

**TOWN OF BUCKLAND
ROAD INVENTORY LIST.**

	ROAD NAME	STATUS	PROJECT DESCRIPTION	EST COST		COMMENTS
1	Apple Valley Rd. 24' x 2640'	Poor	Replace drainage pipe/structures, install under drain, reclaim, excavate 18" of unsuitable road base, replace with 6" of 3" crushed gravel, 6" 1 1/2" crushed gravel, 2" B/C base, 2" B/C top.	FDR \$430,000. Chip Seal \$64,000.	Overlay \$73,000.	Base and surface are poor. Permanent repair will require full depth reconstruction.
2	Ashfield St 32' x 1,635'	Fair/poor	Replace drainage pipe/structures, water main/services, sewer main/services, sidewalk w/curb, curb, reclaim, 3"B/C base, 2"B/C top	FDR \$1.5 million	Overlay \$63,000.	Requires reconstruction
3	Avery Rd. 21' x 8184'	Fair	Drainage, reclaim, excavate 10", replace w/ 10" of 1 1/2" gravel, 3" B/C	Chip Seal \$90,000.	Overlay \$198,000.	Base is poor however surface is fair. Permanent repair will require full depth reconstruction, sub drainage, bank reinforcement, guardrail, bit curb. Routine maintenance and a coat of O/S every 2 to 3 years
4	Birch Rd. 22' x 1,156'	Surface Excellent	FDR required, Replace drainage pipe/structures, water main/services, sewer main/services, sidewalk w/curb, curb	FDR \$982,600.	Overlay N/R	120+ water requires replacement
5	Bray Rd. 26' x 14,844'	Surface Excellent	FY 2016/17/18 received a 3" overlay of B/C three phase project			
6	Brown Rd. (west)	Good	Bi-annual maintenance			Aug. 09 added 8 inches of 1 1/2" crushed gravel to entire length. Routine scheduled maintenance.
7	Cemetery Rd. (north)	Excellent				Rebuilt/Resurfaced After TS Irene 2011
8	Cemetery Rd. (south) 24' x 2112' O/S 24' x 3,000' Gravel	Poor	Drainage, remove 10" of unsuitable, replace w/ 10" of 1 1/2" gravel, O/S	FDR \$350,000. Chip Seal \$51,000.	Overlay \$59,000.	Permanent repair for O/S section will require full depth reconstruction, sub drainage. Gravel section requires routine scheduled maintenance, and bi-annual gravel replacement as needed.
9	Charlemont Rd. 28' x 17,424'	Fair/Poor	in 2003-2004 a 1.5 mile section was reclaimed and resurfaced with oil and stone using Chap. 90 funds, and the remaining 1.8 mile received a 2" B/C top overlay courtesy of Mass Highway, full depth reconstruction is required including upgraded drainage and structures, pipe, under drain, and guard rail.	FDR \$5.3 mil	Overlay \$585,500.	The base is poor, Surface is fair/poor. Routine scheduled maintenance. North of Avery RD a large culvert made up of various construction materials needs replacement, likely a bridge est. \$1 to \$2 million 1990 EST. 3.3Million

