

# Kingsbury Plantation

## Board of Assessors/Road Commissioners

### 5 Year Plan: Roads

Original July 24, 2017; Updated April 10, 2019

#### Authors

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#### Overview

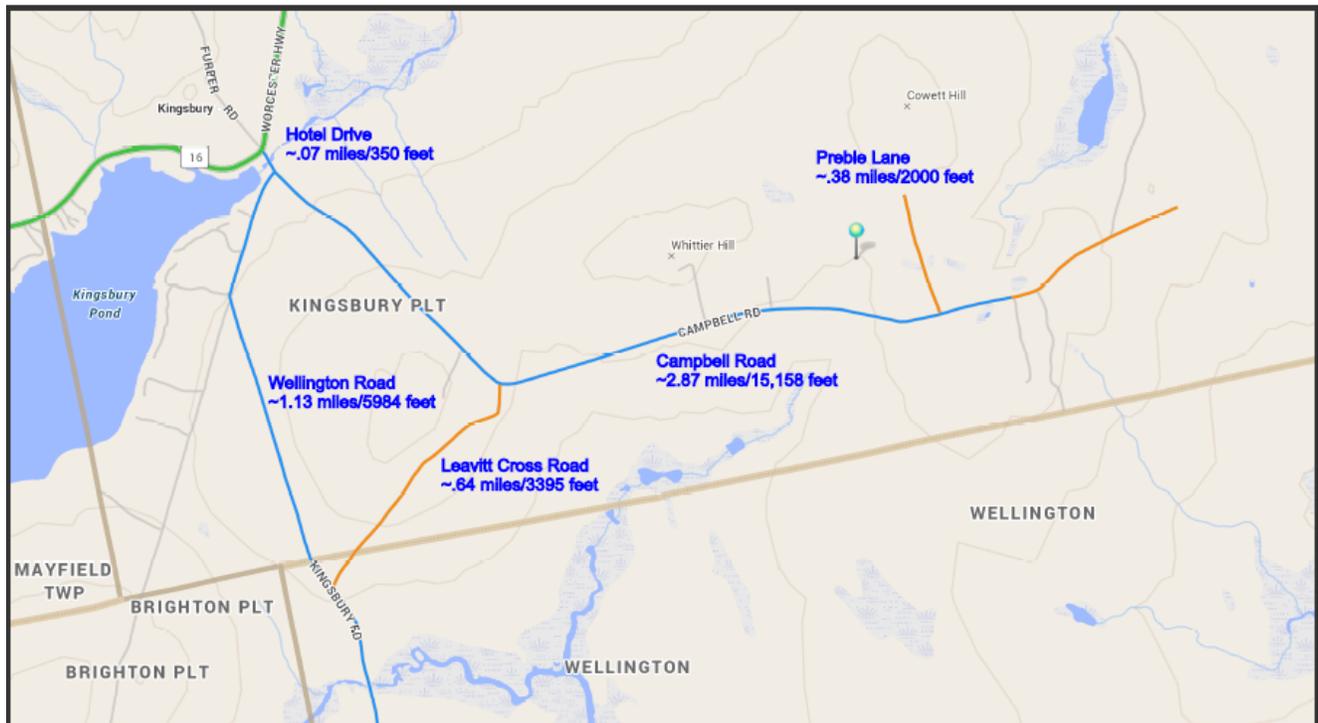
Kingsbury Plantation maintains 5 roads:

- **Campbell Road\***
  - \* Part of Campbell Road is closed for winter maintenance.
- **Hotel Drive\***
  - \* Hotel Drive is the only paved road maintained by the Plantation.
- **Leavitt Cross Road\***
  - \* Leavitt Cross Road is closed for winter maintenance.
- **Preble Lane\***
  - \* Preble Lane is closed for winter maintenance.
- **Wellington Road**

Kingsbury Plantation is also part of an interlocal agreement with Brighton Plantation and Somerset County (Mayfield). The three communities purchased and maintain a sand/salt shed in Brighton Plantation, and have a contract with Lawson Landscaping to handle the plowing and sanding. Kingsbury Plantation's financial responsibility covers the winter maintenance for part of Campbell Road, all of Wellington Road, and the Alton Worcester Highway (State Route 16).

