

**The Town Of Somerville**  
**ROAD ASSESSMENT, INVENTORY, AND PLANNING PROJECT**  
**“ASSISTANCE WITH SPECIFIC KNOW-HOW” (ASK) PROGRAM**  
**FINAL REPORT**

**For the Lincoln County Regional Planning Commission (LCRPC)**  
**August 30, 2013**

## **INTRODUCTION**

Somerville, a small rural town located in south-central Maine, has a population of five hundred thirty eight residents who rely on one partially paved road and nine gravel roads that the Town of Somerville is responsible for maintaining year-round. Two of these roads are connector roads, used extensively by both residential and commercial traffic.

Historically, Somerville road repairs and maintenance had been primarily remedial, allocating resources as needed in the most problematic areas. These roads suffer from severe cracking, rutting, potholes, and water erosion, often making them impassable at certain times of year. Many of the roads and sections of roads have required the same maintenance year after year, which hasn't allowed for long-term, capital improvements to be made due to budget constraints. However, poor or lack of vehicular access, vehicle wear and tear, and environmental impact has made this a critical issue.

Recognizing that the long term cost to the Town of a remedial approach is considerably greater than an anticipatory, proactive approach, in 2012, the Town of Somerville Board of Selectmen committed to the Town that developing and implementing a long-range road improvement plan was a high priority. A long-range road plan would enable the Town to better spend the limited funds allocated for road maintenance and repair, with an ultimate goal of identifying and completing necessary road reconstruction.

In order to establish a "best practices approach" to the development of the road plan, the Board of Selectmen consulted with subject matter experts including individuals from the Maine Department of Transportation (MDOT) and Lincoln County Regional Planning Commission (LCRPC). It was determined that Somerville needed a comprehensive evaluation of the Town's roads by a professional engineer who would provide not only an evaluation, but would also recommend remedies for repairing, maintaining, and reconstructing Somerville's roads.

Somerville's Board of Selectmen and Road Commissioner met with engineer, Steve Roberge of SJR Engineering Inc., to develop a strategy for evaluating the roads and developing the long-range plan, and subsequently contracted with SJR Engineering to provide engineering and consultation services.

These services included assisting Somerville's Road Commissioner with an evaluation of the roads, creating a documented inventory of conditions and work needed, and also helping to identify and utilize "Best Management in Erosion and Sedimentation" control practices and ensure compliance with state statutes, particularly those of the Department of Environmental Protection (DEP). Data, including text, photo, and aerial mapping materials, would be collected and prepared for entry into a road planning database using RSMS 11, a software program recommended by MDOT.

Total cost for engineering and development of the plan was estimated to be between \$6,000 and \$8,000 in actual dollars expended as well as an estimated \$7,000 to \$8,000 in volunteer time. To offset some of the cost, the Town applied for and received \$2,000 from the LCRPC under the "Assistance with Specific Know-How" (ASK) Program.

The assessment and inventory process is expected take place over two fiscal years, 2012 and 2013-2014. This project is not intended to be a redesign but, rather, an evaluation that will help the Town prioritize use of limited funds in managing its gravel roads. Ongoing road repairs and maintenance activities will continue, taking engineer recommendations into account.

## **DEVELOPMENT OF SOMERVILLE'S LONG RANGE ROAD PLAN**

The long-range road plan is being developed utilizing the road engineer's evaluation of the roads and the analysis obtained through the MDOT road software, RSMS11. Using input from the road engineer, estimated costs based on prior road maintenance and improvement activities, and quotes obtained from local contractors and suppliers, a road budget is being created which will allow the Town's limited resources to be better utilized. Potentially, additional money will be appropriated at the Town Meeting in March 2014 and in future years.

The road plan will enable the Board of Selectmen to better forecast the costs of repairing and prioritizing the reconstruction of the Town's roads. In addition, the Board of

Selectmen will be able to provide a projection of road work to the Town's residents, taking a proactive approach rather than a reactive approach.

The Board of Selectmen will serve as the project managers, working with the Road Commissioner to update the road plan as needed. The road engineer will continue to provide advice and assessment as work progresses on the roads.

A high level explanation of the strategy and work-to-date for the development of the five-year long-range road improvement and maintenance plan was presented to the residents and voters of Somerville at the Town Meeting in March 2013. Further progress and a more concrete timeline will be presented at the Town Meeting in May of 2014.

The Town of Somerville's Long Range Road Plan is to be a living document, continually being reviewed and updated as road repair projects are completed.

## **ROAD ASSESSMENT, INVENTORY, AND PLANNING PROJECT**

The observation and assessment of Somerville's roads was carried out by Steve Roberge, of SJR Engineering Inc., accompanied by Jesse Turner, Somerville's Road Commissioner.

