	HMA Overlay (1.25")	0.25	\$16,863
	White Oak Rd	5	Overlays	HMA Overlay (1.25")	0.25	\$17,592
	Total for Year 2022					1.84
2023	Cogswell Rd	2	Overlays	HMA Overlay (1.25")	0.16	\$7,583
	Hatch Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,686
	Meeting House Rd	2	Overlays	HMA Overlay (1.25")	0.25	\$15,013
	Meeting House Rd	3	Overlays	HMA Overlay (1.25")	0.25	\$14,973
	Middle Rte	1	Overlays	HMA Overlay (1.25")	0.25	\$17,391
	Middle Rte	2	Overlays	HMA Overlay (1.25")	0.25	\$17,373
	Middle Rte	3	Overlays	HMA Overlay (1.25")	0.25	\$17,387
	Munsey Hill Rd	1	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$77,671

		Total for Year 2023			1.91	\$169,078
2024	Canney Hill Rd	6	Crack Sealing	Crack Seal (Major)	0.25	\$1,920
	Canney Hill Rd	7	Crack Sealing	Crack Seal (Major)	0.25	\$2,011
	Canney Hill Rd	8	Crack Sealing	Crack Seal (Major)	0.25	\$2,013
	Currier Hill Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$1,373
	Currier Hill Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$1,736
	Currier Hill Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$1,740
	Currier Hill Rd	6	Crack Sealing	Crack Seal (Minor)	0.13	\$513
	Leatherstocking Ln	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,830
	Leatherstocking Ln	2	Crack Sealing	Crack Seal (Major)	0.16	\$1,299
	Munsey Hill Rd	2	Rehabilitate and Rebuild	8" Reclaim and Pave	0.18	\$57,302
	Ridgewood Dr	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,739
	Ridgewood Dr	2	Crack Sealing	Crack Seal (Major)	0.36	\$2,535
	River Rd	1	Crack Sealing	Crack Seal (Major)	0.12	\$952
	Rollins Pond Rd	1	Crack Sealing	Crack Seal (Major)	0.19	\$1,289
	Shannon Rd	1	Overlays	HMA Overlay (1.25")	0.25	\$15,494
	Shannon Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$1,739
	Shannon Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$1,739
	Shannon Rd	4	Overlays	HMA Overlay (1.25")	0.25	\$15,494
	Shellcamp Rd	2	Overlays	HMA Overlay (1.25")	0.25	\$17,941
	Shellcamp Rd	5	Overlays	HMA Overlay (1.25")	0.25	\$17,935
Stockwell Hill Rd	7	Crack Sealing	Crack Seal (Major)	0.25	\$2,013	
Stockwell Hill Rd	8	Crack Sealing	Crack Seal (Major)	0.25	\$2,013	
Wood Dr	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,644	
Total for Year 2024					5.39	\$154,265
2025	Elm St	1	Crack Sealing	Crack Seal (Minor)	0.24	\$1,438
	Halmar Rd	1	Rehabilitate and Rebuild	8" Reclaim and Pave	0.35	\$80,039