The Board of Assessors currently serves as the Board of Road Commissioners. At the 2017 Town Meeting, the Assessors recommended returning to an individual appointed Road Commissioner starting in 2018. Also at the Town Meeting, the Board recommended appointing a Road Commissioner Agent until the 2018 Town Meeting. Both motions carried, and a Road Commissioner is appointed each year by the Board of Assessors after Town Meeting.

## Kingsbury Plantation Roads Map



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0.65 Miles  
1 inch = 0.49 miles

Date: 7/26/2017  
Time: 10:56:38 AM

### LEGEND

**Jurisdiction 4**    State Aid    Townway Summer Maint. Only    Seasonal Parkway    **Freeways and Expressways 4**  
 State Highway    Townway    Townway Winter Maint. Only    Other    Interstate

## Culverts

- There are approximately 40 culverts in Kingsbury Plantation.
- The assessors made the decision in 2017 to use plastic for all replacement culverts:
  - Plastic culverts are less expensive.
  - Plastic culverts are not subject to the same rust and other maintenance issues as metal culverts.
  - Plastic culverts are easier to store, install, and manage.

## Ditching

- Kingsbury Plantation has been adding deep ditches where feasible. Deep ditching has dramatically improved the roads throughout the year by decreasing the damage from frost and weather and improving drainage.
- In 2017, the assessors requested mats and/or ground cover be used after ditching to protect the road and ditches.
- In 2017, Kingsbury Plantation continued deep ditching the Wellington Road down to the intersection and began work on the Campbell Road.

- Kingsbury Plantation also benefits from the fill from the ditching—appropriate fill is taken to improve the Plantation lot.
- In 2017, the estimated costs for labor and equipment for 2-3 days was approximately \$3,320.

## **Grading**

- The Plantation traditionally grades the roads twice/year—once in the spring and once in the fall.
- Sections of the road are graded as needed, due to culverts, ditching, additional gravel, and damage.
- The cost for the spring grading in 2017 was \$1,995.
- In 2019, we are improving the grading to ensure calcium is added and activated immediately after grading to reduce damage and dust/lost fine gravel and improve the road. The estimated cost for grading is \$1,800 and the estimated cost for calcium addition and activation is \$1,000.
- To control costs, the Plantation will use our rock rake and tractor, instead of relying on contractors to rock rake before/during/after grading.

## **Gravel**

- The Plantation adds gravel by plan and as needed to maintain and improve Campbell, Wellington, Leavitt, and Preble roads.
- Specific plans for gravel are included under each road.

## **Trees**

- In 2017, the Board of Road Commissioners/Assessors created and began executing a plan to remove dead and potentially hazardous trees.
  - Step 1: Chris Russell identified trees with spray paint.
  - Step 2: Tami Wederbrand coordinated with Thomas Douglas Logging to remove the trees following a cut on Wellington Road. Coordinating the plantation work following the cut allowed the plantation to work with a high quality professional, save money (since the equipment and yard were on site), and complete the work while the roads are frozen (to alleviate damage).
  - Step 3: Chris notified landowners via letter.
  - Step 4: Thomas Douglas cut the trees in January 2018.
- In addition to the planned cut, many people helped trim, cut, and remove dead trees and brush throughout the year. Thank you to: Tammy and Jeff Bridges, Walter Curtis, Martie Furber, Al Grant, Jim Morin, Errol Nightingale Chris and Cathy Russell, Tami Wederbrand, and all residents, landowners and friends of Kingsbury that helped throughout the year.

