

# Road Surface Management System Forecasting Summary



**SNHPC**

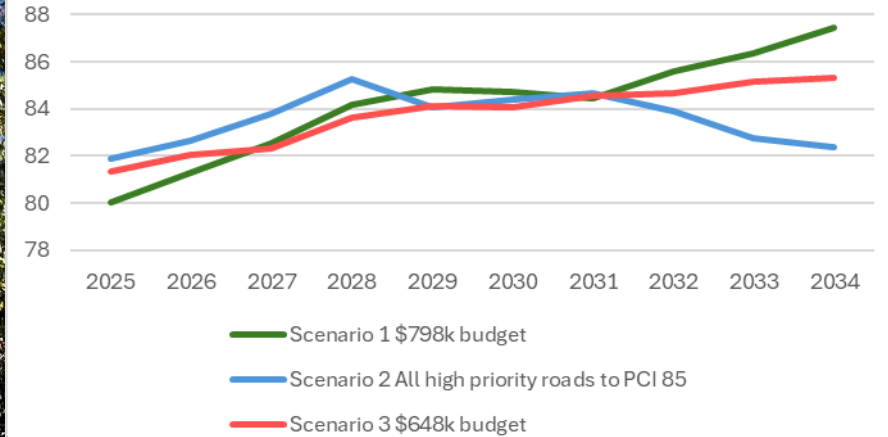
**New Boston, NH  
December 17, 2024**



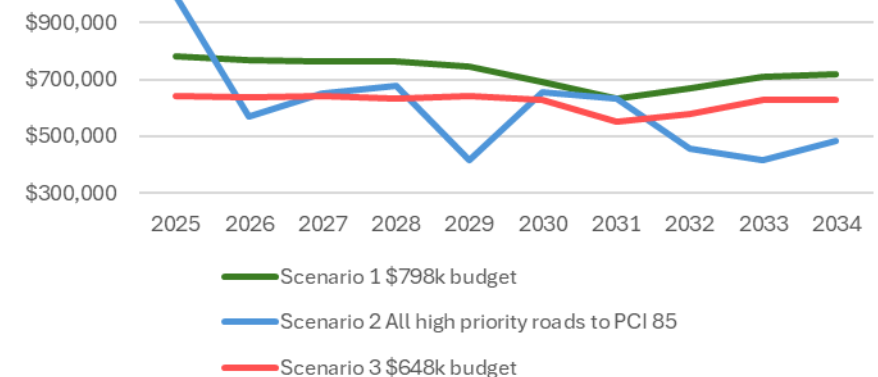
# Pavement Repair Scenarios At-a-Glance:

- **Scenario 1:** Based on the 2025 New Boston road budget of \$798,000 and strived to preserve/improve PCI of all town-maintained roads.
- **Scenario 2:** Prioritized roadways that were determined by municipal staff to be critical for New Boston and strived to improve/ maintain those priority roads at a PCI of 85.
- **Scenario 3:** Based on a reduced town budget of \$648,000 per year over a 10-year period with the goal of preserving/improving PCI of all paved, town-maintained roadways.

New Boston PCI Forecasts, Scenario 1-3



New Boston Road Budget, Scenario 1-3



YEAR	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
PCI before repairs	74.12	70.78	67.60	64.56	61.65	58.88	56.23	53.70	51.28	48.97
PCI after repairs	80.02	81.27	82.52	84.18	84.82	84.71	84.46	85.58	86.35	87.42
Cost	\$783k	\$767k	\$763k	\$763k	\$747k	\$692k	\$632k	\$670k	\$710k	\$718k

## Scenario 1: 2025 Budget \$798,000.

- \$782,350 in year one
- Overall costs: ~\$7.24 million over 10 years
- PCI improves from 74.12 to 87.42

YEAR	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
PCI before repairs	74.12	70.78	67.60	64.56	61.65	58.88	56.23	53.70	51.28	48.97
PCI after repairs	81.90	82.63	83.81	85.25	84.08	84.41	84.64	83.89	82.77	82.39
Cost	\$992k	\$568k	\$650k	\$677k	\$416k	\$653k	\$630k	\$458k	\$413k	\$483k

## Scenario 2: PCI of 85 for Priority Roads.

### Priority Roads:

2<sup>nd</sup> NH Turnpike  
Bedford Road  
Byam Road  
Cemetery Road  
Gregg Mill Road

Howe Bridge Road  
Meetinghouse Hill Rd  
Old Coach Road  
Parker Road  
Twin Bridge Road

- This scenario would cost approximately \$992,000 in year one, with overall costs totaling approximately \$5.95 million.
- Within the parameters of scenario 2, the ten priority roads would maintain a PCI in the low to mid 80s and remain in satisfactory condition while other paved town-maintained roadways would slowly degrade over time.