	Stockwell Hill Rd	6	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$82,712
	Total for Year 2025				0.84	\$164,188
2026	Allens Mill Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,142
	Allens Mill Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,146
	Allens Mill Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$1,852
	Allens Mill Rd	4	Crack Sealing	Crack Seal (Minor)	0.25	\$1,347
	Allens Mill Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$1,851
	Allens Mill Rd	6	Crack Sealing	Crack Seal (Major)	0.25	\$1,851
	Allens Mill Rd	7	Crack Sealing	Crack Seal (Major)	0.25	\$1,851
	Allens Mill Rd	8	Crack Sealing	Crack Seal (Major)	0.19	\$1,441
	Bingham Rd	1	Crack Sealing	Crack Seal (Major)	0.36	\$2,671
	Blueberry Ln	1	Crack Sealing	Crack Seal (Major)	0.30	\$2,549
	Edwards Dr	1	Crack Sealing	Crack Seal (Major)	0.21	\$1,559
	French Rd	1	Crack Sealing	Crack Seal (Major)	0.33	\$2,435
	Greeley Farm Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,852
	Greeley Farm Rd	2	Crack Sealing	Crack Seal (Major)	0.20	\$1,445
	Halls Hill Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,141
	Halls Hill Rd	2	Crack Sealing	Crack Seal (Major)	0.18	\$1,525
	Halls Hill Rd	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,145
	Halls Hill Rd	10	Crack Sealing	Crack Seal (Major)	0.23	\$1,884
	High St		Overlays	HMA Overlay (1")	0.37	\$36,022
	Middle Rte	13	Crack Sealing	Crack Seal (Minor)	0.25	\$1,558
	Middle Rte	14	Crack Sealing	Crack Seal (Minor)	0.25	\$1,558
	Nighthawk Hollow Dr	1	Overlays	HMA Overlay (1.25")	0.24	\$15,598
	Oakcrest Ln	1	Crack Sealing	Crack Seal (Minor)	0.25	\$1,346
	Oakcrest Ln	2	Crack Sealing	Crack Seal (Major)	0.25	\$1,853
	Oakcrest Ln	3	Overlays	HMA Overlay (1.5")	0.14	\$18,205
	Shellcamp Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,146

	Shellcamp Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,146
	Shellcamp Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$2,145
	Stage Rd	3	Overlays	HMA Overlay (1.25")	0.25	\$16,477
	Stage Rd	6	Overlays	HMA Overlay (1.25")	0.25	\$16,506
	Upper City Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,850
	Upper City Rd	2	Crack Sealing	Crack Seal (Major)	0.33	\$2,465
	Varney Rd	1	Crack Sealing	Crack Seal (Minor)	0.25	\$1,558
	Varney Rd	2	Crack Sealing	Crack Seal (Minor)	0.25	\$1,560
	Varney Rd	3	Crack Sealing	Crack Seal (Minor)	0.25	\$1,555
	Total for Year 2026				8.82	\$159,235
2027	Ash Ave	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,216
	Beechwood Dr	1	Crack Sealing	Crack Seal (Major)	0.29	\$2,182
	Cat Aly	1	Crack Sealing	Crack Seal (Major)	0.02	\$76
	Cat Aly	1	Crack Sealing	Crack Seal (Major)	0.08	\$365
	Guinea Ridge Rd	7	Overlays	HMA Overlay (1.25")	0.25	\$19,715
	Guinea Ridge Rd	8	Overlays	HMA Overlay (1.25")	0.25	\$19,708
	Guinea Ridge Rd	9	Crack Sealing	Crack Seal (Minor)	0.25	\$1,609
	Guinea Ridge Rd	10	Crack Sealing	Crack Seal (Major)	0.19	\$1,673
	Middle Rte	4	Overlays	HMA Overlay (1.25")	0.25	\$19,720
	Middle Rte	5	Overlays	HMA Overlay (1.25")	0.25	\$19,721
	Middle Rte	6	Overlays	HMA Overlay (1.25")	0.25	\$19,721
	Middle Rte	7	Overlays	HMA Overlay (1.25")	0.25	\$19,721
	Middle Rte	15	Crack Sealing	Crack Seal (Minor)	0.25	\$1,610
	Middle Rte	16	Crack Sealing	Crack Seal (Minor)	0.25	\$1,610
	Mountain Rd	1	Overlays	HMA Overlay (1")	0.25	\$25,332
	Mountain Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,113
	Mountain Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$2,111
	Total for Year 2027				3.82	\$159,202
2028	Burke Rd	4	Crack Sealing	Crack Seal (Major)	0.21	\$1,652