10	Clement St. 850'	Excellent			FDR 2012 \$450.Lf = \$382,500.	2012 Full Depth reconstruction of Clement St. complete. Weston & Sampson Engineer, Pererira Construction, Co., Inc., contractor. C.D.B.G funded.
11	Clesson Brook Rd. 22' x 16,000'	Excellent		99% rebuilt after TS Irene	REC./Pave \$325,000. Overlay \$170,000.	Full depth reconstruction completed after tropical storm Irene using FEMA, MEMA, MASS Works, Chap. 90 Roughly 1 mile requires FDR including drain structures/pipe, under drain. Sections of guardrail thru the entire length from RT 112 to the Hawely town line require replacement
12	Conway Rd. 5,400'	poor		Reclaim, replace/upgrade drainage ditch and pipe, replace catch basins, replace guardrail, repave with 4 1/2" B/C base, 1 1/2" B/C top, replace curb.	TIP 2021	TIP Underway Proposed construction date 2021
13	Conway St. 27' x 1,997'	Good/ 437' excellent		For the remaining 1560 feet of Conway St., replace and relocate 7 drainage structures on the west side of the street, new pipe, water main/ services, sewer main/services, pulverize surface, excavate and remove 12 inches of the existing road base, replace with 8 inches of 3" minus crushed gravel, 3" B/C base, 1 1/2" B/C top, add 345 feet of sidewalk with monolithic curb, curb, pavement marking, loam and grass seed.	TIP 2021	This project has started with a application of CBDG Grant in conjunction with Shelburne. Start date 2009. 437 feet of the southern end of Conway ST. completed 11/5/09, 1 year warranty. 400 feet of drainage including structures and pipe replaced to complement CBDG using \$178,000. Chap. 90 TIP underway. The 1560' received 2" overlay of B/C after Tropical Storm Irene. Proposed construction date 2021
14	Creamery Ave. 22' x 1,056'	Poor		Upgrade drainage, replace catch basin, full depth entire length, 4" bituminous concrete.	FDR \$175,000. Overlay \$26,670.	From Roberts to Station #11 needs full depth On CDBG list
15	Creamery Ln. 19' x 300'	Poor		Overlay with 2" B/C top.	FDR N/R Overlay \$7,000.	There is one house occupied and one house condemned on this 300 foot long street. On CDBG List
16	Crittenden Hill Rd. 5405'x21'	Poor/fair		1,824' South end needs under drain, water main/services, reclaim with calcium, 2 1/2" B/C base, 1 1/2" B/C top, and curb.	FDR \$1.4 M Overlay \$44,000.	Routine scheduled maintenance for 2937' gravel section. 644' North end repaved 09. 1,824' south end requires full depth On CDBG List
17	Cross St. 21' x 1,200'	Poor		Reclamation required 2 1/2" B/C base, 1 1/2" B/C top. Or 2" Overlay of B/C top.	FDR \$195,000. Overlay \$30,000.	Routine scheduled maintenance On CDBG List

