

**SUMMARY REPORT
AND
FINAL DOCUMENTATION**

**WOLFEBORO ROADWAY
EVALUATION**

(DRAFT)

**TOWN OF WOLFEBORO
WOLFEBORO, NEW HAMPSHIRE**

April 2019

UEI PROJECT 2211



**WOLFEBORO,
NEW HAMPSHIRE**

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EVALUATION**

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1.0 Introduction

1.1 Project Summary

The Town currently maintains approximately 64 miles of Class-V roads (53.4 miles paved and 10.6 miles gravel). As the Town takes ownership of existing private roads and new subdivisions, the maintenance effort and budget required from the town continues to grow. The Town requested Underwood Engineers assess and evaluate the network of Town maintained Class-V roads and provide a prioritized 10-year Capital Improvements Plan (including recommended yearly budgets). Town maintained Class-V roads included as part of this assessment are depicted in Figure 1.

1.2 Project Objective

The objective of this evaluation is to develop and provide the Town of Wolfeboro with a detailed 10-year C.I.P. including a prioritized repair schedule with associated budget needs over a 10-year period (2019 to 2029). To accomplish this, Underwood Engineers, Inc (UE) completed field assessment work, data reduction, and final analysis as defined in the attached scope of work authorized as ESR #67 (Appendix A).

It should be noted that this plan is based on a preliminary review and visual assessment of the roads with limited data. Prior to implementing any capital projects, a detailed review of each road should be completed during the design phase and limits of recommended improvements confirmed.

1.3 Previous Evaluations

The Town has completed previously completed roadway assessments in both 2010 and 2013. Both evaluations appear to have assessed road surface conditions to provide a condition index. The 2013 evaluation completed by Woodard and Curran provided some criticality assessment of each roadway to provide a method of prioritizing roads requiring improvements in the form of a criticality matrix.

2.0 Current Maintenance Strategies and Recent Road Improvements

2.1 Recent Capital Projects

Records provided show the Town is proactively improving and reconstructing an average of 10,000 LF (almost 2 miles) of road reconstruction per year over the past 3 years as summarized in the Table 2-1:



Table 2-1: Recent Road Work Completed (Previous 3-Years)

<u>2015</u>		<u>2016</u>		<u>2017</u>	
Road	Length (ft)	Road	Length (ft)	Road	Length (ft)
Beach Pond Rd.	11,500	Port Wedelin Rd.	3,200	Oakwood Rd.	4,000
Grove St.	700	Winterhaven Rd.	3,400	Spruce Rd.	3,200
Old Lakeview Tr.	2,200			Tips Cove Rd.	1,500
Total:	14,400		6,600		8,700

2.2 Road Management (Budget)

Historically the Town has supported the following operating budgets for “Highways and Streets” and Warrant Articles for capital projects Summarized in Table 2-2.

Table 2-2: Historical Operating and Capital Improvements Budgets

	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>AVERAGE</i>
Operating Budget	\$1,352,000	\$1,378,000	\$1,348,000	\$1,352,000	\$1,392,000	\$1,364,400
% Change	N/A	1.9%	-2.2%	0.3%	3.0%	0.8%
Warrant Articles	\$625,000	\$650,000	\$675,000	\$750,000	\$870,000	\$714,000
% Change	N/A	4.0%	3.8%	11.1%	16.0%	8.7%

Though the Town has been generally maintaining the same operating budgets from highways and street, the Town has been successful in increasing the warrant articles for CIP projects by approximately 8.7% per year over the past five years.

It should be noted that the Construction Cost Index (CCI) for the Boston Area has seen a 16% increase over the same time period.

Table 2-3: Historical CCI Costs (Boston)

	2014	2015	2016	2017	2018
Yearly CCI Average	12,414	12,565	13,290	13,761	14,410
% Increase from 2014	N/A	1.2%	7.0%	10.9%	16.1%

2.3 Road Maintenance

Wolfeboro completes routine road maintenance. While the evaluation was being completed, evidence of maintenance efforts was observed including crack sealing, ditch cleaning, and gravel road grading. Though no actual grading was observed, it was apparent that gravel roads are routinely graded as many had limited pot hole areas at the time of inspection. Based on Town Staff, gravel roads are graded at least 3 times per year. Some sections are graded more often.

Though many of the ditches appear to have good shape and evidence of previous maintenance, it was observed that many of the culvert inlets or CB inlets were in need of cleaning. We do note that the evaluation was completed in late fall following dropping of



leaves so the timing of the evaluation could have attributed to the condition noted. The Town should endeavor to include inlet cleaning as part of the routine maintenance program.

3.0 Road Surface Assessments & Evaluations

3.1 Evaluation Summary

The existing condition of the road surface is evaluated and assessed to document the condition. Section 3.2 summarizes the distress categories considered during an assessment. These assessments are vital in developing recommended repair strategies for capital projects and maintenance for a given road. Budgets are then developed using recommended repairs assigned and a prioritized schedule is developed taking into account PCI rating, budget, and input from the Town. Repair strategies vary depending on the severity of the road's condition and surface type and are described in Section 3.3.

For assessment purposes, roads are often divided into sections. Historically, these sections are determined by changes in physical characteristics as described in Section 4.1. However, for this evaluation to provide consistency, UE maintained existing sections from previous assessment work completed by the Town. These sections generally seemed to line up with the nodal maps. Splitting sections using nodal maps allows road section to corresponds with already existing GIS information and allows integration into asset management systems currently used by many municipalities.

Road assessments are most often completed by visual observation. This consists of looking at the existing road surface and evaluating its condition based on a given criteria (see section 3.2). Qualitative ratings are provided for each of the criteria.

Once assessments are complete, data is tabulated into summary spreadsheets or existing road management software and the Pavement Condition Index (PCI) is calculated. The PCI is based on a scale of 1-100 with 100 being the best condition possible. PCI is calculated by subtracting the summation numerical values which correspond with the surface distress observed (Section 3.2) from 100. A repair alternative is then selected for each individual road section based on its condition and road sections are then put into a prioritized maintenance/reconstruction schedule.

Following the assessment and PCI determination, the Road Condition Summary (Appendix E) was provided to the Town for review.

For the assessment and following review with the Town, priority for C.I.P. planning was determined by ranking each road section by PCI. The C.I.P. developed as part of this assessment is still under review by Town Staff.

3.2 Surface Distresses

There are many surface conditions to assess when evaluating road surface conditions. The summary below shows the surface distresses evaluated as part of this evaluation.



Table 3-1: Road Surface Distress Criteria Assessed

Asphalt Surface Distresses	Gravel Surface Distresses
Longitudinal/Transverse Cracking	Proper Crown (x-sec shape)
Alligator Cracking	Roadside Drainage
Edge Cracking	Corrugations
Patching & Potholes	Dust
Roughness	Potholes
Rutting	Rutting
Drainage	Loose Aggregate

A sample PCI calculation is shown below using the condition rating portion of the field form provided in Appendix C.

<u>Condition & Deduct Value</u>											
				←	Extent	→					
				None	Low	Medium	High				
				No Defects	<10%	10-30%	>30%				
Alligator Cracking	Severity	Low		0	2	5	8				
		Medium			5	8	11				
		High			8	11	14				
Long/Trans Cracking	Severity	Low		0	2	5	8				
		Medium			5	8	11				
		High			8	11	14				
Edge Cracking	Severity	Low		0	2	5	8				
		Medium			5	8	11				
		High			8	11	14				
Patch/Pothole.....			0	2	5	14					
Roughness			0	8	15						
Rutting			0	8	14						
Drainage			0	8	14						

SAMPLE CALCULATION:
 $PCI = 100 - \sum(\text{deduct value})$
 therefore,
 $PCI = 100 - (8 + 11 + 8 + 5 + 15 + 8 + 14) = \mathbf{31}$

3.3 Repair Alternatives

The following tables identify some the strategies considered in Wolfeboro as well as the estimated service life extension for the road surface:



Table 3-2: Additional Service Life Provided by Repair Categories (Asphalt Surfaces)

Asphalt Alternatives	Additional Service Life in Years
<i>Deferred Maintenance</i>	<i>N/A</i>
<i>Routine Maintenance</i> Crack Sealing Ditch Maintenance Gravel Backing	<i>1/2 to 2</i>
<i>Preventative Maintenance</i> Shim and 1.5" Overlay Minor Drainage Improvements	<i>6 to 8</i>
<i>Reconstruction</i>	<i>15 to 20</i>

Note: Actual service life will vary based on traffic volume and condition of roadway prior to application of alternative

Table 3-3: Additional Service Life Provided by Repair Categories (Gravel Surfaces)

Gravel Alternatives	Additional Service Life in Years
<i>Deferred Maintenance</i>	<i>N/A</i>
<i>Routine Maintenance</i> Spot Gravel Reshape, minor material (1" average depth)	<i>0.5 to 1</i>
<i>Preventative Maintenance</i> Reshape, major material (4" average depth) Ditching Minor Drainage Improvements	<i>1 to 4</i>
<i>Rehabilitation/Reconstruction</i> Box-out reconstruction Fabrics Major Drainage Improvements	<i>5 +</i>

Note: Speed of deterioration of gravel surfaces varies depending on weather, traffic volume, drainage, and time of year. Service life shown is an estimate based on typical observed conditions and deterioration

The chosen repairs were assigned unit costs (2019 dollars) which were applied to an assumed quantity to develop the recommended budget provided in Section 7. The table on the following page shows repair strategies selected by UE with their estimated unit costs (including contingencies as noted).



Table 3-4: Repair Item Unit Costs (2019 \$)

Item	Unit	Unit Cost	35% Contingency Included
<u>Pavement Repair Strategies</u>			
Crack Sealing	SF	\$2.00	no
1.5" Overlay	SF	\$0.71	no
Shimming and 1.5" Overlay	SF	\$0.83	no
Gravel backing	LF	\$1.10	no
Mill and Patch Center Line	LF	\$5.70	no
Mill (1.5" Depth) and 1.5" Overlay	SF	\$1.11	no
Cut and Patch Distressed Area	SF	\$6.10	no
<u>Road Reconstruction Strategies</u>			
8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	yes
8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	yes
10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 3" Overlay	SF	\$5.46	yes
10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	yes
Reinforcing Fabric	SF	\$0.60	no
Supplemental Stone for Reclaim	SF	\$0.22	no
Convert to Gravel (Reclaim - Process in Place)	SF	\$0.36	no
<u>Drainage Improvements</u>			
Asphalt Swales	LF	\$16.90	yes
Curbing - Asphalt Berm	LF	\$19.50	yes
Curbing - Vertical Granite	LF	\$40.00	yes
Underdrain - 6" (one side)	LF	\$32.00	yes
Maintain Ditch (Turf)	LF	\$11.70	no
Maintain Ditch (Erosion Stone)	LF	\$27.30	no
Construct Enclosed Drainage	LF	\$75.50	yes
Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	yes
Cross/Driveway Culvert (up to 24" dia)	LF	\$60.00	yes
Replace large diameter cross culvert (24" or greater, single pipe)	LS	\$43,200.00	yes
<u>Gravel Repair Strategies</u>			
Maintain existing ditch (gravel road)	LF	\$14.00	-
Spot Regravel (Fill in pot holes and minor rut/puddle areas)	SF	\$0.33	
Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	
Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	
Raise Road to mitigate embankments (18" depth)	SF	\$1.38	
Reconstruction	SF	\$2.26	

Notes

1. Paving price based on bituminous pavement price of \$73.00 per ton for (machine method paving)
2. 35% contingency includes 20% for Design & Construction Engineering and 15% Construction Contingency

*See Appendix B for details regarding repair alternatives



4.0 Field Evaluations

Field work was completed during November and December 2017 by following the procedure below:

4.1 Sectioning

In an effort to stay consistent with evaluations previously completed, as many sections as possible remained unchanged for the 2017 evaluation. However, there may be some sections that were combined due to their short length or added due to an overlay area observed. The beginning and end of each road section typically corresponded with an intersection node as listed on the Nodal Reference maps published yearly by the NHDOT (Appendix J). Sections were previously referenced by a “R####” (2013 evaluation). UE was also provided the field maps showing each section and this referenced has been carried over as well where ever possible for consistency (Appendix J).

4.2 Evaluations

Data was collected using the windshield survey method at speeds of around 5 MPH and stopping when necessary to record measurements, take photos, or review a specific element in greater detail. Surface conditions were noted on a field form (Appendix C). See Appendix D for the field workbook used in this evaluation and Appendix E for a tabular summary of the evaluation findings. The field work took approximately eleven days to complete

4.3 Photos

In conjunction with the evaluation, photos were taken of each road section. Photos showing typical section conditions and existing drainage infrastructure are provided digitally in Appendix D to document observed road conditions

4.4 Data Analysis

Following the completion of field work, findings were analyzed using RSMS type methods to calculate pavement condition index (PCI) for each section. Roads were categorized by PCI ranges to establish the category of repairs recommended for a given road section. Longer roads with multiple sections were typically split into more than one repair category. This is the case for roads like Beach Pond Road which were reconstructed to a certain point. The following is a summary of the PCI ranges for each repair category:

- PCI between 90 and 100 – Deferred/routine maintenance
- PCI between 65 and 89 – Preventative maintenance & overlays
- PCI less than 65 – Reconstruction

Based on the assigned category and observed conditions, recommended repair alternatives and unit pricing were assigned to each section so that the capital improvement plan and associated budget can be prepared.



5.0 Findings

The summary below shows the maintenance categories used and the percentage (by length) of the road network which fell into each category

Table 5-1: Distribution of Roads by Maintenance Category

Strategy	Asphalt	Gravel	Combined
Deferred/Routine Maintenance	25%	-	22%
Preventive Maintenance	40%	100%	50%
Reconstruction	35%	-	28%
Total:	100%	100%	100%

As seen above, a large percentage of roads, over 70%, fall within the preventative maintenance category or better. This is evidence that the Town has been proactive in improving and maintaining their road network. Though some gravel roads may need more than preventative maintenance in select areas, it is assumed that all the gravel roads fall under the preventative maintenance category. As indicated in Section 2.0, the Town has been improving almost 10,000 linear feet (almost 2 miles) of road per year over the past 3 years. Records made available prior to the last 3 years show that the town has been completing this level of effort for the last ten to twelve years or so.

The average PCI was determined to be around 69 for the asphalt roads. Based on information provided from previous assessments, comparatively the average PCIs in 2010 and 2013 were around 69 and 75 respectively. It would be expected that the PCI should increase from assessment to assessment, particularly when the Town is actively improving roads. However, it is important to note that the assessment (though based on certain guidance criteria) can still be open to the interpretation of the assessor. Based on the average PCI being within fairly tight range (69 to 75) over the last 3 assessments it can be assumed that the Town is keeping up with roadway maintenance and improvements may not be getting ahead of maintenance needs.

It is important to note that (at a minimum) the Town needs to maintain its current level of effort. Roads, both paved and gravel, need to be maintained routinely in order for the town to protect their investment. This includes maintaining drainage systems regularly and completing routine maintenance and overlays on a regular schedule so that the need for costly reconstruction in the future is less likely.

6.0 Additional Evaluations

In addition to the road surface evaluation, additional data was collected to assist the town with planning and budgeting. This is summarized in the sections below.

6.1 Drainage

During the course of the work, general observations were made regarding the existing roadway drainage conditions. Some roads were found to have good drainage while others had no existing drainage at all. Poor drainage control contributes to much of the road



maintenance issues. These controls are both subsurface (high water table), surface water and puddling.

Since drainage plays a significant part in the life of a road, Underwood Engineers, Inc. recommends that the Town consider focusing efforts towards improving drainage throughout. This effort will lead to longer life of road improvements once made. These preventative maintenance improvements include the following:

- Portions of the roads throughout Town could benefit from installations of closed drainage infrastructure. This was particularly true on roads with lengthy hills and steep grades like Beach Pond Road and Haines Hill Road. This work would include installing a drainage system with catch basins and creating outfalls to discharge the water. Closed drainage systems with structure with properly sized inlet grates in areas with long grades can help mitigate ditch erosion and reduce the need for large, stone stabilized ditches by periodically capturing surface run-off into a pipe and reducing flow volumes in the ditch.
- A large percentage of Wolfeboro's roads as they climb and descend over hills or are constructed on the side of hills (Stoneham Road). These types of roads will often include some severe cut sections. Underdrain should often be installed in these areas. Cut sections have a tendency to trap groundwater underneath the roadbed. An underdrain lets this accumulated water drain from beneath the road helping keep the road bed dry.
- Install gravel backing on the edge of all pavements. Adding backing allows the water to flow away from the road once it leaves the paved surface. Storm water will travel over the backing and into the ditch as opposed to simply running off the edge and getting underneath the asphalt surface. Backing also creates a more stable shoulder that will have fewer tendencies to wash out in heavy rains and helps mitigate edge cracking.
- Maintain and clean existing ditches to control drainage. Ditches with slopes greater than 5% or 7% should be treated with rip-rap or pavement to minimize erosion. The balance of the ditches should be loamed and seeded.

6.2 Trees and Stone Walls

The character of Wolfeboro's rural and scenic roads is created by the close proximity of trees to the roadside and the presence of stone walls in areas. While this is aesthetically pleasing, it creates difficulty in maintaining a road and maintaining adequate sight distances around corners and intersections. Trees in close proximity to the road do not allow proper ditching and therefore much of the water runs against the pavement.

There is a balance to maintaining rural character and providing proper drainage control. It is important to understand that maintaining character creates more maintenance and more frequent road repairs. With scenic roads especially, the balance between safety/maintenance ability and retaining trees can be a fragile and difficult subject. *A Hard Road to Travel* states that trees and stonewalls can be removed along these designated roads with public approval by vote (pg 81). The section on scenic roads from *A Hard Road to Travel* can be found in Appendix I.



Certain compromises can be made to maintain that balance; therefore, consideration should be given to the following:

- Selectively remove trees to provide proper roadside drainage controls, particularly in areas where the moving water is causing significant erosion.
- Construct paved swales (or bituminous curbing) to control the water without the use of ditches. This will allow some of the trees to remain as well as reduce impacts to stone walls by not requiring the width of a proper ditch.
- Depending on the length of curbing or swales, closed drainage systems will be required to help convey gutter line runoff. This is an expensive option but can be installed in the street further reducing impacts or helping localize impacts to a single pipe outfall area.
- The town may elect to build (or restore existing) sections of stone walls where trees were thinned to help preserve the rural/historic feel. If constructed as part of the project, stone walls can be integrated into the design and placed where they are best meet the design intent

The canopy of trees, which can also add to the character of a road, can also impact the longevity of a road surface. Areas with thick tree canopies prevent the road surface from receiving any solar gain and drying out causing moisture to remain on the road surface. This can particularly be an issue in the winter time as moisture on the roadway can freeze and thaw and cause premature cracking and deterioration.

If trees remain as close to the road as they are in many areas, it should be recognized that maintenance will be more frequent.

7.0 Optimization of Road Repair Strategies

7.1 Strategy Optimization

UE worked with the Town to develop a list of repair strategies best suited for their road network. Each road section was reviewed individually and repair strategies with an assumed quantity were selected and optimized based on observations during the assessment process. By applying the unit price for each strategy an opinion of cost was calculated for each road segment (Appendix G).

The total amount for recommended work as identified in Appendix G is approximately \$20.4M. Since sufficient funds are unavailable to complete all recommended work at once for the entire road network, UE developed a recommended repair strategy and budget, providing a more feasible approach. Spreading this cost over the typical 20-year life span of a paved road the annual cost is approximately \$1.02M per year. This cost per year was used as a target budget to develop the prioritized schedule for the 10-year CIP.

A prioritized schedule of recommended repairs was developed by considering the PCI value of each road section. Roads with a lower overall PCI were given priority over roads with an overall higher PCI. In most instances, road surface conditions for each road varied



between each section for that given road. Priority was generally based on the section with the lowest ratings. However, the CIP schedule was developed so that the entire road length be improved at once with the recommended budget representing optimized repair strategies for each section. For example, the budget for a road like Beach Pond Road includes preventative maintenance overlays for the section recently reconstructed from Pine Hill Road (Rt 109A) to N. Line Road and reconstruction for the balance of the road length.

Table 7-1 below provides an abbreviated version of the recommended 10-year CIP found in Appendix H. This depicts the roads recommended for improvements and required budgets over the first 5 years of the CIP

Table 7-1: Abbreviated CIP Summary (5-Year)

	Surface	Length (Miles)	2020	2021	2022	2023	2024
Allen Rd	A	0.26			\$196,000		
Anagance Ln	A	0.22				\$181,000	
Bryant Rd	A	1.22		\$937,000			
Canopache Rd	A	0.20	\$119,000				
Cropley Hill Rd	A	0.05	\$8,000				
Dockside Rd	A	0.05			\$8,000		
Fairway Dr	A	0.23			\$28,000		
Goodrich Rd	A	0.14	\$19,000				
Haines Hill Rd	A	1.83					\$1,084,000
Hemlock Dr	A	0.46			\$60,000		
High St	A	0.06	\$62,000				
Jenness Farm Rd	A	0.35			\$39,000		
Martin Hill Rd	A	0.04	\$58,000				
Park Av	A	0.05	\$40,000				
Pleasant Valley Rd	A	3.41			\$824,000	\$1,053,000	
Sewall Rd	A	1.89	\$240,000				
Stoneham Rd	A	0.90	\$795,000	\$260,000			
Waumbeck Rd	A	1.26					\$225,000
	Overlays:		\$267,000	\$260,000	\$135,000	\$229,200	\$225,000
	Reconstruction:		\$1,074,000	\$937,000	\$1,020,000	\$1,005,000	\$1,084,000
	Total:	12.6	\$1,341,000	\$1,197,000	\$1,155,000	\$1,234,000	\$1,309,000

Overlays
Reconstruction

As depicted above, there are instances where longer roads or roads that involve a greater scope of work consume the majority of the allocated planned budget for a given year or even multiple years (i.e. Pleasant Valley Road). When this occurs, shorter less expensive



roads are used to help fill in the prioritized schedule so that the entire recommended yearly budget is filled in. These shorter roads are also selected by trying to prioritize around the lowest PCI value.

Roads identified in the 10-year prioritized CIP are depicted in Figures 3 and 3A. The proposed CIP schedule and corresponding yearly budget is provided as Appendix H.

The table below summarizes the recommended yearly budget for roadway maintenance and improvements for the next ten years.

Table 7-2: Annual CIP Budget (2019 \$)

Maintenance Category	<i>Asphalt</i>			<i>Gravel</i>		
	% (\$)	CIP Budget	Operating Budget	% (\$)	Capital	Maint.
Routine	5	-	\$ 75,000	-	-	\$ 0.00
Preventative	20		\$ 252,000	40	-	\$ 64,000
Reconstruction	75	\$ 1,030,000	-	60	\$ 100,000	-
Total Annual Costs:		\$ 1,030,000	\$ 327,000		\$ 100,000	\$ 64,000

Total Annual Capital = \$ **1,130,000**
 Total Annual Routine Maintenance = \$ **391,000**
Total Annual Capital and Maint. = \$ 1,521,000

Note: The summary above assumes that preventative maintenance (overlays) is not considered as capital improvements

As it is assumed that the current yearly capital budget is \$870,000, the recommended yearly budget shown above represents an increase of approximately \$260,000 per year for capital improvements.

7.2 Load Limits

UE recommends the use of load limit postings even if roads are rehabilitated or reconstructed. During the spring thaw, water can accumulate as ice melts getting trapped between the frozen base layers and asphalt layers. This trapped moisture saturate base materials as they thaw causing them to weaken and be susceptible to movement under heavy loads. Trapped water allows the pavement surface on a paved road to also become saturated, losing much of its strength. This loss of strength in combination with a decrease in base material's strength will cause structural failure of the roadway and movement of the road surface when heavy loads are applied. Typical load limits posted by the state limit loads to 30,000 pounds.

When determining where seasonal load limits should be enacted, there are some basic criteria to follow (UNH T² – Guidelines for Road Restrictions):

- Usually placed on roads carrying less than 5,000 vehicles per day.
- Should be strongly considered where paved surface thickness is two inches or less.



- A paved or unpaved road with a fine-grained sub-grade (Silts and clays).
- Using local knowledge of the road system.
- Unpaved roads, with poor sub-grades in particular, are in the most danger to heavy loads.
- Poor drainage allowing pooling contributing to surface saturation.

UE does note that it may not be appropriate to post all roads in Town. Posting of all roads may create undue hardships for truck traffic to efficiently get from one side of Town to another. The Town should consider a road posting program that may permit truck traffic on select roads during the spring thaw months. These roads could be reconstructed to a slightly higher standard to be able to withstand heavy loads in the spring time. Permitting trucking on select roads would limit the risk of spring time load impacts to select roads therefore limiting premature deterioration on the remainder of the Town's road network. We also note that Wolfeboro is fortunate in that it has state roads that do cross the Town in both the north/south and east/west directions permitting the ability for cross town traffic in all directions

When developing the repair recommendations, certain roads were budgeted to have 4" a total nominal pavement thickness of 4" and/or additional gravel base thickness (10" crushed gravel) to provide additional strength heavier traffic volumes or trucking. These roads include:

- Beach Pond Road
- College Road
- Estabrook Road
- Filterbed Road
- Green Street
- North Wolfeboro Road
- Trotting Track Road
- Valley Lane
- Wickers Drive

A Hard Road to Travel states RSA 231:190 and 231:191 authorize the council or board of selectman to enact maximum load weight limits on class IV, V, and VI highways. In order for municipalities to have enforceable road weight limits the following should be completed:

- Minutes should memorialize testimony
- Limits must be posted
- Identify officials with authority to grant exemptions
- Grant exemption if limitation imposes significant interference

*For more information on load limits, refer to University of New Hampshire Technology Transfer Center - Guidelines for Spring Road Use Restrictions, provided NHDOT maintenance guidance, and excerpt from *A Hard Road to Travel* (Appendix I).



8.0 Conclusions and Recommendations

8.1 Capital Improvements Plans and Budget

Though the Town currently carries a sizable yearly budget for capital roadway improvements of around \$870,000, additional budget is recommended so that the amount of yearly road work can increase and the Town can continue to aggressively complete roadway improvements. This may permit future long-term capital budgets to be reduced, though likely resulting in an increase in routine maintenance and overlay budgets so the Town can then maximize the life of its newly reconstructed roads.

UE recommends that the improvements identified in Appendix G and prioritized in Appendix H be completed over the next 10 years. To manage this work, it is recommended that Wolfeboro maintain the following minimum annual budgets (adjusted for inflation):

Table 8-1: Recommended Yearly Budget with Inflation

	2020	2021	2022
Recommended Capital	\$1,130,000	\$1,164,000	\$1,200,000
Recommended O&M Budget	\$391,000	\$403,000	\$415,000
Total Budget	\$1,521,000	\$1,567,000	\$1,615,000

- 1) "O&M" Budget represents paving overlays and routine maintenance.
- 2) These costs should be adjusted as necessary to match the identified work.