	Chipmunk Ln	1	Crack Sealing	Crack Seal (Major)	0.15	\$1,352
	Hemlock Dr	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,288
	Hemlock Dr	3	Crack Sealing	Crack Seal (Major)	0.23	\$2,096
	Middle Rte	11	Overlays	HMA Overlay (1.25")	0.25	\$20,340
	Middle Rte	12	Overlays	HMA Overlay (1.25")	0.25	\$20,306
	Middle Rte	17	Crack Sealing	Crack Seal (Minor)	0.25	\$1,661
	Middle Rte	18	Crack Sealing	Crack Seal (Minor)	0.25	\$1,661
	Mountain Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,284
	Mountain Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,282
	Mountain Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,283
	Mountain Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,180
	Mountain Rd	4	Crack Sealing	Crack Seal (Minor)	0.25	\$1,513
	Mountain Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$2,281
	Mountain Rd	5	Crack Sealing	Crack Seal (Minor)	0.17	\$1,059
	Sargent Rd	5	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$90,925
	Stevens Rd	1	Crack Sealing	Crack Seal (Minor)	0.04	\$218
	Stone Rd	17	Crack Sealing	Crack Seal (Major)	0.36	\$3,276
	Total for Year 2028				4.15	\$159,656
2029	Lakeshore Dr	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,353
	Lakeshore Dr	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,355
	Lakeshore Dr	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,361
	Lakeshore Dr	4	Crack Sealing	Crack Seal (Major)	0.27	\$2,570
	Middle Rte	19	Crack Sealing	Crack Seal (Minor)	0.25	\$1,716
	Middle Rte	20	Crack Sealing	Crack Seal (Minor)	0.25	\$1,713
	Middle Rte	20	Overlays	HMA Overlay (1.25")	0.25	\$20,981
	Sargent Rd	6	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$93,837
	South Rd	3	Crack Sealing	Crack Seal (Minor)	0.26	\$1,534

	Stage Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,037
	Stage Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,037
	Stage Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,033
	Stage Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$2,039
	Stage Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$2,036
	Stage Rd	6	Crack Sealing	Crack Seal (Major)	0.25	\$2,036
	Stage Rd	7	Crack Sealing	Crack Seal (Major)	0.25	\$2,036
	Stage Rd	8	Crack Sealing	Crack Seal (Minor)	0.25	\$1,481
	Stage Rd	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,036
	Stage Rd	10	Crack Sealing	Crack Seal (Major)	0.25	\$2,038
	Stage Rd	11	Crack Sealing	Crack Seal (Major)	0.25	\$2,035
	Stage Rd	12	Crack Sealing	Crack Seal (Major)	0.25	\$2,035
	Stage Rd	13	Crack Sealing	Crack Seal (Major)	0.25	\$2,466
	Stage Rd	14	Crack Sealing	Crack Seal (Major)	0.25	\$2,465
	Stage Rd	15	Crack Sealing	Crack Seal (Major)	0.25	\$2,464
	Stage Rd	16	Crack Sealing	Crack Seal (Major)	0.25	\$2,353
	Stage Rd	17	Crack Sealing	Crack Seal (Minor)	0.23	\$1,513
	Total for Year 2029				6.52	\$164,561
2030	Crystal Lake Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,321
	Crystal Lake Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,431
	Crystal Lake Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,430
	Crystal Lake Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$2,431
	Crystal Lake Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$2,317
	Crystal Lake Rd	6	Crack Sealing	Crack Seal (Major)	0.25	\$2,430
	Crystal Lake Rd	7	Crack Sealing	Crack Seal (Minor)	0.25	\$1,767
	Crystal Lake Rd	8	Crack Sealing	Crack Seal (Major)	0.25	\$2,327
	Crystal Lake Rd	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,429
	Crystal Lake Rd	10	Crack Sealing	Crack Seal (Major)	0.25	\$2,431
	Crystal Lake Rd	11	Crack Sealing	Crack Seal (Major)	0.25	\$2,432