18	Depot Rd. 21' x 2,633'	Good		<u>Chip Seal</u> \$27,700.	<u>Overlay</u> \$64,000.	Routine scheduled maintenance. O/S every 5-7 years
19	Depot St.	Excellent				Routine scheduled maintenance.
20	Dodge Rd. 23' x 3,468' C/S 2,172'	Excellent	Full depth rebuild following Tropical Storm Irene	<u>Chip Seal</u> \$25,000.	<u>Overlay</u> \$60,000.	Routine maintenance
21	Dungarvin Dr. 18' x 680'	Surface Fair	FDR ideal, remove unsuitable and replace with 1 1/2" crushed gravel, under drain, water main/services, sewer structures, main/services, 2 1/2" B/C base, 1 1/2" B/C top, curb	<u>FDR</u> \$544,000.	<u>Overlay</u> N/A	Routine scheduled maintenance
22	East Buckland Rd. 25' x 2,640' 24' x 16,140' Total Length: 18,780'	Fair/poor (mostly poor)	Reclaim, remove unsuitable, replace with 1 1/2" gravel, under drain, 3" B/C base, 2" B/C top, curb	2.2 mile Recl. Pave \$1.7 M	<u>Overlay</u> \$530,000.	Permanent repair to a roughly two mile section will require full depth reconstruction, the remaining 1.3 miles requires a 2" -3" overlay of B/C top.
23	Elm St. 5,280' x 25' 4,435' pavement 530' gravel	Surface Good	FDR required, Replace/relocate/upgrade drainage pipe/structures, water main/services, sewer main/services, reclaim, remove unsuitable and replace with gravel, 3" base, 2" top B/C, new sidewalk w/ monolithic curb, curb, loam and grass seed.	<u>FDR</u> \$ 4.5 Million		Permanent repair requires full depth reconstruction. Not on CDBG list Received 2" overlay of B/C in 2014. All drainage structures rebuilt as well. using WRRRP, Chap. 90, and town fund.
24	Forgette Rd. 21' x 1600'	poor	Replace drainage, excavate/ remove 16" unsuitable, replace 12" 1 1/2" gravel, 2 1/2" B/C base, 1 1/2" B/C top	<u>FDR</u> \$260,000.	<u>Overlay</u> \$40,000.	The base/surface is poor. Full depth required.
25	Fox Rd. 20' x	fair	200' pave sec. received 2" overlay in 2005. 400' gravel needs bi-annual maint. (9/25/08 scour under bridge footing need repair)	<u>FDR</u> N/R	<u>Overlay</u> \$7000.	Routine scheduled maintenance. Bridge footing scour repaired 2011
26	Franklin St. 24'6" x 1208'	Excellent	300' section requires FDR	<u>FDR</u> \$250,000.		CDBG phase I beginning from Roundhouse Hill Rd. proceeding north for 774 feet, reconstruction complete 2010. CDBG Phase II 200 feet to Ashfield St. completed in 2011
27	Fred Laird Rd. 20' x 500'	Good	Surface Good	<u>FDR</u> N/R	<u>Overlay</u> \$7,800.	Routine scheduled maintenance
28	Gardner Falls Rd. 19' x 982'	Excellent		<u>FDR</u> \$835,000	<u>Overlay</u> N/R	Routine scheduled maintenance
29	Goodnow Rd. 20' x 1584'	Surface Excellent	work needed. Full depth recon, remove 16" unsuitable, replace with 16" of 1 1/2" crushed gravel, chip sealed FY 2018 received a 2 1/2" overlay of B/C			Routine scheduled maintenance.

30	Green St.	Excellent	Received FDR 2018	2018 CDBG scheduled project. Complete
31	Harmony Ln. 16' x 130'	Surface Fair	Full depth reconstruction required	FDR \$104,000 Overlay N/R
32	Hillside Ave. 19' x 220'	Surface Fair	Full depth reconstruction required	FDR \$176,000. Overlay \$5,000.
33	Hodgen Rd. 22' x 2,640' Paved 956'	Good	2" Overlay of B/C to existing black top.	FDR N/R. Overlay \$24,000.
34	Hog Hollow Rd. 24' x 6900'	poor	Full depth recon. Required drainage, excavate/remove 16" unsuitable, replace 12" 1 1/2" crushed gravel, under drain, 3" B/C base, 2" B/C top	FDR \$1.2M Overlay \$20,000.
35	Homestead Ave. 22' x 260'	Fair	Full depth reconstruction required	FDR \$208,000. Overlay \$6,600.
36	Howes Rd.	Good	Bi-annual grading and gravel replacement where needed	Routine scheduled maintenance
37	Kendrick Rd. 23' x 630'	poor	Reclaim, replace drainage pipe/structures, water, sewer, 3" B/C base, 2" B/C top, curb, loam seed	In 2009 added 6-8 inches of 1 1/2" crushed gravel to required sections. Routine scheduled maintenance.
38	Kratt Ave.		See Church St.	
39	LeBelle Rd. 20' x 1600'	excellent	No work needed, rebuilt following Tropical Storm Irene 2011	Full depth reconstruction complete
40	Laurel St. 22' x 875'	Surface good	FDR required, Replace drainage pipe/structures, water main/services, sewer main/services, reclaim, 3" B/C base, 2" B/C top, curb loam/seed	Resurfaced in 2007, 120+ year old water main/service failures have compromised surface
41	Lower Rd. (Rt. 112)	N/A		
42	Martin Rd. 21.5' x 2900'	Fair/good	2,350' requires reclaim, drainage pipe/under drain/structures, 2 1/2" B/C base, 1 1/2" B/C top, curb, or O/S every 5-7 years	Upper 550' rebuilt 2012. received double coat O/S on remaining road surface
43	Maynard Hill Rd. 18' x 920'	Excellent/ Good	Full depth reconstruction completed 2014.	Full depth reconstruction completed using town funds. drainage issues unresolved on hill.
44	Mohawk Trail (Rt.2)	N/A		
45	Monroe Ave. 22' x 680'	Fair/Poor	FDR required, Replace and upgrade drainage structures and pipe, water main/services, sewer main/services, pulverize surface/excavate and remove 12 inches of existing road base, replace with 8 inches of 3" minus crushed gravel, 2 1/2" B/C base, 1 1/2" B/C top, sidewalk with monolithic curb, curb, handrail.	Street surface in fair/Poor shape. Sidewalks poor