YEAR	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
PCI before repairs	74.12	70.78	67.60	64.56	61.65	58.88	56.23	53.70	51.28	48.97
PCI after repairs	81.34	82.04	82.33	83.63	84.11	84.09	84.56	84.64	85.17	85.32
Cost	\$641k	\$637k	\$644k	\$632k	\$642k	\$628k	\$550k	\$579k	\$627k	\$630k

**Scenario 3:**  
**Reduced Annual**  
**Budget of \$648,000.**

- \$640,047 in year one
- Overall costs: ~\$6.21 million over 10 years
- PCI improves from 74.12 to 85.32



# Gregg Mill Road (2024 PCI = 40)

Repair Options - New Boston RSMS		
	SY Cost	PCI Target
Crack Seal (minor)	\$0.40	90-95
Crack Seal (major)	\$0.55	85-90
Isolated Patch & HMA Shim	\$0.98	80-85
Chip Seal	\$2.35	75-80
HMA Shim (1/2") & Chip Seal	\$4.31	70-75
HMA Overlay (1")	\$3.92	60-70
HMA Overlay (1.5")	\$5.80	55-60
Milling/HMA (1.5")	\$7.80	45-55
FDR & HMA (4")	\$17.18	<45

Priority	PCI	Street	SRI	Order	Length (ft)	Width	Length	Surface Type	Shoulder Type	Selected Repairs
75	40	Gregg Mill Rd	L3190155__	1	1317.5	25	2	Paved	None	2026: FDR & HMA (4") 2027: Crack Seal (Minor) 2030: Crack Seal (Major) 2033: Isolated Patch and HMA Shim

Segment PCI and Repair Cost	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Average PCI Before Repairs	38.20	36.48	34.84	33.27	31.77	30.34	28.98	27.67	26.43	25.24
Average PCI After Repairs	38.20	96.82	96.99	92.62	88.45	93.79	89.57	85.54	93.59	89.38
Total Repair Cost (inflated)	0.00	66,962.34	579.22	0.00	0.00	2,431.58	0.00	0.00	4,762.02	0.00

## Crack Sealing

[illegible]

## Patching

Repair	Unit Cost (\$)	Units	Life Span (months)	Repair Cost (\$)	Cost (\$) / Life Improvement	PCI Improvement %	Repaired PCI	\$/Delta PCI	Repair Year									
									'25	'26	'27	'28	'29	'30	'31	'32	'33	'34
Isolated Patch and HMA Shim	0.98	Square Yards	36	\$3,586.53	\$99.63	65	79	\$91.96	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

## Rehabilitate and Rebuild

[illegible]

Repair Options - New Boston RSMS		
	SY Cost	PCI Target
Crack Seal (minor)	\$0.40	90-95
Crack Seal (major)	\$0.55	85-90
Isolated Patch & HMA Shim	\$0.98	80-85
Chip Seal	\$2.35	75-80
HMA Shim (1/2") & Chip Seal	\$4.31	70-75
HMA Overlay (1")	\$3.92	60-70
HMA Overlay (1.5")	\$5.80	55-60
Milling/HMA (1.5")	\$7.80	45-55
FDR & HMA (4")	\$17.18	<45

Priority	PCI	Street	SRI	Order	Length (ft)	Width	Length	Surface Type	Shoulder Type	Selected Repairs
62.25	91	Old Coach Rd	L3190096__	6	1320.21	24	2	Paved	None	2025: Crack Seal (Major) 2028: Isolated Patch and HMA Shim 2032: Chip Seal 2034: Crack Seal (Major)

Segment PCI and Repair Cost	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Average PCI Before Repairs	86.91	82.99	79.26	75.69	72.29	69.03	65.93	62.96	60.13	57.42
Average PCI After Repairs	94.76	90.50	86.43	93.89	89.66	85.63	81.77	93.43	89.22	94.08
Total Repair Cost (inflated)	1,998.26	0.00	0.00	3,913.42	0.00	0.00	0.00	10,644.30	0.00	2,653.20

## Crack Sealing

[illegible]

## Patching

[illegible]

## Pavement Preservation/Maintenance

[illegible]