Adverse conditions were identified and photographed and repair recommendations (culverts, ditching, outlets, berm removal, etc.) were made for each section of road. Gravel Road Survey Forms (see Appendix) were also completed for each road.

Steve Roberge then uploaded the photos to a website and attached instructional engineering notes of explanation and recommendation to each photo. A link to the photos and notes for each section of road was then provided to the Town. Photos and accompanying notes were then downloaded and organized into a presentably formatted and printable document (see accompanying document "Somerville Road Project SRJ Engineering 2012 Photos & Notes AU2813").

Steve also embedded each of the repair recommendations he had made into the appropriate locations on Google aerial maps of each section of road that he then printed out and provided to the Town.

Road inventory data was entered into the State recommended road system management software program, RSMS11 by Selectman Carolyn Doyle, with assistance from the MDOT Local Roads Center Program personnel. Gravel Road Survey Form

data from the engineer was entered into the RSMS11 by Kelly Grenier who relied primarily on the RSMS11 User Manual but also received assistance from Maine Local Roads Center Program Manager, Jerry Douglass. Kelly also entered road issue details into the budget function of RSMS11 and into the repairs and bids worksheet developed to support the project going forward. This worksheet is discussed later in the RSMS11 Ten-Step Approach to Developing a Road Plan section.

Road width data needs to be collected and entered into the RSMS11; one road survey still needs to be done and the data entered; costs need to be obtained for materials, items and services for maintenance, repair, and reconstruction activities.

## **SOME OF WHAT WE LEARNED**

### **Gravel Roads Can Live Forever**

An interesting graphic called "The Road Condition Decline Curve" is often used to help decision makers understand how roads degrade over time if not maintained and what kind of intervention at different phases of a road's declination should be applied. However, this picture was intended to discuss paved roads, not gravel roads. If it was redesigned to represent gravel roads, it would look very different. A gravel road that is not maintained will degrade completely in less than five years.

A gravel road that has been properly constructed in terms of both surface and drainage, and that is diligently maintained on a routine basis, could, assuming nothing drastic ever happened to it, last forever.

Routine maintenance for a gravel road that has low to medium traffic, made up of mostly lighter vehicles, is not only cost effective but relatively simple to administer and reconstruction will normally only ever be required if routine maintenance for both surface and drainage is not done or not done properly.

Gravel roads with medium-high to high traffic, particularly if this includes heavy trucks, will be less cost effective to maintain and paving may need to be considered. Unlike gravel roads, however, paved roads cannot last forever even with perfect maintenance practices, so money needs to be set aside each year for preventative treatment, rehabilitative work, and, finally, complete reconstruction that will eventually be necessary. For this reason, some municipalities in Maine with low traffic paved roads

that have degraded to a point of near impassability, are removing the pavement altogether and reconstructing them as gravel.

For gravel roads that have not been well maintained and reconstruction has become necessary, the cost for surface and drainage reconstruction can be considered a one-time investment, assuming that the road will be well maintained thereafter. Once reconstruction is completed, budgeting can focus primarily on routine maintenance with an eye to changes in traffic and road use.

### **Gravel Road Surveys**

Gravel road surveys should be done for every road twice per year at least until all necessary reconstruction has been completed and all reconstructed roads have been shown to be consistently well maintained. A sample Gravel Road Survey Form is included in the Appendix.

All Gravel Road Survey Forms should be clearly marked with the name of the surveyor, date of the survey, and what method was used (i.e. compared with other surveyor's notes, etc.). Without the date of the survey and name of the surveyor, there is no way to tell which surveys were done when and by whom and the work that went into conducting the surveys may be wasted.

Gravel road surveys are an important tool for identifying road degradation before it becomes a reconstruction issue. That being said, regular observation of road surface and drainage status is a critical component of routine maintenance and routine maintenance is the key to longevity for gravel roads.

Reconstructing a road and then not properly maintaining it is as good as throwing the money spent on reconstruction away. A poorly or non-maintained gravel road will degrade to a point of requiring reconstruction again in just a few short years. MDOT offers a number of valuable training workshops including Gravel Road Maintenance, Grader Training, Snow & Ice Control, and Drainage, drainage, drainage. Even once roads are being consistently well maintained, part of the actual maintenance plan should include regularly driving along each road and checking for changes in any of the eight gravel road survey measures, as well as looking for potential troubles that may be developing.