46	Nillman Rd. 20' x 800' o/s	Road Surface Good, Bridge Deficient	Culvert needs replacement as concrete wing walls and façade failing, est. cost \$1.5 M	<u>Chip Seal</u> \$8,000. Bridge/Culvert \$1-\$2M	<u>Overlay</u> \$19,000.	In 2009 added 6-8 inches of 1 1/2 " crushed gravel to gravel section. Routine scheduled maintenance and a coat of chip seal every 5-7 years.
47	Norman Rd.	Good				Gravel road. routine scheduled maintenance.
48	North St. 26' x 4,752'	Poor/ Excellent	Remaining half mile replace, upgrade, and add drainage structures/pipe, water main/services, sewer services, pulverize surface/excavate and remove 15 inches of the existing road base, replace with 8 inches of 3" minus crushed gravel, 3" B/C base, 1 1/2" B/C top, sidewalk with monolithic curb, curb, loam and grass seed. Address retaining walls	<u>FDR</u> \$2.6M <u>Retaining Walls</u> \$1,000,000. +- \$800. LF in 2017	<u>Overlay</u> \$86,000.	Overlay will raise the road and cause more drainage problems for property owners. On CDBG list. 2016/17 roughly 1600' received full depth reconstruction in two phases, 2840' require FDR + retaining walls
49	Nubil Heights	N/A				
50	Old Hawley Rd	Good	Lost arch bridge during Tropical Storm Irene. Rebuilt the road from bridge to Clesson Brook Road			Bi-annual grading and replace gravel as needed
51	Old State St. 23' x 1,785'	Fair	FDR required, Replace drainage under drain/pipe/structures, water main/services, sewer main/services, remove 18" unsuitable, replace with 12" 1 1/2" crushed gravel, 3" B/C base, 2" top, curb, loam/seed	<u>FDR</u> \$1,430,000.	<u>Overlay</u> N/A	Full depth required
52	Old Upper St. N. 15'x 150' Old Upper St. S. 15'x 150'	Excellent	FDR on north and south ends completed in 2014	<u>Chip Seal</u> \$2,250.	<u>Overlay</u> \$5,200.	Routine maintenance, chip seal every 5-7 years
53	Orcutt Hill Rd. South end o/s 20'x1056' North end b/c 17' x 1846' Orcutt Hill RD. cont Gravel section 2378'	Good		<u>Chip Seal</u> \$30,000.	<u>Overlay</u> \$68,000.	Aug.09 added 6-8 inches of 1 1/2" crushed gravel to required sections. Routine scheduled maintenance. A coat of O/S every 5-7 years on the south end.
54	Pine St. 22' x 528'	Surface Good	FDR required- reclaim/excavate unsuitable replace with 1 1/2" gravel, replace and upgrade 6' CMP, sub drain, drainage pipe and structures, sewer main/services, water main/services, 5" B/C, curb, loam seed	<u>FDR</u> \$422,400.	<u>Overlay</u> N/A	Routine scheduled maintenance
55	Pine Street Ext.	N/A				
56	Pomeroy Ter. 20'x 290'	Poor	Replace drainage under drain/pipe/structures, water main/services, sewer main/services, remove 18" unsuitable, replace with 12" 1 1/2" crushed gravel, 2" B/C base, 2" B/C top, curb, loam/seed.	<u>FDR</u> \$116,000.	<u>Overlay</u> \$7,000.	Full depth required. On CDBG list

