# ATKINSON ROAD SYSTEM ACTION PLAN - 2020

#### Prepared for:

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#### INTRODUCTION

In 1999 the Town of Atkinson developed its initial Road System Action Plan. That Action Plan, prepared by the Town Engineer and Road Agent, identified a program of systematic improvements subsequently completed at a series of Class V public streets, including principal collector roadways Providence Hill Road, Westside Drive and Sawyer Avenue, between 2000 and 2008. In 2008 the Town Engineer and Road Agent expanded the Action Plan to layout a program for continuation of systematic betterments to public streets that had begun in 2000. The 2008 Road System Action Plan served as a tool for the planning of prioritized annual expenditures made by the Town for capital improvements to its Class V public streets through 2019, culminating with reconstruction of Island Pond Road; the last of the series of principal collector roadways which required reconstruction over the life of the program.

While the Town of Atkinson must be commended for significant accomplishments realized in terms of capital improvements made to its Class V public highway system over the past two decades, it must be recognized that the maintenance of public roads and streets will continue to be an on-going responsibility of the municipality in perpetuity. Correspondingly, in 2020 the Road Agent began implementation of a pavement management program under which a series of Class V public streets in the vicinity of Westside Drive were shimmed and overlaid with hot bituminous asphalt pavement. The intent of this pavement management program is to both protect and preserve the Town's earlier investment in roadway base rehabilitation and/or reconstruction. Under this current program, public streets will receive limited structural repairs, only if and to the extent warranted, prior to installation of full width shim and overlay courses of hot bituminous asphalt pavement. The underlying intent of this this pavement management program is extension of the useful service life of existing pavement and roadway base materials. Given the extent of work completed over the prior two decades, it is reasonable to expect future shim and overlay projects will yield a useful service life of approaching 15+ years on heavier traveled collector roadways and 25+ years on low volume residential streets.

In furtherance of the pavement management program initiated under direction of the Road Agent in 2020, he and the Town Engineer performed on site evaluation of the Town's inventory of Class V public streets over the course of 2020. As an outcome of this evaluation, 60 public streets were identified as needing shim and overlay treatment over the next five years (2021 through 2025). While the majority of those public streets scheduled to receive shim and overlay treatment during this period may be properly characterized as low volume residential streets, the resulting program includes application of shim and overlay courses of hot bituminous pavement at Providence Hill Road (2022) and Sawyer Avenue (2025), both collector roadways reconstructed at the outset of initial Road System Action Plan implementation two decades prior. The experiences realized at Providence Hill Road and Sawyer Avenue effectively highlight the underlying intent and value of Atkinson's Road System Action Plan. In 2020, proper reclaimed stabilized base roadway reconstruction of a typical municipal street is expected to cost approximately \$100 per linear foot, while application of full width shim and overlay courses of hot bituminous pavement are expected to cost something on the order of \$16 to \$18 per linear foot. Once properly reconstructed, periodic application of shim and overlay courses of pavement enables a municipality to protect previously reconstructed or rehabilitated roadway base and thereby extend useful service life of the same at a cost of less than 20 percent of that associated with reconstruction/rehabilitation. In the pages which follow, the Road

Agent and Town Engineer present an extended Action Plan for a long term (2021 to 2029) pavement management program for 85 Class V public streets and roadways. Apart from one short local street (Huckleberry Lane) having roadway base and drainage deficiencies which appear to warrant reclaimed stabilized base reconstruction, the principal repair/maintenance strategy for the remaining 84 streets is limited to shim and overlay. From a fiscal standpoint, the advantage of reaching this enviable position are obvious and best illustrated by declining projections of anticipated annual program cost for the next decade summarized on Page 4 of this document.

Lastly, attached to this Atkinson Road System Action Plan of 2020 the reader will find a Street Map of the community which has been annotated to illustrate both annual program work completed between 2015 and 2020, as well as future pavement management program improvements recommended for the period extending from 2021 through 2029.