Data collected through gravel road surveys is used to make important economic decisions around road maintenance and reconstruction. It's very important that surveys be done through direct observation using a best practices approach by a road survey team of at least three individuals who then compare notes. The Maine Local Roads Center, has developed a Field Manual for the Identification of Road Distresses to help Maine municipalities with this very important task. They also have "Road Rangers" who will come to the community and help survey teams learn how to accurately and consistently conduct these surveys.

## **ROAD SYSTEM MANAGEMENT SOFTWARE: RSMS11**

As recommended by MDOT, the Town of Somerville is using a road system management software program, RSMS11, to organize and analyze road information and to help the Town develop a long range road plan. Data from road surveys is entered into the RSMS11 software which then analyzes the data and generates a number of useful reports. These reports include a road network inventory and analysis, network overviews of road surface and of drainage status, and budget reports. Discussion of reports on Somerville's roads can be found in the RSMS11 Reports Discussion section and the reports themselves are found in the Appendix.

The RSMS11 software budget component will be particularly useful for routine maintenance budgeting. However, budget lines for reconstruction and routine maintenance materials, items, and services that cannot be costed out on a per-mile basis and applied to an entire section of road must be entered manually for each material, item, or service and manually updated for each material, item, and service. Since much of the reconstruction required for Somerville's roads fall into this last category, a "repairs and bids worksheet" was created, loosely based on the approach and structure of the RSMS11 budget spreadsheet, to help budget and track cost, purchase, and use of these materials, items and services.

## **RSMS11 TEN-STEP APPROACH TO DEVELOPING A ROAD PLAN**

The RSMS11 User Guide offers a ten-step approach to developing a Road Plan.

*RSMS 11 User Guide Chapter 2.2, Page 10-11*

*Steps to a Road Plan*

- *Collect data (2-step process: inventory and surveys).*
- *Enter data.*

- *Review road inventory for accuracy.*
- *Review comparative importance and traffic reports.*
- *Run network overview graphical charts.*
- *Run reports to view roads by maintenance (surface and drainage) categories.*
- *Analyze and compare roads based on municipal priorities, using the network analysis grid and supporting reports.*
- *Using the new RSMS 11 network budgeting tool, select roads on which to work, choose appropriate repair options, schedule year in which work will be performed, and enter budget data.*
- *Run financial reports to review budget and adjust as needed.*
- *After work is performed, enter actual costs.*

A key part of Somerville's Road Assessment, Inventory, and Planning Project, included the engineer, Steve Roberge of SJR Engineering Inc., observing Somerville's roads and making recommendations for improvements that would help with road drainage and surface repair, reconstruction, and maintenance. These recommendations came in the form of aerial photographs populated with notes at each location that a repair was recommended, and a set of ground photos with accompanying notes for each section of road. Relying primarily on the aerial maps, Carolyn Doyle developed and entered the road inventory into RSMS11.

Steve Roberge, accompanied by Jesse Turner, Somerville's Road Commissioner, completed the Gravel Road Survey Forms. Kelly Grenier entered the engineer's survey data into the RSMS11 and performed the accuracy review of the inventory data entry.

Susan and Kelly then reviewed the comparative importance and traffic reports and Kelly ran the network overview of graphical charts and maintenance status reports (see Appendix). Analysis and comparison of roads based on municipal priorities is discussed in the RSMS11 Reports Discussion section below.

Kelly also entered the engineer's repair recommendations into the RSMS11 and created the Somerville Roads Repair & Bids Worksheets 2012 (see attached) for the next stage of the project which will focus more on learning more about what items, materials, and services can be expected to cost (i.e. getting quotes, doing research) and budgeting. The repairs and bids worksheet enables easier tracking and updating of items, materials, and activities that cannot be costed per mile and applied to entire sections of road. The worksheet is also intended to help the user summarize materials, items, and services required for each section of road, obtain quotes, and organize them into jobs that can

then be put out to bid. This worksheet has not yet been tested so it remains to be seen whether it will be as useful as is hoped. It will likely be revised as it is utilized.

Once average costs for materials, items and services have been ascertained and entered into the RSMS11 along with other important budget information, then the RSMS11 budget development tool can be used to choose appropriate repair options, schedule work, and run financial reports. Then the maintenance, repair, and reconstruction project development phase of the project can begin.

## **RSMS11 REPORTS DISCUSSION**

The most useful reports at this point in the project include the Road Network Inventory, Road Importance Analysis and Road Traffic Analysis, Road Network Inventory Analysis Report, Network Overview Gravel: Drainage Category, and Network Overview Gravel: Maintenance Category.