57	Prospect St. 590'	Excellent	all drainage, water main, and services, the existing surface and base replaced w/ 12" of 1 1/2" crushed gravel, 2 1/2" B/C base, 1 1/2" B/C top, B/C curb, guard rail completed in May 2015	FDR 2015 \$ 645. LF = \$380,550.	CDBG FY2015 Full depth reconstruction completed in May 2015
58	Purinton Rd. 21' x 6,340'	Good	Chip seal overlay every 5-7 years.	Chip Seal \$68,000.	Routine scheduled maintenance.
59	Rand Rd. 20' x 4,225'	Poor	Replace/install drainage under drain/pipes/structures, reclaim with calcium, 1 1/2" crushed gravel, 2" B/C base, 2" B/C top, curb, loam/seed	FDR \$700,00.	The base is poor and surface is failing. Requires full depth reconstruction.
60	Round House Hill 25' x 520'	Poor	Drainage pipe/structures, water main/services, sewer main/services, pulverize surface/excavate and remove 12 inches of the existing road base, replace with 8 inches of 3" minus crushed gravel, 3" B/C base, 2" B/C top, sidewalk with and w/o monolithic curb, curb loam and grass seed.	FDR \$416,000.	Full depth reconstruction required. Intersection of Elm St. and Round House Hill redesigned 2015.
61	School St.	Fair			FDR completed 2007 under CDBG
62	SchoolHouse Ln.	N/A			
63	Sears St. 5,400'	Excellent		FDR phase II 850' \$505. LF = \$430,000.	Full depth reconstruction completed 2013/2014 with CDBG, 2 phase
64	Shepard Rd 21' x 6600'	Good Above Avery poor	Section above Avery RD in need of repair	Chip Seal \$70,000.	Routine scheduled maintenance and a coat of O/S every 5-7 years. Sections rebuilt following Irene.
65	South St. 2,150'	Poor	Remaining inadequate drainage system needs to be replaced. Entire street requires new water main/services, sewer main/services, pulverize surface, excavate and remove 12 inches of the existing road base, replace with 8 inches of 3" minus crushed gravel, 2 1/2" B/C base, 1 1/2" B/C top, remaining uneven fractured sidewalk removed, new sidewalk with monolithic curb installed, guard rail, curb, loam and grass seed.	TIP 2021	Aug.09 Drainage upgrades using Chap. 90 to compliment CDBG Conway St. reconstruction project. Beginning at Summer St., 260 feet of sidewalk was replaced using Chap. 90. And a 310 foot section between Summer St. and #12 South St. received a 2" overlay of B/C top. permanent repair requires full depth reconstruction. TIP under way/On going, proposed construction date 2021

