



The existing railroad trestle, when refitted as a pedestrian walkway, could be an important, eye-catching, scenic component to the Cobbossee Stream Trail.



South end of the trestle, at the proposed trailhead area.



Below the trestle lie artifacts of past industry along the Cobbossee Stream.



Existing businesses near the proposed trailhead area (trestle to the right). The City would work cooperatively with the landowner to make parking & landscape improvements to this area.



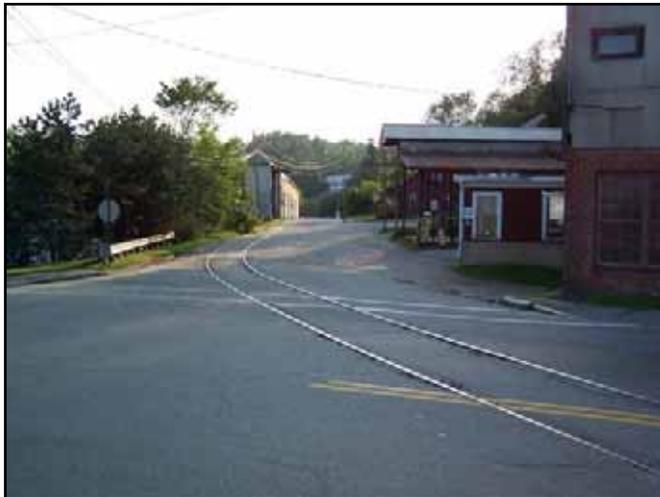
Harden "Street" is a City-owned ROW that connects Summer St. and Harrison Ave. The existing path is poorly constructed and in need of drainage improvements and erosion control.



The old rail bed behind Hannaford (near the KRRT).



View of the rail bed (opening in trees) from the KRRT.



The railroad tracks still cross Bridge St. onto Summer St.



Summer St., looking back towards Bridge St.



Summer St. at Winter St. intersection (no sidewalk).



After Summer St. crosses Winter St. (looking towards the trestle), the rail lines have been pulled out.



Improvements to the Bridge St. pedestrian crossing (at Summer St.) are already included in the City's Cobbossee Corridor plan.

Cobbossee Stream Area - Master Plan / Trails

PRELIMINARY CONSTRUCTION COST ESTIMATE - July 27, 2004

TRAIL SEGMENT A - Cobbossee Ave from New Mills Bridge to Middle School**New 5-foot Bituminous Sidewalk with Bituminous Curb**

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	EXCAVATION	1	LS	\$15,000.00	\$15,000
2	AGGREGATE BASE	675	CY	\$18.00	\$12,150
3	LOAMING & SEEDING	3750	SY	\$12.00	\$45,000
4	BITUMINOUS CURBING	3,350	LF	\$11.00	\$36,850
5	SLOPE STABILIZATION (FABRIC)	400	SY	\$6.00	\$2,400
6	RESET UTILITY POLES - ALLOWANCE	1	LS	\$4,500.00	\$4,500
7	PAVEMENT MARKINGS / STRIPING	1	LS	\$750.00	\$750
8	LANDSCAPING / TRIMMING	1	LS	\$4,000.00	\$4,000
9	HOT BIT. PAVEMENT (2")	250	TON	\$110.00	\$27,500
10	RESET HYDRANTS	2	EA	\$1,050.00	\$2,100
11	MOBILIZATION / EROSION CONTROL	1	LS	\$5,000.00	\$5,000
					SUBTOTAL: \$155,250
					ENGINEERING AND CONTINGENCY: <u>\$38,813</u>
					TOTAL: \$194,063

TRAIL SEGMENT C - Cobbossee Ave, from Winter Street to E.J. Prescott Office**New 5-foot Bituminous Sidewalk with Bituminous Curb**

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	EXCAVATION/FILL	1	LS	\$24,000.00	\$24,000
2	AGGREGATE BASE	975	CY	\$18.00	\$17,550
3	LOAMING & SEEDING	5100	SY	\$12.00	\$61,200
4	BITUMINOUS CURBING	4,900	LF	\$11.00	\$53,900
5	SLOPE STABILIZATION (FABRIC)	600	SY	\$6.00	\$3,600
6	RESET UTILITY POLES - ALLOWANCE	1	LS	\$7,500.00	\$7,500