The C.I.P. should be updated and monitored internally on a yearly basis to track progress. On the fourth year, it is recommended that another evaluation be complete. This allows for a review of progress and reassessment of the CIP half way through the 10-year duration. Doing this may help the Town to stay ahead of its repair schedule or adjust priorities and budgets as needs and costs change. Completing the new evaluation on the fourth year also allows work to continue through that year and not have repairs on hold, increasing the ability to stay on course.

It should be noted even though a road does not have any recommended maintenance or work in within this 10-year time period, routine maintenance (ditching, crack sealing, and pot hole filling) should still be carried out to prolong surface life. Routine maintenance should also be performed on gravel roads so they are kept in good shape and their maintenance does not fall behind.

8.2 General Road Repair Approach

All reconstruction/rehabilitation projects should include additional evaluation (design phase engineering) prior to implementing to consider the following:

- Soils investigations
- Survey



- Drainage evaluation
- Design plans

8.2 Drainage

Good roadside drainage can be tough to achieve when trying to keep a rural character. However, it is apparent that Wolfeboro is actively incorporating drainage improvement in the road reconstruction programs and have used designs to help maintain that character. Many of the newly reconstructed roads had good drainage measures in place. The Town should continue this practice as it moves forward with the recommended CIP. Ongoing drainage considerations include:

- Adequate ditching or means of directing runoff away from the roadway to the greatest extent practical
- Installation of paved swales and closed drainage systems on steep grades
- Installation of underdrains in wet areas and cut areas
- Installation of curbing and closed drainage systems.
- Culvert replacements if not recently replaced with modern materials
- Use of infiltration practices and BMPS on gravel roads

Drainage is a large factor for many of the roads being in poor condition. It was apparent throughout the course of the evaluation that the Town completes routine maintenance on a regular basis including drainage and ditch work. It is recommended that the town keep up these efforts as much as possible to keep new roads looking and riding like new and helping old roads gain extended service life. Some recommendations in improving ditches and drainage are:

- Improved ditching
 - Increase depth
 - Develop / improve shape
 - Remove or mow excess vegetation and keep clean
- Improved shoulders
- Gravel backing (to pavement edges)

It is also important that the town include maintenance of ditches and drainage systems on roads recently reconstructed. Many of the recently reconstructed roads appeared to have good drainage systems in place however most of them looked to need some maintenance (particularly cleaning catch basin inlet areas in ditches. It is important to keep up with the newer systems so that the Town can protect their investments.

All repairs (routine maintenance and capital improvements) should include ditching and drainage improvements. Costs for this work is included in the recommended budgets provided in this report (Section 7).

8.3 Pavement

All roadway reconstruction work should include a minimum 3” thickness for structure. As recommended in the repair strategies list, select heavier traveled roads should receive 4” of pavement. These roads include but may not be limited to:

- Beach Pond Road



- Christian Ridge Road (Secondary Hospital Access and Church Access)
- College Road
- Estabrook Road (Brewster Academy Maintenance Access)
- Trotting Track Road

8.4 Soils Investigations

UE recommends that subsurface investigations be completed on all roads during the design phase so that insitu base and sub-base materials can be evaluated for their supportive strength and drainage characteristics.

- Existing bed materials directly below the pavement may not allow for a desirable reclaim asphalt product (RAP) and additional materials (i.e. stone) may be required to supplement the RAP
- Soft unsupportive soils may require additional excavation or fabric
- Poor draining soils may require underdrains to help lower groundwater elevations beneath the roadway

8.5 Base Materials

In addition to drainage control discussed above, having a poor gravel material is a leading cause of road failures. Acceptable base materials can include crushed gravel (NHDOT 304.3), processed crushed stone products (NHDOT 304.4), or reclaimed stabilized base. Reclaimed stabilized is typically the most cost-effective solution to improving base materials (particularly when supplemented with a crushed stone aggregate) in rural areas.

Due to the nature of existing pavements and typical base materials, reclaimed asphalt product produced during a reclamation operation can consist of heavy percentage of fine material with minimal large stone or coarse aggregate. Using a well graded coarse stone aggregate with minimal fines (NHDOT 703.357) is a cost-effective method to add strength and supplement reclaimed asphalt product with larger processed aggregate typically found in crushed gravel. The stone can be spread onto a paved surface in a layer two or three inches thick prior to the reclamation of a road and blended as one single operation. This method can help ensure a better blending as it is being blended during the initial pulverization. However, the force of the pavement being pulverized can also cause some break-up of the supplemental aggregate. Supplemental stone can also be added after initial pulverization and blended with a second pass of the reclamation equipment. This method can reduce aggregate break-up however the operation will have a tendency to move at a faster speed if not properly monitored, potentially resulting in a less consistent product blend.

Additionally, UE is currently working on updating the Town's Roadway Construction Standards which will provide recommended cross-sections for new roadways.

8.6 On Going Maintenance

The following maintenance regime is recommended:

- Crack sealing and patching every 2 years
- Overlays every 5-10 years
- Ongoing gravel backing



- Ongoing ditch maintenance

It is recommended that routine inspection and maintenance is performed every year on all roads to help prolong the life and integrity. Failure in performing routine maintenance will result in larger repair costs in the future.

It is also recommended that the Town physically mark all culvert locations on the road surface. Locating culverts during the evaluation was often difficult due to shoulder over growth or complete burial. This could be done by installing timber posts or painting a small arrow on the side of the road where a culvert is located. We note that the Town appears to mark the culvert every year prior to winter as temporary marker made from branches and flagging were observed during the assessment at culvert locations. Implementing a permanent marking program would eliminate the need of marking out each structure in every fall prior to the winter months.

8.8 Construction Standards

Wolfeboro should work to maintain the following standards as road improvements are completed:

- Ditch maintenance – This includes reconstruction/reshaping the ditches such that they are at least 12” deep, preferably 24” (or as required so that bottom of ditch is 6” below gravel grades.
- Install at least 12” of gravel backing to protect the edge of pavement.
- Complete spot repairs where significant cracking, rutting or any other disfiguration is visible or where the pavement is soft using the following guidelines.
 - Use construction fabrics in areas where sub-soils are known to be unsuitable, such as mud or marsh to stabilize rutting.
 - Use underdrains where the water table is known to be high or in large cut sections and there is a suitable outlet.
- Reconstruction and rehabilitation
 - When reclaiming, sample reclaimed asphalt product (RAP) and determine if additional aggregate and asphalt cement is needed in to meet NHDOT Section 401.2.10 (Appendix I).
 - When reconstructing, implement a quality control program to ensure that work completed meets town standards.

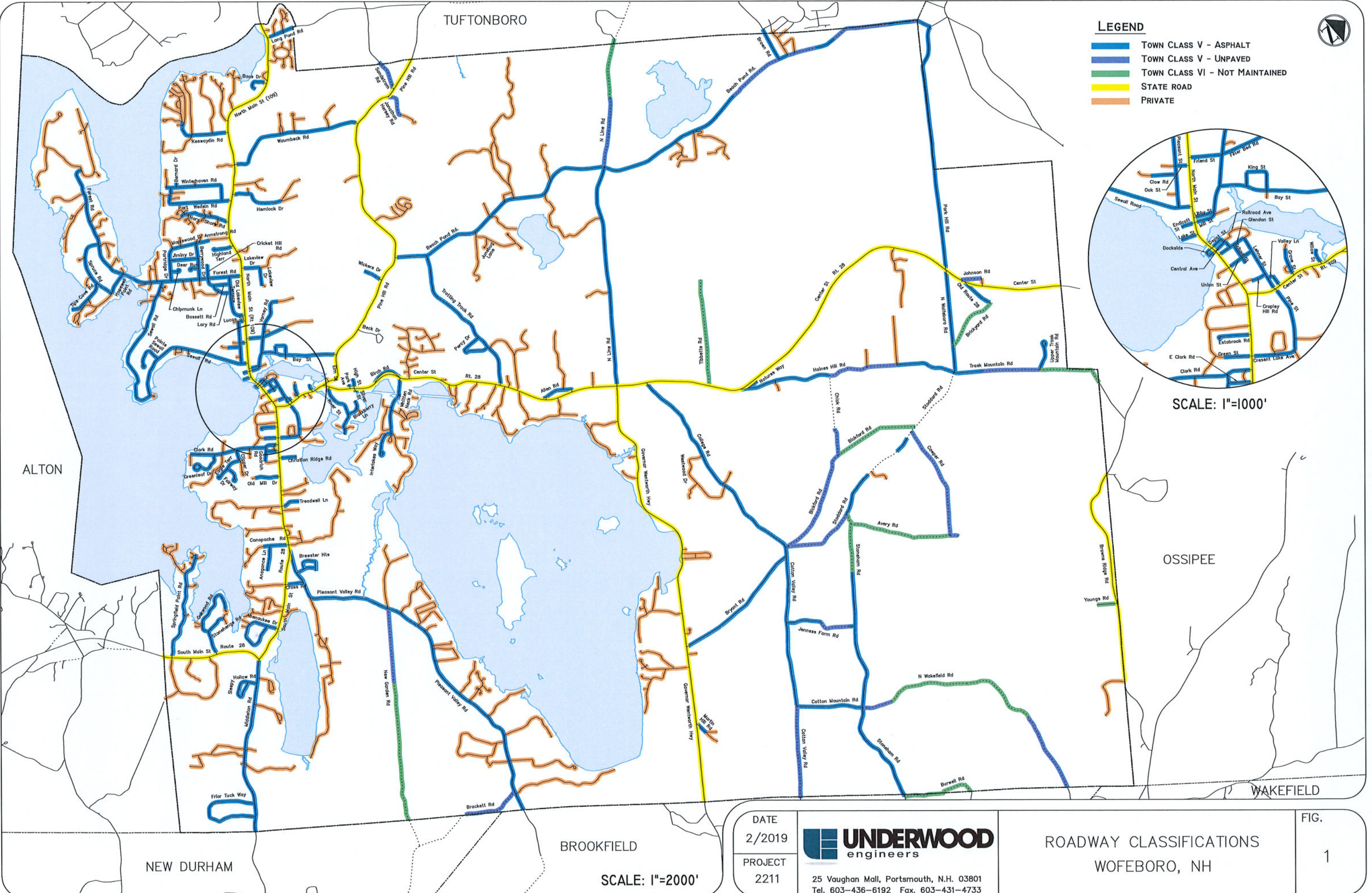
Additional construction standards can be found in the Town’s Road Regulations which are currently being updated.



LIST OF FIGURES

- Figure 1 – Roadway Classifications
- Figure 2/2A – Roadway Section Delineations
- Figure 3 – 10-Year CIP Targeted Roads

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LEGEND

- █ TOWN CLASS V - ASPHALT
- █ TOWN CLASS V - UNPAVED
- █ TOWN CLASS VI - NOT MAINTAINED
- █ STATE ROAD
- █ PRIVATE



SCALE: 1"=1000'

BROOKFIELD
SCALE: 1"=2000'

DATE
2/2019
PROJECT
2211

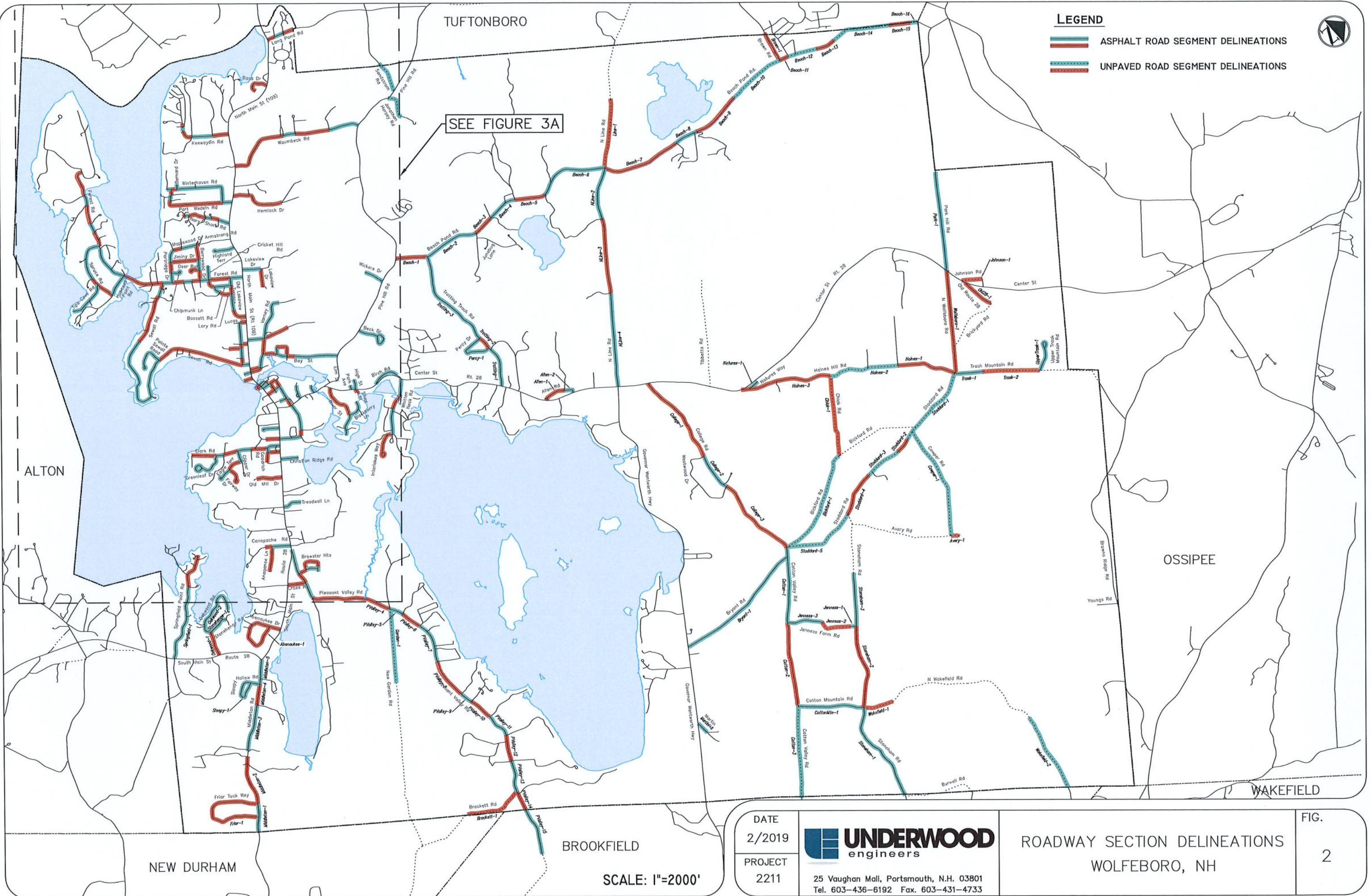
UNDERWOOD
engineers

25 Vaughan Mall, Portsmouth, N.H. 03801
Tel. 603-436-6192 Fax. 603-431-4733

ROADWAY CLASSIFICATIONS
WOFEBORO, NH

FIG.
1

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LEGEND

- ASPHALT ROAD SEGMENT DELINEATIONS
- UNPAVED ROAD SEGMENT DELINEATIONS



SEE FIGURE 3A

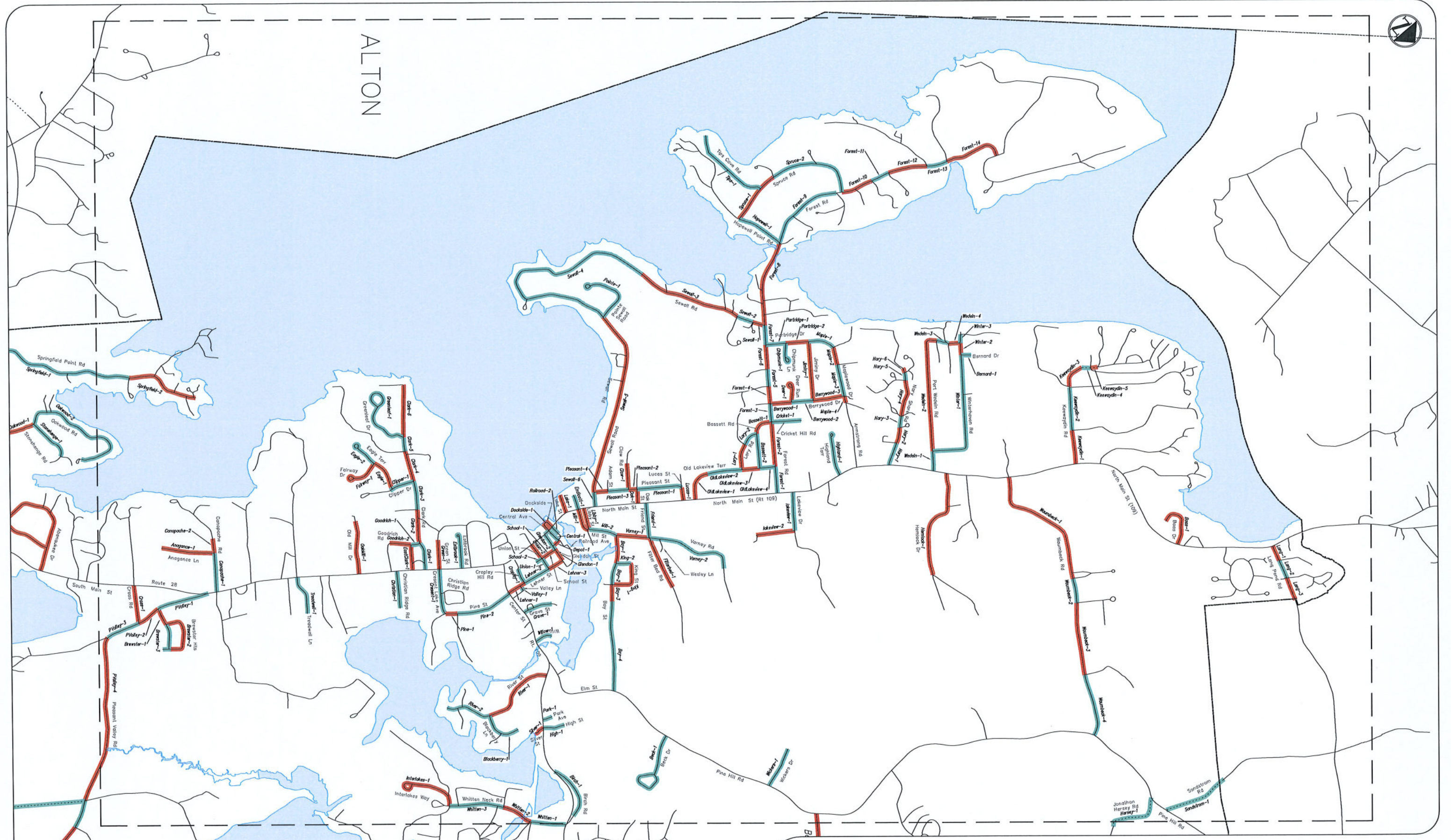
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PROJECT
2211

UNDERWOOD
engineers
25 Vaughan Mall, Portsmouth, N.H. 03801
Tel. 603-436-6192 Fax. 603-431-4733

ROADWAY SECTION DELINEATIONS
WOLFEBORO, NH

FIG.
2

BROOKFIELD
SCALE: 1"=2000'



LEGEND

- ASPHALT SEGMENT ROAD DELINEATIONS
- UNPAVED SEGMENT ROAD DELINEATIONS

NOTE: SEE FIGURE 3 FOR ENTIRE TOWN WIDE MAP

SCALE: 1"=1000'

DATE

2/2019

PROJECT

2211



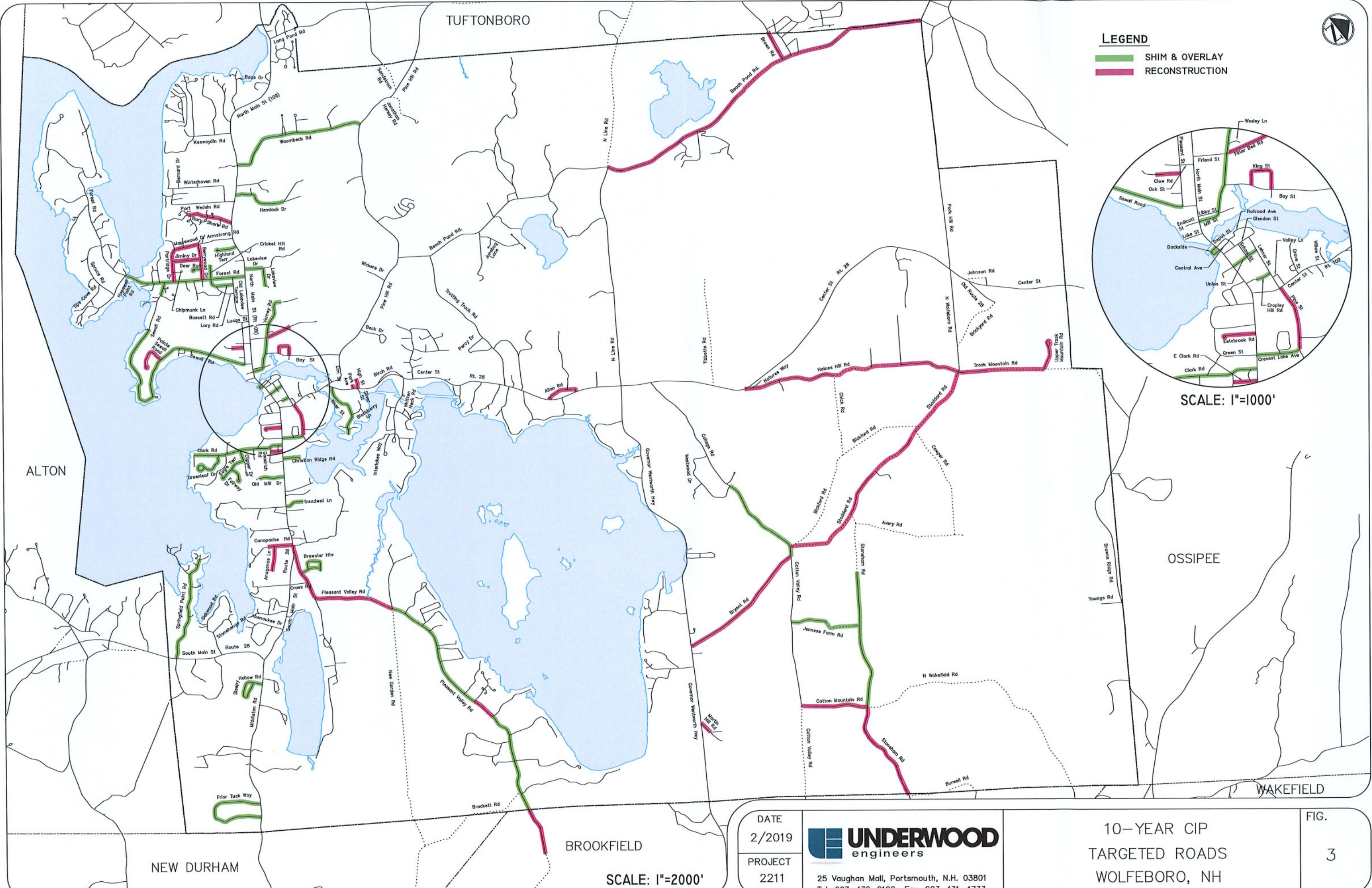
25 Vaughan Mall, Portsmouth, N.H. 03801
Tel. 603-436-6192 Fax. 603-431-4733

ROADWAY SECTION DELINEATIONS
WOLFEBORO, NH

FIG.

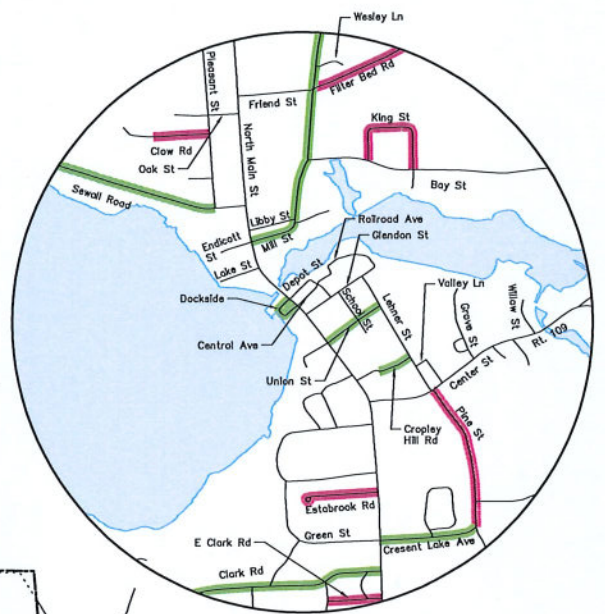
2A

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LEGEND

- SHIM & OVERLAY
- RECONSTRUCTION



BROOKFIELD
SCALE: 1"=2000'

DATE
2/2019
PROJECT
2211



25 Vaughan Mall, Portsmouth, N.H. 03801
Tel. 603-436-6192 Fax. 603-431-4733

10-YEAR CIP
TARGETED ROADS
WOLFEBORO, NH

FIG.
3

APPENDIX B

- Repair Alternatives
- Definition of Terms

Repair Summary of Work

The following repair alternatives were chosen by Underwood Engineers that best fit the repair needs of the town.

Note:

- 1) Costs shown represent 2018 dollars
- 2) Units represent entire road surface. For example, to estimate for crack sealing:
Road Section Length = 1,000'
Road Section Width = 22'
Road Section Area = 22,000 SF
Crack Sealing Unit Price = \$0.11/SF.
Total cost for crack sealing = \$2,420

ASPHALT

PATCHING

- ◆ Furnish and install asphalt to fill in potholes in road surface

CRACK SEAL

- ◆ Fill in surface cracks with sealing material
- ◆ Cost = \$0.11/SF of total road surface (road length X road width)

1 ½" OVERLAY

- ◆ Apply a 1 ½" thick layer of asphalt to the existing surface without the need to work the existing surface.
- ◆ Cost = \$0.56/SF

3" OVERLAY

- ◆ Apply a 3" thick layer of asphalt to the existing surface without the need to work the existing surface.
- ◆ Cost = \$1.14/SF

SHIMMING

- ◆ Asphalt applied where depressions, rutting, or any kind of un-level area exists in the surface of the road. Used to essentially to level off the road surface.