### **Road Importance Analysis Report**

This report breaks the roads down by level of importance. The RSMS11 User Guide defines the measure of importance as follows:

*Importance is a qualitative measure of the importance of this road section on a scale of 1-5, where 1 is lowest and 5 highest. Municipal priorities may dictate that road sections with schools, medical facilities, etc., have higher importance ratings. Environmentally sensitive roads — such as those bordering bodies of water — may also be considered for higher importance ratings.*

The column to the furthest right shows the volume of traffic for each section of road. It is interesting to note that traffic volume is fairly consistent with importance for each section.

### **Road Traffic Analysis Report**

Like importance, traffic volume is a qualitative measure on a scale of 1-5, where 1 is lowest and 5 highest. The RSMS11 simply adds together importance and traffic for priority. Therefore, if a road has an importance of 1 and a traffic volume of 1, its priority number will be 2. Likewise, if importance is 5 and traffic is 5, then priority will be 10. Use of a priority rating will be seen in the Road Network Inventory Analysis Report discussed below.

## **Road Network Inventory Report**

This first report shows how all of Somerville's roads have been broken into sections, the length of each section, and width of each section (not yet measured and entered), the importance of that section of road to Somerville's residents, the volume of traffic, the jurisdiction (not meaningful to Somerville as there is only one jurisdiction at this time), whether the surface is gravel or paved (only one section of road in Somerville is paved), and when the last survey of the road was conducted (the last section of Valley Road, which also happens to be the only paved section, has never been surveyed).

This is the first time that an inventory of this level of detail has ever been compiled for Somerville's roads. Elements such as importance and traffic may have to be changed as more people take an interest in the project and, now that these aspects are visible, can take part in the conversation.

## **Road Network Inventory Analysis Report**

At this time, the Road Network Inventory Analysis Report is probably the most important RSMS11 report with regard to the Town of Somerville's Road Assessment, Inventory, and Planning Project.

The last two columns of the report are headed "Surface Status" and "Drainage Status". Surface Status has two categories: routine and reconstruct. Drainage Status also has two categories: good and poor. If no Gravel Road Survey Form data has been entered into the RSMS11, no surface or drainage status analysis can be done. For sections with no survey data, such as Valley Road, Section 3, the report will simply say "No Survey".

For each road, immediately after the surface status rating and the drainage status rating, there is a dash followed by a number. This number is the priority rating that has been established for that particular section of road.

Priority rating has nine categories ranging from 2 to 10. As mentioned above, priority rating is obtained by adding together importance and traffic ratings assigned to each section of road. So, for example, Somerville Road, Section 1, has a priority rating of 10. Conversely, Hibberts Gore Road, in the last line of the report has a priority rating of 2.

The Surface Status and Drainage Status columns of this report indicate that, according to RSMS11's analysis of the Gravel Road Survey Form data that was collected by the

engineer and Road Commissioner in the last (only) gravel road survey, the surfaces of all of Somerville's roads (with the exception of Section 3 of Valley Road which was not surveyed) are degraded to a point of requiring reconstruction. As well, all of Somerville's roads have poor drainage.

Since all of Somerville's roads (except Valley Road, Section 3) have the same surface and drainage status, this report was organized according to priority with the highest priority road sections at the top and the lowest priority road sections at the bottom. As previously mentioned, importance and traffic volume may be revisited but, at least for now, Somerville's Board of Selectmen have some idea of where resources are going to need to be focused.

While people in Somerville have been complaining for quite some time that their roads are in very bad shape, it's meaningful to see that the data collected by the engineer and Road Commissioner, and analyzed by the RSMS11, substantiates residents' claims: all of Somerville's roads need serious attention.

Having a simple, meaningful report such as the Road Network Inventory Analysis Report, will help residents understand the need for allocation of funds for road reconstruction. As well, RSMS11's prioritization function will help the Town decide which roads to focus on first.

### **Network Overview: Gravel – Maintenance**

This report provides a graphical representation of the status of all road section surfaces. Surface status is established by the RSMS11 through analysis of the data collected during gravel road surveys and recorded in the Gravel Road Survey Forms. Surface Status has two categories: routine and reconstruct.

### **Network Overview: Gravel – Drainage**

This report also provides a graphical representation, this time of the status of drainage for all road sections. Like surface status, drainage status is established by the RSMS11 through analysis of the data collected during gravel road surveys and recorded in the Gravel Road Survey Forms. Drainage Status has two categories: good and poor.

## **CONCLUSION**

Somerville's roads were originally built in the late 1800s using, what was at that time, contemporary road construction methods. For this reason, if we were to dig down through the subbase of most of Somerville's gravel roads, we would find wooden crossties, the material of choice for sound road construction at that time.

As the residents of Somerville can attest to and as the Road Network Inventory Analysis Report so clearly reflects, despite best efforts both in construction of the original roads and maintenance over the last one hundred years, Somerville's roads have degraded to the point of requiring complete reconstruction for surfaces and much reconstruction of drainage components such as ditching, outlets, culverts, etc.