## **2017 Plans**

- **Grading**
  - The Spring grading for all roads cost was \$1,995.
  - Fall grading of Campbell Road cost was \$595.
- **Culverts**
  - In 2017, the Plantation replaced 6 culverts: two 15-inch culverts and four 12-inch culverts.
- **Safety Equipment**

- Kingsbury Plantation is dedicated to promoting safety and ensuring the safety of residents, travelers, and laborers. In 2017, the Plantation updated safety equipment—purchasing:
  - Road warning and hazard signs
  - Personal safety equipment, including vests, jackets, and other safety apparel
  - Safety cones.
- **Campbell Road**
  - **Ditching**
    - Deep Ditching is now in place for part of Campbell Road.
    - Deep Ditching was improved near the Wellington Road intersection.
    - In 2017, Kingsbury began adding mats after deep ditching.
    - An engineering plan for erosion is needed to mitigate water and vehicle damage that is causing washboarding and potholes near the Wellington Road intersection.
  - **Gravel**
    - \$173 of Gravel was added to repair washboard and potholes issues in fall 2017.
    - The Road Commissioners requested additional gravel in 2017 that was not completed. They plan dramatic improvements in 2018.
  - **January 2017 Actual Condition:** The condition of the road in January 2017 was acceptable—though there were potholes, subpar ditches, and several culverts needed to be replaced, the road was passable. January through July 2017, we experienced issues and lost gravel due to runoff and drainage on the hill near the Wellington Road intersection. Fall 2017, serious issues of washboarding and potholes occurred again near the Wellington Road intersection, and between Leavitt and Preble.
  - **December 2017 Projected and Actual Condition:** The road was projected to be very good in December 2017. Due to the deferred gravel, the actual condition of the road at the end of 2017 was good.
- **Hotel Drive**
  - In 2017, Hotel Drive was re-paved to protect the excellent work done when the road was rebuilt. The goal was to avoid further damage to the road and protect the road and bridge.
  - The actual cost of the work by Fine Line Paving was: \$9,450.
  - **January 2017 Actual Condition:** The condition of the road in January 2017 was subpar due to potholes and crumbling asphalt.
  - **December 2017 Projected and Actual Condition:** Both the projected and actual condition of the road at the end of 2017 was excellent, due to the work completed in June 2017.
- **Leavitt Cross Road**
  - **Culverts**
    - No Culverts Replaced in 2017
  - **Ditching**
    - No Deep Ditching is in place, in part due to the insufficient gravel.
  - **Gravel**
    - Substantial gravel is needed to improve the subpar condition of the road. The work was planned in 2017, but not completed.

- **January 2017 Actual Condition:** Since Leavitt Cross Road is closed for winter maintenance, the condition of the road is measured when the snow clears. The condition of the road near the Wellington town line in Spring 2017 is subpar—the road is down to ledge and needs gravel.
- **December 2017 Projected and Actual Condition:** The condition of the road at the end of 2017 was projected to be very good. The actual condition was subpar, since the work planned in 2017 was not completed. Gravel and ditching are critical needs for 2018.
- **Preble Lane**
  - **Culverts**
    - No Culverts Replaced in 2017
  - **Ditching**
    - Ditching is in place as needed.
    - No additional Deep Ditching was planned or needed in 2017.
  - **Gravel**
    - No gravel was projected or needed in 2017.
  - **January 2017 Actual Condition:** Since Preble Lane is closed for winter maintenance, the condition of the road is measured when the snow clears. The condition of the road in Spring 2017 is very good.
  - **December 2017 Projected and Actual Condition:** Both the projected and actual condition of the road at the end of 2017 was very good.
- **Wellington Road**
  - **Ditching**
    - Deep Ditching was added in 2017 from 75 Wellington Road to the Campbell Road intersection and is now in place for most of Wellington Road.
    - In 2017, Kingsbury began adding mats after ditching.
    - The Deep Ditching has dramatically improved the drainage and condition of the road and will be maintained moving forward.
  - **Gravel**
    - Substantial gravel (approximately \$32,000) was added to Wellington Road in 2017.
    - Lessons were learned during the gravel work—two changes will be made to all future gravel work:
      - The roads were not immediately graded. Loose, uneven gravel caused potentially hazardous driving conditions. Moving forward, roads will be immediately graded following addition of gravel.
      - Calcium chloride was not added immediately following addition of gravel or grading. Dusty conditions caused potentially hazardous driving conditions and an unpleasant environment for camp owners. Moving forward, calcium chloride will be added immediately following addition of gravel/grading to alleviate dust and improve the road surface.
  - **January 2017 Actual Condition:** The condition of the road in January 2017 was acceptable—though there were potholes, subpar ditches, and several culverts needed to be replaced, the road was passable throughout the winter and spring.