Loon Pond Rd	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	10	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	11	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	12	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	13	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	14	Crack Sealing	Crack Seal (Major)	0.25	\$2,100
Loon Pond Rd	15	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	16	Crack Sealing	Crack Seal (Major)	0.25	\$2,100
Loon Pond Rd	17	Crack Sealing	Crack Seal (Major)	0.25	\$2,100
Loon Pond Rd	18	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	19	Crack Sealing	Crack Seal (Major)	0.13	\$1,073
Meadow Pond Rd	3	Crack Sealing	Crack Seal (Minor)	0.25	\$1,447
Meadow Pond Rd	10	Crack Sealing	Crack Seal (Major)	0.25	\$2,432
Meadow Pond Rd	11	Crack Sealing	Crack Seal (Minor)	0.36	\$2,580
Middle Rt	1	Crack Sealing	Crack Seal (Major)	0.03	\$218
Middle Rte	8	Overlays	HMA Overlay (1.25")	0.25	\$21,679
Middle Rte	9	Overlays	HMA Overlay (1.25")	0.25	\$21,681
Middle Rte	10	Crack Sealing	Crack Seal (Minor)	0.25	\$1,769
Middle Rte	10	Overlays	HMA Overlay (1.25")	0.25	\$21,675
Middle Rte	21	Overlays	HMA Overlay (1.25")	0.35	\$30,142
Sawyer Lake Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,433
Sawyer Lake Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,433
Sawyer Lake Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,433
Total for Year 2030				8.37	\$158,748
Total				43.64	\$1,603,487

Scenario 2

Year	Street	Order ID	Repair Category	Repair	Miles Treated	Cost
2021	Edgerly Rd	1	Rehabilitate and Rebuild	8" Reclaim and Pave	0.16	\$39,245
	Meeting House Rd	1	Overlays	HMA Overlay (1.25")	0.25	\$16,319
	Meeting House Rd	2	Overlays	HMA Overlay (1.25")	0.34	\$22,258
	Middle Rte	13	Overlays	HMA Overlay (1.25")	0.25	\$16,302
	Middle Rte	14	Overlays	HMA Overlay (1.25")	0.25	\$16,309
	Middle Rte	15	Overlays	HMA Overlay (1.25")	0.25	\$16,330
	Middle Rte	17	Overlays	HMA Overlay (1.25")	0.25	\$16,319
	White Oak Rd	6	Overlays	HMA Overlay (1.25")	0.23	\$15,753
	Total for Year 2021					1.99
2022	Cogswell Rd	1	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$51,305
	Crystal Lake Rd	2	Overlays	HMA Overlay (1.25")	0.25	\$16,831
	Meeting House Rd	1	Overlays	HMA Overlay (1.25")	0.34	\$21,726
	Meeting House Rd	1	Overlays	HMA Overlay (1.25")	0.25	\$14,549
	Middle Rte	16	Overlays	HMA Overlay (1.25")	0.25	\$16,847
	Middle Rte	18	Overlays	HMA Overlay (1.25")	0.25	\$16,839
	Middle Rte	19	Overlays	HMA Overlay (1.25")	0.25	\$16,863
	Stage Rd	1	Overlays	HMA Overlay (1.25")	0.25	\$14,554
	Stage Rd	2	Overlays	HMA Overlay (1.25")	0.25	\$14,560
	White Oak Rd	5	Overlays	HMA Overlay (1.25")	0.25	\$17,592
	Total for Year 2022					2.59
2023	Cogswell Rd	2	Overlays	HMA Overlay (1.25")	0.16	\$7,583
	Hatch Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,686
	Meeting House Rd	2	Overlays	HMA Overlay (1.25")	0.25	\$15,013
	Meeting House Rd	3	Overlays	HMA Overlay (1.25")	0.25	\$14,973

