

2018 ROAD MAINTENANCE PROGRAM

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**Town of Bethlehem
Superintendent of Highways**

June 27, 2018

AGENDA

- ☒ Why do we maintain our roads?
- ☒ How is the Road Maintenance Plan developed?
 - ➔ The process – its not just pavement age
 - ➔ Pavement condition assessments on Town roads
 - ➔ Other considerations
- ☒ 2018 Road Maintenance Plan
- ☒ Sidewalks: Improvements and Modifications

WHY DO WE MAINTAIN OUR ROADS?



Road Maintenance Program

- Goal is to maintain our high quality road system at lowest cost and avoid major reconstruction
- Road Maintenance program includes patching, area repairs, drainage maintenance, surface treatments and repaving



HOW WAS THE ROAD MAINTENANCE PLAN DEVELOPED?

☒ Pavement Condition Assessment

- Highway Department re-assessed Town roads in April and May 2017
- Condition Assessment is the foundation of road selection for Road Maintenance Plan

☒ Coordination

- DPW - water & sewer projects and problem areas
- Capital projects
- Engineering and Planning Dept. – New developments
- National Grid Gas and Electric
- Bike & Pedestrian Priorities – Complete Streets

☒ Field Work Planning

- Confirmation of street condition and priority
- Assess drainage & adjoining grades – milling required?
- Measurement of streets and planned work areas

PAVEMENT CONDITION ASSESSMENT



How People Typically See Roads

- Nice suburban road
- It's not too bumpy – the tires aren't "thumping"
- There aren't any potholes

PAVEMENT CONDITION ASSESSMENT



Upon Closer Inspection....

- Longitudinal cracking where a seam failed
- Ponding water and drainage issues
- Reflective cracking from underlying pavement joints
- Rutting in the wheel tracks
- Raveling where asphalt binder has deteriorated

IT'S NOT JUST PAVEMENT AGE



Ratings based on frequency & significance of common surface defects



IF WE WAIT TOO LONG, COSTS GO UP QUICKLY

Goal:

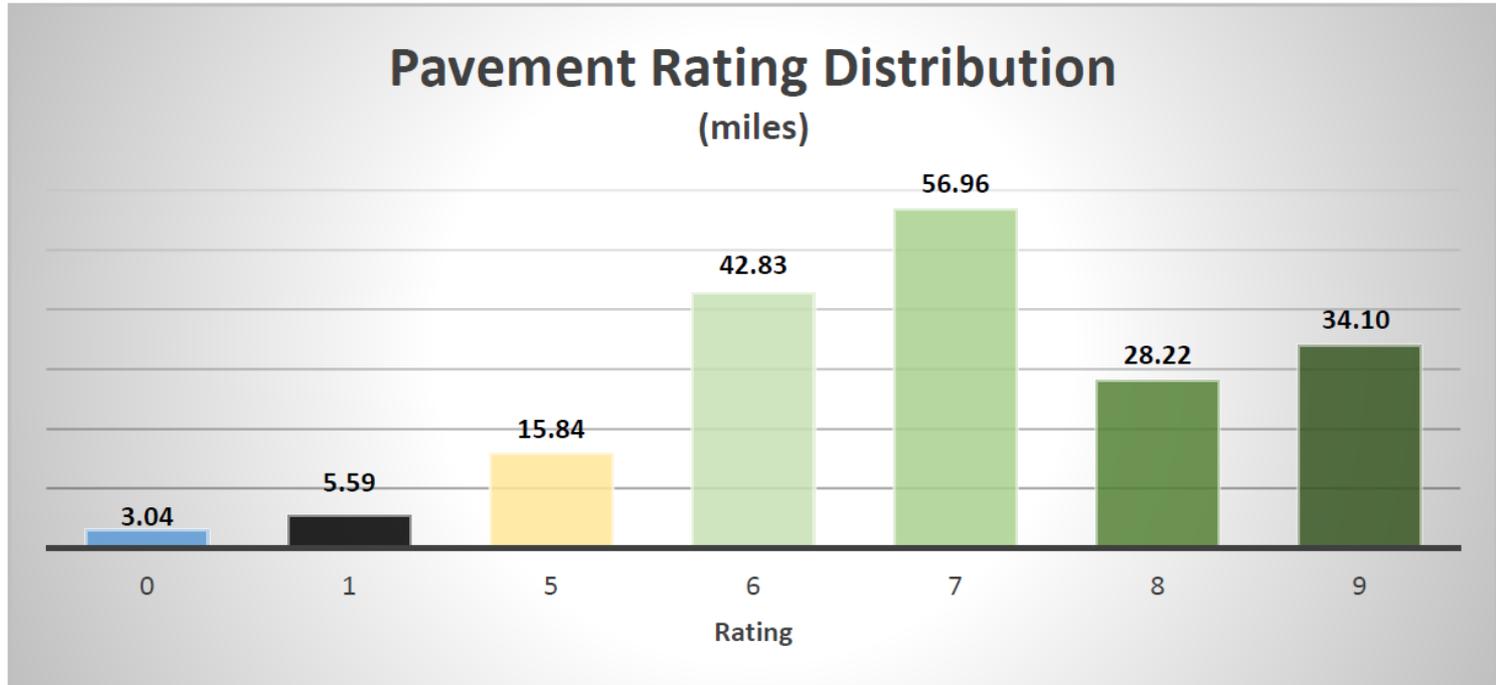
Maintain good conditions & find and fix problems early