- **December 2017 Projected and Actual Condition:** Both the projected and actual condition of the road at the end of 2017 was very good, thanks to the replaced culverts, deep ditching, and added gravel.

## 2018 Plans

- **Grading**
  - The Assessors graded roads in the Spring and Fall 2018.
  - The cost for the Spring grading (\$1,615) and gravel (\$1,920) was \$3,535.00
- **Culverts**
  - In 2018, the Plantation replaced approximately 4 culverts.
- **Equipment**
  - Kingsbury Plantation is dedicated to promoting safety and ensuring the safety of residents, travelers, and laborers. After dramatically upgrading the quantity and quality of equipment in 2017, the Plantation projects that it will only need personal safety equipment and equipment and signs for the new garage.
  - The Plantation purchased a tractor in 2018 to ensure we can quickly resolve issues and emergencies, better maintain roads without relying on expensive equipment rentals, and proactively avoid potential hazards.
  - The Plantation plans on building a garage to safely store and maintain town equipment used to maintain the roads.
- **Campbell Road**
  - **Culverts**
    - Number 2018 Culverts: 2
  - **Ditching**
    - Some ditching was done in key sections.
    - The erosion and ditching issues near the Wellington Road intersection needs an improvement plan.
  - **Gravel**
    - Gravel was added in sections from Wellington Road to Preble Road. Unfortunately, we received substandard gravel. The contractor was asked to remediate, and simply mixed the new gravel with the gravel from the ditch. We experienced serious washboard issues as a result. In addition, the contractor did not add calcium after immediately adding gravel or grading, so we lost substantial fine gravel as dust.
  - **Spring 2018 Condition:** The improved ditching, replaced culverts, and gravel reduced some damage during the winter storms and spring mud season, but the spring condition was not good—we continue to face dramatic erosion issues on the hill, and needed to add substantial gravel in several sections.
  - **December 2018 Condition:** Due to extensive work completed in 2018, the condition of the road at the end of 2018 was projected to be very good. Unfortunately, due to the substandard gravel, the actual condition was only acceptable. We need to do substantial brush work, ditching, erosion mitigation, culvert replacement, and add gravel to several sections of the road.
- **Hotel Drive**
  - **Spring 2018 Condition:** Since the road was improved in 2017, the condition in Spring 2018 was excellent.

- **December 2018 Condition:** The condition of the road at the end of 2018 was excellent.
- **Leavitt Cross Road**
  - **Culverts**
    - Number 2018 Culverts: 2 Culverts were added in 2018
  - **Ditching**
    - Ditching was added where appropriate in 2018.
  - **Gravel**
    - Substantial gravel was needed to improve the condition of the road—several parts of the road are down to ledge. On the sections where the road was down to ledge, mats were added under the gravel to improve the road.
  - **Spring 2018 Condition:** Since Leavitt Cross Road is closed for winter maintenance, the condition of the road is measured when the snow clears. Since the work requested in 2017 was not completed, the condition was poor.
  - **December 2018 Condition:** Due to substantial work planned in 2018, the condition of the road at the end of 2018 was good.
- **Preble Lane**
  - **Culverts**
    - No Culverts were projected or needed in 2018
  - **Ditching**
    - Ditching is in place as needed.
    - No additional Deep Ditching was planned or needed in 2018.
  - **Gravel**
    - No gravel is projected for 2018.
  - **Spring 2018 Condition:** Since Preble Lane is closed for winter maintenance, the condition of the road is measured when the snow clears. The condition of the road in Spring 2018 was good.
  - **December 2018 Condition:** The condition of the road at the end of 2018 was good.
- **Wellington Road**
  - **Culverts**
    - Number 2018 Culverts: 0
  - **Ditching**
    - Deep Ditching is in place for most of Wellington Road.
    - Deep Ditching will be maintained in 2018.
  - **Gravel**
    - Gravel should only be needed to maintain current condition, and/or repair potholes.
  - **Spring 2018 Condition:** The extensive ditching, maintained culverts, and added gravel reduced the damage during the winter and mud season.
  - **December 2018 Condition:** With maintenance on potholes and grading, the condition was good throughout the year, and very good going in December 2018.