SHIMMING AND 1 ½” OVERLAY

- ◆ Surface is shimmed where needed
- ◆ Apply 1 ½” overlay to the entire length of section
- ◆ Cost = \$0.72/SF

RECLAIM (8” DEPTH)

- ◆ Grind and recycle the existing road surface and base materials to a depth of 8”
- ◆ Can be reused as base material as an alternative for road reconstruction or to convert a paved road to a gravel road

RECLAIM WITH 3” OR 4” OVERLAY

- ◆ Grind and recycle existing asphalt and surface materials to a depth of 8”
- ◆ Reuse recycled material for the new base materials for the road
- ◆ Grade and compact new material
- ◆ Repave with 3 or 4 inches of pavement either 2-inch base or 1 inch wearing or 3-inch base with 1 inch wearing. Thickness should depend on volume and type of traffic on the road (see recommended repair strategies – Appendix G).
- ◆ Cost with 3” Overlay = \$1.65/SF
- ◆ Cost with 4” Overlay = \$2.01/SF

ROAD RECONSTRUCTION

- ◆ Remove pavement
- ◆ Remove 12” of base material and haul away
- ◆ Furnish and install under drains where needed
- ◆ Furnish and install 6” of gravel base material and compact
- ◆ Furnish and install 6” of crushed gravel material and compact
- ◆ Repave with 3 or 4 inches of pavement either 2-inch base or 1 inch wearing or 3-inch base with 1 inch wearing. Thickness should depend on volume and type of traffic on the road (see recommended repair strategies – Appendix G).
- ◆ Cost includes a 15% contingency for engineering services.
- ◆ Cost with 3” overlay = \$4.62/SF
- ◆ Cost with 4” overlay = \$5.04/SF

REINFORCING FABRIC

- ◆ Furnish and install reinforcing fabric before paving
- ◆ Cost = \$2.48/SF

UNDERDRAIN

- ◆ Furnish and install 6" under drain
- ◆ Cost = \$21.36/LF of pipe installed

SPOT REPAIR

- ◆ Assumed 50 linear feet of road 20 feet wide
- ◆ Remove poor base material as needed (minimum of 12")
- ◆ Furnish and install under drains as needed
- ◆ Furnish and install 6" (minimum) of gravel base material and compact
- ◆ Furnish and install 6" (minimum) of crushed gravel material and compact
- ◆ Install a minimum 3" thickness of asphalt overlay
- ◆ Work ditches where needed to maintain proper drainage
- ◆ Cost = \$4,000.00 Each

SIDEWALKS

- ◆ Furnish and install 4" concrete sidewalk (includes all excavation and formwork necessary to complete the work).
- ◆ Furnish and install 6" reveal granite curbing.
- ◆ Cost = \$50.00/LF

CLOSED DRAIN SYSTEM

- ◆ Complete all earthwork necessary for installation
- ◆ Furnish and install CPE drainpipe. (Cost estimates based on 15" pipe)(Cost estimated by assuming 70% of total pipe installed to be plastic)
- ◆ Furnish and install RCP drainpipe. (Cost estimates based on 15" pipe)(Cost estimated by assuming 30% of total pipe installed to be reinforced concrete)
- ◆ Furnish and install catch basins, grates, and frames.
- ◆ Furnish and install drain manholes, covers, and frames.
- ◆ Furnish and install 6" reveal curbing as needed
- ◆ Cost includes a 15% contingency for engineering services.
- ◆ Cost = \$100.72/LF of pipe installed

GRAVEL BACKING

- ◆ Furnish and install gravels along edge of road to protect pavement edge
- ◆ Gravels extend approx. 12" from edge of pavement into the shoulder
- ◆ Top grade of gravel matches existing surface grade of asphalt
- ◆ Cost = \$0.50/LF

DITCHING

- ◆ Clean ditches along edge of roadway by removing and debris, soil deposits, or shrubbery

- ◆ Recommended depth for ditches is 24"
- ◆ Allow room for gravel backing on shoulder
- ◆ Cost = \$2.00/LF of road (work completed on both sides)

GRAVEL

SPOT REGRAVEL

- ◆ Add new crushed gravel in areas where potholes exist in the road surface
- ◆ Grade
- ◆ Cost = \$0.08/SF of total road surface

RESHAPE – ADD MINOR GRAVEL

- ◆ Reshape road to have proper crown
- ◆ Furnish and install minor amounts of crushed gravel where needed
- ◆ Grade
- ◆ Cost = \$0.25/SF of total road surface

ADD MAJOR GRAVEL – REGRADE AND COMPACT

- ◆ Reshape road to regain proper crown
- ◆ Furnish and install major amounts of crushed gravel in road
- ◆ Compact new material
- ◆ Grade
- ◆ Cost = \$0.64/sf of total road surface

RECONSTRUCT ROAD

- ◆ Remove a 12" depth of existing material
- ◆ Furnish and install under drain where needed
- ◆ Furnish and install 12" of new crushed gravel
- ◆ Compact in 6" lifts
- ◆ Grade and shape new material
- ◆ Complete any ditch work needed to maintain proper drainage
- ◆ Cost = \$2.13/SF

DEFINITION OF TERMS

ROAD CATEGORIES

Class-V Road:	A road, asphalt or gravel, owned and maintained by the Town.
Class-VI Road:	A road owned but no longer maintained by the Town.
State Road:	A road owned and maintained by the State Department of Transportation.
Private Road:	A road owned and maintained by a private individual or association.
Deferred Maintenance:	When a road does not need any immediate maintenance because it is a new road, in very good condition or an older road in poor condition and is a low priority.
Routine Maintenance:	When a road is only in need of minor maintenance such as crack sealing, ditching, and gravel backing. This can also be a newer road in good condition or a road in poor condition awaiting reconstruction.
Preventative Maintenance:	When a road is beginning to show signs of stress. Usually consisting of overlays, it extends the life of the road further. For the Town of Belmont, overlays were considered for roads where future rehabilitation was proposed, but avoided where reconstruction was proposed.
Rehabilitation:	When a road has a failing surface (pavement) but is still holding the proper cross section suggesting good gravels. Sub-base materials are largely adequate gravels and no new materials are needed. Rehabilitation consists primarily of reclamation (i.e. grinding) with new pavement. Work also may include spot repairs (reconstructing a short section) and improving drainage conditions.
Reconstruction:	Roads in this category have been noted to have poor structural integrity of the surface and sub base has diminished creating ruts, potholes, and extensive cracking. Poor subsurface drainage has been identified. Work includes removal of surface and underlying soils and replacing with new gravels and pavement. This can also include extensive drainage work.

REPAIRS

- Crack Sealing:** The application of a rubberized asphalt material into cracks in the paved surface. This helps prevent water from seeping below the surface.
- Gravel Backing:** Gravel installed up against the edge of the pavement and extends 1-2' into the shoulder. Carries water from the road surface into the ditch and reduces edge cracking.
- Ditching:** Ditches give water running on the surface of the road a place to go where it cannot get below the surface. Ditches also encourage the drainage of water out of the gravels.
- Preventative Overlay:** Overlays extend the service life of the pavement a few more years but are not always a permanent fix. This is also done where future rehabilitation will be completed including reclamation. The additional thickness of asphalt will give a better Reclaim Asphalt Product (R.A.P.) when the road is ground.
- Reclamation:** The process of grinding and mixing (like tilling a garden) the asphalt surface and the soils beneath to create one product, Reclaim Asphalt Product (R.A.P.). The R.A.P. is then compacted and shaped as the new road base. Asphalt is then paved over the new base to a total thickness of 3 or 4.”
- Reinforcing Fabric:** Usually applied in low, swampy areas, or where soils are fine or silty. This acts as a barrier keeping the fine soils from migrating up into the base as water percolates in and out of the base soils. Silts and fines have the ability to retain water causing frost heaves and other surface problems.
- Enclosed Drain:** Enclosed drainage can be installed to re-route the surface water into sub-surface piping through the use of catch basins and discharging the runoff down stream. Often needed where ditches cannot be installed or maintained.
- Underdrain:** Usually installed in areas where a road has been cut into the side of or through a hill and/or where the water tables is expected to be high. It helps keep the sub-base dry in wet conditions. Perforated pipe is installed just below the gravels and ground water will drain into these pipes and flow to a pre-determined discharge point.

Shimming:

Shimming can be a stand-alone fix but more commonly is used in conjunction with an overlay to help improve the road surface. Shimming involves applying thin layers of asphalts in rutted areas or very rough spots to aid in correcting the cross-section before paving.

Spot Repair:

Some roads are in good shape overall but have a few areas that are in poor condition. Instead of reconstructing the entire length of the road, a spot repair rebuilds only the short section of road in need. The remainder of the road may be left alone, overlaid, or rehabilitated.

APPENDIX E

- Roadway Condition Summary

Asphalt Roads Condition Summary
Roadway Evaluation
Wolfeboro, New Hampshire

Field Inspections and Assessments Completed November/December 2017

Road Name	No Outlet	Section Name	GIS ID (R###)	Section		NHDOT NODES	Lanes	Road Width (ft)	Shoulder Width (ft)	Shoulder Type		Pavement Backing	Shoulder Description	Section Length (mi) GPS	Traffic	Importance
				Beginning	End					Gravel	Natural					
Abanaukee Drive		Abanaukee-1	241, 693	Rt 28	thru loop	3 to 8	2	22	1	x	x	no	low in areas with some erosion	0.78	1	1
Allen Road		Allen-1	289	Rt 28	Square Hill	1421 to 1536	2	22	2		x	no		0.18	1	1
Allen Road		Allen-2	694	Square Hill	Rt 28	1536 to 159	2	22	2		x	no		0.08	1	1
Anagance Lane	x	Anagance-1	245	Canopache	End	14 to 11	2	22	1		x	no	lawns	0.22	1	1
Bass Drive	x	Bass-1	172	Rt 109	End	142 to 141	2	22	2		x	no	low in mailbox areas	0.19	1	1
Bassett Road		Bassett-1	472	Forest	Lary	108 to 107	2	21	1	x		no	low in areas	0.08	1	1
Bassett Road		Bassett-2	126	Lary	Old Lakeview	107 to 104	2	21	2		x	no	generally low	0.15	1	1
Bay Street		Bay-3	564	King	Taylor	97 to	2	22	2	x		no	low in areas	0.07	3	2
Bay Street		Bay-1	563	Mill	King	92 to 96	2	33	2		x	no	partially curbed	0.12	3	2
Bay Street		Bay-2	562	King	King	96 to 97	2	22	2	x		no	low in areas	0.11	3	2
Bay Street		Bay-4	145	Taylor	Rt 109A	to 97	2	22	2	x		no	low in areas	0.38	3	2
Beach Pond Road		Beach-3	619	Furber	Bennett	1063 to 1071	2	23	2	x		yes		0.18	3	3
Beach Pond Road		Beach-4	621	Bennett	York	1071 to 1094	2	23	2	x		yes		0.25	3	3
Beach Pond Road		Beach-5	692	York	Sargents	1094 to 1093	2	23	2	x		yes		0.28	3	3
Beach Pond Road		Beach-1	614	Rt109A	Trotting	146 to 151	2	23	2	x		yes		0.27	3	3
Beach Pond Road		Beach-2	615	Trotting	Furber	151 to 1063	2	23	2	x		yes		0.50	3	3
Beach Pond Road		Beach-6	622, 744	Sargents	N. Line	1093 to 208	2	23	2	x		yes		0.65	3	3
Beach Pond Road		Beach-11	629, 695	Brown +/-	Herritage	to	2	21	1	x		yes	low in areas	0.10	1	1
Beach Pond Road		Beach-15	13			to	2	20	1	x		yes	low on upgradient side	0.19	1	1
Beach Pond Road		Beach-8	626	Blueberry	Suncrest	1096 to 128	2	20	2	x		no	low in areas	0.20	1	1
Beach Pond Road		Beach-9	718	Suncrest	Pt 318	128 to	2	20	2	x		no	low in areas	0.45	1	1
Beach Pond Road		Beach-13	720			to	2	20	1	x		yes		0.18	1	1
Beach Pond Road		Beach-7	625	N. Line	Blueberry	208 to 1096	2	20	2	x		yes		0.67	1	1
Beck Drive		Beck-1	N/A	Rt 109A	Clement	to	2	27	2	x		no	shoulders low	0.22	1	1
Bernard Road	x	Bernard-1	65	Winterhaven	End	133 to 132	2	21	2	x		yes	gravel backing low at intersection	0.05	1	1
Berrywood Drive		Berrywood-1	474	Forest	Deer	114 to 110	2	21	1		x		shoulder covered by leaf litter, difficult to observe	0.06	1	1
Berrywood Drive		Berrywood-2	475	Deer	Jiminy	110 to 112	2	21	1		x		shoulder covered by leaf litter, difficult to observe	0.09	1	1
Berrywood Drive		Berrywood-3	39	Jiminy	Maplewood	112 to 892	2	21	1		x	no		0.13	1	1
Birch Road	x	Birch-1	97	Rt 109	End	28 to 27	2	18	2	x	x	no	shoulder grading satisfactory	0.15	1	1
Blackberry Lane	x	Blackberry-1	88	River	End	44 to 33	2	22	3	x		no	low in areas	0.17	1	1
Brewster Heights		Brewster-2	251	Loop Connect	Top of hill	215 to 213	2	22	2			no	combo of paved swale, lawns, & gravel	0.10	1	1
Brewster Heights		Brewster-1	696	Pleasant Valley	Loop connect	182 to 215	2	22	2	x		no	low in areas	0.07	1	1
Brewster Heights		Brewster-3	250, 379	Top of Hill	Loop connect	1446 to 215	2	22	2		x	no	some lawns	0.25	1	1
Brown Road		Brown-1	211	Beach	Town line	210 to 6137	2	21	2	x		no		0.30	1	1
Bryant Road		Bryant-1	309	Rt 109	College	177 to 171	2	21	2		x	no		1.22	1	1
Canopache Road		Canopache-1	374	Rt 28	Anagance	16 to 14	2	21	1		x	no		0.15	1	1
Canopache Road	x	Canopache-2	697	Anagance	End	14 to 17	2	21	1		x	no	significant shoulder erosion	0.05	1	1
Central Avenue		Central-1	134	Rt 109	Depot	74 to	1	38	N/A				curbed	0.05	2	3
Chipmunk Lane	x	Chipmunk-1	62	Partridge	End	116 to 117	2	22	2		x	no	shoulders low	0.10	1	1
Christian Ridge Road	x	Christian-1	99	Rt 28	End	918 to 919	2	22	1				some landscaped areas	0.20	2	3
Clark Road		Clark-5	412	Clafin	Greenleaf	1399 to 202	2	20	2	x		no		0.06	1	1
Clark Road		Clark-4	411	Clafin	Clipper	43 to 1399	2	20	2	x		no		0.13	1	1
Clark Road		Clark-1	408	Rt 28	Goodrich	56 to 54	2	22	2	x		no	low in areas	0.11	2	2

Road Name	No Outlet	Section Name	GIS ID (R###)	Section		NHDOT NODES	Lanes	Road Width (ft)	Shoulder Width (ft)	Shoulder Type		Pavement Backing	Shoulder Description	Section Length (mi) GPS	Traffic	Importance
				Beginning	End					Gravel	Natural					
Clark Road		Clark-3	410	Fawn	Clipper	163 to 43	2	20	2	x		no	low in areas	0.12	2	2
Clark Road		Clark-6	413	Greenleaf	Lewando	202 to 52	2	20	3	x		no		0.22	1	1
Clark Road		Clark-2	409	Goodrich	Fawn	54 to 163	2	20	2	x		no	low in areas	0.14	2	2
Clipper Drive		Clipper-1	108	Clark	Eagle	43 to 144	2	21	2	x	x	no		0.10	2	2
Clow Street	x	Clow-1	143	Pleasant	End/Private	91 to 225	2	17	1		x	no		0.11	2	1
College Road		College-3	652,654	Westwood (e)	Bryant	1085 to 171	2	21	3	x		yes		0.84	2	1
College Road		College-2	650,651	Westwood (w)	Westwood (e)	1084 to 1085	2	21	3	x		yes		0.33	2	1
College Road		College-1	283	Rt 28	Westwood	164 to 1084	2	21	3	x		no	low in areas	0.84	2	1
Cotton Mountain Road		Cotton Mtn-1	657	Cotton Valley	Stoneham	187 to 189	2	22	2	x		no		0.52	1	1
Cotton Valley Road		Cotton-2	656	Jenness	Cotton Mtn	183 to 187	2	22	2	x		yes		0.77	2	1
Cotton Valley Road		Cotton-1	655	Bryant	Jenness	171 to 183	2	22	2	x		yes	low in areas	0.58	2	1
Crescent Lake Avenue		Crescent-1	423	Rt 28	Pine	58 to 61	2	22	2	x		no	low in areas	0.13	2	1
Cricket Hill Road	x	Cricket-1	129	Forest	End	108 to 109	2	22	2		x	no	lawns, low in areas	0.11	1	1
Cropley Hill	x	Cropley	113	Lehner	End/Private	67 to 66	2	20		x		no		0.05	1	1
Cross Road		Cross-1	240	Rt 28	Pleasant Valley	12 to 13	2	20	1	x		yes	low in areas	0.14	2	1
Deer Run		Deer-1	172	Berrywood	Cul-de-sac	110 to 111	2	21	1				covered in heavy leaf litter	0.09	1	1
Depot Street		Depot-1	438	Glendon	Railroad	76 to 75	2		N/A				curbed	0.05	2	3
Dockside Road		Dockside-1	135, 440	Rt 109	Rt 109	78 to 76	1	24	N/A				curb, buildings, & parking lot	0.05	2	3
Eagle Trace		Eagle-1	27	Clipper	Fairway	144 to 30	2	21	3	x	x	no	low in areas, particularly near pump station	0.13	1	1
Eagle Trace		Eagle-2	143	Fairway	Cul-de-sac	30 to 31	2	21	3	x	x	no		0.14	1	1
East Clark Road		Eask Clark-1	109	Goodrich	Rt 28	53 to 55	2	24	1	x		no		0.10	1	1
Endicott Street	x	Endicott-1	137	Rt 109	End/Private	to	2	20	1		x	no	combination of natural and curb	0.08	2	2
Estabrook Road	x	Estabrook-1	105	Rt 28	Cul-de-sac	59 to 1291	2	22	1	x		no		0.15	2	2
Fairway Drive		Fairway-1	33	Eagle	Cul-de-sac	30 to 20	2	21	3	x	x	no	some landscaped areas, low in areas	0.23	1	1
Filterbed Road		Filterbed-1	558	Varney	WWTF	94 to 123	2	21	2	x		no		0.21	1	3
Forest Road		Forest-10	492	Spruce	Campfire	884 to 882	2	21	1	x		yes	low in areas	0.14	1	1
Forest Road		Forest-12	41	Storytelling	Rocky Shore	869 to 870	2	21	1	x		yes	low in areas	0.18	1	1
Forest Road		Forest-11	493	Campfire	Storytelling	882 to 869	2	21	1	x		yes	generally low	0.08	1	1
Forest Road		Forest-13	494	Rocky Shore	Parker Island	87 to 1554	2	21	1	x		yes	low in areas	0.06	1	1
Forest Road		Forest-14	78	Parker Island	End/Private	1554 to 871	2	21	1	x		yes	low in areas	0.28	1	1
Forest Road		Forest-9	490, 491	Hopewell	Spruce	886 to 883	2	21	1	x		yes	low in areas	0.36	1	1
Forest Road		Forest-8	484,485	Sewall	Hopewell	118 to 886	2	22	3		x	no	low in areas	0.40	2	2
Forest Road		Forest-7	453	Partridge	Sewall	115 to 118	2	22	3		x	no	generally low	0.07	2	2
Forest Road		Forest-6	454	Standard	Partridge	897 to 115	2	22	3	x		no	generally low	0.10	2	2
Forest Road		Forest-2	452	Lakeview	Bassett	106 to 108	2	22	3	x		no	low in areas	0.21	2	2
Forest Road		Forest-5	455	Dudly	Standard	899 to 897	2	22	3	x		no	generally low	0.07	2	2
Forest Road		Forest-1	458	Rt 109	Lakeview	105 to 106	2	22	2		x	no	low in areas	0.10	2	2
Forest Road		Forest-4	456	Wiggin	Dudley	114 to 899	2	22	3	x		no	generally low	0.07	2	2
Forest Road		Forest-3	457	Bassett	Wiggin	108 to 114	2	22	3	x		no	some areas graded flat	0.07	2	2
Friar Tuck Way		Friar-1	227	Middleton	Middleton	1 to 2	2	22	2	x	x	yes	low in areas	0.95	1	1
Friend Street		Friend-1	122	Varney	Rt 109	94 to 93	2	21	N/A				curbed	0.12	2	1
Glendon Street		Glendon-1	435	Lehner	School	73 to 72	2	28	N/A				curbed	0.05	1	1
Glendon Street		Glendon-2	90	School	Rt 109	72 to 76	2	24	N/A				curbed	0.07	3	2
Goodrich Road		Goodrich-1	407	Clark	E. Clark	54 to 53	2	22	1	x	x	no	Low in areas, particularly at CB	0.04	1	1
Goodrich Road	x	Goodrich-2	110	E. Clark	End	53 to 50	2	22	2		x	no	lawns	0.10	1	1
Green Street	x	Green-1	106	Rt 28	End	58 to 57	2	18	1		x	no	graded towards road surface	0.12	2	2
Greenleaf Drive		Greenleaf-1	34	Clark	Cul-de-sac	202 to 175	2	21	2	x	x	no	some low areas	0.37	1	1
Grove Street	x	Grove-1	92	Rt 109	End	62 to 79	2	20	1		x	no	lawns, generally satisfactory	0.11	1	1
Haines Hill Road		Haines-1	641	N. Wolfeboro	Gravel	222 to 1559	2	22	2	x	x	no		0.54	1	1

Road Name	No Outlet	Section Name	GIS ID (R###)	Section		NHDOT NODES	Lanes	Road Width (ft)	Shoulder Width (ft)	Shoulder Type		Pavement Backing	Shoulder Description	Section Length (mi) GPS	Traffic	Importance
				Beginning	End					Gravel	Natural					
Sewall Road		Sewall-5	139	Pointe Sewall	Pleasant	226 to 88	2	21	2	x		no	low in some areas	0.72	1	2
Silver Street	x	Silver-1	711	Rt 109	Boat Launch	34 to 38	2	20	N/A		x	no	lawn & parking lot	0.05	2	2
Sleepy Hollow		Sleepy-1	256	Middleton	thru loop	826 to 829	2	23	2	x		no	steep in some areas, low in some areas	0.45	1	1
Springfield Point Road	x	Springfield-2	354	Worcester	End/Private	809 to 4	2	22	2	x		no	low in some areas	0.17	1	1
Springfield Point Road		Springfield-1	12	Rt 28	Wocester	5 to 808	2	22	3	x		no	low in some areas	0.71	1	1
Spruce Road		Spruce-1	487	Hopewell	Tips Cove	860 to 864	2	20	2	x		yes	fresh backing	0.15	1	1
Spruce Road		Spruce-2	81	Tips Cove	Forest	864 to 884	2	20	2	x		yes	fresh backing	0.48	1	1
Stoddard Road		Stoddard-2	723	Stoddard-1	Stoddard-3	to	2	17	2	x		no	areas of erosion noted	0.14	1	1
Stoddard Road		Stoddard-4	215	Stoddard-3	Stoddard-5	to	2	20	2	x	x	no	low in some areas	0.33	1	1
Stoneham Road		Stoneham-2	659	Cotton Mtn	Jenness	189 to 185	2	20	2	x		yes		0.73	1	1
Stoneham Road	x	Stoneham-3	280	Jenness	End	185 to 1113	2	19	2	x		no		0.43	1	1
Stoneham Road		Stoneham-1	649	Townline	Cotton Mtn	6133 to 189	2	20	1		x	no	limited shoulders to do road cut into side of hill	0.90	1	1
Stonehenge Road	x	Stonehenge-1	252	Oakwoods	End	818 to 819	2	22	2	x		yes	Eroded at intersection with Oakwood	0.27	1	1
Tips Cove Road	x	Tips-1	28	Spruce	End	864 to 865	2	20	2	x		yes	fresh backing	0.26	1	1
Trask Mountain Road		Trask-1	746 & 747	N. Wolfeboro	Gravel	222 to	2	20	2	x	x	no	Low with some erosion in areas	0.25	1	1
Treadwell Lane	x	Treadwell-1	269	Rt 28	End	47 to 46	2	20	2	x	x	no	low in areas	0.15	1	1
Trotting Track Road		Trotting-2	612	Percy	Percy	154 to 152	2	22	3	x		no		0.11	3	2
Trotting Track Road		Trotting-1	14	Rt 28	Percy	156 to 154	2	22	2	x		no		0.36	3	1
Trotting Track Road		Trotting-3	743 & 183	Percy	Beach	152 to 151	2	22	2	x		no		0.89	3	2
Union Street		Union-1	432	Lehner	School	70 to 71	2	24	N/A				curbed	0.04	1	1
Union Street		Union-2	114	School	Rt 109	71 to 69	2	30	N/A				curbed	0.07	3	3
Upper Trask Mountain Road		Upper Trask-1	640	Trask	Cul-de-sac	220 to 221	2	21	2	x		no		0.33	1	1
Valley Lane		Valley-1	715	Lehner	Parking Lot	1515 to 1516	2	24	N/A				curbed	0.02	3	2
Varney Road	x	Varney-2	121 & 717	Friend	end/private	94 to 126	2	19			x	no	low in areas	0.43	1	1
Varney Road		Varney-1	565	Mill	Friend	92 to 94	2	24	1		x	no	curbing on one side	0.13	1	2
Waumbeck Road		Waumbec-2	542	Council Tree	Jason	1320 to 1030	2	22	2	x		yes	generally satisfactory	0.09	2	2
Waumbeck Road		Waumbec-3	539	Jason	Autumn	1030 to 143	2	22	3		x	yes	generally satisfactory	0.32	2	2
Waumbeck Road		Waumbec-4	153	Autumn	Rt 109A	143 to 147	2	22	3	x		yes	generally satisfactory	0.27	2	2
Waumbeck Road		Waumbec-1	171	Rt 109	Council Tree	136 to 1320	2	24	3	x		no	low in areas	0.58	2	2
Whitten Neck Road		Whitten-1	579	Rt 109	Dores	29 to 1167	2	20	1	x		yes	low and eroded in areas	0.13	2	1
Whitten Neck Road		Whitten-3	5, 582, 584	Crystal	Interlakes	986 to 933	2	22	1	x		yes		0.22	2	1
Whitten Neck Road		Whitten-2	580	Dores	Crystal	1167 to 986	2	22	1	x		yes	Curbed at bridge crossing	0.13	2	1
Wickers Drive	x	Wickers-1	198	Rt 109A	End	1018 to 1019	2	23	3	x		no	low shoulder due to trucks turning from factory	0.10	1	2
Willow Street	x	Willow-1	93	Rt 109	End	41 to 42	1	15	2	x		no	low in areas	0.07	1	1
Winterhaven Road		Winter-3	513	P. Wedeln	Lloyd	115 to 1547	2	21	2	x		yes	low in areas	0.04	1	1
Winterhaven Road		Winter-1	83	P. Wedeln	Bernard	131 to 133	2	21	2	x		yes	low in areas	0.51	1	1
Winterhaven Road		Winter-2	512	Bernard	P.Wedeln	133 to 135	2	21	2	x		yes	low in areas	0.03	1	1