Pavement Condition Informs Maintenance Need		Cost Scale
Ratings 9 & 10	No maintenance	
Rating 8	Little maintenance	
Rating 7	Routine maintenance (e.g., crack sealing, patching, etc.)	\$
Ratings 5 & 6	Preventative treatments - thin overlay (< 2"), etc.	\$\$\$
Ratings 3 & 4	Needs strengthening – milling, patching, reclamation, struct. overlay (> 2"), etc.	(3 to 10) x \$
Ratings 1 & 2	Full reconstruction	(40 to 50) x \$

PAVING CONDITIONS

ROAD MILES PER EACH CONDITION RATING



PAVING CONDITIONS

- We like to try to catch our roads between 5 and 6 rating, because in the case of a severe winter, some of our roads could quickly deteriorate to a 4 or possibly even a 3
- Borthwick Ave is an example, which was a 3 before reconstruction

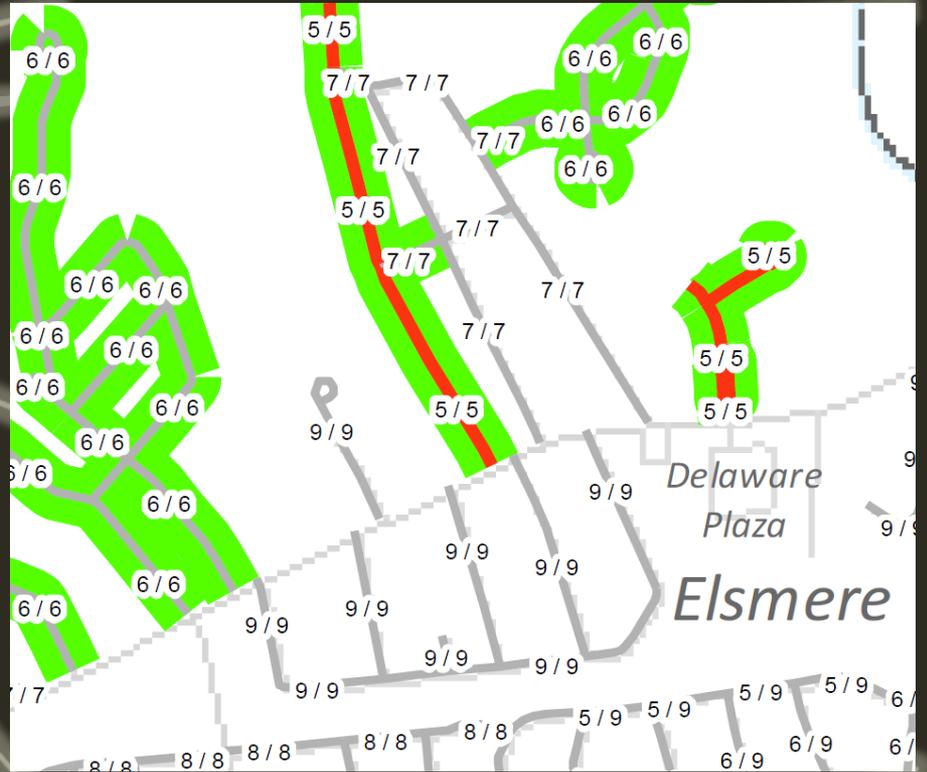
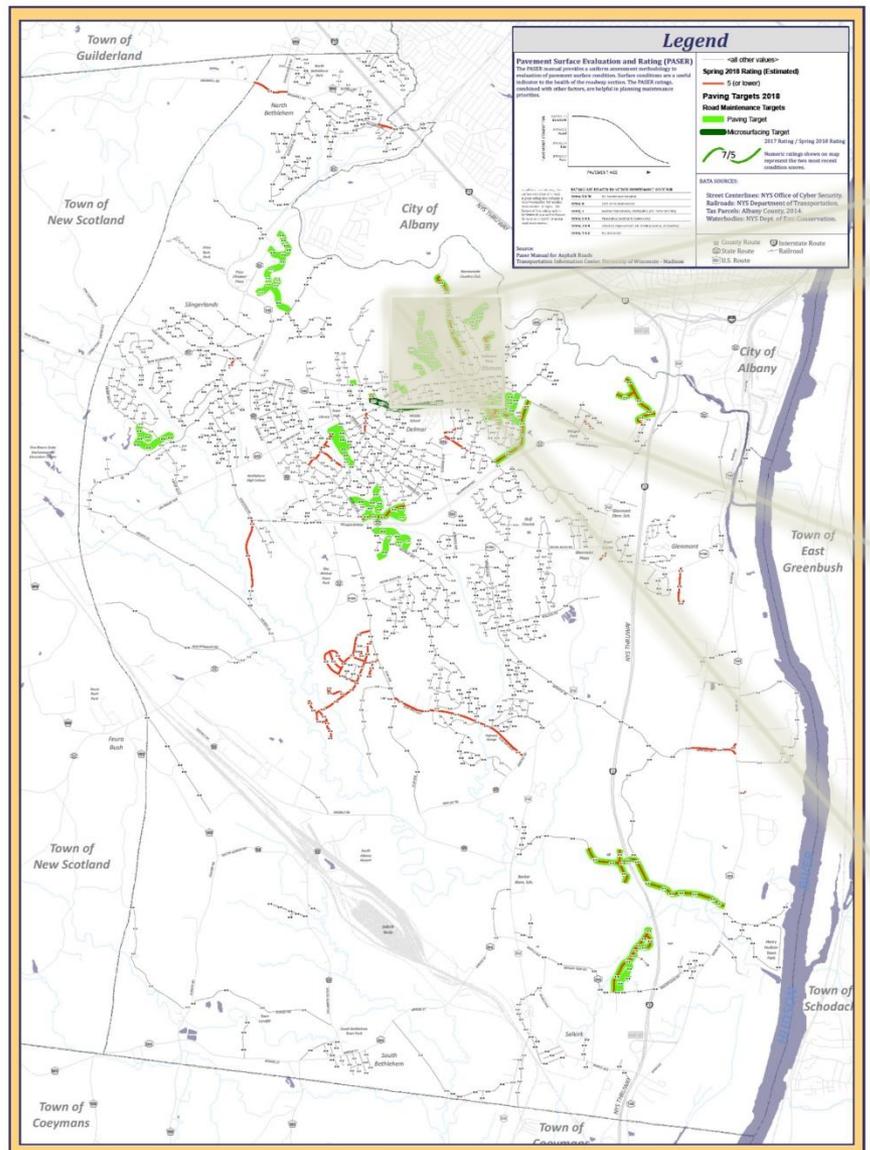