ROADWAY IMPROVEMENT	PROGRAM ANNUAL COST SUMMARY
FISCAL YEAR	ANNUAL PROGRAM BUDGET
2021	\$468,500.00
2022	\$403,000.00
2023	\$480,400.00
2024	\$487,100.00
2025	\$312,500.00
2026	\$366,800.00
2027	\$291,400.00
2028	\$289,600.00
2029	\$47,800.00

\*Note: All estimated construction cost projects are presented in 2020 dollars.

Street	Length	P G	Estimated Cost
	(miles)	Repair Strategy	(2020 Dollars)
Crown Hill Road	0.58	Shim & Overlay	\$57,100.00
Amberwood Drive	0.72	Shim & Overlay w/ Select Curb Replacement	\$77,500.00
Fernwood Way	0.12	Shim & Overlay	\$11,800.00
Dearborn Ridge Road	0.21	Shim & Overlay	\$19,800.00
Pine Knoll Drive	0.39	Shim & Overlay w/ Select Curb Installation	\$47,700.00
Crystal Hill Road	0.36	Shim & Overlay \$34,5	
Crystal Hill Circle	0.09	Shim & Overlay	\$8,800.00
Murray Drive	0.32	Shim & Overlay	\$30,800.00
Devonshire Road	0.53	Shim & Overlay	\$47,600.00
Lisheen Drive	0.36	Shim & Overlay w/ Drainage Structure Elev. Adjustments	\$39,100.00
Kings Grant Drive	0.39	Shim & Overlay w/ Selective Underdrain \$45,200 Installation	
Meeting Rock Road	0.23	Shim & Overlay \$21,800.0	
Haydn Drive	0.28	Shim & Overlay	\$26,800.00
Total Program Budget (2021)			\$468,500.00

Street	Length (miles)	Repair Strategy	Estimated Cost (2020 Dollars)
Providence Hill Road	1.53	Shim & Overlay	\$144,900.00
Butler Road	0.22	Shim & Overlay	\$20,700.00
Twin Oaks Drive	0.15	Shim & Overlay	\$14,300.00
Windmill Lane	0.30	Shim & Overlay	\$28,400.00
Moccasin Path	0.20	Shim & Overlay	\$19,000.00
Pheasant Lane	0.29`	Shim & Overlay	\$23,000.00
Bluebird Lane	0.23	Shim & Overlay	\$16,300.00
Geary Lane	0.16	Shirn & Overlay	\$14,400.00
Spickett Valley Drive	0.20	Shim & Overlay	. \$19,000.00
Atkinson Farm Road	0.20	Shim & Overlay	\$19,000.00
Little Rob Road	0.40	Shim & Overlay	\$38,000.00
Carriage Chase Lane	0.17	Shim & Overlay	\$14,600.00
Jasmine Drive	0.33	Shim & Overlay	\$31,400.00
Total Program Budget (2022)	Total Program Budget (2022)		

Street	Length (miles)	Repair Strategy	Estimated Cost (2020 Dollars)
Knightland Road 0.40		Shim & Overlay w/ Selective Drainage Improvements	\$48,300.00
Huckleberry Lane	0.11	Reclaimed Stabilized Base Reconstruction	\$60,900.00
Fairview Hill Road	0.29	Shim & Overlay	\$27,800.00
Woodside Way	0.22	Shim & Overlay	\$20,600.00
Stewart Farm Road	0.09	Shim & Overlay	\$8,100.00
Pope Road	0.54	Shim & Overlay	\$51,400.00
Whippoorwill Lane	0.14	Shim & Overlay	\$12,900.00
Stone Pound Lane	0,40	Shim & Overlay	\$39,600.00
Bittersweet Lane	0.41	Shim & Overlay	\$38,800.00
Page's Lane	0.10	Shim & Overlay	\$9,300.00
Stage Road	0.54	Shim & Overlay	\$47,200.00
Rocking Chair Lane	0.33	Shim & Overlay w/ Selective Curb Replacement	\$46,800.00
Cottontail Lane	0.20	Shim & Overlay w/ Selective Curb Replacement	\$31,300.00
Pebble Brook Road	0.19	Shim & Overlay	\$18,300.00
Washington Road	0.20	Shim & Overlay	\$19,100.00
Total Program Budget (2023)	\$480,400.00		