Paved Total: 53.35

Gravel Total: 10.60

Road Name	No Outlet	Section Name	Inspection Date	Alligator Cracking	Long / Trans Cracking	Edge Cracking	Patch / Pothole	Roughness	Rutting	Drainage	PCI 2017	Additional Comments
Abanaukee Drive		Abanaukee-1	11/28/17	5	8	5	2	8	8	8	56	.05 miles added to account for double entrance. Many culverts crossing yards, inlets and outlets should be stabilized. Shoulder erosion cause for lower drain score. Some stone lined ditches.
Allen Road		Allen-1	12/4/17	5	14	11	2	15	14	14	25	Road in poor condition. Some structures and ditching in areas but overall ditching needs improvement. Badly settled conduit trench at Square Hill.
Allen Road		Allen-2	12/4/17	8	14	11	2	15	14	14	22	Road in poor condition. Standing water in ditch.
Anagance Lane	x	Anagance-1	11/28/17	11	5	11	2	8	8	14	41	Areas where edge of road/shoulder are pushing up. Sump pump discharges onto roadway and puddles on surface in rut. Watermain patch at the end of the road is in fair condition with minor settlement. Some existing ditching on up-gradient side of roadway.
Bass Drive	x	Bass-1	11/15/17	5	2	5	1	0	0	0	87	Some patching on the up gradient side at the corner.
Bassett Road		Bassett-1	11/21/17	2	8	5	0	0	8	2	75	Alligator cracking at the more severe transverse cracks .
Bassett Road		Bassett-2	11/21/17	5	5	8	0	0	8	2	72	Alligator cracking on centerline at Old Lakeview. Previous crack sealing work complete.
Bay Street		Bay-3	11/27/17	2	5	5	0	0	0	2	86	Isolated alligator cracking in one area. Edge cracking at paved driveways. Previous crack sealing work completed.
Bay Street		Bay-1	11/27/17	0	5	0	2	8	0	2	83	Bay Street appears to be a cut through from Rte. 109 to Rte. 109A with painted "sharrows" observed. Surface bumps up onto box culvert. Some minor settlement around manhole covers. Painted "sharrows" observed
Bay Street		Bay-2	11/27/17	0	5	2	0	8	0	2	83	Pavement overlay approximately 200' from node 96, width of the section taken at the overlay. Previous crack sealing work completed. CB observed with paved aprons. Some settlement around gate valves in non overlay portion of section.
Bay Street		Bay-4	11/27/17	2	5	8	2	0	0	2	81	Isolated alligator cracking. Wet area adjacent to roadway, approximately 4' lower than finish grade. Minor ditch erosion. CB's observed
Beach Pond Road		Beach-3	12/4/17	0	0	0	0	0	0	0	100	Higher importance due to access to transfer station. Segment reconstructed between 2014 and 2016. Surface drainage generally satisfactory.
Beach Pond Road		Beach-4	12/4/17	0	0	0	0	0	0	0	100	Higher importance due to access to transfer station. Segment reconstructed between 2014 and 2016. Surface drainage generally satisfactory.
Beach Pond Road		Beach-5	12/4/17	0	0	0	0	0	0	0	100	Higher importance due to access to transfer station. Segment reconstructed between 2014 and 2016. Surface drainage generally satisfactory.
Beach Pond Road		Beach-1	12/4/17	0	0	0	0	0	0	2	98	Higher importance due to access to transfer station. Segment reconstructed between 2014 and 2016. Surface drainage generally satisfactory. CB off the edge of the road (some need grates cleared). Low shoulder along inside corners
Beach Pond Road		Beach-2	12/4/17	0	0	0	0	0	0	2	98	Higher importance due to access to transfer station. Segment reconstructed between 2014 and 2016. Surface drainage generally satisfactory. Low shoulder along inside corners
Beach Pond Road		Beach-6	12/4/17	0	0	0	0	0	0	2	98	Higher importance due to access to transfer station. Segment reconstructed between 2014 and 2016. Surface drainage generally satisfactory.
Beach Pond Road		Beach-11	12/4/17	0	8	2	0	0	0	2	88	Section begins approximately 200 hundred feet south of Brown Street. Short section of road between gravel section in good condition. Brook section along the edge of road appears to be well stabilized
Beach Pond Road		Beach-15	12/4/17	0	11	8	0	0	0	2	79	Surface drainage appears satisfactory
Beach Pond Road		Beach-8	12/4/17	5	11	8	2	0	8	2	64	Surface drainage generally appears functional.
Beach Pond Road		Beach-9	12/4/17	5	14	11	2	0	8	2	58	Surface drainage generally appears functional.
Beach Pond Road		Beach-13	12/4/17	5	11	8	5	0	0	14	57	Some ditch erosion
Beach Pond Road		Beach-7	12/4/17	8	8	11	2	0	8	8	55	Surface drainage generally appears functional. Culverts should be inspected for cleaning.
Beck Drive		Beck-1	11/27/17	0	0	0	0	0	0	2	98	Guardrail throughout the road length. Road serves multi unit housing complex. Stone stabilized side slopes. Inspection ended at clement court as limit of town maintained roadway not clear. Cross section appears to be flat
Bernard Road	x	Bernard-1	11/15/17	0	0	0	0	0	0	2	98	Recently overlaid. As noted very low shoulders at intersection with Whitehaven Road
Berrywood Drive		Berrywood-1	11/16/17	5	8	5	2	0	8	8	64	Short guardrail section on both sides near forest. Some edges covered by leaves. Guardrail at Deer Run as well. Pavement patch at Deer Run settled.
Berrywood Drive		Berrywood-2	11/16/17	11	11	5	2	0	8	8	55	Guardrail at Deer Run and Jiminy
Berrywood Drive		Berrywood-3	11/16/17	14	8	11	5	8	8	8	38	Section in worse condition of three sections for this road. Shoulder being pushed up in severe cracking areas
Birch Road	x	Birch-1	12/1/17	0	0	2	0	0	0	2	96	Inspection to end of pavement. CB's and structures observed along with some ditching. Road in good condition. Some edge cracking on the second connection to Rte. 109
Blackberry Lane	x	Blackberry-1	12/1/17	11	11	11	2	8	0	2	55	Roughness due to significant amount of cracking. Surface drainage appears satisfactory
Brewster Heights		Brewster-2	11/29/17	5	5	5	0	8	0	2	75	Previous crack seal work complete. Roadside drainage appears stable and satisfactory for steep grade. Paved swales observed with periodic discharges. One area of erosion noted at the top of the hill
Brewster Heights		Brewster-1	11/29/17	5	0	5	0	0	8	8	74	Lower drain score due to puddle near P. Valley intersection. Previous crack seal work complete
Brewster Heights		Brewster-3	11/29/17	5	8	8	0	8	0	8	63	Poor drainage and asphalt condition on upper portion of road. Previous crack seal work completed
Brown Road		Brown-1	12/4/17	5	11	14	2	8	8	2	50	Town line not obvious. Inspection completed to hidden Valley Estates. Despite cracking surface drainage appears functional.
Bryant Road		Bryant-1	12/6/17	11	14	8	5	15	8	8	31	Surface drainage (ditching) generally appears functional but needs cleaning. Isolated areas of surface run-off onto roadway. Two large diameter CMP culvert crossings (one crossing double barrel). Crossing with the rail trail is very rough. Wetlands encroach in multiple areas. Rock observed protruding through the pavement.
Canopache Road		Canopache-1	11/28/17	11	8	8	0	8	14	14	37	Road is in poor condition. Utility pole noted to be approximately 1' from the edge of the road.
Canopache Road	x	Canopache-2	11/28/17	14	11	11	2	8	8	14	32	Road is in poor condition.
Central Avenue		Central-1	11/29/17	0	5	0	0	0	0	2	93	One way road. Parking on both sides (angled and parallel). Closed drainage system
Chipmunk Lane	x	Chipmunk-1	11/16/17	0	2	5	0	0	0	8	85	Good ditching, tight against the edge of road at Partridge intersection
Christian Ridge Road	x	Christian-1	11/29/17	5	11	5	0	8	0	2	69	Higher importance and traffic as road is access to hospital and church. Wider at intersection to Rte. 28 due to additional turning lane. .03 added to measured length for hammer head end . CB's in paved swales and in grass
Clark Road		Clark-5	11/28/17	0	2	2	0	0	0	2	94	
Clark Road		Clark-4	11/28/17	0	5	2	0	0	0	2	91	
Clark Road		Clark-1	11/28/17	0	5	5	0	0	0	8	82	CB in lawns off EOP. Isolated cracking but road is in good shape overall. Higher importance and traffic due to Genesis Health Center

Road Name	No Outlet	Section Name	Inspection Date	Alligator Cracking	Long / Trans Cracking	Edge Cracking	Patch / Pothole	Roughness	Rutting	Drainage	PCI 2017	Additional Comments
Clark Road		Clark-3	11/28/17	2	5	5	0	0	8	2	78	Road generally in good condition
Clark Road		Clark-6	11/28/17	2	8	5	0	0	8	0	77	Previous crack seal work completed. Based on cracks section appears to be worse section of road
Clark Road		Clark-2	11/28/17	5	5	5	0	0	8	2	75	CBs off edge of pavement, some have aprons
Clipper Drive		Clipper-1	11/28/17	5	5	8	0	0	0	8	74	Higher importance and traffic due Genesis Health Center
Clow Street	x	Clow-1	11/22/17	8	8	5	2	8	8	8	53	Some paved swales, CBs and ditching. Minor puddling on roadway. Shallow culvert crossing. Parking lot for cross country ski trail at end of road
College Road		College-3	12/5/17	0	8	8	0	0	0	8	76	Better section of road. 36" CMP culvert noted with inlet completely blocked with debris. Some cut-outs in the shoulder observed near Bryant Road to reduce volume of water going down hill may cause sedimentation of adjacent wetland areas. Consider implementation of BMP's
College Road		College-2	12/5/17	2	11	5	2	8	8	8	56	
College Road		College-1	12/5/17	11	14	11	14	15	8	8	19	Embankment tight to edge of road at start of section. Otherwise shoulder grading and roadside drainage appears satisfactory
Cotton Mountain Road		Cotton Mtn-1	12/6/17	11	11	11	0	8	8	8	43	Some shoulder erosion at top of section. Embankment erosion at intersection with Cotton Valley Road. Also embankments noted to protruding ledge adjacent to roadway.
Cotton Valley Road		Cotton-2	12/6/17	0	0	2	0	0	0	8	90	Some culverts should be cleaned. Cross section appears flat in some areas. Steep side slope areas may merit guardrails
Cotton Valley Road		Cotton-1	12/6/17	2	8	5	0	0	0	2	83	Reconstructed in 2011 or 2012 and overall in good condition. Surface drainage appears satisfactory. Short section of severe centerline cracking noted. Culvert inlets appear to be full of leaf litter and should be cleaned.
Crescent Lake Avenue		Crescent-1	11/29/17	5	11	5	0	8	0	2	69	CBs, some located in paved swales. Large amounts of low to medium cracking. Road seems to have heavy traffic and could be used as cut through to 109 to avoid main intersection. Consider posting "no through traffic".
Cricket Hill Road	x	Cricket-1	11/16/17	0	8	8	0	0	8	0	76	Severe edge cracking at turn around. Appears to be rutting and sever crack longitudinal crack at forest intersection.
Cropley Hill	x	Cropley	11/29/17	2	11	5	5	8	0	8	61	New closed drainage system at top of road. Swale should be regraded to help CB catch run-off more efficiently
Cross Road		Cross-1	11/29/17	0	0	0	0	0	0	2	98	Road reconstructed in 2014 and is in good condition. Culvert crossing through wetland with 2-24" +/- pipes. Cut through from Pleasant Valley Road to Rte. 28.
Deer Run		Deer-1	11/16/17	0	0	5	5	0	0	2	88	Length includes cul-de-sac loop. Most of edge covered in leaves and not visible but low severity cracking noted. Ditches in place, some steep embankments. 2 larger patches noted. Overall roadway is in good condition
Depot Street		Depot-1	11/29/17	0	8	2	0	0	0	2	88	
Dockside Road		Dockside-1	11/28/17	8	8	2	5	2	0	8	67	one way road, access to public parking area and docks/ Silt around CB from previous excavation work (fresh trench patches). Width measured as approximate traveled way between buildings.
Eagle Trace		Eagle-1	11/28/17	0	8	5	0	0	0	2	85	besides low shoulder area surface drainage appears functional.
Eagle Trace		Eagle-2	11/28/17	0	11	8	0	0	0	2	79	2 cross culverts in cul-de-sac. Potentially outlet behind homes on down gradient side
East Clark Road		Eask Clark-1	11/28/17	14	11	5	2	8	0	8	52	
Endicott Street	x	Endicott-1	11/22/17	0	5	2	0	0	0	8	85	Access to bank parking lot
Estabrook Road	x	Estabrook-1	11/28/17	8	8	5	2	8	8	8	53	Narrow ditches. Some outlet to shoulder surface and run-off onto academy walkway. Trench drain in place but appears in-effective. Road is cul-de-sac access to Brewster Academy Smith Center. Length includes cul-de-sac
Fairway Drive		Fairway-1	11/28/17	2	8	11	2	8	0	2	67	Length includes cul-de-sac. Roadway in cul-de-sac is in poor condition. Majority of the road appears to be built through a wetland area.
Filterbed Road		Filterbed-1	11/27/17	8	11	5	2	8	8	8	50	Road is access to WWTF. Roughness is a most of the trans. Cracking. Bulges in select areas and the culvert crossing is raised. Some sand on the roadway from adjacent driveways indicates drainage problems. Short section of curbing (100' +/- at the Varney Road intersection. Settlement/rutting observed along the roadway centerline.
Forest Road		Forest-10	11/21/17	0	0	0	2	0	0	0	98	Patch around hydrant valve. Road reconstructed in 2013 & 2014
Forest Road		Forest-12	11/21/17	0	0	2	0	0	0	0	98	Roadway reconstructed in 2013 & 2014. Ditches observed with CBs. Survey control by White Mountain Survey noted adjacent to the culvert inlet across from Storytelling Road
Forest Road		Forest-11	11/21/17	0	0	2	0	0	0	2	96	Roadway reconstructed in 2013 & 2014. Ditches observed with CBs
Forest Road		Forest-13	11/21/17	0	0	2	0	0	0	2	96	Roadway reconstructed in 2013 & 2014. Ditches tight to edge of road in areas of steep embankments
Forest Road		Forest-14	11/21/17	0	2	2	0	0	0	2	94	Roadway reconstructed in 2013 & 2014. Ditches tight to edge of road in areas of steep embankments. CBs noted.
Forest Road		Forest-9	11/21/17	0	5	2	0	0	0	2	91	Roadway reconstructed in 2013 & 2014. Steep grade has satisfactory stone ditches. Edge cracking in one isolated area of medium severity longitudinal cracking.
Forest Road		Forest-8	11/21/17	0	8	2	2	0	0	2	86	Small gate valve patch at Hopewell Road Intersection. Previous crack sealing work completed. "Sharrows" painted from town beach to Rte. 109.
Forest Road		Forest-7	11/21/17	0	5	2	0	0	8	2	83	Some crack sealing previously completed. Some wheel path rutting with potential from run-off in wheel path. Isolated minor shoulder erosion. Good ditching and shoulder grading away from road
Forest Road		Forest-6	11/21/17	0	5	5	0	0	8	2	80	Previous crack sealing work completed. Good ditching. Potential for run-off in wheel path (minor rutting).
Forest Road		Forest-2	11/21/17	0	8	5	0	0	0	8	79	Large trees encroaching on roadway. See pictures. CB's throughout with one being very low and causing edge cracking. Paved apron around grate recommended to help preserve pavement edge. Good ditching on one side,
Forest Road		Forest-5	11/21/17	0	2	2	2	0	8	8	78	Run-off encroaching shoulder with minor erosion
Forest Road		Forest-1	11/21/17	0	5	2	0	0	8	8	77	"Sharrows" observed painted along the road between 109 and the town beach
Forest Road		Forest-4	11/21/17	0	5	5	0	0	8	8	74	Minor wheel rutting. Potential for run-off to flow in wheel ruts. Shoulder erosion noted. Previous crack sealing work complete. Isolated moderate trans cracking
Forest Road		Forest-3	11/21/17	0	5	5	0	2	8	8	72	Good ditching on one side, needed on the other side. Potential ruts
Friar Tuck Way		Friar-1	11/29/17	0	11	8	0	0	0	8	73	Some shoulder erosion. Previous crack seal work completed.
Friend Street		Friend-1	11/27/17	2	5	0	0	0	0	0	93	Catch basins and driveway culverts with ditches behind curbing. Cracking generally isolated to CB and crossing locations. Edge cracking at curb not observed but may be concealed by leaf litter.
Glendon Street		Glendon-1	11/29/17	2	5	2	0	0	0	2	89	
Glendon Street		Glendon-2	11/29/17	5	5	0	0	0	0	2	88	Partial on-way with parallel parking on one side. Previous crack sealing work completed.
Goodrich Road		Goodrich-1	11/28/17	5	5	2	5	8	0	8	67	Full length overlay one lane, cracked at the seam.
Goodrich Road	x	Goodrich-2	11/28/17	11	8	2	2	0	8	8	61	Full length overlay one lane. CBs off edge of road in lawns. Frame elevations are low with edge cracking the CB locations. Evidence of some puddles observed. Community garden at the end of the road
Green Street	x	Green-1	11/28/17	8	8	5	5	0	8	8	58	Puddle/pothole area at intersection with Rte. 28. Road served Brewster Academy maintenance garage.
Greenleaf Drive		Greenleaf-1	11/28/17	5	11	5	2	0	0	2	75	Patching around manhole covers and new house construction. Previous crack sealing work complete. Length provided includes cul-de-sac
Grove Street	x	Grove-1	11/29/17	0	0	2	0	0	0	2	96	Roadway reconstructed in 2014 & 2015. CBs in center of road and road is graded to drain towards the centerline.
Haines Hill Road		Haines-1	12/5/17	11	14	11	2	8	8	8	38	Some shoulder erosion. Good ditching in some areas while ditching should be added in other areas.

Road Name	No Outlet	Section Name	Inspection Date	Alligator Cracking	Long / Trans Cracking	Edge Cracking	Patch / Pothole	Roughness	Rutting	Drainage	PCI 2017	Additional Comments
Haines Hill Road		Haines-3	12/5/17	11	14	11	2	8	8	14	32	Ditching in place in many areas. Standing water observed within a couple feet from edge of roadway at wetland area. Full width roadway patch in this section. Significant cracking through cut section.
Hemlock Drive		Hemlock-1	11/27/17	2	8	8	0	8	0	8	66	Some sand on roadway from gravel drives. Low drainage score due to eroded shoulders in areas. Electric boxes very close to edge of pavement (3' +/-)
High Street	x	High-1	11/29/17	14	11	11	14	8	0	8	34	Road is very steep and in poor condition.
Highland Terrace		Highland-1	11/16/17	5	8	2	2	0	0	8	75	Some wetland area along side of road. Rough area at transverse cracking. Length includes cul-de-sac
Hopewell Point Road		Hopewell-1	11/16/17	0	5	2	0	0	0	0	93	Road appears to have been recently overlaid. Edge cracking noted due to slight roughness felt during inspection
Interlakes Way		Interlakes-1	12/1/17	0	5	8	0	0	0	2	85	Roadway was overlaid in 2013. Surface generally appears satisfactory and functional.
Jenness Farm Road		Jenness-1	12/6/17	0	8	0	0	0	0	2	90	Short section of asphalt connecting to gravel
Jenness Farm Road		Jenness-3	12/6/17	2	11	5	0	0	0	14	68	ground water running along edge of pavement and bleeding through cracks at the top of the section. Newer looking larger diameter CPE culvert crossing. Steep angled approach to Cotton Valley Road.
Jiminy Drive		Jiminy-1	11/16/17	11	11	8	0	8	8	8	46	Ditches exist, generally satisfactory.
Keewaydin Road		Keewaydin-1	11/15/17	14	11	11	2	8	8	14	32	Better section of roadway - Road in poor condition
Keewaydin Road		Keewaydin-3	11/15/17	11	11	11	2	15	8	14	28	Road in poor condition
Keewaydin Road		Keewaydin-2	11/15/17	14	11	11	5	8	14	14	23	Road in poor condition
King Street		King-2	11/27/17	5	5	5	0	8	0	8	69	Cracking at manhole covers. Section is in better condition of the two.
King Street		King-1	11/27/17	11	5	8	5	0	8	14	49	Low/settled trench patch, Rutting at Bay Street. Cracking around manhole covers. Utility poles very close to edge of roadway. Road could benefit from curbing
Lake Street	x	Lake-1	11/22/17	0	0	0	0	0	0	8	92	Width varies from 21' to 30', wide section is for 3 parking spots at Rte. 109. Some puddles at E.O.P where no hard border. Appears to be a fresh overlay
Lakeview Drive		Lakeview-1	11/27/17	5	8	5	2	0	0	8	72	Severe longitudinal cracking at patch joint. Low shoulder at driveway culvert. CB at Lakeview/Jennifer intersection
Lakeview Drive	x	Lakeview-2	11/27/17	5	5	5	0	8	8	8	61	some shoulder erosion. Some ditches exist but re-shaping is recommended
Lang Pond Road		Lang-3	11/15/17	0	0	8	0	0	0	0	92	Section ended at new pavement seam. CB's observed to have grates clogged. Shoulders have low areas with evidence of erosion undermining asphalt
Lang Pond Road		Lang-1	11/15/17	5	5	2	0	0	0	0	88	Alligator cracking primarily at the intersection with Rte. 28. CB's observed. Centerline cracking observed
Lang Pond Road		Lang-2	11/15/17	2	11	0	0	0	0	0	87	Cracking along centerline, and an isolated longitudinal crack
Lary Road		Lary-2	11/21/17	5	5	5	0	0	8	8	69	Better of the two sections. Previous crack seal work completed
Lary Road		Lary-1	11/21/17	8	11	2	0	0	8	8	63	moderate to severe cracking along centerline. Previous crack seal work completed
Lehner Street		Lehner-3	11/29/17	0	5	2	0	0	0	2	91	Width varies from 30' to 36'. Half section has parking on both sides
Lehner Street		Lehner-2	11/29/17	0	8	2	0	0	0	2	88	Parallel parking on one side. Closed drainage, rating given assume drainage is clean and functional. Better condition than section 1
Lehner Street		Lehner-1	11/29/17	5	8	2	0	0	0	2	83	Parallel parking on one side. Closed drainage, rating given assume drainage is clean and functional
Libby Street		Libby-1	11/22/17	0	0	2	2	0	0	8	88	1 lane +/- at Rte. 109. Gravel spilling into CB from driveway. CB frames are set very low (3"-5" below grade). Retaining wall tight to road at Rte. 109
Lucas Street		Lucas-1	11/22/17	0	2	0	0	0	0	8	90	Road seems to be able to drain run-off however some ditching would improve conditions in some areas
Maplewood Drive		Maplewood-2	11/16/17	11	2	2	0	0	8	8	69	Good ditching
Maplewood Drive		Maplewood-1	11/16/17	8	5	5	0	0	8	14	60	Puddle observed at low point, poor ditching
Maplewood Drive		Maplewood-3	11/16/17	11	11	2	2	8	8	8	50	Some ditching exists. Centerline cracking through most of the section. Wheel path rut up to 2" in isolated areas
Maplewood Drive	x	Maplewood-4	11/16/17	14	5	8	5	8	8	14	38	Road section in poor condition. Shoulders do not allow for run-off to drain. Some areas pushed up
Martin Hill Road	x	Martin-1	12/6/17	11	14	11	5	15	14	14	16	Road has failed. Some ditching exists. Groundwater appears to be flowing from cracks in pavement. Poor approach grading to Rte. 109. Some shoulder erosion at the edge of pavement. High ground water could be a result of heavy rains overnight
Middleton Road		Middleton-1	11/29/17	0	0	0	0	0	0	2	98	Road reconstructed in 2014 & 2015. Good ditching some stone
Middleton Road		Middleton-2	11/29/17	0	0	0	0	0	0	2	98	Good ditching and drainage satisfactory
Middleton Road		Middleton-4	11/29/17	0	0	0	0	0	0	2	98	Good ditching and drainage satisfactory
Middleton Road		Middleton-5	11/29/17	0	0	2	0	0	0	2	96	Steep shoulders into ditches with edge of pavement exposed and some edge cracking.
Middleton Road		Middleton-3	11/29/17	0	0	0	0	0	0	8	92	Low drainage score due to sand washing down driveways and accumulating on roadway and in ditches.
Mill Street		Mill-1	11/22/17	2	5	2	2	0	0	8	81	Run-off from road onto gravel driveways
Mill Street		Mill-2	11/22/17	5	5	2	2	8	8	14	56	Settlement at utility trenches. Wetlands area behind sidewalk appears to be higher than road. Roadway rutting. Puddle adjacent to the wetland area.
N. Line Road		N. Line-3	12/4/17	0	8	2	0	0	0	2	88	Previous crack sealing work completed. Longitudinal cracking observed on the centerline, previously crack sealed. Cross-section appears flat in areas. Good ditching with catch basins
N. Line Road		N. Line-2	12/4/17	0	8	5	0	0	0	2	85	Steep shoulders in areas as previously noted. Surface drainage appears to be adequate however structure inlets should be cleaned and maintained. Centerline crack observed almost the full length of the section. Section ended at Rae Conservation entrance which appeared to be consistent with the Sargent's Pond Road location depicted on the map.
N. Line Road		N. Line-4	12/4/17	5	8	2	5	0	0	2	78	Steep shoulders in some areas as previously noted. Surface drainage generally appears satisfactory. Some embankment erosion beneath large trees at the cemetery. Isolated areas of potential rutting, not considered in ranking due to size. Additional traffic note - two or three 18-wheelers- observed on N. Line and Beach Pond Road over a 3 or 4 hour period. N. Line road provides access to the water treatment plant from Rte. 28.
Nary Shores Road		Nary-3	11/16/17	5	5	5	2	0	0	8	75	Trench patch at end of Section. Run-off flowing along edge of road due to lack of backing.
Nary Shores Road		Nary-1	11/16/17	5	5	11	2	0	0	8	69	Culvert crossing patch low. Previous crack seal work completed
Nary Shores Road		Nary-2	11/16/17	5	5	11	0	0	8	8	63	low shoulders appear to be from continuous parking and use. Previous crack seal work completed. Run-off running flowing along edge of road due to lack of backing.
Nary Shores Road		Nary-4	11/16/17	5	8	8	0	0	8	8	63	Run-off along edge of pavement due to lack of backing.
Nary Shores Road		Nary-5	11/16/17	14	5	8	2	8	0	8	55	
Nary Shores Road	x	Nary-6	11/16/17	14	5	14	5	8	0	8	46	Asphalt missing along edge of the road. Well established ditch
Natures Way	x	Natures-1	12/5/17	14	14	14	14	15	8	14	7	Majority of asphalt appears to be missing (or covered in sand). Two culvert CMP culvert crossings noted, one has been extended beyond the shoulder with CPE. Road has completely deteriorated