Maine Local Roads Center, MDOT advises that reconstruction efforts should begin with the highest priority roads. Once a road has been reconstructed, proper maintenance of that and any other reconstructed roads that have a surface status of routine and a drainage status of good, should become the top priority for allocation of resources ensuring that reconstruction expenditure is not wasted.

## **NEXT STEPS**

There's still work to be done before the RSMS11 can be used to project the fifteen year budget its Budget Development tool is able to provide.

Road width measures have to be done for all of Somerville's roads and a paved road survey of Valley Road, Section 3, still has to be completed. Quotes have to be obtained for materials, items and services required for both maintenance and repair. Work that is ongoing and that has already been done will have to be reconciled against the engineer recommendations listed in both the RSMS11 and the Repairs and Bids worksheet.

Decisions have to be made based on what resources are available, or can be acquired, as to what rate of road reconstruction (one road per year? one section of road per year? can Somerville afford to do any reconstruction at this time?) can be tackled. Then road maintenance, repair, and reconstruction jobs can be organized and put out to bid.

The Road Commissioner and his crews will continue to conduct routine maintenance on roads not being considered for immediate reconstruction. Along with the Board of Selectmen, the decision will be made as to what percentage of funds allocated for road construction and maintenance will be used for reconstruction vs maintenance.

## **THANK YOU**

The Town of Somerville is most grateful to the Lincoln County Regional Planning Commission for their moral and technical support and also for their selection of Somerville as recipient of the \$2,000 as part of the "Assistance with Specific Know-How" (ASK) Program.

# APPENDICES

# Gravel Road Survey Form

Name: Brann Road                      Sec: 1  
 From: Sand Hill Road                      MP: 0.00  
 To: Hibberts Gore                          MP: 0.18

Surface: Gravel                      Importance (1-5): 1  
 Length: 0.18mi.                      Traffic (1-5): 1  
 Width: 0.00ft.                          Speed: 45  
 Jurisdiction: Townway

## Rock/Clay

Extent

<10%    10-30%    >30%

none	low	med	high

## Rutting

Extent

<10%    10-30%    >30%

none	low	med	high

## Loose Aggregate

Extent

<10%    10-30%    >30%

none	low	med	high

## Corrugations

Extent

<10%    10-30%    >30%

none	low	med	high

## Potholes

Extent

<10%    10-30%    >30%

none	low	med	high

## Dust

Extent

<10%    10-30%    >30%

none	low	med	high

## Cross Section

Extent

<10%    10-30%    >30%

none	low	med	high

## Roadside Drainage

Extent

<10%    10-30%    >30%

none	low	med	high

# Road Importance Analysis

## 2012-2013

<u>Road/Section Name</u>	<u>Section</u>	<u>From</u>	<u>To</u>	<u>Length</u>	<u>Width</u>	<u>Traffic</u>
<b>High</b>						
Somerville Road	1	Bridge edge Rte105	Marker 0.8	0.80		0.00 high
Somerville Road	2	Marker	Pole #70	1.10	0.00	high
Somerville Road	3	Pole #70	Jefferson South	1.20	0.00	high
Valley Road	1	Route 17	Marker 0.4	0.40	0.00	high
Valley Road	2	Marker	Marker 0.7	0.30	0.00	high
Valley Road	3	Marker	Jefferson line	1.00	0.00	high
<b>Med-High</b>						
Crummet Mountain Road	1	Route 105	Marker 1.2	1.19	0.00	medium
Crummet Mountain Road	2	Marker	Marker 2.6	1.40	0.00	medium
Crummet Mountain Road	3	Marker	Route 17	1.60	0.00	medium
North Mountain Road	2	Marker	Jefferson Line	0.28	0.00	med-high
<b>Medium</b>						
Colby Road	1	Turner	Marker	0.35	0.00	low-med
Colby	2	Marker	Marker	0.35	0.00	low-med
Colby	3	Marker	Marker	0.40	0.00	low-med
Colby	4	Marker	Palermo	0.45	0.00	low-med
Jones	1	Route 17	Mailbox	0.20	0.00	low-med
Jones	2	Mailbox	Mailbox	0.30	0.00	low-med
Jones	3	Mailbox	Marker	0.60	0.00	low-med
Jones	4	Marker	Jefferson	0.32	0.00	low-med
Sand Hill	1	Route 105	Powerline	0.63	49.50	medium
<b>Low-</b>						
Hewett Rd	1	Route 17	Marker	1.10	0.00	low-med
North	1	Jefferson	Marker	0.30	0.00	low-med
Sand Hill	2	Powerline	Marker	0.67	0.00	low-med
Sand Hill	3	Marker	Palermo	0.57	0.00	low-med
<b>Low</b>						
Brann	1	Sand Hill	Hibberts	0.18	0.00	low
Hibberts	1	Sand Hill	Town line	0.32	0.00	low