			Poor	FDR required, Replace and upgrade drainage structures and pipe, water main/services, sewer main/services, pulverize surface, excavate and remove 15 inches of unsuitable, replace with 12 inches of 3" crushed gravel, 2 1/2" B/C base, 1 1/2" B/C top, curb, loam and grass seed.	FDR \$320,000.	Overlay N/R	Permanent repair requires full depth reconstruction. On CDBG list
67	Spring St. 21' x 400'		Excellent		FDR 2011 \$ 705. LF = \$2,980,000.		Project completed 2012 using TIP Grant
68	State St. 26' x 4,224'		Surface Excellent	FY2018 Received a 2 1/2" overlay of B/C and 200' of cape cod berm, Follow up finish work in 2018			Routine scheduled.
69	Stone Rd. 25' x 3,700'		Surface Good	Reclaim, water main/services, sewer main/services, excavate 12" of the existing road base, replace with 8" of 3" minus crushed gravel, 2" B/C base, 1 1/2" B/C top, curb.	TIP 2021		2009 Drainage, sidewalk, and a 2" overlay of B/C were completed using Chap. 90 funding to complement CDBG Conway St. reconstruction project. Permanent repair requires full depth reconstruction. TIP under way, proposed construction date 2021
70	Summer St. 320'		poor	Replace, upgrade, relocate, and ad drainage structures and pipe, water main/services, sewer main/services, pulverize surface, excavate and remove 12 inches of the existing road base, replace with 8 inches of 3" minus crushed gravel, 2 1/2" B/C base, 1 1/2" B/C top, curb, loam and grass seed.	FDR \$240,000.	Overlay N/R	Permanent repair requires full depth reconstruction. On CDBG list
71	Union St 24' x 300'		Fair/Poor	FDR required, Install new drainage pipe/structures/under drain, sidewalk with monolithic curb, curb, 3"B/C base, 2"B/C top, guardrail.	FDR \$1,210,000.	Recon/Rec \$950,000.	The base is good, the road surface is fair to poor and can benefit from an overlay of B/C, however, drainage is failing and the sidewalks are broken, uneven, and in some areas are below the road surface causing flooding for property owners, all need to be addressed before overlay
72	Upper St. 21' x 7,500'		poor	Replace drainage pipe/structures, install under drain, water main/services, sewer main/services, reclaim, 3"B/C base, 2"B/C top, curb	FDR \$1.27M	Overlay N/R	Reconstruction required On CDBG list
73	Walker Rd. 22' x 1585'		Excellent				Routine scheduled maintenance
74	Wall St. 21' x 335'		N/A				
75	Ware's Hill Rd.		Good	Replace water/sewer, 2" overlay of B/C top	FDR \$270,000.	Overlay N/R	Routine scheduled maintenance
76	Wellington St. 24' x 327'		good	Replace water main/services, sewer main/services, under drain, curb			Routine scheduled maintenance
77	Wilde Rd.		Fair/Poor	Sidewalk replacement from State St. 9/25/08 majority of project complete. Rail issue will be solved by fill over wall sloping down to existing front yard then seed. Replace, upgrade, and ad drainage structures	FDR \$1.5M	Overlay \$43,300.	Town will remove existing sidewalks in preparation for contractor start spring 08. William St. sidewalk project completed Sept.09, all issues

				and pipe, water main/services, sewer main/services, pulverize surface, excavate and remove 12 inches of the existing road base, replace with 8 inches of 3" minus crushed gravel, 2" B/C base, 1 1/2" B/C top, curb, loam and grass seed.		resolved. On CDBG list	
78	Woodward Rd.	Excellent				Routine scheduled maintenance.	
79	Church St. aka Kratt Ave. 21' x 200'	Poor		FDR required, Drainage, excavation, gravel, sidewalk, B/C. 150Ft, curb	FDR \$180,000.	Overlay N/R	
80	Dunbar Rd. 20'x 870'	Good			Chip Seal \$8,700.	Overlay \$20,000.	Routine scheduled maintenance. O/S every 5-7 years
81	Old Bray Rd. 17.6' x 445'	Surface Excellent		FY2018 received a 2" overlay of B/C			Rebuilt 2012 using town funds. Some drainage issues unresolved. Received 2" overlay of B/C 2017

Grand Total \$34,000,000.

- B/C- Bituminous Concrete (Black Top)
- O/S- Oil and Stone (Chip Seal)
- Total number of town maintained roads is 75

Formula for Tac Coat

.05 gsy for smooth surface. .07 gsy for milled surface.

Formula for tons

L x W divide by 9 x .056 x depth = tons

Formula for cubic yards

L x W x Depth divide by 27 = cy

1" = .08333

2" = .16666

3" = .24999

4" = .33332

5" = .41665

6" = .49998

7" = .58331

8" = .66664

9" = .74997

10" = .83330

11" = .91663

12" = .99996

2' = 1.99992