## 2019 Plans

- **Grading / Calcium**
  - The Assessors plan to grade in the Spring and Fall 2019.
  - The estimated cost for each grading is \$1,800 (15 hours).
  - After each grading, the roads will be wet, calcium flakes spread, and activated with an estimated cost of water truck, 2 men, spreader \$1,000.
  - We will order 2 pallets of calcium to start the year and will track for archiving and future year estimates.
- **Culverts:**
  - In 2019, the Plantation plans to add/replace several culverts, with an estimated cost of: \$1,500-2,500 for each culvert. Estimate to be updated late Spring 2019, with actual reported in the Fall. Culverts will be placed using a new method which includes compacting to improve the road and lifespan of the culvert.
- **Equipment**
  - The Plantation fixed the rock rake in Spring 2019 and plans to use it to reduce costs for grading and to improve the roads in the Spring.
  - The Plantation is purchasing a new chipper in Spring 2019 to take care of deferred and new brushwork needed on all roads. The chipper will save money by avoiding rental of equipment, reducing labor, and allowing us to use the chips on Plantation lots.
- **Key intersection issues:**
  - **Campbell/Wellington Road**
    - We will be addressing the issue in 2019 by improving the grade of Campbell Hill to mitigate erosion, improving the ditching and culverts on both Campbell and Wellington Road, using a compactor and calcium to mitigate water and ATV damage, and potentially adding RAP + compaction + calcium. The cost for RAP is estimated at \$18/yard recycled asphalt.
  - **Campbell/Leavitt Cross Road**
    - We are experiencing tire and water damage at the intersection and will be addressing the issues with improved culvert and ditching to reduce erosion and by compacting the road and activating calcium to reduce vehicle damage and dust.
- **Campbell Road**
  - **Culverts**
    - Number 2019 Culverts: Estimate TBD—several culverts need to be re-installed. We hope to re-use the original culverts. Estimate to be updated after culverts are inspected during re-installation.
  - **Ditching**
    - Deep Ditching is in place from the Wellington Road intersection to the Leavitt Cross Road. Sections of the ditching need to be improved.
    - Deep Ditching needs to be improved from Leavitt Cross Road to Preble.
  - **Brush:**
    - Extensive brush work is needed on Campbell Hill.