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# Road Traffic Analysis 2012-2013

<u>Road/Section Name</u>	<u>Section</u>	<u>From</u>	<u>To</u>	<u>Length</u>	<u>Width</u>	<u>Importance</u>
<b>High</b>						
Somerville Road	1	Bridge edge Rte105	Marker 0.8	0.80	0.00	high
Somerville Road	2	Marker 0.8	Pole #70	1.10	0.00	high
Somerville Road	3	Pole #70	Jefferson South	1.20	0.00	high
Valley Road	1	Route 17	Marker 0.4	0.40	0.00	high
Valley Road	2	Marker 0.4	Marker 0.7	0.30	0.00	high
Valley Road	3	Marker 0.7	Jefferson line	1.00	0.00	high
<b>Med-High</b>						
North Mountain Road	2	Marker 0.3	Jefferson Line	0.28	0.00	med-high
<b>Medium</b>						
Crummet Mountain Road	1	Route 105	Marker 1.2	1.19	0.00	med-high
Crummet Mountain Road	2	Marker 1.2	Marker 2.6	1.40	0.00	med-high
Crummet Mountain Road	3	Marker 2.6	Route 17	1.60	0.00	med-high
Sand Hill Road	1	Route 105	Powerline	0.63	49.50	medium
<b>Low-Medium</b>						
Colby Road	1	Turner Ridge Road	Marker 0.35	0.35	0.00	medium
Colby Road	2	Marker .35	Marker 0.7	0.35	0.00	medium
Colby Road	3	Marker 0.7	Marker 1.1	0.40	0.00	medium
Colby Road	4	Marker 1.1	Palermo Town Line	0.45	0.00	medium
Hewett Road	1	Route 17	Marker 1.1	1.10	0.00	low-med
Jones Road	1	Route 17	Mailbox #19	0.20	0.00	medium
Jones Road	2	Mailbox #19	Mailbox #114	0.30	0.00	medium
Jones Road	3	Mailbox #114	Marker 1.1	0.60	0.00	medium
Jones Road	4	Marker 1.1	Jefferson Line	0.32	0.00	medium
North Mountain Road	1	Jefferson WestLine	Marker 0.3	0.30	0.00	low-med
Sand Hill Road	2	Powerline	Marker 1.3	0.67	0.00	low-med
Sand Hill Road	3	Marker 1.3	Palermo Town Line	0.57	0.00	low-med
<b>Low</b>						
Brann Road	1	Sand Hill Road	Hibberts Gore	0.18	0.00	low
Hibberts Gore Road	1	Sand Hill Road	Town line Palermo	0.32	0.00	low

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## Road Network Inventory 2012-2013 Somerville