Road Name	No Outlet	Section Name	Inspection Date	Alligator Cracking	Long / Trans Cracking	Edge Cracking	Patch / Pothole	Roughness	Rutting	Drainage	PCI 2017	Additional Comments
Sewall Road		Sewall-5	11/22/17	8	8	5	2	0	8	8	61	Ditching and CBs, partially curbed towards Pleasant Street
Silver Street	x	Silver-1	12/1/17	0	0	0	0	0	0	0	100	Recently reconstructed. Width varies due to parking lot areas and boat launch access
Sleepy Hollow		Sleepy-1	11/29/17	2	11	5	0	0	0	2	80	Surface drainage appears satisfactory. Potential erosion in bottom of ditch.
Springfield Point Road	x	Springfield-2	11/28/17	0	5	5	0	0	0	2	88	Previous crack seal work completed
Springfield Point Road		Springfield-1	11/28/17	2	5	5	0	8	0	8	72	Road does not appear to be very old. Previous crack seal work completed.
Spruce Road		Spruce-1	11/16/17	0	0	0	0	0	0	0	100	Reconstructed in 2016 with final overlay recently completed. Good ditching and shoulders
Spruce Road		Spruce-2	11/16/17	0	0	0	0	0	0	2	98	Reconstructed in 2016 with final overlay recently completed. Good ditching and shoulders. One isolated area where standing water in ditch near a driveway
Stoddard Road		Stoddard-2	12/5/17	8	14	8	2	8	14	8	38	See gravel road summary for Stoddard Road sections 1,3, and 5
Stoddard Road		Stoddard-4	12/5/17	8	14	8	2	8	8	14	38	Erosion noted towards bottom of hill. Extensive cracking. Section from GPS point 329 to 330
Stoneham Road		Stoneham-2	12/6/17	5	8	2	2	0	8	2	73	Section of road is newer than Stoneham-1. All catch basins appear to be covered in leaves and should be clean. Culvert crossing apparent near N. Wakefield Road however inlet and outlet not found. CPE culvert located in this location however appears to be overflow as pipe is dry and water still flowing upstream and down stream of pipe
Stoneham Road	x	Stoneham-3	12/6/17	5	11	8	0	0	0	8	68	Road reconstructed in 2013. Moderate amount of longitudinal cracking. Large Trees encroaching roadway
Stoneham Road		Stoneham-1	12/6/17	11	14	11	14	15	8	14	13	Road is in poor condition, see photos. Road may be narrower than 20' at embankment/guardrail section. Some shoulder built on rubble retaining walls as road is cut into side of hill
Stonehenge Road	x	Stonehenge-1	11/28/17	2	0	2	0	0	0	2	94	Road re constructed in 2014/2015. Some shoulder erosion as previously noted
Tips Cove Road	x	Tips-1	11/16/17	0	0	0	0	0	0	0	100	Reconstructed 2016/2017.
Trask Mountain Road		Trask-1	12/5/17	8	8	11	2	8	8	8	47	Shallow bed rock in ditch results in poor drainage at end of section.
Treadwell Lane	x	Treadwell-1	11/29/17	5	8	5	0	8	0	2	72	ditching with CBs, some curbing noted. Surface drainage generally appears satisfactory. Road reconstructed in 2004
Trotting Track Road		Trotting-2	12/4/17	5	11	11	5	0	0	8	60	Existing ditches could benefit from some grading/cleaned however they appears to be functional and stable in their current condition. Assessment completed prior to 2018 Overlay
Trotting Track Road		Trotting-1	12/4/17	5	8	8	5	0	8	8	58	Multiple shim areas. Large embankment area across from rec fields has signs of erosion below tree roots at the top of slope. Assessment completed prior to 2018 Overlay
Trotting Track Road		Trotting-3	12/4/17	8	11	11	14	8	8	8	32	Many areas of section in poor condition. Large diameter CMP (24" to 30" dia.) culvert noted. Settlement near CB approaching Beach Pond Road. Assessment completed prior to 2018 Overlay
Union Street		Union-1	11/29/17	0	5	2	2	0	0	2	89	
Union Street		Union-2	11/29/17	2	5	5	5	8	0	2	73	Worst section of the 2. This sections see substantially more traffic as it has one of the Town Hall parking lots
Upper Trask Mountain Road		Upper Trask-1	12/5/17	5	11	8	5	0	8	8	55	Ditches with CB's, extensive trench patching presumably from drainage installations
Valley Lane		Valley-1	11/29/17	5	11	2	14	8	8	8	44	one way with parallel parking lot. Road serves as exit for parking lot. Road is in poor condition and has 1 new trench patch.
Varney Road	x	Varney-2	11/27/17	2	11	5	2	0	0	2	78	Running water in ditch. Some severe centerline cracking at culvert crossing. Brook in stabilized ditch with large diameter driveway and cross culvert
Varney Road		Varney-1	11/22/17	2	2	5	0	0	8	8	75	Potential rutting with cracking in wheel path. Shoulder satisfactory where found. Curbing with CBs.
Waumbeck Road		Waumbec-2	11/27/17	0	8	11	0	0	8	2	71	Previous crack seal work completed. Potential wheel path rutting but crown appears satisfactory. "Sharrow" paint symbols noted
Waumbeck Road		Waumbec-3	11/27/18	2	8	11	0	0	8	2	69	Surface drainage appears satisfactory. Good crown. Ditches with CBs. Some stone ditches. 18-wheeler truck observed using road during inspection. Posting road to no thru truck traffic should be considered as this road is not intended for truck traffic. "Sharrow" paint symbols noted.
Waumbeck Road		Waumbec-4	11/27/17	2	8	11	0	0	8	2	69	recent gravel backing work completed at the Rte. 109A intersection. Crown appears satisfactory. Ditch appears to have been maintained by grader blade. "Sharrow" paint symbols noted.
Waumbeck Road		Waumbec-1	11/27/17	0	8	8	0	0	8	8	68	Wetland areas adjacent to road. Low shoulder at some CBs. Appears to be minor wheel path rutting. Ditching tight against edge of pavement in areas. Low drain score due to low shoulder areas. Previous crack seal work completed. Higher traffic road as it connects Rte. 109 to Rte. 109A. "Sharrow" paint symbol noted
Whitten Neck Road		Whitten-1	12/1/17	0	0	0	0	0	0	2	98	Road appears to have recent overlay or reconstruction
Whitten Neck Road		Whitten-3	12/1/17	0	0	0	2	0	0	2	96	Utility pole observed to be approximately 1' from edge of pavement and should be relocated further from roadway. Patching around water gate valves. Roadside grading at top of hill is generally flat and may inhibit proper long-term drainage.
Whitten Neck Road		Whitten-2	12/1/17	0	5	0	0	0	0	0	95	Minor cracks between railroad tracks and bridge
Wickers Drive	x	Wickers-1	11/27/17	5	8	11	0	0	8	8	60	Small industrial park with 2 properties and what appears to be an entrance to a Town sand pit of staging yard. Rutting observed is minor near hydrant at end of road
Willow Street	x	Willow-1	11/29/17	5	8	8	5	8	0	8	58	Shim/overlay completed on second half. Very low volume road with the dead end at the bike path and one multi unit building
Winterhaven Road		Winter-3	11/15/17	0	0	2	0	0	0	0	98	Road reconstructed 2016/2017. Good ditching. Edge cracking score assumes minor edge cracking similar to that noted on Port Wedeln. Paved swale up gradient of the Lloyd intersection
Winterhaven Road		Winter-1	11/15/17	0	0	2	0	0	0	2	96	Road reconstructed 2016/2017. Good ditching. Edge cracking score assumes minor edge cracking similar to that noted on Port Wedeln
Winterhaven Road		Winter-2	11/15/17	0	0	2	0	0	0	2	96	Road reconstructed 2016/2017. Good stone ditching. Edge cracking score assumes minor edge cracking similar to that noted on Port Wedeln. Sediment observed in new ditches.

Gravel Roads Condition Summary
Roadway Evaluation
Wolfeboro, New Hampshire

Field Inspections and Assessments Completed November/December 2017

Road Name	No Outlet	Section Name	GIS ID (R###)	Section		NHDOT Nodes	Lanes	Road Width (ft)	Shoulder Width (ft)	Shoulder Type		Shoulder Description	Section Length (mi) GPS	Traffic	Importance	Inspection Date	Rutting	Loose Aggregate	Corrugations	Potholes	Cross Section	Roadside Drainage	Dust	PCI			
				Beginning	End					Natural	Gravel																
Avery Road	x	Avery-1	664	Cowper	End	192 to 193	1	23	2		x		0.08	1	1	12/06/17	0	5	0	0	0	8	0	87			
Beach Pond Road		Beach-10	627	Beach-9	Beach-11	N/A to 210	2	23	2		x	Erosion in some areas	0.47	1	1	12/04/17	0	5	2	5	0	8	0	80			
Beach Pond Road		Beach-12	634, 719	Beach-11	Beach-13	N/A to N/A	2	20	1		x		0.25	1	1	12/04/17	0	2	2	2	0	14	0	80			
Beach Pond Road		Beach-14	721	Beach-13	Beach-15	N/A to N/A	2	20	2		x		0.35	1	1	12/04/17	2	5	2	2	0	14	0	75			
Beach Pond Road		Beach-16	722	Beach-15	Townline	N/A to 6094	2	20	2		x		0.06	1	1	12/14/17	2	5	2	0	0	2	0	89			
Bickford Road		Bickford-1	314	Stoddard	Chick	1574 to 197	2	16	3		x		0.89	1	1	12/05/17	2	5	2	2	0	14	0	75			
Brackett Road	x	Brackett-1	257	Pleasant	End	22 to 8040	1	15	1				0.53	1	1	12/01/17	2	5	2	2	0	8	0	81			
Chick Road		Chick-1	316	Bickford	Haines	197 to 200	1	14	2		x		0.61	1	1	12/05/17	0	2	2	2	0	8	0	86			
Cotton Valley Road	x	Cotton-3	319	Cotton	Townline	187 to 6134	1	12	1				0.85	1	1	12/06/17	2	5	2	5	0	8	0	78			
Cowper Road		Cowper-1	313	Stoddard	Avery	198 to 192	1	12	3				1.00	1	1	12/06/17	2	2	5	2	8	14	0	67			
Haines Hill Road		Haines-2	642	Pavement	Chick	N/A to 200	2	16	2				0.54	1	1	12/05/17	0	2	2	5	0	14	0	77			
Jonalhan Hersey Road	x	Hersey-1	149	Rt 109A	Private	150 to 148	1	14	1			Eroded, cut embankments	0.25	1	1	11/27/17	0	8	2	2	8	14	0	66			
Jenness Farm Road		Jenness-2	700	Jenness-1	Jenness-2	N/A to N/A	2	18	3				0.27	1	1	12/06/17	2	2	0	5	0	14	0	77			
Johnson Road	x	Johnson-1	327	Rt 28	End	216 to 218	2	16	2		x		0.14	1	1	12/05/17	0	5	2	0	0	8	0	85			
Keewaydin Road		Keewaydin-4	530	Keewaydin-3	Keewaydin-5	138 to 1037	1	12	1	x			0.03	1	1	11/15/17	8	0	0	2	8	14	0	68			
Keewaydin Road	x	Keewaydin-5	529	Keewaydin-4	Private	1037 to 1036	1	12	1	x			0.06	1	1	11/15/17	8	0	0	0	8	14	0	70			
New Garden Road	x	Garden-1	705	Pleasant	End	24 to 842	1	14	2				0.58	1	1	12/01/17	2	2	2	5	0	8	0	81			
N. Line Road	x	N. Line-1	16	Beach	Class VI	208 to 209	2	18	2				0.44	1	3	12/04/17	2	0	2	2	0	8	0	86			
North Wakefield Road	x	Wakefield-1	658	Stoneham	End	189 to 1088	1	12	3		x		0.21	1	1	12/06/17	2	2	2	0	0	8	0	86			
North Wakefield Road	x	Wakefield-2	317	Brookfield Townline	End/Private	6131 to 190	1	14	1		x		0.73	1	1	12/06/17	5	2	5	5	8	14	0	61			
Sandstrom Road		Sandstrom-1	147	Rt 109A	Townline	149 to 6129	2	16	1				0.25	1	1	11/27/17	0	2	0	0	0	14	0	84			
Stoddard Road		Stoddard-1	663, 664	Haines	Stoddard-2	222 to N/A	2	16	2		x		0.55	1	1	12/05/17	0	2	2	5	0	14	0	77			
Stoddard Road		Stoddard-3	215	Stoddard-2	Stoddard-4	N/A to N/A	2	16	2	x	x		0.25	1	1	12/05/17	0	2	5	5	0	14	0	74			
Stoddard Road		Stoddard-5	661	Stoddard-4	Stoddard-6	195 to 196	2	16	2		x	Eroded in areas	0.69	1	1	12/06/17	5	2	5	5	0	14	0	69			
Trask Mountain Road		Trask-2	639	Trask-1	Upper Trask	N/A to 220	2	20	3		x		0.52	1	1	12/05/17	0	8	0	2	0	2	0	88			
												Total:	10.6														100

Road Name	No Outlet	Section Name	Comments
Avery Road	x	Avery-1	No ditching but erosion appears minimal. Short segment of Road
Beach Pond Road		Beach-10	Long hill section has cut outs for drainage. Road appears to handle run-off ok. Section near Brown Road has some shoulder erosion
Beach Pond Road		Beach-12	some pooled water in shoulder and some ditch erosion. Areas of light moisture on surface
Beach Pond Road		Beach-14	Loose aggregate and wash board at pavement transition. Culvert at section-13 should be extended as shoulder and debris are eroding and falling blocking inlet. Outlet clear but headwall overhangs. Pipe not visible.
Beach Pond Road		Beach-16	Brook running along road edge, appears well stabilized
Bickford Road		Bickford-1	Some run-off eroded channel across road at granite culvert. Road generally in satisfactory condition. Some ditches may be eroded but overall good ditching through out.
Brackett Road	x	Brackett-1	Culvert outlet at edge of road. Inspection completed following overnight rain. Some embankment erosion near end of road however road seems to handle run-off well
Chick Road		Chick-1	Areas of tight embankments with some erosion due to ditches. Some erosion at the culvert outlet near Bickford Road
Cotton Valley Road	x	Cotton-3	To Class VI limits at Brownfield Townline. Some embankment erosion Shoulders/ditches tight in areas but no erosion noted. Some standing water at edge of road where wetlands draining into ditch/shoulder
Cowper Road		Cowper-1	Large puddles and standing water next to road. CPE culverts with either high or buried blocked inverts. Inspection completed after overnight rains
Haines Hill Road		Haines-2	Some areas of moisture in shoulder. Shoulders eroding into headwalls of both major culverts. Run-off bypasses culvert due to shoulder erosion.
Jonathan Hersey Road	x	Hersey-1	Pot holes at very end. Corrugations at Rte. 109A intersection
Jenness Farm Road		Jenness-2	Area with groundwater from field flowing onto surface. Erosion in shoulder. Ditch/shoulder water running at edge of traveled way
Johnson Road	x	Johnson-1	Ditches have some erosion but generally satisfactory. 12" CMP culvert with deteriorating inlet headwall, potentially crushing pipe. Ditching appears to have been recently completed.
Keewaydin Road		Keewaydin-4	Low severity rutting in wheel path wear and slight loss of cross-section. Road damp during inspection
Keewaydin Road	x	Keewaydin-5	Drainage fair on down gradient side of road. Low severity rutting similarly to section 4
New Garden Road	x	Garden-1	Hill near end of maintained section appears to be only section with ditches handling run-off. Some corrugations at Pleasant Valley Road. Some moisture left on roadway during inspections following overnight rains
N. Line Road	x	N. Line-1	Recent ditching and shoulder work with stone stabilization recently completed. Some shoulder and ditch erosion noted in recently ditched areas. Overall good condition. Town water facility located at end of section
North Wakefield Road	x	Wakefield-1	One wet area where significant ground water appears to be entering ditch. Good ditching. Some shoulder erosion near end and evidence of run-off crossing road from driveway.
North Wakefield Road	x	Wakefield-2	Wetland area appears to overtop road in one location near end. Brookfield portion is Class VI and in poor condition
Sandstrom Road		Sandstrom-1	Townline noted as approximately in front of 2-bay garage door. Good shoulder relief through low area otherwise no relief due to cut shoulders. One cut-out on down gradient side for intermediate discharge
Stoddard Road		Stoddard-1	First .02 mile is asphalt in poor condition. Standing water in roadside ditch. Some sediment controls exist along section which need to be cleaned/maintained.
Stoddard Road		Stoddard-3	Top of section near fields has shoulders graded towards road. Ditching present in first part of section
Stoddard Road		Stoddard-5	Water flowing along edge of road from Stonham Class VI. Inspection completed following overnight rains and light thaw of frost in road. Multiple areas of surface runoff draining into shoulders from up gradient areas. Short section of asphalt at College Road in very poor condition.
Trask Mountain Road		Trask-2	Road in overall good condition. Satisfactory ditches are in place and appear stable. Loose aggregate at edge of traveled way entire length. Shoulder bermed at some culverts.

APPENDIX F

- One Page Road Summaries (Priority Roads)

ALLEN ROAD

GENERAL ASSESSMENT

- PCI = varies 22 to 25
- Road is in poor condition
- Poor drainage with standing water in ditches
- Settled cross trenches
- Low priority road serves approximately 10 houses

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Closed drains and underdrains
- Ditching
- Gravel backing
- Year scheduled = 2021



ANAGANCE STREET

GENERAL ASSESSMENT

- PCI = 41
- Evidence of shoulder pumping up
- Sump pump discharge onto road surface creates ponding in rutted areas
- Cracking observed on “cut” side of road likely due to high groundwater and/or poor base materials
- Lower priority residential dead-end road



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3” nominal pavement thickness
- Closed drains and underdrains
- Ditching
- Gravel backing
- Year scheduled = 2022



BASSETT ROAD

GENERAL ASSESSMENT

- PCI = varies 72 to 75
- Transverse and longitudinal cracking
- Alligator cracking in some areas
- Some crack sealing previously completed
- Drainage generally appears satisfactory
- Lower priority road

RECOMMENDED IMPROVEMENTS

- Crack sealing
- Shim and 1.5" overlay
- Gravel backing
- Ditching
- Year scheduled = 2024



BEACH POND ROAD (ASPHALT)

GENERAL ASSESSMENT

- PCI = Varies 100 to 55
- Road transitions from asphalt to gravel multiple times
- Reconstructed between RT 109A and N. Line Road between 2014 and 2016
- Elevated importance and traffic in rebuild area due to access to water treatment plant and transfer station.
- With exception of some ditch erosion, drainage generally satisfactory
- Severe longitudinal cracking in no-re-build areas

RECOMMENDED IMPROVEMENTS

- Previously reconstructed sections
 - Inspect drainage structures and culverts for cleaning
 - Crack sealing
- Reclamation with supplemental stone aggregate
- 4" nominal pavement thickness
- Closed drainage and underdrains
- Large diameter culvert replacement on gravel section
- Ditching
- gravel backing
- Year scheduled = 2029 (may need 2 years due to anticipated budget)



BERRYWOOD DRIVE

GENERAL ASSESSMENT

- PCI = Varies 64 to 38
- Settled pavement patch near Deer Run
- Extensive cracking throughout
- Some areas where shoulder is pumping
- Some guardrail at intersections with Deer Run and Jiminy Drive

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Closed drainage and underdrains
- Gravel backing
- Ditching
- Year scheduled = 2024



BREWSTER HEIGHTS

GENERAL ASSESSMENT

- PCI = Varies 74 to 63
- Drainage in fair condition, some puddling observed at Pleasant Valley Rd.
- Crack sealing work previously completed
- Deteriorated asphalt in upper section likely due to elevated groundwater and base failure
- Lower priority loop road



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Closed drainage and underdrains
- Gravel backing
- Ditching
- 1.5" overlays on better rated sections
- Year scheduled = 2024



BROWN ROAD

GENERAL ASSESSMENT

- PCI = 50
- Severe cracking throughout
- Despite cracking, surface drainage appears functional.
- Cracking could be due to elevated groundwater levels, particularly in cut areas, and base failure
- Lower priority road however traffic maybe elevated compared to similar roads due to Hidden Valley Estates

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Closed drainage and underdrains
- Asphalt curbing/swales
- Gravel backing
- Ditching
- Year scheduled = 2028



BRYANT ROAD

GENERAL ASSESSMENT

- PCI = 31
- Previous shimming completed
- Ditching where observed appears functional but needs cleaning
- Isolated locations where surface water drains onto roadway. Some locations coincide with previous shim work
- Grade crossing with rail trail is rough
- Wetlands encroach close to edge of pavement in some areas



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Closed drainage and underdrains
- Asphalt curbing/swales
- Gravel backing
- Ditching (turf and stone)
- Year scheduled = 2020



CANOPACHE ROAD

GENERAL ASSESSMENT

- PCI = Varies 37 to 32
- Road surface in poor condition
- Drainage systems are in poor condition
- Utility observed 12" to 15" from edge of pavement
- Lower priority road



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Closed drainage and underdrains
- Asphalt curbing/swales
- Gravel backing
- Ditching
- Year scheduled = 2019



CHRISTIAN RIDGE ROAD

GENERAL ASSESSMENT

- PCI = 69
- Additional width noted at Rt 28 intersection due to left turning lane
- Ditching with catch basins observed
- Moderate to severe centerline cracking beyond hospital entrance
- Higher importance/volume road due to hospital entrance

RECOMMENDED IMPROVEMENTS

- Mill and repair centerline
- 1.5" overlay
- Gravel backing
- Ditching
- Year scheduled = 2024



CLARK ROAD

GENERAL ASSESSMENT

- PCI = Varies 94 to 75
- Road is generally in satisfactory condition. With isolated areas of cracking observed
- Low shoulders in some areas
- Crack sealing work previously completed
- Higher importance/volumes due to Genesis Health Center located on Clipper Drive

RECOMMENDED IMPROVEMENTS

- Crack seal
- 1.5" overlay
- Gravel backing
- Ditching
- Year scheduled = 2024



CLIPPER DRIVE

GENERAL ASSESSMENT

- PCI = 74
- Isolated areas of alligator cracking
- No real ditching observed but based on condition roads appears to drain
- Higher importance/traffic as road is access to Genesis Health Center

RECOMMENDED IMPROVEMENTS

- Crack seal
- 1.5" overlay
- Gravel backing
- Ditching
- Year scheduled = 2026



CLOW STREET

GENERAL ASSESSMENT

- PCI = 53
- Low shoulders
- Extensive cracking throughout
- Shallow drainage crossing causing protrusion in road surface
- Generally, a low priority road dead end road. However, the Sewall Trail Head is at end of road



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Asphalt berm/swales
- Gravel backing
- Ditching
- Year scheduled = 2028



COLLEGE ROAD

GENERAL ASSESSMENT

- PCI = Varies 76 to 19
- Section for Westwood (east entrance) to Bryant Road in newer condition than balance of road
- Large areas of shimming through older section of road
- Severe cracking through older section of road
- Sedimentation potential into adjacent wetlands due to shoulder erosion into “cut out” locations to promote drainage in isolated areas
- Large diameter culvert (36” dia +/-) observed to have blocked inlet
- Elevated traffic levels due to collector road status



RECOMMENDED IMPROVEMENTS

- Crushed gravel base (section 1 only)
- Reclamation (rehandled) with supplemental stone aggregate
- 4” nominal pavement thickness (section 1 only)
- Closed drainage and underdrains
- Asphalt curbing/swales
- Evaluate large diameter culvert for replacement
- 1.5” overlay (Section 3)
- Consider implementation of BMPs where sedimentation could occur due to shoulder erosion

COTTON MOUNTAIN ROAD

GENERAL ASSESSMENT

- PCI = 43
- Extensive cracking observed, particularly in the steep sloped areas
- Steep back slopes appear to be eroding or encroach edge of pavement with large trees and protruding ledge
- Drainage structures observed in ditch lines
- Some shoulder erosion noted.
- Lower traffic volume



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Asphalt berm/swales
- Closed drainage and underdrains
- Ditching (turf and stone)
- Gravel backing
- Year scheduled = 2027



CRESCENT LAKE AVENUE

GENERAL ASSESSMENT

- PCI = 69
- Heavier than expected traffic noted. Road appears to be a cut through to avoid the 109/28 intersection.
- Low to moderate severity cracking throughout
- Lower priority road despite traffic volume observed



RECOMMENDED IMPROVEMENTS

- Crack sealing
- 1.5" overlay
- Asphalt swales
- Gravel backing
- Ditching
- Year scheduled = 2024



CRICKET HILL ROAD

GENERAL ASSESSMENT

- PCI = 76
- Some cracking of various types and severities throughout
- Some rutting near intersection with Forest Road
- Drainage appears satisfactory
- Low priority dead end road

RECOMMENDED IMPROVEMENTS

- Crack sealing
- 1.5" overlay
- Gravel backing
- Year scheduled = 2026



CROPLEY HILL ROAD

GENERAL ASSESSMENT

- PCI = 61
- Drainage improvements apparent from trench patching along top section of road
- Drainage swale should be re-graded to better promote run-off into CB
- Low to medium severity cracking
- Low priority road

RECOMMENDED IMPROVEMENTS

- Crack sealing
- 1.5" overlay
- Asphalt swales
- Gravel backing
- Year scheduled = 2019