	Middle Rte	1	Overlays	HMA Overlay (1.25")	0.25	\$17,391
	Middle Rte	2	Overlays	HMA Overlay (1.25")	0.25	\$17,373
	Middle Rte	3	Overlays	HMA Overlay (1.25")	0.25	\$17,387
	Munsey Hill Rd	1	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$77,671
	Stage Rd	4	Overlays	HMA Overlay (1.25")	0.25	\$15,035
	Stage Rd	5	Overlays	HMA Overlay (1.25")	0.25	\$15,016
	Total for Year 2023				2.41	\$199,129
2024	Canney Hill Rd	6	Crack Sealing	Crack Seal (Major)	0.25	\$1,920
	Canney Hill Rd	7	Crack Sealing	Crack Seal (Major)	0.25	\$2,011
	Canney Hill Rd	8	Crack Sealing	Crack Seal (Major)	0.25	\$2,013
	Currier Hill Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$1,373
	Currier Hill Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$1,736
	Currier Hill Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$1,740
	Currier Hill Rd	6	Crack Sealing	Crack Seal (Minor)	0.13	\$513
	Leatherstocking Ln	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,830
	Leatherstocking Ln	2	Crack Sealing	Crack Seal (Major)	0.16	\$1,299
	Munsey Hill Rd	2	Rehabilitate and Rebuild	8" Reclaim and Pave	0.18	\$57,302
	Ridgewood Dr	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,739
	Ridgewood Dr	2	Crack Sealing	Crack Seal (Major)	0.36	\$2,535
	River Rd	1	Crack Sealing	Crack Seal (Major)	0.12	\$952
	Rollins Pond Rd	1	Crack Sealing	Crack Seal (Major)	0.19	\$1,289
	Shannon Rd	1	Overlays	HMA Overlay (1.25")	0.25	\$15,494
	Shannon Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$1,739
	Shannon Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$1,739
	Shannon Rd	4	Overlays	HMA Overlay (1.25")	0.25	\$15,494
	Shellcamp Rd	2	Overlays	HMA Overlay (1.25")	0.25	\$17,941
	Shellcamp Rd	5	Overlays	HMA Overlay (1.25")	0.25	\$17,935

	Stage Rd	7	Overlays	HMA Overlay (1.25")	0.25	\$15,498
	Stage Rd	8	Overlays	HMA Overlay (1.25")	0.25	\$15,494
	Stockwell Hill Rd	7	Crack Sealing	Crack Seal (Major)	0.25	\$2,013
	Stockwell Hill Rd	8	Crack Sealing	Crack Seal (Major)	0.25	\$2,013
	Wood Dr	1	Overlays	HMA Overlay (1.25")	0.25	\$14,648
	Total for Year 2024				5.89	\$198,261
2025	Elm St	1	Crack Sealing	Crack Seal (Minor)	0.24	\$1,438
	Halmar Rd	1	Rehabilitate and Rebuild	8" Reclaim and Pave	0.35	\$80,039
	Stage Rd	10	Overlays	HMA Overlay (1.25")	0.25	\$16,011
	Stage Rd	11	Overlays	HMA Overlay (1.25")	0.25	\$15,983
	Stockwell Hill Rd	6	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$82,712
	Total for Year 2025				1.34	\$196,182
2026	Allens Mill Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,142
	Allens Mill Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,146
	Allens Mill Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$1,852
	Allens Mill Rd	4	Crack Sealing	Crack Seal (Minor)	0.25	\$1,347
	Allens Mill Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$1,851
	Allens Mill Rd	6	Crack Sealing	Crack Seal (Major)	0.25	\$1,851
	Allens Mill Rd	7	Crack Sealing	Crack Seal (Major)	0.25	\$1,851
	Allens Mill Rd	8	Crack Sealing	Crack Seal (Major)	0.19	\$1,441
	Bingham Rd	1	Crack Sealing	Crack Seal (Major)	0.36	\$2,671
	Blueberry Ln	1	Crack Sealing	Crack Seal (Major)	0.30	\$2,549
	Edwards Dr	1	Crack Sealing	Crack Seal (Major)	0.21	\$1,559
	French Rd	1	Crack Sealing	Crack Seal (Major)	0.33	\$2,435
	Greeley Farm Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,852
	Greeley Farm Rd	2	Crack Sealing	Crack Seal (Major)	0.20	\$1,445
	Halls Hill Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,141