Street	Length (miles)	Repair Strategy	Estimated Cost (2020 Dollars)	
Bryant Woods Road	0.80	Shim & Overlay	\$75,800.00	
Kelly Lane	0.45	Shim & Overlay w/ Selective Curb Replacement	\$66,300.00	
Coventry Road	1.35	Shim & Overlay w/ Selective Curb Replacement	\$175,100.00	
Treasure Way	0.09	Shim & Overlay w/ Selective Curb Replacement \$13.		
Birdsall Lane	0.12	Shim & Overlay	\$11,800.00	
Mosher Drive	0.13	Shim & Overlay	\$12,100.00	
Upland Road	0.35	Shim & Overlay \$32,		
Green Hill Drive	0.09	Shim & Overlay	\$8,500.00	
Robie Lane	0.38	Shim & Overlay	\$36,300.00	
Indian Ridge Road	0.49	Shim & Overlay	\$46,500.00	
Noyes Lane	0.09	Shim & Overlay	\$8,400.00	
Total Program Budget (2024)	\$487,100.00			

Street	Length (miles)	Repair Strategy	Estimated Cost (2020 Dollars)
Sawyer Avenue	1.45	Shim & Overlay	\$137,700.00
Meadow Lane	0.34	Shim & Overlay	\$32,400.00
Highland Road	0.20	Shim & Overlay	\$18,500.00
Scottsdale Road	0.17	Shim & Overlay	\$16,500.00
Sleepy Hollow Road	0.47	Shim & Overlay	\$45,000.00
Forest Road	0.08	Shim & Overlay	\$8,000.00
Juniper Lane	0.26	Shim & Overlay	\$24,500.00
Brendan Road	0.32	Shim & Overlay	\$29,900.00
Total Program Budget (2025)			\$312,500.00

Street	Length (miles)	Repair Strategy	Estimated Cost (2020 Dollars)
Summit Drive	1.09	Shim & Overlay	\$102,800.00
Christine Drive	0.37	Shim & Overlay	\$34,900.00
Wood Drive	0.42	Shim & Overlay	\$40,000.00
Sunset Drive	0.42	Shim & Overlay	\$39,400.00
Sawmill Road	0.27	Shim & Overlay	\$25,500.00
Walker Road	1.31	Shim & Overlay	\$124,200.00
Total Program Budget (2026)			\$366,800.00

Street	Length (miles)	Repair Strategy	Estimated Cost (2020 Dollars)
Old Coach Road	1.08	Shim & Overlay	\$102,300.00
Oak Hill Circle	0.48	Shim & Overlay	\$45,900.00
Hawthorne Drive	0.41	Shim & Overlay	\$39,000.00
Merrill Drive	0.46	Shim & Overlay	\$43,900.00
Hovey Meadow Road	0.39	Shim & Overlay	\$37,500.00
Hoyt Circle	0.12	Shim & Overlay	\$11,400.00
Hitchcock Lane	0.12	Shim & Overlay	\$11,400.00
Total Program Budget (2027)	\$291,400.00		

Street	Length (miles)	Repair Strategy	Estimated Cost (2020 Dollars)	
Maple Avenue	1.06	Shim & Overlay	\$100,800.00	
Newbury Drive	0.17	Shim & Overlay	\$16,500.00	
Squire Drive	0.12	Shim & Overlay	\$11,400.00	
Brittany Lane	0.23	Shim & Overlay	\$21,400.00	
Woodlawn Avenue	0.38	Shim & Overlay	\$35,900.00	
Birch Lane	0.22	Shim & Overlay	\$21,000.00	
Leroy Avenue	0.11	Shim & Overlay	\$10,100.00	
Willow Vale	0.31	Shim & Overlay	\$29,000.00	
Wason Lane	0.24	Shim & Overlay	\$22,900.00	
Little River Lane	0.15	Shim & Overlay	\$14,500.00	
Hilldale Avenue	0.06	Shim & Overlay	\$6,100.00	
Total Program Budget (2028)			\$289,600.00	