DEER RUN

GENERAL ASSESSMENT

- PCI = 88
- Roadway overall appears to be in good condition
- Ditching observed in place
- Low severity edge cracking noted
- Some patching observed
- Low priority cul-de-sac road



RECOMMENDED IMPROVEMENTS

- Crack sealing
- 1.5" overlay
- Gravel backing
- Ditching
- Year scheduled = 2025



DOCKSIDE STREET

GENERAL ASSESSMENT

- PCI = 67
- Road is entrance and exit to parking lot for docks.
- Recent utility work apparent due to trench patching observed
- Sedimentation accumulated around CB
- Various types and levels of cracking observed through out

RECOMMENDED IMPROVEMENTS

- Mill and 1.5" overlay
- Year scheduled = 2021



EAGLE TERRACE

GENERAL ASSESSMENT

- PCI = Varies 85 to 79
- Severe edge cracking in areas
- Drainage (culverts and ditching) appears to be in place and functional
- Low priority cul-de-sac road

RECOMMENDED IMPROVEMENTS

- Crack sealing
- 1.5" overlay
- Gravel backing
- Ditching
- Year scheduled = 2029



EAST CLARK ROAD

GENERAL ASSESSMENT

- PCI = 52
- Severe alligator cracking throughout
- Various severities of other cracking types through out
- Drainage in fair condition
- Low priority road

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3” nominal pavement thickness
- Underdrains
- Asphalt curbing
- Gravel backing
- Year Scheduled = 2028



ESTABROOK ROAD

GENERAL ASSESSMENT

- PCI = 53
- Road is access to Brewster Academy Smith Center
- Ditching is in place but needs improvement
- Existing ditching appears to discharge at grade causing puddle on music center walk ways
- Lower priority road



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Underdrains
- Asphalt curbing
- Ditching
- Gravel backing
- Year Scheduled = 2028



FAIRWAY DRIVE

GENERAL ASSESSMENT

- PCI = 67
- Road appears to have been constructed through a wetland area.
- Severe edge cracking and low shoulders observed
- Failed trench repairs

RECOMMENDED IMPROVEMENTS

- Crack sealing
- Shim and 1.5" overlay
- Gravel backing
- Ditching
- Year scheduled = 2021



FILTER BED ROAD

GENERAL ASSESSMENT

- PCI = 50
- Road is access to WWTF
- Loss of cross section observed
- Failed trench repair
- Cross culverts appear to be raised creating bulges in the road

RECOMMENDED IMPROVEMENTS

- Crushed gravel road base
- Reclamation with supplemental stone aggregate
- 4" nominal pavement thickness
- Underdrain
- Gravel backing
- Ditching
- Year scheduled = 2028



FOREST ROAD

GENERAL ASSESSMENT

- Portion Reconstructed in 2013 (End to Hopewell Point Road)
 - PCI = Varies 98 to 91
- Remaining Portion (Rt 109 to Hopewell Point Road)
 - PCI = Varies 86 to 72
- Various cracking throughout older sections
- Low shoulders observed throughout
- Good ditching on newer section, older section needs ditching improvements
- Tree removal may be desired to improve site distance
- Alligator cracking observed in isolated spot of reconstructed area

RECOMMENDED IMPROVEMENTS

- Crack sealing
- 1.5" overlay
- Ditching
- Gravel backing
- Year scheduled = 2025
- Routine maintenance should particularly be completed on a regular basis on section recently reconstructed



FRIAR TUCK WAY

GENERAL ASSESSMENT

- PCI = 73
- Previous crack sealing work completed
- Low shoulders
- Some shoulder erosion observed
- Cross section appears satisfactory
- Lower volume residential loop road

RECOMMENDED IMPROVEMENTS

- Crack sealing
- 1.5" Overlay
- Ditching
- Gravel backing
- Year scheduled = 2027



GOODRICH ROAD

GENERAL ASSESSMENT

- PCI = Varies 67 to 31
- Areas of cross section loss with alligator cracking at centerline
- Low shoulders at off pavement catch basins
- Low volume dead end road

RECOMMENDED IMPROVEMENTS

- Crack sealing
- 1.5" overlay
- Gravel backing
- Year scheduled = 2019



GREENLEAF DRIVE

GENERAL ASSESSMENT

- PCI = 75
- High extent of longitudinal and transverse cracking
- Low shoulders in areas
- Drainage generally appears satisfactory

RECOMMENDED IMPROVEMENTS

- 1.5" Overlay
- Ditching
- Gravel Backing
- Schedule year = 2028



HAINES HILL ROAD

GENERAL ASSESSMENT

- PCI = 38
- Extensive cracking throughout paved sections
- Drainage noted to be fair however standing water observed in some areas adjacent to road outside the ROW

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone
- 3" pavement
- Ditching
- Underdrains and Enclosed drainage
- Scheduled year = 2023



HEMLOCK DRIVE

GENERAL ASSESSMENT

- PCI = 66
- Some low shoulders with signs of erosion
- Moderate longitudinal and transverse cracking
- Drainage generally appears satisfactory however sand on road from gravel drives and previously noted shoulder erosion indicates some drainage concerns in select areas
- Electrical boxes observed within 3' from edge of pavement



RECOMMENDED IMPROVEMENTS

- 1.5" Overlay
- Ditching
- Gravel Backing
- Year scheduled = 2021



HIGH STREET

GENERAL ASSESSMENT

- PCI = 34
- Road surface is in failure
- Extensive cracking
- Paved swales and catch basins observed

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone
- 3" pavement thickness
- Closed drainage system and underdrains
- Asphalt curbing and swales
- Year scheduled = 2019



HIGHLAND TERRACE

GENERAL ASSESSMENT

- PCI = 75
- Low to moderate cracking observed
- Drainage observed to be fair
- Some wetland areas noted in close proximity to edge of pavement

RECOMMENDED IMPROVEMENTS

- 1.5" Overlay
- Ditching
- Gravel Backing
- Year Schedule = 2027



JENNESS FARM ROAD

GENERAL ASSESSMENT

- PCI varies 68 to 90
- Short paved section at top of road appeared to be recently paved
- Longer paved section has poor drainage with ground water percolating through cracks and running along edge of pavement
- Extensive longitudinal and transverse cracking observed on lower paved section
- Larger diameter CPE drain pipe appears to be functioning properly
- Embankment erosion
- Large trees encroaching roadway

RECOMMENDED IMPROVEMENTS

- 1.5" Overlay
- Ditching
- Gravel Backing
- Underdrains should be considered
- Year Scheduled = 2021



JIMINY DRIVE

GENERAL ASSESSMENT

- PCI = 46
- Ditching and drainage appear satisfactory
- Extensive longitudinal and transverse cracking observed
- Low shoulders in some areas

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Enclosed drainage systems
- Ditching
- Gravel backing
- Scheduled year = 2025



KING STREET

GENERAL ASSESSMENT

- PCI varies 49 to 69
- Some rutting at Bay Street
- Moderate rutting
- Poor drainage due to lawns graded towards roadway
- Utility poles measured to be approximately 1' away from pavement



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" pavement
- Enclosed drainage and underdrains
- Vertical curbing
- Gravel backing
- Year scheduled - 2027



LAKEVIEW DRIVE

GENERAL ASSESSMENT

- PCI varies 61 to 72
- Severe cracking in isolated areas
- Ditches exist on up-gradient side of road
- Some shoulder erosion
- Low shoulders

RECOMMENDED IMPROVEMENTS

- 1.5" overlay
- Reclamation with supplemental stone aggregate
- 3" pavement thickness
- Closed drainage and underdrains
- Gravel backing
- Ditching
- Year scheduled = 2024



MAPLEWOOD DRIVE

GENERAL ASSESSMENT

- PCI varies 38 to 69
- Section 4 is a dead end with shoulders graded towards the road
- Rutting is isolated areas with puddling on the roadway
- Some area of good ditching
- Moderate and severe cracking through most of the roadway



RECOMMENDED IMPROVEMENTS

- Reclamation
- 3" nominal pavement thickness
- Gravel backing
- Ditching
- Asphalt Swales in isolated areas
- Year scheduled = 2025



MARTIN HILL ROAD

GENERAL ASSESSMENT

- PCI = 16
- Road has failed
- Groundwater flowing through pavement
- Poor shoulders

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Closed drains and underdrains
- Ditching
- Underdrains
- Year scheduled = 2019



MILL STREET

GENERAL ASSESSMENT

- PCI varies 81 to 56
- Settlement and rutting adjacent to wetland area that appears higher than roadway
- Some road drainage drains onto adjacent to roadway



RECOMMENDED IMPROVEMENTS

- Reclamation and supplemental stone aggregate
- 3" nominal pavement thickness
- Closed drainage and underdrains
- Year scheduled = 2028



OLD MILL DRIVE

GENERAL ASSESSMENT

- PCI = 69
- Some shoulder areas grade towards pavement. Roadway must still drain as surface is in fair shape.
- Moderate cracking throughout



RECOMMENDED IMPROVEMENTS

- Crack seal
- 1.5" overlay
- Gravel backing
- Year Scheduled = 2024



PARK AVENUE

GENERAL ASSESSMENT

- PCI = 34
- Gravel section (top of hill) in satisfactory shape.
- Paved section in poor condition
- Extensive cracking throughout
- Road very narrow due to retaining wall at intersection with Rt 28. Sight distance did not seem impacted

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Asphalt berm
- Closed drainage and underdrains
- Gravel backing
- Year scheduled 2019



PARTRIDGE DRIVE

GENERAL ASSESSMENT

- PCI varies 55 to 58
- Slight wheel rutting with runoff in wheel path
- Needs ditching in some areas
- Shoulder erosion observed in areas where ditches exist

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Asphalt berms
- Underdrains
- Ditching
- Gravel backing
- Year schedule = 2028



PINE STREET

GENERAL ASSESSMENT

- PCI varies 44 to 52
- Edge of pavement no visible due to quantity of needles on ground
- Road appears to have been previously shimmed
- Road in poor condition
- Traffic observed to be heavy for type of road. Assumed that used as short cut to avoid intersection at RT 109 and RT 28



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Vertical granite curbing
- Underdrains
- Ditching
- Gravel backing
- Consider posting road as "No Thru Traffic"
- Year scheduled = 2027



PLEASANT VALLEY ROAD

GENERAL ASSESSMENT

- PCI varies 32 to 89
- Between Rt 28 and New Garden Road in poor condition
- Some sections beyond New Garden Road previously overlaid
- Short section of deteriorated pavement in overlaid area near Sunset Point Road.
- CBs present in some areas
- Some shoulder erosion in areas
- Section 15 assessed is beyond Town line but reported to be maintained by Town
- Large diameter culverts appear to be previously reconstructed, however gabion walls could be leaning.



RECOMMENDED IMPROVEMENTS

- 1.5" overlay on previously overlay/reconstruction areas
- Reclamation and supplemental stone aggregate on areas not previously reconstructed
- 4" nominal pavement thickness
- Closed drainage systems and underdrains
- Asphalt berms
- Gravel backing
- Ditching
- Year Schedule = 2021 & 2022 (2 years due to estimated budget)

POINTE SEWALL ROAD

GENERAL ASSESSMENT

- PCI = 41
- Ditching appeared to be in place where needed
- Isolated areas of sediment transport and shoulder erosion
- X-section generally satisfactory except for isolated area and rutting
- Significant alligator cracking
- Moderate longitudinal and transverse cracking



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" pavement nominal thickness
- Closed drainage systems and underdrains
- Ditching
- Gravel backing
- Year schedule = 2026



RIVER STREET

GENERAL ASSESSMENT

- PCI varies 58 to 74
- Crown and cross-sectional shape appear satisfactory despite level of cracking
- Very low shoulders in some areas
- Moderate alligator throughout
- Moderate longitudinal and transverse cracking throughout
- Drainage satisfactory



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal thickness pavement
- Underdrains
- Gravel backing
- Ditching
- 1.5" overlay for section 1
- Year scheduled = 2027



SEWALL ROAD

GENERAL ASSESSMENT

- PCI varies 61 to 95
- Section 3 appeared to have been reconstructed more recently but section 1 and 2 also in fair condition
- Isolated puddle areas otherwise road side drainage appears satisfactory with ditches, shoulders, and asphalt swales
- Areas with stone walls tight to edge of pavement
- Low severity cracking through out
- Marina located on road



RECOMMENDED IMPROVEMENTS

- Crack sealing
- 1.5" overlay
- Gravel backing
- Ditching
- Milling in areas with curbing to maintain appropriate reveal
- Year scheduled = 2019



SLEEPY HOLLOW ROAD

GENERAL ASSESSMENT

- PCI = 80
- Surface drainage appears satisfactory
- Potential erosion in bottom of ditches
- Low to moderate cracking in all categories

RECOMMENDED IMPROVEMENTS

- 1.5" overlay
- Crack sealing
- Gravel backing
- Ditch maintenance
- Year scheduled = 2029



SPRINGFIELD POINT ROAD

GENERAL ASSESSMENT

- PCI varies 72 to 88
- Road reconstructed in _____
- Low shoulder areas
- Low severity cracking throughout
- Road is in fair condition overall

RECOMMENDED IMPROVEMENTS

- 1.5" overlay
- Crack sealing
- Gravel backing
- Ditch maintenance
- Year scheduled = 2024



STODDARD ROAD

GENERAL ASSESSMENT

- PCI = 38
- Moderate and severe cracking throughout
- Poor drainage in areas, standing water in the gravel sections
- Some gravel sections have significant amounts of surface water draining from embankment in to shoulder/ditch areas



RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Ditching (turf and stone)
- Closed drainage and underdrains
- Significant regrading of some gravel sections to raise road and eliminate embankments and provide ditches
- Large diameter culvert replacements
- Year scheduled = 2026



STONEHAM ROAD

GENERAL ASSESSMENT

- PCI ranges 13 to 73
- Section 1 has failed
 - Narrow road cut into hill side
 - Standing water
 - Extensive cracking
 - Moderate rutting
 - Retaining walls on down gradient side in areas
- Sections 2 and 3 rebuilt in 2013
 - Moderate longitudinal and transverse cracking through out
 - Inlet or outlet not observed for flowing culvert crossing near N. Wakefield Road. CPE outlet pipe observed is dry (overflow?)

RECOMMENDED IMPROVEMENTS

- Section 1
 - 10" crushed gravel, rehandled reclamation with supplemental stone aggregate
 - Closed drainage and underdrains
 - Asphalt swales/berms
 - Ditching
 - Gravel backing
- Section 2 and 3
 - 1.5" overlay
 - Crack sealing
 - Asphalt curbing
 - Underdrains
 - Gravel backing
 - Ditch maintenance



- Year scheduled = 2019/2020

TRASK MOUNTAIN ROAD

GENERAL ASSESSMENT

- PCI = 47
- Moderate cracking though out
- Some ditching on lower half
- Exposed ledge in shoulder area of road
- Gravel section in satisfactory condition with good ditching that appears stable

RECOMMENDED IMPROVEMENTS

- Paved section
 - Reclamation with supplemental stone aggregate
 - Underdrain
 - Ledge removal
 - Gravel backing
 - Ditching
 - Year scheduled = 2026
- Gravel Section
 - Routine maintenance grading
 - Ditching



TREADWELL LANE

GENERAL ASSESSMENT

- PCI = 72
- Moderate cracking through out
- Drainage appears satisfactory
- Some ditches with CBs

RECOMMENDED IMPROVEMENTS

- 1.5" overlay
- Milling may need to be reviewed for grading in areas with curbing
- Crack sealing
- Gravel backing
- Ditch maintenance
- Year scheduled = 2025



TROTTING TRACK ROAD

GENERAL ASSESSMENT

- PCI varies 32 to 60
- Moderate and severe cracking through out
- Previous shimming completed
- Large embankment areas across from rec fields appears to be eroding
- Ditching where present appears functional



RECOMMENDED IMPROVEMENTS

- 10" crushed gravel, rehandled reclamation with supplemental stone aggregate
- 4" nominal pavement thickness
- Closed drainage and underdrains
- Large diameter culvert replacement
- Gravel backing
- Ditching
- Year scheduled = 2024 & 2025 (multiple years due to estimated budget).



UNION STREET

GENERAL ASSESSMENT

- PCI varies 73 to 89
- Road overall in good condition
- Access to Town Hall parking lot
- Some trench patching
- Curbed with close drainage system

RECOMMENDED IMPROVEMENTS

- Mill with 1.5" overlay
- Year scheduled = 2025



UPPER TRASK MOUNTAIN ROAD

GENERAL ASSESSMENT

- PCI = 55
- Moderate cracking through out
- Trench patching from previous drainage installations
- Ditches with catch basins

RECOMMENDED IMPROVEMENTS

- Reclamation with supplemental stone aggregate
- 3" nominal pavement thickness
- Underdrains
- Gravel backing
- Ditching
- Year schedule = 2028



VARNEY ROAD

GENERAL ASSESSMENT

- PCI varies 75 to 78
- Potential when rutting apparent due to run-off path
- Runoff and sand from adjacent properties flowing into roadway
- Low severity cracking with exception of severe centerline cracking
- Section 1 is curbed on upgradient sides with CBs

RECOMMENDED IMPROVEMENTS

- 1.5" overlay
- Review need for milling in curbed areas prior to overlay
- Review condition of large diameter culvert prior to overlay
- Gravel backing
- Ditching
- Year schedule = 2028



WAUMBEC ROAD

GENERAL ASSESSMENT

- PCI varies 68 to 71
- Low shoulders at some CBs
- Minor wheel path ruts observed
- Some ditching tight to edge of pavement
- Previous crack seal work completed in areas
- Some stone ditches
- Road may be used as a cut through to avoid down town, 18-wheeler tractor trailer observed driving through



RECOMMENDED IMPROVEMENTS

- Post as “No Thru Trucking”
- Crack sealing
- 1.5” overlay
- Ditching (turf and stone)
- Gravel backing
- Year scheduled = 2023



APPENDIX G

- Suggested Repair Strategies

Recommended Road Repair Strategies - Asphalt Roads

December 14, 2018

Section Name	GIS ID (R###)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
Routine Maintenance (PCI 90 to 100)															
Beach-1	614	98	0.27	1,430	23	32,800	3	3	Routine Maintenance	Gravel backing	LF	\$1.10	1,500	\$1,650.00	Road reconstructed between 2014 and 2016. Ditch maintenance assumed on 25% length of roadway. Complete crack seal within 5 years of reconstruction. Crack sealing assumes 15% of roadway.
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Crack Sealing	SF	\$2.00	4,920	\$9,840.00	
Beach-2	615	98	0.50	2,640	23	60,800	3	3	Routine Maintenance	Gravel backing	LF	\$1.10	2,700	\$2,970.00	
										Maintain Ditch (Turf)	LF	\$11.70	700	\$8,190.00	
										Crack Sealing	SF	\$2.00	9,120	\$18,240.00	
Beach-3	619	100	0.18	960	23	21,900	3	3	Routine Maintenance	Gravel backing	LF	\$1.10	1,000	\$1,100.00	
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00	
										Crack Sealing	SF	\$2.00	3,285	\$6,570.00	
Beach-4	621	100	0.25	1,320	23	30,400	3	3	Routine Maintenance	Gravel backing	LF	\$1.10	1,400	\$1,540.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Crack Sealing	SF	\$2.00	4,560	\$9,120.00	
Beach-5	692	100	0.28	1,480	23	34,100	3	3	Routine Maintenance	Gravel backing	LF	\$1.10	1,500	\$1,650.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Crack Sealing	SF	\$2.00	5,115	\$10,230.00	
Beach-6	622, 744	98	0.65	3,440	23	79,000	3	3	Routine Maintenance	Gravel backing	LF	\$1.10	3,500	\$3,850.00	
										Maintain Ditch (Turf)	LF	\$11.70	900	\$10,530.00	
										Crack Sealing	SF	\$2.00	11,850	\$23,700.00	
Beck-1	N/A	98	0.22	1,170	27	31,400	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	1,200	\$1,320.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	200	\$5,460.00	
Bernard-1	65	98	0.05	270	21	5,600	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	300	\$330.00	
										Maintain Ditch (Turf)	LF	\$11.70	200	\$2,340.00	
Birch-1	97	96	0.15	800	18	14,300	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	800	\$880.00	
										Maintain Ditch (Turf)	LF	\$11.70	600	\$7,020.00	
Central-1	134	93	0.05	270	38	10,100	2	3	Routine Maintenance	Crack Sealing	SF	\$2.00	300	\$600.00	
Chipmunk-1	62	85	0.10	530	22	11,700	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	600	\$660.00	PCI score less than 90 due to drainage conditions at partridge intersection. Stone ditch recommended at intersection with Partridge to mitigate observed erosion.
										Maintain Ditch (Erosion Stone)	LF	\$27.30	200	\$5,460.00	
										Crack Sealing	SF	\$2.00	1,170	\$2,340.00	
Clark-4	411	91	0.13	690	20	13,800	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	700	\$770.00	Crack sealing along edges where edge and longitudinal cracking is present.
										Maintain Ditch (Turf)	LF	\$11.70	200	\$2,340.00	
										Crack Sealing	SF	\$2.00	1,380	\$2,760.00	
Clark-5	412	94	0.06	320	20	6,400	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	400	\$440.00	Crack sealing along edges where edge cracking is present.
										Maintain Ditch (Turf)	LF	\$11.70	100	\$1,170.00	
										Crack Sealing	SF	\$2.00	320	\$640.00	
Cotton Valley-1	655	83	0.58	690	22	67,400	2	1	Routine Maintenance	Gravel backing	LF	\$1.10	3,100	\$3,410.00	Road in satisfactory condition except for centerline cracking which is reason for PCI less than 90. Road section should be treated similarly to Section 2. If center line cracking becomes more severe the Town could consider milling the centerline and constructing a patch.
										Maintain Ditch (Turf)	LF	\$11.70	800	\$9,360.00	
										Mill and Patch Center Line	LF	\$5.70	1,600	\$9,120.00	
										Crack Sealing	SF	\$2.00	3,370	\$6,740.00	
Cotton Valley-2	656	90	0.77	4,070	22	89,500	2	1	Routine Maintenance	Gravel backing	LF	\$1.10	4,100	\$4,510.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,100	\$12,870.00	
										Crack Sealing	SF	\$2.00	4,475	\$8,950.00	
Cross-1	240	98	0.14	740	20	14,800	2	1	Routine Maintenance	Gravel backing	LF	\$1.10	800	\$880.00	Reconstructed in 2014. Complete crack sealing as needed within 5 years of reconstruction.
										Crack Sealing	SF	\$2.00	740	\$1,480.00	
Depot-1	438	88	0.05	270	30	8,000	2	3	Routine Maintenance	Crack Sealing	SF	\$2.00	400	\$800.00	PCI score less than 90 due to longitudinal cracking previously crack sealed. Road is in satisfactory condition and only routine maintenance is recommended at this time.
Forest-9	490, 491	91	0.36	1,910	21	40,000	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	2,000	\$2,200.00	Reconstructed in 2013/2014. Cracks should be sealed as soon as practical to preserve road surface.
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	500	\$13,650.00	
										Crack Sealing	SF	\$2.00	2,000	\$4,000.00	
Forest-10	492	98	0.14	740	21	15,600	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	800	\$880.00	
										Crack Sealing	SF	\$2.00	780	\$1,560.00	
Forest-11	493	96	0.08	430	21	8,900	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	500	\$550.00	
										Maintain Ditch (Turf)	LF	\$11.70	200	\$2,340.00	
										Crack Sealing	SF	\$2.00	445	\$890.00	
Forest-12	41	98	0.18	960	21	20,000	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	1,000	\$1,100.00	Reconstructed in 2013/2014. Complete crack sealing as needed within 5 years of reconstruction.
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00	
										Crack Sealing	SF	\$2.00	1,000	\$2,000.00	
Forest-13	494	96	0.06	320	21	6,700	1	1	Routine Maintenance	Gravel backing	LF	\$1.10	400	\$440.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Crack Sealing	SF	\$2.00	335	\$670.00	

Section Name	GIS ID (R###)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments			
										Alternative	Unit	Unit Price	Quantity	Total Cost				
Union-1	432	89	0.04	220	24	5,100	1	1	Maintenance Overlays	Mill (1.5" Depth) and 1.5" Overlay	SF	\$1.11	5,100	\$5,661.00	Consider milling prior to overlay to retain reveal on asphalt curbing.			
Union-2	114	73	0.07	370	30	11,100	3	3	Maintenance Overlays	Mill (1.5" Depth) and 1.5" Overlay	SF	\$1.11	11,000	\$12,210.00		Consider milling prior to overlay to retain reveal on asphalt curbing.		
Varney-1	565	75	0.13	690	24	16,500	1	2	Maintenance Overlays	Mill (1.5" Depth) and 1.5" Overlay	SF	\$1.11	16,500	\$18,315.00	Consider milling prior to overlay to retain reveal on asphalt curbing.			
Varney-2	121 & 717	78	0.43	2,280	19	43,200	1	1	Maintenance Overlays	Gravel backing	LF	\$1.10	400	\$440.00				
										Crack Sealing	SF	\$2.00	4,320	\$8,640.00				
										1.5" Overlay	SF	\$0.71	43,200	\$30,672.00				
										Gravel backing	LF	\$1.10	2,300	\$2,530.00				
										Maintain Ditch (Turf)	LF	\$11.70	1,900	\$22,230.00				
Waumbec-1	171	68	0.58	3,070	24	73,500	2	2	Maintenance Overlays	Crack Sealing	SF	\$2.00	7,350	\$14,700.00	Ditches generally seem to be fairly stable and excessive erosion not noted. Care should be taken to not disturbed properly stabilized areas during routine ditch maintenance, particularly on steeper slopes			
										Maintain Ditch (Turf)	LF	\$11.70	2,500	\$29,250.00				
										1.5" Overlay	SF	\$0.71	73,500	\$52,185.00				
										Gravel backing	LF	\$1.10	3,100	\$3,410.00				
										Crack Sealing	SF	\$2.00	1,050	\$2,100.00				
Waumbec-2	542	71	0.09	480	22	10,500	2	2	Maintenance Overlays	Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	Ditches generally seem to be fairly stable and excessive erosion not noted. Care should be taken to not disturbed properly stabilized areas during routine ditch maintenance, particularly on steeper slopes			
										1.5" Overlay	SF	\$0.71	10,500	\$7,455.00				
										Gravel backing	LF	\$1.10	500	\$550.00				
										Crack Sealing	SF	\$2.00	3,720	\$7,440.00				
Waumbec-3	539	69	0.32	1,690	22	37,200	2	2	Maintenance Overlays	Maintain Ditch (Erosion Stone)	SF	\$27.30	600	\$16,380.00	Ditches generally seem to be fairly stable and excessive erosion not noted. Care should be taken to not disturbed properly stabilized areas during routine ditch maintenance, particularly on steeper slopes			
										Maintain Ditch (Turf)	LF	\$11.70	1,200	\$14,040.00				
										1.5" Overlay	SF	\$0.71	37,200	\$26,412.00				
										Gravel backing	LF	\$1.10	1,700	\$1,870.00				
Waumbec-4	153	69	0.27	1,430	22	31,400	2	2	Maintenance Overlays	Crack Sealing	SF	\$2.00	3,140	\$6,280.00	Ditches generally seem to be fairly stable and excessive erosion not noted. Care should be taken to not disturbed properly stabilized areas during routine ditch maintenance, particularly on steeper slopes			
										Maintain Ditch (Turf)	LF	\$11.70	1,200	\$14,040.00				
										1.5" Overlay	SF	\$0.71	31,400	\$22,294.00				
										Gravel backing	LF	\$1.10	1,500	\$1,650.00				
Willow-1	93	58	0.07	370	15	5,600	1	1	Maintenance Overlays	Crack Sealing	SF	\$2.00	600	\$1,200.00	Road dead ends at rail trail and has one house. Thouse PCI is lower than 65, only maintenance overlays recommended. Roadway can be monitored for future reconstruction following overlays.			
										1" Overlay	SF	\$0.47	5,600	\$2,632.00				
										Gravel backing	LF	\$1.10	1,500	\$1,650.00				
21.08											Overlay Total: \$3,040,651.56							
											Yearly Cost (10 years) \$304,065.16							
Reconstruction (PCI 0 to 65)																		
Abanaukee-1	241, 693	56	0.78	4,120	22	90,700	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	90,700	\$334,300.00				
										Maintain Ditch (Turf)	LF	\$11.70	2,100	\$24,570.00				
										Underdrain - 6" (one side)	LF	\$32.00	2,100	\$67,200.00				
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	600	\$30,780.00				
										Construct Enclosed Drainage	LF	\$75.50	900	\$67,950.00				
										Gravel backing	LF	\$1.10	4,200	\$4,620.00				
Allen-1	289	25	0.18	960	22	21,000	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	21,000	\$77,500.00				
										Supplemental Stone for Reclaim	SF	\$0.22	21,000	\$4,620.00				
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00				
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00				
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	100	\$5,130.00				
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00				
Allen-2	694	22	0.08	430	22	9,300	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	9,300	\$34,300.00				
										Supplemental Stone for Reclaim	SF	\$0.22	9,300	\$2,046.00				
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00				
										Underdrain - 6" (one side)	LF	\$32.00	300	\$9,600.00				
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	100	\$5,130.00				
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00				
Gravel backing	LF	\$1.10	500	\$550.00														