MILLING IS VERY COSTLY

\$6,000 PER MILE (24' WIDE ROAD)



2018 ROAD MAINTENANCE PLAN



Legend:

Red – Pavement Condition 3, 4 or 5

Green – Target for 2018 Paving

Streets shown in enlargement include Normanskill Blvd, Salisbury Rd, Herrick Rd, Groesbeck Pl, etc.

2018 Road Maintenance Plan
Town of Bethlehem - County of Albany - State of New York

REVISED BY: [Signature]
TOWN OF BETHLEHEM
Department of Public Works - Engineering Division
445 Delaware Avenue
Bethlehem, New York 12024

Cartographer: [Signature]
Reviewer: [Signature]

SCALE: 1 inch = 2,000 feet

DATE: 6/2018

PAVING STATS

For the upcoming year, weather permitting we intend to resurface 12 miles of roadway (which is the distance from Town Hall to Colonie Center)

Standard 24' wide roadway:

- Milling costs: \$6,000 per mile
- Blacktopping: 1 mile at 1.5" thick = 1,000 tons of asphalt
- Material costs for paving 1 mile of road = \$50,000
- Paving usually requires an 8-man crew, plus 2 flagman and 3-4 truck drivers to run blacktop from plant
- Town of Bethlehem maintains about 187 miles of roads. Replaced on average 11-13 miles/year
- This is why the assessment is so vital. Some roads weather better than others. Otherwise, in rotation could take 18 years/road



SIDEWALK REMOVAL AND REPLACEMENT

- We maintain approximately 56 miles of sidewalk and 700 curb ramps (about 60% have ADA compliant detectible warning plates and about 40% do not)
- In 2018 we will be reassessing all of our sidewalks
- Town's 2018 allocated budget for sidewalk maintenance is \$50,000
- At the contracted rate, we would be able to replace 1,900 lineal feet of sidewalk (about 1/3 mile) per year
- At that rate it would take us 155.6 years to replace all of our existing sidewalks. This does not include the cost of ADA compliant detectible warning plates, which cost \$500 per device installed



SIDEWALK REMOVAL AND REPLACEMENT

- With that being said, for the cost of 1,100 lineal feet of sidewalk at the contracted rate, we were able to outfit our own crew with a construction trailer, steel forms, and all the equipment needed to replace and finish concrete AND construct 1,100 lineal feet of sidewalk on New Scotland Avenue.
- For the sidewalks we repair or replace with our own crew, we anticipate saving at least 50% of the costs compared with sub-contracting



SIDEWALK CONSTRUCTION





A MERICANS WITH **D** ISABILITIES **A** CT
DETECTIBLE WARNING PLATES



SIDEWALK CONSTRUCTION