Halls Hill Rd	2	Crack Sealing	Crack Seal (Major)	0.18	\$1,525	
Halls Hill Rd	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,145	
Halls Hill Rd	10	Crack Sealing	Crack Seal (Major)	0.23	\$1,884	
High St		Overlays	HMA Overlay (1")	0.37	\$36,022	
Nighthawk Hollow Dr	1	Overlays	HMA Overlay (1.25")	0.24	\$15,598	
Oakcrest Ln	1	Crack Sealing	Crack Seal (Minor)	0.25	\$1,346	
Oakcrest Ln	2	Crack Sealing	Crack Seal (Major)	0.25	\$1,853	
Oakcrest Ln	3	Overlays	HMA Overlay (1.5")	0.14	\$18,205	
Shellcamp Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,146	
Shellcamp Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,146	
Shellcamp Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$2,145	
Stage Rd	3	Overlays	HMA Overlay (1.25")	0.25	\$16,477	
Stage Rd	6	Overlays	HMA Overlay (1.25")	0.25	\$16,506	
Stage Rd	12	Overlays	HMA Overlay (1.25")	0.25	\$16,495	
Stone Rd	17	Overlays	HMA Overlay (1.25")	0.36	\$27,408	
Upper City Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,850	
Upper City Rd	2	Crack Sealing	Crack Seal (Major)	0.33	\$2,465	
Varney Rd	1	Crack Sealing	Crack Seal (Minor)	0.25	\$1,558	
Varney Rd	2	Crack Sealing	Crack Seal (Minor)	0.25	\$1,560	
Varney Rd	3	Crack Sealing	Crack Seal (Minor)	0.25	\$1,555	
White Oak Rd	6	Crack Sealing	Crack Seal (Major)	0.23	\$2,070	
Total for Year 2026				9.16	\$202,091	
2027	Ash Ave	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,216
	Beechwood Dr	1	Crack Sealing	Crack Seal (Major)	0.29	\$2,182
	Cat Aly	1	Crack Sealing	Crack Seal (Major)	0.02	\$76
	Cat Aly	1	Crack Sealing	Crack Seal (Major)	0.08	\$365
	Guinea Ridge Rd	7	Overlays	HMA Overlay (1.25")	0.25	\$19,715
	Guinea Ridge Rd	8	Overlays	HMA Overlay (1.25")	0.25	\$19,708
	Guinea Ridge Rd	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,212

	Guinea Ridge Rd	10	Crack Sealing	Crack Seal (Major)	0.19	\$1,673
	Meeting House Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$1,912
	Meeting House Rd	1	Crack Sealing	Crack Seal (Major)	0.34	\$2,855
	Meeting House Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,213
	Meeting House Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$1,911
	Meeting House Rd	2	Crack Sealing	Crack Seal (Major)	0.34	\$3,018
	Meeting House Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$1,906
	Middle Rte	4	Overlays	HMA Overlay (1.25")	0.25	\$19,720
	Middle Rte	5	Overlays	HMA Overlay (1.25")	0.25	\$19,721
	Middle Rte	6	Overlays	HMA Overlay (1.25")	0.25	\$19,721
	Middle Rte	7	Overlays	HMA Overlay (1.25")	0.25	\$19,721
	Middle Rte	16	Crack Sealing	Crack Seal (Major)	0.25	\$2,214
	Middle Rte	17	Crack Sealing	Crack Seal (Major)	0.25	\$2,213
	Middle Rte	18	Crack Sealing	Crack Seal (Major)	0.25	\$2,213
	Middle Rte	19	Crack Sealing	Crack Seal (Major)	0.25	\$2,216
	Mountain Rd	1	Overlays	HMA Overlay (1")	0.25	\$25,332
	Mountain Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,113
	Mountain Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$2,111
	Oakcrest Ln	3	Crack Sealing	Crack Seal (Major)	0.14	\$1,093
	Stockwell Hill Rd	6	Overlays	HMA Overlay (1.25")	0.25	\$19,710
	Total for Year 2027				6.39	\$200,057
2028	Burke Rd	4	Crack Sealing	Crack Seal (Major)	0.21	\$1,652
	Chipmunk Ln	1	Crack Sealing	Crack Seal (Major)	0.15	\$1,352
	Hemlock Dr	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,288
	Hemlock Dr	3	Crack Sealing	Crack Seal (Major)	0.23	\$2,096
	Middle Rte	11	Overlays	HMA Overlay (1.25")	0.25	\$20,340
	Middle Rte	12	Crack Sealing	Crack Seal (Major)	0.25	\$2,279
	Middle Rte	12	Overlays	HMA Overlay (1.25")	0.25	\$20,306
	Middle Rte	13	Crack Sealing	Crack Seal (Major)	0.25	\$2,281