Section Name	GIS ID (R##)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
Anagance-1	245	41	0.22	1,170	22	25,600	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	25,600	\$94,400.00	
										Supplemental Stone for Reclaim	SF	\$0.22	25,600	\$5,632.00	
										Maintain Ditch (Turf)	LF	\$11.70	600	\$7,020.00	
										Underdrain - 6" (one side)	LF	\$32.00	600	\$19,200.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	450	\$23,085.00	
										Construct Enclosed Drainage	LF	\$75.50	400	\$30,200.00	
Gravel backing	LF	\$1.10	1,200	\$1,320.00											
Beach-7	625	55	0.67	3,540	20	70,800	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	70,800	\$325,100.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,800	\$21,060.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	900	\$24,570.00	
										Underdrain - 6" (one side)	LF	\$32.00	1,800	\$57,600.00	
										Construct Enclosed Drainage	LF	\$75.50	800	\$60,400.00	
										Gravel backing	LF	\$1.10	3,600	\$3,960.00	
Beach-8	626	64	0.20	1,060	20	21,200	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	21,200	\$97,400.00	
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	300	\$8,190.00	
										Underdrain - 6" (one side)	LF	\$32.00	600	\$19,200.00	
										Construct Enclosed Drainage	LF	\$75.50	400	\$30,200.00	
										Gravel backing	LF	\$1.10	1,100	\$1,210.00	
Beach-9	718	58	0.45	2,380	20	47,600	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	47,600	\$218,600.00	
										Maintain Ditch (Turf)	LF	\$11.70	600	\$7,020.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	600	\$16,380.00	
										Underdrain - 6" (one side)	LF	\$32.00	1,200	\$38,400.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	300	\$15,390.00	
										Construct Enclosed Drainage	LF	\$75.50	500	\$37,750.00	
Gravel backing	LF	\$1.10	2,400	\$2,640.00											
Beach-13	720	57	0.18	960	20	19,100	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	19,100	\$87,700.00	
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	300	\$8,190.00	
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	300	\$15,390.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
Gravel backing	LF	\$1.10	1,000	\$1,100.00											
Berrywood-1	474	64	0.06	320	21	6,700	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	6,700	\$24,700.00	
										Supplemental Stone for Reclaim	SF	\$0.22	6,700	\$1,474.00	
										Maintain Ditch (Turf)	LF	\$11.70	200	\$2,340.00	
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	150	\$7,695.00	
										Construct Enclosed Drainage	LF	\$75.50	100	\$7,550.00	
Gravel backing	LF	\$1.10	400	\$440.00											
Berrywood-2	475	55	0.09	480	21	10,000	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	10,000	\$36,900.00	
										Supplemental Stone for Reclaim	SF	\$0.22	10,000	\$2,200.00	
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00	
										Underdrain - 6" (one side)	LF	\$32.00	300	\$9,600.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	150	\$7,695.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
Gravel backing	LF	\$1.10	500	\$550.00											
Berrywood-3	39	38	0.13	690	21	14,500	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	14,500	\$53,500.00	
										Supplemental Stone for Reclaim	SF	\$0.22	14,500	\$3,190.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Underdrain - 6" (one side)	LF	\$32.00	400	\$12,800.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	150	\$7,695.00	
										Construct Enclosed Drainage	LF	\$75.50	300	\$22,650.00	
Gravel backing	LF	\$1.10	700	\$770.00											
Blackberry-1	88	55	0.17	900	22	19,800	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	19,800	\$73,000.00	
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00	
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	150	\$7,695.00	
										Construct Enclosed Drainage	LF	\$75.50	300	\$22,650.00	

Section Name	GIS ID (R###)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
Brewster-3	250, 379	63	0.25	1,320	22	29,100	1	1	Reconstruction	Gravel backing	LF	\$1.10	900	\$990.00	
										8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	29,100	\$107,300.00	
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	120	\$6,156.00	
										Construct Enclosed Drainage	LF	\$75.50	300	\$22,650.00	
										Gravel backing	LF	\$1.10	900	\$990.00	
Brown-1	211	50	0.30	1,590	21	33,300	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	33,300	\$122,800.00	Consider asphalt curbing (or swales) in areas where embankment is tight to edge of pavement
										Supplemental Stone for Reclaim	SF	\$0.22	33,300	\$7,326.00	
										Curbing - Asphalt Berm	LF	\$19.50	300	\$5,850.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,000	\$11,700.00	
										Underdrain - 6" (one side)	LF	\$32.00	400	\$12,800.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	100	\$5,130.00	
										Construct Enclosed Drainage	LF	\$75.50	300	\$22,650.00	
Gravel backing	LF	\$1.10	1,590	\$1,749.00											
Bryant-1	309	31	1.22	6,450	21	135,300	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	135,300	\$498,681.30	Budget for enclosed drainage intended to include replacement of large diameter culvert crossings (~\$150,000).
										Supplemental Stone for Reclaim	SF	\$0.22	135,300	\$29,766.00	
										Curbing - Asphalt Berm	LF	\$19.50	1,000	\$19,500.00	
										Maintain Ditch (Turf)	LF	\$11.70	2,000	\$23,400.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	750	\$20,475.00	
										Underdrain - 6" (one side)	LF	\$32.00	2,000	\$64,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	800	\$41,040.00	
Construct Enclosed Drainage	LF	\$75.50	3,000	\$226,500.00											
Gravel backing	LF	\$1.10	6,450	\$7,095.00											
Canopache-1	374	37	0.15	800	21	16,700	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	16,700	\$61,600.00	Utility pole within 12" of edge of pavement should be relocated.
										Supplemental Stone for Reclaim	SF	\$0.22	16,700	\$3,674.00	
										Curbing - Asphalt Berm	LF	\$19.50	200	\$3,900.00	
										Maintain Ditch (Turf)	LF	\$11.70	600	\$7,020.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	120	\$6,156.00	
										Gravel backing	LF	\$1.10	800	\$880.00	
										8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	5,600	\$20,700.00	
Canopache-2	697	32	0.05	270	21	5,600	1	1	Reconstruction	Supplemental Stone for Reclaim	SF	\$0.22	5,600	\$1,232.00	
										Curbing - Asphalt Berm	LF	\$19.50	300	\$5,850.00	
										Maintain Ditch (Turf)	LF	\$11.70	200	\$2,340.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	100	\$5,130.00	
										Gravel backing	LF	\$1.10	270	\$297.00	
										8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	9,900	\$36,500.00	
										Supplemental Stone for Reclaim	SF	\$0.22	9,900	\$2,178.00	
Clow-1	143	53	0.11	590	17	9,900	2	1	Reconstruction	Asphalt Swales	LF	\$16.90	500	\$8,450.00	Road serves cross country ski center. Evaluate existing closed drainage systems for replacement
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Construct Enclosed Drainage	LF	\$75.50	300	\$22,650.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	210	\$10,773.00	
										Gravel backing	LF	\$1.10	590	\$649.00	
										10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	93,200	\$593,100.00	
										Supplemental Stone for Reclaim	SF	\$0.22	93,200	\$20,504.00	
College-1	283	19	0.84	4,440	21	93,200	2	1	Reconstruction	Curbing - Asphalt Berm	LF	\$19.50	500	\$9,750.00	Road reconstructed in 2018 following inspection
										Maintain Ditch (Turf)	LF	\$11.70	2,000	\$23,400.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	500	\$13,650.00	
										Underdrain - 6" (one side)	LF	\$32.00	2,000	\$64,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	800	\$41,040.00	
										Construct Enclosed Drainage	LF	\$75.50	1,000	\$75,500.00	
										Gravel backing	LF	\$1.10	4,400	\$4,840.00	
College-2	650, 651	56	0.33	1,750	21	36,600	2	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	36,600	\$168,100.00	Road reconstructed in 2018 following inspection
										Asphalt Swales	LF	\$16.90	500	\$8,450.00	
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Construct Enclosed Drainage	LF	\$75.50	300	\$22,650.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	450	\$23,085.00	
										Gravel backing	LF	\$1.10	590	\$649.00	
										Gravel backing	LF	\$1.10	590	\$649.00	

Section Name	GIS ID (R##)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
Cotton Mtn-1	657	43	0.52	2,750	22	60,500	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	60,500	\$223,000.00	Additional slope stabilization should be considered at the each end of the road where steep embankments appear to be eroded and falling
										Supplemental Stone for Reclaim	SF	\$0.22	60,500	\$13,310.00	
										Curbing - Asphalt Berm	LF	\$19.50	300	\$5,850.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,000	\$11,700.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	1,000	\$27,300.00	
										Underdrain - 6" (one side)	LF	\$32.00	2,000	\$64,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	800	\$41,040.00	
										Construct Enclosed Drainage	LF	\$75.50	600	\$45,300.00	
Gravel backing	LF	\$1.10	2,750	\$3,025.00											
East Clark-1	109	52	0.10	530	24	12,700	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	12,700	\$46,900.00	
										Supplemental Stone for Reclaim	SF	\$0.22	12,700	\$2,794.00	
										Curbing - Asphalt Berm	LF	\$19.50	300	\$5,850.00	
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Gravel backing	LF	\$1.10	2,750	\$3,025.00	
Estabrook-1	105	53	0.15	800	22	17,500	2	2	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	17,500	\$80,400.00	Additional pavement thickness recommended do to Brewster Academy traffic to parking lot and facility. Drainage needs improvement across sidewalk to field house
										Supplemental Stone for Reclaim	SF	\$0.22	17,500	\$3,850.00	
										Maintain Ditch (Turf)	LF	\$11.70	800	\$9,360.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	120	\$6,156.00	
										Underdrain - 6" (one side)	LF	\$32.00	600	\$19,200.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
Gravel backing	LF	\$1.10	2,750	\$3,025.00											
Filterbed-1	558	50	0.21	1,110	21	23,300	1	3	Reconstruction	10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	23,300	\$148,300.00	Heavier cross section recommended due to access to sewer treatment plant. Curbing provided so that existing can be reset following road improvement work
										Supplemental Stone for Reclaim	SF	\$0.22	23,300	\$5,126.00	
										Curbing - Vertical Granite	LF	\$40.00	200	\$8,000.00	
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	800	\$41,040.00	
										Gravel backing	LF	\$1.10	2,750	\$3,025.00	
Green-1	106	58	0.12	640	18	11,500	2	2	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	11,500	\$52,800.00	
										Curbing - Asphalt Berm	LF	\$19.50	300	\$5,850.00	
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Construct Enclosed Drainage	LF	\$75.50	600	\$45,300.00	
										Gravel backing	LF	\$1.10	640	\$704.00	
Haines-1	641	38	0.54	2,860	22	62,800	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	62,800	\$231,500.00	
										Supplemental Stone for Reclaim	SF	\$0.22	62,800	\$13,816.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,500	\$17,550.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	1,500	\$40,950.00	
										Underdrain - 6" (one side)	LF	\$32.00	2,000	\$64,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	200	\$10,260.00	
										Construct Enclosed Drainage	LF	\$75.50	1,000	\$75,500.00	
										Gravel backing	LF	\$1.10	2,860	\$3,146.00	
Haines-3	216, 643	32	0.75	3,960	20	79,200	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	79,200	\$292,000.00	Increase road elevation in areas where wetlands are encroaching with standing water almost to edge of pavement
										Supplemental Stone for Reclaim	SF	\$0.22	79,200	\$17,424.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,500	\$17,550.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	1,500	\$40,950.00	
										Underdrain - 6" (one side)	LF	\$32.00	2,000	\$64,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	300	\$15,390.00	
										Construct Enclosed Drainage	LF	\$75.50	1,000	\$75,500.00	
										Gravel backing	LF	\$1.10	3,960	\$4,356.00	
High-1	96		0.06	320	16	5,100	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	5,100	\$18,800.00	
										Supplemental Stone for Reclaim	SF	\$0.22	5,100	\$1,122.00	
										Curbing - Asphalt Berm	LF	\$19.50	300	\$5,850.00	
										Underdrain - 6" (one side)	LF	\$32.00	600	\$19,200.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	200	\$10,260.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
Gravel backing	LF	\$1.10	320	\$352.00											

Section Name	GIS ID (R##)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
Jiminy-1	60	46	0.23	1,220	21	25,600	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	25,600	\$94,400.00	
										Supplemental Stone for Reclaim	SF	\$0.22	25,600	\$5,632.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,000	\$11,700.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	300	\$15,390.00	
										Construct Enclosed Drainage	LF	\$75.50	1,000	\$75,500.00	
Gravel backing	LF	\$1.10	1,220	\$1,342.00											
Keewaydin-1	521	32	0.14	740	17	12,600	2	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	12,600	\$46,500.00	
										Supplemental Stone for Reclaim	SF	\$0.22	12,600	\$2,772.00	
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	300	\$15,390.00	
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Construct Enclosed Drainage	LF	\$75.50	500	\$37,750.00	
Gravel backing	LF	\$1.10	740	\$814.00											
Keewaydin-2	23	23	0.14	740	17	12,600	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	12,600	\$46,500.00	
										Supplemental Stone for Reclaim	SF	\$0.22	12,600	\$2,772.00	
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	300	\$15,390.00	
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Construct Enclosed Drainage	LF	\$75.50	500	\$37,750.00	
Gravel backing	LF	\$1.10	740	\$814.00											
Keewaydin-3	701	28	0.14	740	18	13,400	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	13,400	\$49,400.00	
										Supplemental Stone for Reclaim	SF	\$0.22	13,400	\$2,948.00	
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	300	\$15,390.00	
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Construct Enclosed Drainage	LF	\$75.50	500	\$37,750.00	
Gravel backing	LF	\$1.10	740	\$814.00											
King-1	117	49	0.17	900	18	16,200	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	16,200	\$59,800.00	
										Supplemental Stone for Reclaim	SF	\$0.22	16,200	\$3,564.00	
										Curbing - Vertical Granite	LF	\$40.00	800	\$32,000.00	
										Underdrain - 6" (one side)	LF	\$32.00	600	\$19,200.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	200	\$10,260.00	
										Construct Enclosed Drainage	LF	\$75.50	500	\$37,750.00	
Gravel backing	LF	\$1.10	900	\$990.00											
Lakeview-2	119	61	0.15	800	21	16,700	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	16,700	\$61,600.00	
										Supplemental Stone for Reclaim	SF	\$0.22	16,700	\$3,674.00	
										Curbing - Asphalt Berm	LF	\$19.50	300	\$5,850.00	
										Underdrain - 6" (one side)	LF	\$32.00	300	\$9,600.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	200	\$10,260.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
Construct Enclosed Drainage	LF	\$75.50	300	\$22,650.00											
Gravel backing	LF	\$1.10	900	\$990.00											
Larry-1	131	63	0.10	530	21	11,100	1	1	Reconstruction	10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 3" Overlay	SF	\$5.46	11,100	\$60,578.81	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Gravel backing	LF	\$1.10	600	\$660.00	
Larry-2	471	69	0.07	370	21	7,800	1	1	Reconstruction	10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 3" Overlay	SF	\$5.46	7,800	\$42,568.89	
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00	
										Gravel backing	LF	\$1.10	400	\$440.00	
Maplewood-1	478	60	0.12	640	22	14,000	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	14,000	\$51,700.00	
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Gravel backing	LF	\$1.10	700	\$770.00	
Maplewood-2	479	69	0.04	220	22	4,700	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	4,700	\$17,400.00	
										Maintain Ditch (Turf)	LF	\$11.70	200	\$2,340.00	
										Gravel backing	LF	\$1.10	300	\$330.00	

Section Name	GIS ID (R###)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
Maplewood-3	56	50	0.14	740	22	16,300	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	16,300	\$60,100.00	
										Maintain Ditch (Turf)	LF	\$11.70	600	\$7,020.00	
										Gravel backing	LF	\$1.10	800	\$880.00	
Maplewood-4	480	38	0.08	430	18	7,700	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	7,700	\$28,400.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Gravel backing	LF	\$1.10	500	\$550.00	
										Asphalt Swales	LF	\$16.90			
Martin-1	704	16	0.04	220	18	3,900	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	3,900	\$14,400.00	
										Supplemental Stone for Reclaim	SF	\$0.22	3,900	\$858.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	400	\$10,920.00	
										Underdrain - 6" (one side)	LF	\$32.00	400	\$12,800.00	
										Maintain Ditch (Turf)	LF	\$11.70	200	\$2,340.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
Mill-2	571	56	0.11	590	24	14,000	3	2	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	14,000	\$51,700.00	Low score due to rutting and puddles adjacent to wetland areas
										Supplemental Stone for Reclaim	SF	\$0.22	14,000	\$3,080.00	
										Underdrain - 6" (one side)	LF	\$32.00	400	\$12,800.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
Nary-2	508	63	0.05	270	22	5,900	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	5,900	\$21,800.00	
										Supplemental Stone for Reclaim	SF	\$0.22	5,900	\$1,298.00	
										Curbing - Asphalt Berm	LF	\$19.50	300	\$5,850.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	200	\$10,260.00	
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00	
										Gravel backing	LF	\$1.10	270	\$297.00	
Nary-4	505	63	0.15	800	21	16,700	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	16,700	\$61,600.00	
										Supplemental Stone for Reclaim	SF	\$0.22	16,700	\$3,674.00	
										Curbing - Asphalt Berm	LF	\$19.50	300	\$5,850.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	200	\$10,260.00	
										Maintain Ditch (Turf)	LF	\$11.70	600	\$7,020.00	
Nary-5	501	55	0.03	160	21	3,400	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	3,400	\$12,546.00	
										Supplemental Stone for Reclaim	SF	\$0.22	3,400	\$748.00	
										Curbing - Asphalt Berm	LF	\$19.50	100	\$1,950.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Construct Enclosed Drainage	LF	\$75.50	150	\$11,325.00	
Nary-6	500	46	0.02	110	21	2,300	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	2,300	\$8,500.00	
										Supplemental Stone for Reclaim	SF	\$0.22	2,300	\$506.00	
										Underdrain - 6" (one side)	LF	\$32.00	100	\$3,200.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	200	\$10,260.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
Natures-1	310	7	0.07	370	12	4,500	1	1	Reconstruction	Convert to Gravel (Reclaim - Process in Place)	SF	\$0.36	4,500	\$1,620.00	
Old 28-1	328	15	0.13	690	14	9,700	1	1	Reconstruction	Convert to Gravel (Reclaim - Process in Place)	SF	\$0.36	9,700	\$3,492.00	
P. Valley-1	375	55	0.18	960	24	22,900	3	1	Reconstruction	10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	22,900	\$145,706.98	
										Supplemental Stone for Reclaim	SF	\$0.22	22,900	\$5,038.00	
										Underdrain - 6" (one side)	LF	\$32.00	700	\$22,400.00	
										Maintain Ditch (Turf)	LF	\$11.70	200	\$2,340.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
										Curbing - Asphalt Berm	LF	\$19.50	700	\$13,650.00	
Gravel backing	LF	\$1.10	960	\$1,056.00											

Section Name	GIS ID (R###)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
P. Valley-2	376	50	0.11	590	24	14,000	3	1	Reconstruction	10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	14,000	\$89,078.50	
										Supplemental Stone for Reclaim	SF	\$0.22	14,000	\$3,080.00	
										Underdrain - 6" (one side)	LF	\$32.00	400	\$12,800.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Construct Enclosed Drainage	LF	\$75.50	400	\$30,200.00	
										Gravel backing	LF	\$1.10	590	\$649.00	
P. Valley-3	735 & 377	38	0.13	690	24	16,500	3	1	Reconstruction	10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	16,500	\$104,985.38	
										Supplemental Stone for Reclaim	SF	\$0.22	16,500	\$3,630.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	400	\$10,920.00	
										Underdrain - 6" (one side)	LF	\$32.00	400	\$12,800.00	
										Maintain Ditch (Turf)	LF	\$11.70	200	\$2,340.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
										Curbing - Asphalt Berm	LF	\$19.50	700	\$13,650.00	
										Gravel backing	LF	\$1.10	690	\$759.00	
										P. Valley-4	383	32	0.57	3,010	24
Supplemental Stone for Reclaim	SF	\$0.22	72,300	\$15,906.00											
Underdrain - 6" (one side)	LF	\$32.00	1,000	\$32,000.00											
Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	1,000	\$51,300.00											
Maintain Ditch (Turf)	LF	\$11.70	2,000	\$23,400.00											
Construct Enclosed Drainage	LF	\$75.50	500	\$37,750.00											
Gravel backing	LF	\$1.10	3,010	\$3,311.00											
P. Valley-10	395	46	0.21	1,110	21	23,300	2	1	Reconstruction						
										Supplemental Stone for Reclaim	SF	\$0.22	23,300	\$5,126.00	
										Underdrain - 6" (one side)	LF	\$32.00	300	\$9,600.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	500	\$25,650.00	
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Construct Enclosed Drainage	LF	\$75.50	500	\$37,750.00	
										Gravel backing	LF	\$1.10	1,110	\$1,221.00	
P. Valley-15	N/A	55	0.43	2,280	18	40,900	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	40,900	\$150,800.00	
										Supplemental Stone for Reclaim	SF	\$0.22	40,900	\$8,998.00	
										Underdrain - 6" (one side)	LF	\$32.00	800	\$25,600.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	500	\$25,650.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,500	\$17,550.00	
										Construct Enclosed Drainage	LF	\$75.50	500	\$37,750.00	
										Curbing - Asphalt Berm	LF	\$19.50	500	\$9,750.00	
Gravel backing	LF	\$1.10	2,280	\$2,508.00											
Park-1	708	34	0.05	270	13	3,500	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	3,500	\$13,000.00	
										Supplemental Stone for Reclaim	SF	\$0.22	3,500	\$770.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Curbing - Asphalt Berm	LF	\$19.50	200	\$3,900.00	
										Gravel backing	LF	\$1.10	270	\$297.00	
Partridge-1	477	58	0.07	370	22	8,200	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	8,200	\$30,300.00	
										Supplemental Stone for Reclaim	SF	\$0.22	8,200	\$1,804.00	
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Curbing - Asphalt Berm	LF	\$19.50	200	\$3,900.00	
										Maintain Ditch (Turf)	LF	\$11.70	300	\$3,510.00	
										Gravel backing	LF	\$1.10	270	\$297.00	
Partridge-2	476	55	0.09	480	22	10,500	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	10,500	\$38,800.00	
										Supplemental Stone for Reclaim	SF	\$0.22	10,500	\$2,310.00	
										Curbing - Asphalt Berm	LF	\$19.50	200	\$3,900.00	
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Gravel backing	LF	\$1.10	270	\$297.00	
Pine-1	424	52	0.05	270	22	5,900	2	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	5,900	\$21,800.00	
										Supplemental Stone for Reclaim	SF	\$0.22	5,900	\$1,298.00	
										Curbing - Vertical Granite	LF	\$40.00	200	\$8,000.00	
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
Pine-2	112	44	0.21	1,110	22	24,400	2	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	24,400	\$90,000.00	
										Supplemental Stone for Reclaim	SF	\$0.22	24,400	\$5,368.00	
										Curbing - Vertical Granite	LF	\$40.00	800	\$32,000.00	