<u>Road/Section Name</u>	<u>Sec</u>	<u>From Road/Section</u>	<u>To Road/Section</u>	<u>Length</u>	<u>Import</u>	<u>Traffic</u>	<u>Jurisdiction</u>	<u>Surface</u>	<u>Last Survey Date</u>
Brann Road	1	Sand Hill Road	Hibberts Gore	0.18	low	low	Townway	Gravel	08/09/2012
Colby Road	1	Turner Ridge Road	Marker 0.35	0.35	medium	low-med	Townway	Gravel	08/02/2012
Colby Road	2	Marker .35	Marker 0.7	0.35	medium	low-med	Townway	Gravel	08/02/2012
Colby Road	3	Marker 0.7	Marker 1.1	0.40	medium	low-med	Townway	Gravel	08/02/2012
Colby Road	4	Marker 1.1	Palermo Town Line	0.45	medium	low-med	Townway	Gravel	08/02/2012
Crummett Mountain Road	1	Route 105	Marker 1.2	1.19	med-high	medium	Townway	Gravel	08/30/2012
Crummett Mountain Road	2	Marker 1.2	Marker 2.6	1.40	med-high	medium	Townway	Gravel	08/30/2012
Crummett Mountain Road	3	Marker 2.6	Route 17	1.60	med-high	medium	Townway	Gravel	08/30/2012
Hewett Rd	1	Route 17	Marker 1.1	1.10	low-med	low-med	Townway	Gravel	08/23/2012
Hibberts Gore Road	1	Sand Hill Road	Town line Palermo	0.32	low	low	Townway	Gravel	08/09/2012
Jones Road	1	Route 17	Mailbox #19	0.20	medium	low-med	Townway	Gravel	08/23/2012
Jones Road	2	Mailbox #19	Mailbox #114	0.30	medium	low-med	Townway	Gravel	08/23/2012
Jones Road	3	Mailbox #114	Marker 1.1	0.60	medium	low-med	Townway	Gravel	08/23/2012
Jones Road	4	Marker 1.1	Jefferson Line	0.32	medium	low-med	Townway	Gravel	08/23/2012
North Mountain Road	1	Jefferson WestLine	Marker 0.3	0.30	low-med	low-med	Townway	Gravel	08/23/2012
North Mountain Road	2	Marker 0.3	Jefferson Line	0.28	med-high	med-high	Townway	Gravel	08/23/2012
Sand Hill Road	1	Route 105	Powerline	0.63	medium	medium	Townway	Gravel	08/09/2012
Sand Hill Road	2	Powerline	Marker 1.3	0.67	low-med	low-med	Townway	Gravel	08/09/2012
Sand Hill Road	3	Marker 1.3	Palermo Town Line	0.57	low-med	low-med	Townway	Gravel	08/09/2012
Somerville Road	1	Bridge edge Rte105	Marker 0.8	0.80	high	high	Townway	Gravel	07/26/2012
Somerville Road	2	Marker 0.8	Pole #70	1.10	high	high	Townway	Gravel	07/26/2012
Somerville Road	3	Pole #70	Jefferson South	1.20	high	high	Townway	Gravel	07/26/2012
Valley Road	1	Route 17	Marker 0.4	0.40	high	high	Townway	Gravel	08/02/2012
Valley Road	2	Marker 0.4	Marker 0.7	0.30	high	high	Townway	Gravel	08/02/2012
Valley Road	3	Marker 0.7	Jefferson line	1.00	high	high	Townway	Paved	
				<b>16.01</b>					