	Middle Rte	14	Crack Sealing	Crack Seal (Major)	0.25	\$2,282
	Middle Rte	15	Crack Sealing	Crack Seal (Major)	0.25	\$2,285
	Mountain Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,284
	Mountain Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,282
	Mountain Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,283
	Mountain Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,180
	Mountain Rd	4	Crack Sealing	Crack Seal (Minor)	0.25	\$1,513
	Mountain Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$2,281
	Mountain Rd	5	Crack Sealing	Crack Seal (Minor)	0.17	\$1,059
	Munsey Hill Rd	1	Overlays	HMA Overlay (1.25")	0.25	\$20,343
	Munsey Hill Rd	2	Overlays	HMA Overlay (1.25")	0.18	\$14,543
	Sargent Rd	5	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$90,925
	Stevens Rd	1	Crack Sealing	Crack Seal (Minor)	0.04	\$218
	Total for Year 2028				4.72	\$197,071
2029	Cogswell Rd	1	Overlays	HMA Overlay (1.25")	0.25	\$14,311
	Guinea Ridge Rd	7	Crack Sealing	Crack Seal (Major)	0.25	\$2,357
	Guinea Ridge Rd	8	Crack Sealing	Crack Seal (Major)	0.25	\$2,356
	Lakeshore Dr	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,353
	Lakeshore Dr	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,355
	Lakeshore Dr	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,361
	Lakeshore Dr	4	Crack Sealing	Crack Seal (Major)	0.27	\$2,570
	Middle Rte	6	Crack Sealing	Crack Seal (Major)	0.25	\$2,358
	Middle Rte	7	Crack Sealing	Crack Seal (Major)	0.25	\$2,358
	Middle Rte	8	Crack Sealing	Crack Seal (Major)	0.25	\$2,358
	Middle Rte	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,358
	Middle Rte	10	Crack Sealing	Crack Seal (Major)	0.25	\$2,357
	Middle Rte	11	Crack Sealing	Crack Seal (Major)	0.25	\$2,356
	Middle Rte	20	Overlays	HMA Overlay (1.25")	0.25	\$20,981