Section Name	GIS ID (R##)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
Pointe-1	31	41	0.27	1,430	22	31,400	1	1	Reconstruction	Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Gravel backing	LF	\$1.10	1,110	\$1,221.00	
										8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	31,400	\$115,800.00	
										Supplemental Stone for Reclaim	SF	\$0.22	31,400	\$6,908.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	400	\$10,920.00	
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,000	\$11,700.00	
River-2	575	57	0.84	4,440	22	97,600	1	1	Reconstruction	Construct Enclosed Drainage	LF	\$75.50	400	\$30,200.00	
										Gravel backing	LF	\$1.10	1,430	\$1,573.00	
										8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	97,600	\$359,800.00	
										Supplemental Stone for Reclaim	SF	\$0.22	97,600	\$21,472.00	
										Underdrain - 6" (one side)	LF	\$32.00	2,000	\$64,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	1,000	\$51,300.00	
										Maintain Ditch (Turf)	LF	\$11.70	2,500	\$29,250.00	
Stoddard-2	723	38	0.14	740	17	12,600	1	1	Reconstruction	Gravel backing	LF	\$1.10	4,440	\$4,884.00	
										8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	12,600	\$46,500.00	
										Supplemental Stone for Reclaim	SF	\$0.22	12,600	\$2,772.00	
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	500	\$25,650.00	
										Maintain Ditch (Turf)	LF	\$11.70	700	\$8,190.00	
										Gravel backing	LF	\$1.10	740	\$814.00	
Stoddard-4	215	38	0.33	1,750	20	34,900	1	1	Reconstruction	Underdrain - 6" (one side)	LF	\$32.00	1,000	\$32,000.00	Existing drainage in place. Improvem ditching to improve efficiency
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	500	\$25,650.00	
										Maintain Ditch (Turf)	LF	\$11.70	700	\$8,190.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	1,000	\$27,300.00	
										Gravel backing	LF	\$1.10	1,750	\$1,925.00	
										10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 3" Overlay	SF	\$5.46	95,100	\$519,013.01	
										Supplemental Stone for Reclaim	SF	\$0.22	95,100	\$20,922.00	
Stoneham-1	649	13	0.90	4,760	20	95,100	1	1	Reconstruction	Underdrain - 6" (one side)	LF	\$32.00	3,000	\$96,000.00	Enclosed drainage used to budget for new cross culverts and potential structures needed for extensive underdrain on upgradient side. Very tight embankment on upgradient side, may not have room for ditches and some sort of asphalt curbing or swales may be required. Asphalt Berm used for budgetting.
										Construct Enclosed Drainage	LF	\$75.50	1,000	\$75,500.00	
										Curbing - Asphalt Berm	LF	\$19.50	2,000	\$39,000.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,000	\$11,700.00	
										Maintain Ditch (Erosion Stone)	LF	\$27.30	1,000	\$27,300.00	
										Gravel backing	LF	\$1.10	4,760	\$5,236.00	
										8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	26,400	\$97,400.00	
Trask-1	746 & 747	47	0.25	1,320	20	26,400	1	1	Reconstruction	Supplemental Stone for Reclaim	SF	\$0.22	26,400	\$5,808.00	Outcrop of ledge observed adjacent to edge of pavement. Anticipate removal of ledge to properly reconstruct road / underdrain.
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	500	\$25,650.00	
										Maintain Ditch (Turf)	LF	\$11.70	700	\$8,190.00	
										Gravel backing	LF	\$1.10	1,320	\$1,452.00	
										10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	41,900	\$266,599.23	
										Supplemental Stone for Reclaim	SF	\$0.22	41,900	\$9,218.00	
Trotting-1	14	58	0.36	1,910	22	41,900	3	1	Reconstruction	Underdrain - 6" (one side)	LF	\$32.00	1,000	\$32,000.00	Evaluate the the need for slope stabilization across from the recreation fields. fields. Slope appears to be eroding.
										Construct Enclosed Drainage	LF	\$75.50	1,000	\$75,500.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	500	\$25,650.00	
										Maintain Ditch (Turf)	LF	\$11.70	1,000	\$11,700.00	
										Gravel backing	LF	\$1.10	1,910	\$2,101.00	
										10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	12,800	\$81,443.20	
										Supplemental Stone for Reclaim	SF	\$0.22	12,800	\$2,816.00	
Trotting-2	612	60	0.11	590	22	12,800	3	2	Reconstruction	Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	200	\$10,260.00	
										Maintain Ditch (Turf)	LF	\$11.70	400	\$4,680.00	
										Gravel backing	LF	\$1.10	590	\$649.00	
										10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	12,800	\$81,443.20	
										Supplemental Stone for Reclaim	SF	\$0.22	12,800	\$2,816.00	

Section Name	GIS ID (R###)	PCI 2017	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (SF)	Traffic	Importance	Maintenance Category	Repair Strategies (All work Bid)					Additional Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
Trotting-3	743 & 183	32	0.89	4,700	22	103,400	3	2	Reconstruction	10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	103,400	\$657,908.35	Existing closed drainage/CB's observed in some areas
										Supplemental Stone for Reclaim	SF	\$0.22	103,400	\$22,748.00	
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	
										Replace large diameter cross culvert (24" or greater, single pipe)	LF	\$43,200.00	1	\$43,200.00	
										Construct Enclosed Drainage	LF	\$75.50	1,000	\$75,500.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	800	\$41,040.00	
										Maintain Ditch (Turf)	LF	\$11.70	2,000	\$23,400.00	
Gravel backing	LF	\$1.10	4,700	\$5,170.00											
Upper Trask-1	640	55	0.33	1,750	21	36,600	1	1	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 3" Overlay	SF	\$3.69	36,600	\$134,900.00	Evidence of previous closed drainage installations from trench patches in the roadway. Lightly traveled neighborhood road, it may be appropriate to only complete maintenance overlays and monitor road for future reconstruction.
										Supplemental Stone for Reclaim	SF	\$0.22	36,600	\$8,052.00	
										Underdrain - 6" (one side)	LF	\$32.00	700	\$22,400.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	500	\$25,650.00	
										Maintain Ditch (Turf)	LF	\$11.70	700	\$8,190.00	
Gravel backing	LF	\$1.10	1,750	\$1,925.00											
Valley-1	715	44	0.02	110	24	2,600	3	2	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	2,600	\$11,936.46	Access to parking area. Close drainage system already exists
										Supplemental Stone for Reclaim	SF	\$0.22	36,600	\$8,052.00	
										Curbing - Asphalt Berm	LF	\$19.50	200	\$3,900.00	
										Gravel backing	LF	\$1.10	110	\$121.00	
Wickers-1	198	60	0.10	530	23	12,200	1	2	Reconstruction	8" Reclaim (PIP), 6" Cr. Gravel, 4" Overlay	SF	\$4.59	12,200	\$56,009.53	Industrial park entrance and access to DPW storage facility/pit, Though some cracking exists, it may be prudent to complete maintenance overlay and gravel backing to raise low shoulders and monitor for future reconstruction
										Supplemental Stone for Reclaim	SF	\$0.22	12,200	\$2,684.00	
										Maintain Ditch (Turf)	LF	\$11.70	500	\$5,850.00	
										Gravel backing	LF	\$1.10	530	\$583.00	
Wolfeboro-1 (North Wolfeboro Road)	331	25	0.84	4,440	20	88,800	1	2	Reconstruction	10" Cr. Gravel (w/ excavation), 8" Reclaim (R&R), 4" Overlay	SF	\$6.36	88,800	\$565,012.20	Road reconstructed in 2018 following inspection?
										Supplemental Stone for Reclaim	SF	\$0.22	88,800	\$19,536.00	
										Underdrain - 6" (one side)	LF	\$32.00	3,000	\$96,000.00	
										Construct Enclosed Drainage	LF	\$75.50	1,000	\$75,500.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	800	\$41,040.00	
										Maintain Ditch (Turf)	LF	\$11.70	3,000	\$35,100.00	
Gravel backing	LF	\$1.10	4,440	\$4,884.00											

Reconstruction Total: \$14,967,075.71

18.51

Total Cost (Asphalt): \$18,756,000.00

Total Cost (Gravel): \$1,640,000.00

Total Cost (All Roads): \$20,396,000.00

Yearly Cost (20 Year Life span): \$1,019,800.00

Recommended Road Repair Strategies - Gravel Roads

December 14, 2018

Section Name	GIS ID (R###)	PCI	Section Length (mi) GPS	Section Length (ft)	Road Width (ft)	Section Area (sf)	Traffic	Importance	Maintenance Category	10 Year Repair Strategies (All work Bid)					Comments
										Alternative	Unit	Unit Price	Quantity	Total Cost	
Avery-1	664	87	0.08	430	14	6,100	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	6,100	\$793.00	No evidence of significant erosion however some ditching towards Cowper would help mitigate any future erosion. Considerations should be made to some tree removal to provide space for ditch construction
										Maintain existing ditch (gravel road)	LF	\$14.00	200	\$2,800.00	
Beach-10	627	80	0.47	2,490	23	57,300	1	1	Routine Maintenance	Spot Regravel (Fill in pot holes and minor rut/puddle areas)	SF	\$0.33	4,600	\$1,518.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	1,500	\$21,000.00	
										Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	52,700	\$6,851.00	
Beach-12	634, 719	80	0.25	1,320	20	26,400	1	1	Routine Maintenance	Maintain Ditch (Turf)	LF	\$11.70	1,000	\$11,700.00	some pooled water in shoulder and some ditch erosion. Areas of light moisture on surface
										Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	26,400	\$3,432.00	
Beach-14	721	75	0.35	1,850	20	37,000	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	37,000	\$4,810.00	Water observed flowing in ditch in one area. Though ditch appears stable, closed drainage could be considered to help handle water and stabilize ditch long term. Embankment at culvert crossing at beginning of section eroded and pipe ends very close to edge of road. Cross culvert should be replaced, extended and headwalls placed to help with grading and stability
										Maintain existing ditch (gravel road)	LF	\$14.00	1,000	\$14,000.00	
										Construct Enclosed Drainage	LF	\$75.50	300	\$22,650.00	
										Replace large diameter cross culvert (24" or greater, single pipe)	LS	\$43,200.00	1	\$43,200.00	
Beach-16	722	89	0.06	320	20	6,400	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	6,400	\$832.00	Brook running along road edge, appears well stabilized
										Maintain existing ditch (gravel road)	LF	\$14.00	600	\$8,400.00	
Bickford-1	314	75	0.89	4,700	16	75,200	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	64,800	\$8,424.00	Some run-off eroded channel across road at granite culvert. Condition of both granite box and CMP culverts should be inspected. Budget has been carried for replacement of both. However, granite box could be of historical significance.
										Maintain existing ditch (gravel road)	LF	\$14.00	3,000	\$42,000.00	
										Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	10,400	\$3,432.00	
										Replace large diameter cross culvert (24" or greater, single pipe)	LS	\$43,200.00	2	\$86,400.00	
Brackett-1	257	81	0.53	2,800	15	42,000	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	32,000	\$4,160.00	Extend culvert away from edge of road and install headwall. Consider installation of guardrail in areas of steep embankment
										Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	10,000	\$3,300.00	
										Replace large diameter cross culvert (24" or greater, single pipe)	LS	\$43,200.00	1	\$43,200.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	1,500	\$21,000.00	
Chick-1	316	86	0.61	3,230	14	45,300	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	35,300	\$4,589.00	Areas of tight embankments with some erosion due to ditches. Some erosion at the culvert outlet near Bickford Road. Budget carried to replace stone box culvert to extend further beyond edge of road and improve embankments. However, granite box could be of historical significance
										Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	10,000	\$3,300.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	2,000	\$28,000.00	
										Replace large diameter cross culvert (24" or greater, single pipe)	LS	\$43,200.00	1	\$43,200.00	
Cotton-3	319	78	0.85	4,490	12	53,900	1	1	Routine Maintenance	Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	CMP culvert appears to be in fair condition, replacement no anticipated. Underdrain provided for installation in areas with wetlands adjacent to the street and or draining into the ditch. Tree removal is also recommended in steep embankment areas
										Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	40,000	\$5,200.00	
										Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	13,900	\$4,587.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	2,500	\$35,000.00	
Cowper-1	313	67	1	5,280	12	63,400	1	1	Routine Maintenance	Replace large diameter cross culvert (24" or greater, single pipe)	LS	\$43,200.00	1	\$43,200.00	Underdrains budgetted for areas of standing water adjacent to road. CPE culverts observed but inlets need to be maintained as part of ditching.
										Underdrain - 6" (one side)	LF	\$32.00	1,000	\$32,000.00	
										Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	41,000	\$5,330.00	
										Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	16,400	\$5,412.00	
										Raise Road to mitigate embankments (18" depth)	SF	\$1.38	6,000	\$8,280.00	
Maintain existing ditch (gravel road)	LF	\$14.00	3,000	\$42,000.00											
										Underdrain - 6" (one side)	LF	\$32.00	1,000	\$32,000.00	

Garden-1	705	81	0.58	3,070	14	43,000	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	37,000	\$4,810.00	
										Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	6,000	\$1,980.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	4,000	\$56,000.00	
										Underdrain - 6" (one side)	LF	\$32.00	1,500	\$48,000.00	
Haines-2	642	77	0.54	2,860	16	45,800	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	30,000	\$3,900.00	Some areas of moisture in shoulder. Shoulders eroding into headwalls of both major culverts. Run-off bypasses culvert due to shoulder erosion.
										Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	15,800	\$5,214.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	3,000	\$42,000.00	
										Underdrain - 6" (one side)	LF	\$32.00	1,500	\$48,000.00	
Hersey-1	149	66	0.25	1,320	14	18,500	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	9,800	\$1,274.00	
										Raise Road to mitigate embankments (18" depth)	SF	\$1.38	9,000	\$12,420.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	1,500	\$21,000.00	
										Underdrain - 6" (one side)	SF	\$32.00	500	\$16,000.00	
Jeness-2	700	77	0.27	1,430	18	25,800	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	10,800	\$1,404.00	Raise road through field to improve drainage and provide separation from ground water, install underdrain
										Raise Road to mitigate embankments (18" depth)	SF	\$1.38	15,000	\$20,700.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	1,500	\$21,000.00	
										Underdrain - 6" (one side)	LF	\$32.00	1,000	\$32,000.00	
Johnson-1	327	85	0.14	740	16	11,900	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	11,900	\$1,547.00	Ditches have some erosion but generally satisfactory. 12" CMP culvert with deteriorating inlet headwall, potentially crushing pipe. Ditching appears to have been recently completed.
										Maintain existing ditch (gravel road)	LF	\$14.00	1,000	\$14,000.00	
										Cross/Driveway Culvert (15" dia or less)	LF	\$51.30	40	\$2,052.00	
Keewaydin-4	530	68	0.03	160	12	2,000	1	1	Routine Maintenance	Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	2,000	\$660.00	Low severity rutting in wheel path wear and slight loss of cross-section. Addition of 4" +/- of material should be enough materials to restore a proper crown and raise the road above shoulders and promote drainage. Consider underdrain on uphill side. consider infiltrating basin at puddle area.
										Underdrain - 6" (one side)	LF	\$32.00	200	\$6,400.00	
										Construct Enclosed Drainage	LF	\$75.50	50	\$3,775.00	
Keewaydin-5	529	70	0.06	320	12	3,900	1	1	Routine Maintenance	Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	3,900	\$1,287.00	Low severity rutting in wheel path wear and slight loss of cross-section. Addition of 4" +/- of material should be enough materials to restore a proper crown and raise the road above shoulders and promote drainage. Consider underdrain on uphill side.
										Underdrain - 6" (one side)	LF	\$32.00	300	\$9,600.00	
Line-1	16	86	0.44	2,330	18	42,000	1	3	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	42,000	\$5,460.00	Hill near end of maintained section appears to be only section with ditches handling run-off. Some corrugations at Pleasant Valley Road. Some moisture left on roadway during inspections following overnight rains
										Maintain existing ditch (gravel road)	LF	\$14.00	1,500	\$21,000.00	
Sandstrom-1	147	84	0.25	1,320	16	21,200	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	21,200	\$2,756.00	Recent ditching and shoulder work with stone stabilization recently completed. Some shoulder and ditch erosion noted in recently ditched areas. Overall good condition. Town water facility located at end of section
										Raise Road to mitigate embankments (18" depth)	SF	\$1.38	600	\$828.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	1,500	\$21,000.00	
Stoddard - 1	663, 664	77	0.55	2,910	16	46,600	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	8,000	\$1,040.00	Replacement of 36"+/- CMP culvert budgetted. Maintenance of sedimentation BMP's recommended Raising road though cut/embankment area will provide additional space for better ditching. Septic system close to edge of roadway may result in elevated groundwater levels in that area, underdrain recommended in that area to mitigate elevated groundwater levels.
										Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	24,000	\$7,920.00	
										Raise Road to mitigate embankments (18" depth)	SF	\$1.38	14,600	\$20,148.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	1,500	\$21,000.00	
										Underdrain - 6" (one side)	LF	\$32.00	1,000	\$32,000.00	
										Replace large diameter cross culvert (24" or greater, single pipe)	LS	\$43,200.00	1	\$43,200.00	
Stoddard-3	215	74	0.25	1,320	16	21,200	1	1	Routine Maintenance	Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	21,200	\$6,996.00	Enclosed drainage budgetted for potential infiltration basins
										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	
										Construct Enclosed Drainage	LF	\$75.50	200	\$15,100.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	1,500	\$21,000.00	
Stoddard-5	661	69	0.69	3,650	16	58,400	1	1	Routine Maintenance	Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	38,400	\$12,672.00	Raise road through embankment cut areas to improve drainage conditions. Road could merit from more detailed drainage study and improvements has it seems to have significant flows from embankments and surrounding areas. Addition of 4" of gravel materials will help improve crown and
										Raise Road to mitigate embankments (18" depth)	SF	\$1.38	20,000	\$27,600.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	3,000	\$42,000.00	

										Underdrain - 6" (one side)	LF	\$32.00	500	\$16,000.00	provide additional grading for ditches.
										Construct Enclosed Drainage	LF	\$75.50	750	\$56,625.00	
										Replace large diameter cross culvert (24" or greater, single pipe)	LS	\$43,200.00	1	\$43,200.00	
Trask-2	639	88	0.52	2,750	20	55,000	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	55,000	\$7,150.00	First .02 mile is asphalt in poor condition. Standing water in roadside ditch. Some sediment controls exist along section which need to be cleaned/maintained.
										Maintain existing ditch (gravel road)	LF	\$14.00	2,000	\$28,000.00	
Wakefield-1	658	86	0.21	1,110	12	13,400	1	1	Routine Maintenance	Reshape, Add Minor Material (1" average depth entire length)	SF	\$0.13	13,400	\$1,742.00	High groundwater suspected due to moisture observed in roadway. Underdrain recommended on up gradient site
										Underdrain - 6" (one side)	LF	\$32.00	600	\$19,200.00	
										Maintain existing ditch (gravel road)	LF	\$14.00	600	\$8,400.00	
Wakefield-2	317	61	0.73	3,860	14	54,100	1	1	Routine Maintenance	Reshape, Add Major Material (4" average depth entire length)	SF	\$0.33	54,100	\$17,853.00	Additional culvert length used to budget for headwall installations. Existing culvert may over top and up sizing should be considered. Addition material on road will help raise road slightly and re establish crown and promote drainage. Underdrains should be considered for up gradient side and closed drainage may be required to help convey underdrain flows.
										Underdrain - 6" (one side)	LF	\$32.00	750	\$24,000.00	
										Construct Enclosed Drainage	LF	\$75.50	750	\$56,625.00	
										Cross/Driveway Culvert (up to 24" dia)	LF	\$60.00	100	\$6,000.00	
											Reconstruction Total:		\$1,639,538.00		
											Yearly Cost (10 Years):		\$163,953.80		
			10.6	56,060											

APPENDIX H

- Prioritized 10-Year CIP

ATTACHMENT "H"

2017 Roadway Assessment
Wolfeboro, New Hampshire

10 Year Priorities Summary

April 23, 2019

XXXXXXXXXXXX Routine/Deferred Maintenance
 Preventative Overlays & Minor Drainage Imp.
 Reconstruction & Drainage Improvements

	Surface	Length (Miles)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Additional Comments
Abenauke Dr	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Allen Rd	A	0.26	XXXXXXXXXX	XXXXXXXXXX	\$196,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Anagance Ln	A	0.22	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$181,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Bass Dr	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Bassett Rd	A	0.23	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$35,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Bay St	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Beach Pond Rd	A	3.92	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$657,000	\$657,000	Budget includes 139,000 for culvert replacement, drainage improvements, and grading improvements on gravel sections
Bernard Dr	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Berrywood Dr	A	0.28	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$234,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Birch Rd	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Blackberry Ln	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Brewster Heights	A	0.42	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	Budget includes overlays on better section
Brown Rd	A	0.30	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$190,000	XXXXXXXXXX	
Bryant Rd	A	1.22	XXXXXXXXXX	\$937,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Canopache Rd	A	0.20	\$119,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Central Av	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Chipmunk Ln	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Christian Ridge Rd	A	0.20	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$12,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Clark Rd	A	0.78	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$62,000	XXXXXXXXXX	
Clipper Dr	A	0.10	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$11,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Clow St	A	0.11	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$88,000	XXXXXXXXXX	
College Rd	A	0.84	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$90,000	Budget does not include contingency for overlay of additional sections which should be considered for sections reconstructed in 2018. Length Shown for section 3 only.
Cotton Mountain Rd	A	0.52	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$435,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Cotton Valley Rd	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Cresent Lake Av	A	0.13	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$25,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Cricket Hill Rd	A	0.11	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$13,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Cropley Hill Rd	A	0.05	\$8,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Cross Rd	A		XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
Deer Run Rd	A	0.09	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	\$15,000	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	

xxxxxxxxxx Routine/Deferred Maintenance
 Preventative Overlays & Minor Drainage Imp.
 Reconstruction & Drainage Improvements

	Surface	Length (Miles)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Additional Comments
Depot St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Dockside Rd	A	0.05	xxxxxxxxxx	xxxxxxxxxx	\$8,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Eagle Trace	A	0.27	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$39,000	
East Clark Rd	A	0.10	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$65,000	
Endicott St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Esterbrook Rd	A	0.15	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$138,000	xxxxxxxxxx	xxxxxxxxxx	
Fairway Dr	A	0.23	xxxxxxxxxx	xxxxxxxxxx	\$28,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Filter Bed Rd	A	0.21	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$228,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Forest Rd	A	1.09	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$155,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Overlays from Rt 109 to Spruce Road, Length shown only represents overlay section
Friar Tuck Way	A	0.95	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$137,000	xxxxxxxxxx	xxxxxxxxxx	
Friend St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Glendon St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Goodrich Rd	A	0.14	\$19,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Green St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Greenleaf Dr	A	0.37	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$46,000	xxxxxxxxxx	
Grove St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Haines Hill Rd	A	1.83	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$1,084,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Budget includes 100,000 for culvert replacement, drainage improvements, and grading improvements on gravel sections
Hemlock Dr	A	0.46	xxxxxxxxxx	xxxxxxxxxx	\$60,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
High St	A	0.06	\$62,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Highland Ter	A	0.18	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$23,000	xxxxxxxxxx	xxxxxxxxxx	
Hopewell Pt Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Interlakes Way	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Jenness Farm Rd	A	0.35	xxxxxxxxxx	xxxxxxxxxx	\$39,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Jiminy Dr	A	0.23	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$204,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Keewaydin Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Reconstruction 2018, Consider scheduling shim and overlay within a year or two beyond this planning window
King St	A	0.23	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$179,000	xxxxxxxxxx	xxxxxxxxxx	
Lake St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Lakeview Dr	A	0.30	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$189,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Budget cost includes assumes overlay only for section #1
Lang Pond Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Larry Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Lehner St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Libby St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Lloyd Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Lucas St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Maplewood Dr	A	0.38	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$180,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Martin Hill Rd	A	0.04	\$58,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	

xxxxxxxxxx Routine/Deferred Maintenance
 Preventative Overlays & Minor Drainage Imp.
 Reconstruction & Drainage Improvements

	Surface	Length (Miles)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Additional Comments
Middleton Road	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Mill St	A	0.21	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$101,000	Includes budget for overlay on section #1
Nary Shores Rd	A	0.39	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$195,000	xxxxxxxxxx	xxxxxxxxxx	
North Line Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Consider crack seal work of centerline cracking early in maintenance schedule to protect road. Budget for maintenance overlays of approximately \$450,000 should be budgetted by 2030.
North Wolfeboro Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Reconstruction 2018, Consider scheduling shim and overlay within a year or two beyond this planning window
Oak St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Oakwood Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Old Lakeview Ter	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Old Mill Dr	A	0.24	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$26,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Park Av	A	0.05	\$40,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Partridge Dr	A	0.16	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$102,000	xxxxxxxxxx	
Percy Dr	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Pine St	A	0.26	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$178,000	xxxxxxxxxx	xxxxxxxxxx	
Pleasant St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Pleasant Valley Rd	A	3.41	xxxxxxxxxx	xxxxxxxxxx	\$824,000	\$1,053,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Amount budgetted for 2022 includes \$229,200 for overlays on sections of road not recommended for reconstruction
Point Sewall Rd	A	0.27	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$194,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Pork Hill Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Port Wedeln Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Railroad Av	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
River St	A	1.17	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$37,000	xxxxxxxxxx	xxxxxxxxxx	
School St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Sewall Rd	A	1.89	\$240,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Length only represents sections scheduled for overlays
Silver St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Sleepy Hollow Rd	A	0.45	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$76,000	
Springfield Pt Rd	A	0.88	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$120,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Spruce Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Stoddard Rd	A	2.21	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$714,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Budget includes \$380,000 for culvert replacement, drainage improvements, and grading improvements on gravel sections
Stoneham Rd	A	0.90	\$795,000	\$260,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Maintenance overlays for (2020) includes contingency budget for potential underdrain improvements prior to paving
Tips Cove Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Trask Mt Rd	A	0.77	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$191,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Budget includes \$36,000 for culvert replacement, drainage improvements, and grading improvements on gravel sections
Treadwell Ln	A	0.15	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$21,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Trotting Track Rd	A	1.36	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	Overlay completed in 2018

xxxxxxxxxx Routine/Deferred Maintenance
 Preventative Overlays & Minor Drainage Imp.
 Reconstruction & Drainage Improvements

	Surface	Length (Miles)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Additional Comments
Union St	A	0.11	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$18,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Upper Trask Mt Rd	A	0.33	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$201,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Valley Ln	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Varney Rd	A	0.56	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$83,000	xxxxxxxxxx	Overlay budget includes contingency for ditch work
Waumbeck Rd	A	1.26	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	\$225,000	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Whitten Neck Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Wickers Dr	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Willow St	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Winterhaven Rd	A		xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx	
Preventative Overlays:			\$267,000	\$260,000	\$135,000	\$229,200	\$225,000	\$218,000	\$209,000	\$212,000	\$197,000	\$191,000	\$205,000	\$2,348,200
Reconstruction:			\$1,074,000	\$937,000	\$1,020,000	\$1,005,000	\$1,084,000	\$948,000	\$1,008,000	\$814,000	\$880,000	\$847,000	\$823,000	\$10,440,000
Total:	34.63	\$1,341,000	\$1,197,000	\$1,155,000	\$1,234,000	\$1,309,000	\$1,166,000	\$1,217,000	\$1,026,000	\$1,077,000	\$1,038,000	\$1,028,000	\$1,028,000	\$12,788,000
Total Roads:	63.95													

h Deferred/Routine Maintenance: 13.76
 ruction/Overlays not Scheduled: 15.56

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