- **Gravel**
  - Gravel will be added throughout to overcome the substandard gravel, and as needed to fix potholes and washboard.
- **Spring 2019 Condition:** Due to extensive work completed in 2018, the condition of the road at the end of 2018 was projected to be very good. Unfortunately, we received substandard gravel and had culverts incorrectly installed and the actual condition was only acceptable. We experienced sinkholes, potholes, and serious erosion issues that will need to be addressed in 2019.
- **December 2019 Projected Condition:** The condition of the road at the end of 2019 is projected to be very good.
- **Hotel Drive**
  - **Spring 2019 Projected Condition:** Since the road was improved in 2017, the condition in Spring 2019 was projected to be very good. A few cracks have appeared, which will be addressed in the summer.
  - **December 2019 Projected Condition:** The condition of the road at the end of 2019 is projected to be good.
- **Leavitt Cross Road**
  - **Culverts**
    - Number Culverts: 2
    - No Culverts projected for 2019
  - **Ditching**
    - Ditching will be maintained in the sections where gravel and ditching was added in 2018.
  - **Spring 2019 Projected Condition:** Since Leavitt Cross Road is closed for winter maintenance, the Spring condition of the road was very good.
  - **December 2019 Projected Condition:** The projected condition of the road at the end of 2019 is good.
- **Preble Lane**
  - **Culverts**
    - No Culverts projected for 2019
  - **Ditching**
    - Ditching is in place as needed.
    - No additional Deep Ditching is planned for 2019.
  - **Gravel**
    - Minimal gravel is projected to repair potholes for 2019.
  - **Spring 2019 Projected Condition:** The condition of the road in Spring 2019 was good.
  - **December 2019 Projected Condition:** The condition road at the end of 2019 is projected to be acceptable.
- **Wellington Road**
  - **Culverts**
    - Number 2019 Culverts: Estimate 2
  - **Ditching**
    - Deep Ditching is in place for most of Wellington Road.
    - Deep Ditching will be maintained in 2019.

- **Gravel**
  - Gravel in summer 2019 should be needed to maintain current condition. Approximate amount of gravel and location to be estimated late Spring 2019.
- **Spring 2019 Projected Condition:** We experienced serious erosion issues and sinkholes on Wellington Road due to dams placed in the ditches and around culverts. Dams were removed and ditches and culverts will be improved in 2019.
- **December 2019 Projected Condition:** The condition of the road at the end of 2019 is projected to be very good.

## 2020 Plans

- **Grading**
  - The Assessors plan to grade in the Spring and Fall 2020.
  - The estimated cost for each grading + calcium is \$3,000.
- **Culverts**
  - In 2020, the Plantation plans to replace 6 culverts.
- **Campbell Road**
  - **Culverts**
    - Number 2020 Culverts: Estimate 3
  - **Ditching**
    - Deep Ditching should be in place as needed along most of the road.
    - Deep Ditching may need improvement from Wellington to Leavitt.
  - **Gravel**
    - Gravel in summer 2020 may be needed between Wellington/Leavitt to maintain condition. Approximate amount of gravel and location to be estimated Fall 2019/Spring 2020.
  - **Spring 2020 Projected Condition:** We hope that improved ditching, replaced culverts, erosion work, and added gravel will reduce the damage during future winters, storms, and mud season. The projected condition is very good.
  - **December 2020 Projected Condition:** The condition of the road at the end of 2020 is projected to be very good.
- **Hotel Drive**
  - **Spring 2020 Actual Condition:** Since the road was improved in 2017, the condition in Spring 2020 is projected to be very good.
  - **Spring 2020 Projected Condition:** The condition of the road at the end of 2020 is projected to be very good.
- **Leavitt Cross Road**
  - **Culverts**
    - Number Culverts: 2
    - No Culverts are projected for 2020
  - **Ditching**
    - Deep Ditching will be maintained in the sections where gravel and ditching 2018.
  - **Gravel**