Sargent Rd	6	Rehabilitate and Rebuild	8" Reclaim and Pave	0.25	\$93,837	
South Rd	3	Crack Sealing	Crack Seal (Minor)	0.26	\$1,534	
Stage Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,037	
Stage Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,037	
Stage Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,033	
Stage Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$2,039	
Stage Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$2,036	
Stage Rd	6	Crack Sealing	Crack Seal (Major)	0.25	\$2,036	
Stage Rd	7	Crack Sealing	Crack Seal (Major)	0.25	\$2,036	
Stage Rd	8	Crack Sealing	Crack Seal (Minor)	0.25	\$1,481	
Stage Rd	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,036	
Stage Rd	10	Crack Sealing	Crack Seal (Major)	0.25	\$2,038	
Stage Rd	11	Crack Sealing	Crack Seal (Major)	0.25	\$2,035	
Stage Rd	12	Crack Sealing	Crack Seal (Major)	0.25	\$2,035	
Stage Rd	13	Crack Sealing	Crack Seal (Major)	0.25	\$2,466	
Stage Rd	14	Crack Sealing	Crack Seal (Major)	0.25	\$2,465	
Stage Rd	15	Crack Sealing	Crack Seal (Major)	0.25	\$2,464	
Stage Rd	16	Crack Sealing	Crack Seal (Major)	0.25	\$2,353	
Stage Rd	17	Crack Sealing	Crack Seal (Minor)	0.23	\$1,513	
White Oak Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$2,462	
Total for Year 2029				8.52	\$196,762	
2030	Crystal Lake Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,321
	Crystal Lake Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,431
	Crystal Lake Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,430
	Crystal Lake Rd	4	Crack Sealing	Crack Seal (Major)	0.25	\$2,431
	Crystal Lake Rd	5	Crack Sealing	Crack Seal (Major)	0.25	\$2,317
	Crystal Lake Rd	6	Crack Sealing	Crack Seal (Major)	0.25	\$2,430
	Crystal Lake Rd	7	Crack Sealing	Crack Seal (Minor)	0.25	\$1,767

Crystal Lake Rd	8	Crack Sealing	Crack Seal (Major)	0.25	\$2,327
Crystal Lake Rd	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,429
Crystal Lake Rd	9	Overlays	HMA Overlay (1.25")	0.25	\$21,639
Crystal Lake Rd	10	Crack Sealing	Crack Seal (Major)	0.25	\$2,431
Crystal Lake Rd	11	Crack Sealing	Crack Seal (Major)	0.25	\$2,432
Edgerly Rd	1	Overlays	HMA Overlay (1.25")	0.16	\$11,659
Halmar Rd	1	Crack Sealing	Crack Seal (Major)	0.35	\$2,353
Loon Pond Rd	9	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	10	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	11	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	12	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	13	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	14	Crack Sealing	Crack Seal (Major)	0.25	\$2,100
Loon Pond Rd	15	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	16	Crack Sealing	Crack Seal (Major)	0.25	\$2,100
Loon Pond Rd	17	Crack Sealing	Crack Seal (Major)	0.25	\$2,100
Loon Pond Rd	18	Crack Sealing	Crack Seal (Major)	0.25	\$2,101
Loon Pond Rd	19	Crack Sealing	Crack Seal (Major)	0.13	\$1,073
Meadow Pond Rd	3	Crack Sealing	Crack Seal (Minor)	0.25	\$1,447
Meadow Pond Rd	10	Crack Sealing	Crack Seal (Major)	0.25	\$2,432
Meadow Pond Rd	11	Crack Sealing	Crack Seal (Minor)	0.36	\$2,580
Middle Rt	1	Crack Sealing	Crack Seal (Major)	0.03	\$218
Middle Rte	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,434
Middle Rte	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,431
Middle Rte	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,433
Middle Rte	4	Crack Sealing	Crack Seal (Major)	0.25	\$2,433
Middle Rte	5	Crack Sealing	Crack Seal (Major)	0.25	\$2,433
Middle Rte	8	Overlays	HMA Overlay (1.25")	0.25	\$21,679
Middle Rte	9	Overlays	HMA Overlay (1.25")	0.25	\$21,681

Middle Rte	10	Overlays	HMA Overlay (1.25")	0.25	\$21,675
Middle Rte	21	Overlays	HMA Overlay (1.25")	0.35	\$30,142
Sawyer Lake Rd	1	Crack Sealing	Crack Seal (Major)	0.25	\$2,433
Sawyer Lake Rd	2	Crack Sealing	Crack Seal (Major)	0.25	\$2,433
Sawyer Lake Rd	3	Crack Sealing	Crack Seal (Major)	0.25	\$2,433
Total for Year 2030				10.14	\$204,793
Total				53.14	\$1,954,845