8/29/2013  
2:14:50PM

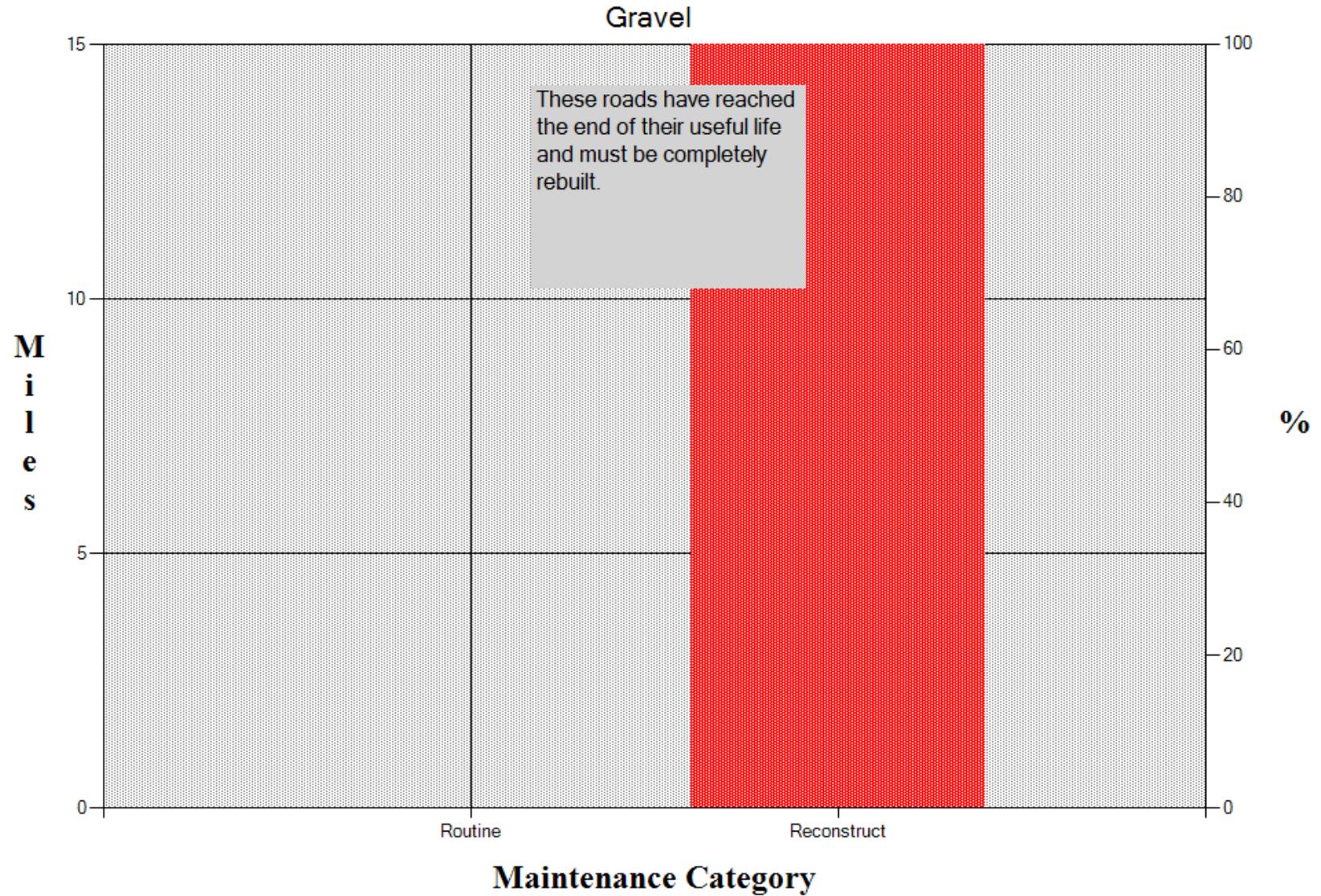
# Road Network Inventory

## Analysis Report

2012-2013 Somerville

<u>Road/Section Name</u>	<u>Sec</u>	<u>From Road/Section</u>	<u>To Road/Section</u>	<u>Surface</u>	<u>Length</u>	<u>Division</u>	<u>Surface Status</u>	<u>Drainage status</u>
Valley Road	3	Marker 0.7	Jefferson line	Paved	1.00		No Survey-10	No Survey-10
Somerville Road	1	Bridge edge Rte105	Marker 0.8	Gravel	0.80		Reconstruct-10	Poor-10
Somerville Road	2	Marker 0.8	Pole #70	Gravel	1.10		Reconstruct-10	Poor-10
Somerville Road	3	Pole #70	Jefferson South	Gravel	1.20		Reconstruct-10	Poor-10
Valley Road	1	Route 17	Marker 0.4	Gravel	0.40		Reconstruct-10	Poor-10
Valley Road	2	Marker 0.4	Marker 0.7	Gravel	0.30		Reconstruct-10	Poor-10
North Mountain Road	2	Marker 0.3	Jefferson Line	Gravel	0.28		Reconstruct-8	Poor-8
Crummet Mountain Road	1	Route 105	Marker 1.2	Gravel	1.19		Reconstruct-7	Poor-7
Crummet Mountain Road	2	Marker 1.2	Marker 2.6	Gravel	1.40		Reconstruct-7	Poor-7
Crummet Mountain Road	3	Marker 2.6	Route 17	Gravel	1.60		Reconstruct-7	Poor-7
Sand Hill Road	1	Route 105	Powerline	Gravel	0.63		Reconstruct-6	Poor-6
Colby Road	1	Turner Ridge Road	Marker 0.35	Gravel	0.35		Reconstruct-5	Poor-5
Colby Road	2	Marker .35	Marker 0.7	Gravel	0.35		Reconstruct-5	Poor-5
Colby Road	3	Marker 0.7	Marker 1.1	Gravel	0.40		Reconstruct-5	Poor-5
Colby Road	4	Marker 1.1	Palermo Town Line	Gravel	0.45		Reconstruct-5	Poor-5
Jones Road	1	Route 17	Mailbox #19	Gravel	0.20		Reconstruct-5	Poor-5
Jones Road	2	Mailbox #19	Mailbox #114	Gravel	0.30		Reconstruct-5	Poor-5
Jones Road	3	Mailbox #114	Marker 1.1	Gravel	0.60		Reconstruct-5	Poor-5
Jones Road	4	Marker 1.1	Jefferson Line	Gravel	0.32		Reconstruct-5	Poor-5
Hewett Rd	1	Route 17	Marker 1.1	Gravel	1.10		Reconstruct-4	Poor-4
North Mountain Road	1	Jefferson WestLine	Marker 0.3	Gravel	0.30		Reconstruct-4	Poor-4
Sand Hill Road	2	Powerline	Marker 1.3	Gravel	0.67		Reconstruct-4	Poor-4
Sand Hill Road	3	Marker 1.3	Palermo Town Line	Gravel	0.57		Reconstruct-4	Poor-4
Brann Road	1	Sand Hill Road	Hibberts Gore	Gravel	0.18		Reconstruct-2	Poor-2
Hibberts Gore Road	1	Sand Hill Road	Town line Palermo	Gravel	0.32		Reconstruct-2	Poor-2
					<b>16.01</b>			

# 2012-2013 Somerville Network Overview



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