- Gravel should be needed to maintain the road. Amount of gravel and location to be determined in Fall 2019/Spring 2020.
  - **Spring 2020 Projected Condition:** Since Leavitt Cross Road is closed for winter maintenance, the condition of the road is measured when the snow clears. We hope that added gravel and ditching will reduce the damage during future winters and storms. The projected condition is good.
  - **December 2020 Projected Condition:** The condition of the road at the end of 2020 is projected to be good.
- **Preble Lane**
  - **Culverts**
    - 1 Culvert may need to be replaced in 2020.
  - **Ditching**
    - Ditching is planned for 2020.
  - **Gravel**
    - Gravel is projected to be needed around the culvert in 2020.
  - **Spring 2020 Projected Condition:** Since Preble Lane is closed for winter maintenance, the condition of the road is measured when the snow clears. The condition of the road in Spring 2020 is projected to be acceptable.
  - **December 2020 Projected Condition:** The condition of the road at the end of 2020 is projected to be very good after planned ditching, gravel, and culvert work during the year.
- **Wellington Road**
  - **Culverts**
    - Number 2020 Culverts: Estimate 2
  - **Ditching**
    - Deep Ditching is in place for most of Wellington Road.
    - Deep Ditching will be maintained in 2020.
  - **Gravel**
    - Gravel should be needed to maintain the road. Amount of gravel and location to be determined in Fall 2019/Spring 2020.
  - **Spring 2020 Projected Condition:** We hope that extensive ditching, maintained culverts, and added gravel will reduce the damage during future winters and storms. The projected condition is very good.
  - **December 2020 Projected Condition:** The condition of the road at the end of 2020 is projected to be very good.

## 2021 Plans

- **Grading**
  - The Assessors plan to grade in the Spring and Fall 2021.
  - The estimated cost for each grading is: \$3,000.
- **Culverts**
  - In 2021, the Plantation plans to replace 6 culverts.
- **Campbell Road**
  - **Culverts**
    - Number 2021 Culverts: Estimate 3
  - **Ditching**

- Deep Ditching should be in place as needed along most of the road.
    - Deep Ditching may need improvement from Wellington to Leavitt.
  - **Gravel**
    - Gravel should be needed to maintain the road. Amount of gravel and location to be determined in Fall 2020/Spring 2021.
  - **Spring 2021 Projected Condition:** We hope that improved ditching, replaced culverts, and added gravel will reduce the damage during future winters and storms. The projected condition is very good.
  - **December 2021 Projected Condition:** The condition of the road at the end of 2021 is projected to be very good.
- **Hotel Drive**
  - **Spring 2021 Actual Condition:** Since the road was improved in 2017, the condition in Spring 2021 is projected to be good.
  - **December 2021 Projected Condition:** The condition of the road at the end of 2021 is projected to be good. The condition should be monitored, with budgeting to improve the road within 5 years.
- **Leavitt Cross Road**
  - **Culverts**
    - Number Culverts: 2
    - No Culverts are projected for 2021
  - **Ditching**
    - Deep Ditching will be maintained in the sections where gravel and ditching was added in 2018.
  - **Gravel**
    - Gravel may be needed to maintain the road. Amount of gravel and location to be determined in Fall 2020/Spring 2021.
  - **Spring 2021 Projected Condition:** Since Leavitt Cross Road is closed for winter maintenance, the condition of the road is measured when the snow clears. We hope that added gravel and ditching will reduce the damage during future winters and storms. The projected condition is good.
  - **December 2021 Projected Condition:** The condition of the road at the end of 2021 is projected to be good.
- **Preble Lane**
  - **Culverts**
    - No Culverts are projected for 2021
  - **Ditching**
    - Ditching from 2020 will be maintained in 2021.
  - **Gravel**
    - No gravel is projected to be needed in 2021.
  - **Spring 2021 Projected Condition:** Since Preble Lane is closed for winter maintenance, the condition of the road is measured when the snow clears. The condition of the road in Spring 2021 is projected to be very good.
  - **December 2021 Projected Condition:** The condition road at the end of 2021 is projected to be very good.
- **Wellington Road**
  - **Culverts**
    - Number 2021 Culverts: Estimate 3
  - **Ditching**
    - Deep Ditching is in place for most of Wellington Road.

- Deep Ditching will be maintained in 2021.
- **Gravel**
  - Gravel may be needed to maintain the road. Amount of gravel and location to be determined in Fall 2020/Spring 2021.
- **Spring 2021 Projected Condition:** We hope that extensive ditching, maintained culverts, and added gravel will reduce the damage during future winters and storms. The projected condition is very good.
- **December 2021 Projected Condition:** The condition of the road at the end of 2021 is projected to be very good.