Street	Length (miles)	Repair Strategy	Estimated Cost (2020 Dollars)
Winslow Drive	0.50	Shim & Overlay	\$47,800.00
Total Program Budget (2029)			\$47,800.00

ROADWAY IMPROVEMENTS BY YEAR					
STREET	YEAR	STREET	YEAR	STREET	YEAR
Crown Hill Road	2021				
Amberwood Drive	2021			<del></del>	<del></del>
Fernwood Way	2021			· · · · · · · · · · · · · · · · · · ·	<del></del>
Dearborn Ridge Road	2021			<del></del>	
Pine Knoll Drive	2021			·	<del></del>
Crystal Hill Road	2021	· <u> </u>		···	
Crystal Hill Circle	2021	·		<del>-</del>	
Murray Drive	2021				
Devonshire Road	2021				
Lisheen Drive	2021			<del></del>	<del></del>
Kings Grant Drive	2021				<del></del>
Meeting Rock Road	2021			<u></u>	<del></del>
Haydn Drive	2021				
Providence Hill Road	2022	· · · · · · · · · · · · · · · · · · ·			<u> </u>
Butler Road	2022				
Twin Oaks Drive	2022				<del></del>
Windmill Lane	2022	·		·	-
Moccasin Path	2022	· · · · · · · · · · · · · · · · · · ·			<del>-</del>
Pheasant Lane	2022				<del></del>
Bluebird Lane	2022				<del>-  </del>
Geary Lane	2022	<del></del>			
Spickett Valley Drive	2022				<del>-  </del>
Atkinson Farm Road	2022				
Little Rob Road	2022				<del>                                     </del>
Carriage Chase Lane	2022	· <u></u>		···	<del>                                     </del>
Jasmine Drive	2022				<del>                                     </del>
Knightland Road	2023	····			<del>                                     </del>

Huckleberry Lane	2023	
Fairview Hill Road	2023	
Woodside Way	2023	
Stewart Farm Road	2023	
Pope Road	2023	
Whippoorwill Lane	2023	
Stone Pound Lane	2023	
Bittersweet Lane	2023	
Page's Lane	2023	
Stage Road	2023	
Rocking Chair Lane	2023	
Cottontail Lane	2023	
Pebble Brook Road	2023	
Washington Road	2023	
Bryant Woods Road	2024	
Kelly Lane	2024	
Coventry Road	2024	
Treasure Way	2024	
Birdsall Lane	2024	
Mosher Drive	2024	
Upland Road	2024	
Green Hill Drive	2024	
Robie Lane	2024	
Indian Ridge Road	2024	
Noyes Lane	2024	
Sawyer Avenue	2025	
Meadow Lane	2025	
Highland Road	2025	
Scottsdale Road	2025	
Sleepy Hollow Road	2025	

Forest Road	2025	
Juniper Lane	2025	
Brendan Road	2025	
Summit Drive	2026	
Christine Drive	2026	
Wood Drive	2026	
Sunset Drive	2026	
Sawmill Road	2026	
Walker Road	2026	
Old Coach Road	2027	
Oak Hill Circle	2027	
Hawthorne Drive	2027	
Merrill Drive	2027	
Hovey Meadow Road	2027	
Hoyt Circle	2027	
Hitchcock Lane	2027	
Maple Avenue	2028	
Newbury Drive	2028	
Squire Drive	2028	
Brittany Lane	2028	
Woodlawn Avenue	2028	
Bitch Lane	2028	
Leroy Avenue	2028	
Willow Vale	2028	
Wason Lane	2028	
Little River Lane	2028	
Hilldale Avenue	2028	
Winslow Drive	2029	