7	PAVEMENT MARKINGS / STRIPING	1 LS	\$1,000.00	\$1,000
8	LANDSCAPING / TRIMMING	1 LS	\$4,500.00	\$4,500
9	HOT BIT. PAVEMENT (2")	350 TON	\$110.00	\$38,500
10	RESET GUARD RAIL	700 LF	\$16.00	\$11,200
11	MISC. DRAINAGE IMPROVEMENTS	1 LS	\$3,500.00	\$3,500
12	RESET HYDRANTS	3 EA	\$1,050.00	\$3,150
13	MOBILIZATION / EROSION CONTROL	1 LS	\$7,500.00	\$7,500
			SUBTOTAL: \$237,100	
			ENGINEERING AND CONTINGENCY: \$59,275	
			TOTAL: \$296,375	

TRAIL SEGMENT E - Harrison Avenue from New Mills past the High School
New 5-foot Bituminous Sidewalk with Bituminous Curb

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	EXCAVATION	1	LS	\$10,500.00	\$10,500
2	AGGREGATE BASE	650	CY	\$18.00	\$11,700
3	LOAMING & SEEDING	3200	SY	\$12.00	\$38,400
4	BITUMINOUS CURBING	3,150	LF	\$11.00	\$34,650
5	RESET UTILITY POLES - ALLOWANCE	1	LS	\$4,500.00	\$4,500
6	PAVEMENT MARKINGS / STRIPING	1	LS	\$500.00	\$500
7	LANDSCAPING / TRIMMING	1	LS	\$6,500.00	\$6,500
8	HOT BIT. PAVEMENT (2")	225	TON	\$110.00	\$24,750
9	MISC. DRAINAGE IMPROVEMENTS	1	LS	\$3,500.00	\$3,500
10	MOBILIZATION / EROSION CONTROL	1	LS	\$5,000.00	\$5,000
			SUBTOTAL: \$140,000		
			ENGINEERING AND CONTINGENCY: \$35,000		
			TOTAL: \$175,000		

TRAIL SEGMENT H & J - Summer Street & the Trestle
New 5-foot Bituminous Multi-Use Trail and Trestle Improvements.

TRAIL SEGMENT J1 - Paved Trail to/from Trestle

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	EXCAVATION	1	LS	\$7,000.00	\$7,000
2	AGGREGATE BASE	225	CY	\$18.00	\$4,050
3	LOAMING & SEEDING	900	SY	\$12.00	\$10,800
4	SPLIT RAIL CEDAR FENCING	200	LF	\$11.00	\$2,200
5	SLOPE STABILIZATION (FABRIC)	125	SY	\$6.00	\$750
6	PAVEMENT MARKINGS / STRIPING	1	LS	\$500.00	\$500
7	LANDSCAPING / TRIMMING	1	LS	\$5,500.00	\$5,500
8	HOT BIT. PAVEMENT (2 1/2")	70	TON	\$110.00	\$7,700
9	CONC. BLOCK RETAINING WALL	125	SF	\$17.00	\$2,125
10	MISC. DRAINAGE IMPROVEMENTS	1	LS	\$2,000.00	\$2,000
11	MOBILIZATION / EROSION CONTROL	1	LS	\$2,500.00	\$2,500
SUBTOTAL:					\$45,125
ENGINEERING AND CONTINGENCY:					\$11,281
TOTAL:					\$56,406

TRAIL SEGMENT H - Trestle Improvements

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	REPAIRS TO EXISTING SUBSTRUCTURE	1	LS	\$28,500.00	\$28,500
2	REPLACE DETERIORATED TIES	60	EA	\$60.00	\$3,600
3	NEW DECK FRAMING/STRINGERS	7,000	SF	\$3.25	\$22,750
4	DECKING ("TREX" OR EQUIV.)	7,000	SF	\$4.50	\$31,500
5	RAILINGS	1700	LF	\$44.00	\$74,800
6	PROTECTIVE MEMBRANE	7,000	SF	\$4.00	\$28,000
7	PRESERVATIVES/STAINS/COATINGS	1	LS	\$32,000.00	\$32,000
8	MOBILIZATION / EROSION CONTROL	1	LS	\$2,500.00	\$2,500
SUBTOTAL:					\$223,650
ENGINEERING AND CONTINGENCY:					\$55,913
TOTAL:					\$279,563

TRAIL SEGMENT I - Harden Street
New 5-foot Bituminous Multi-Use Trail

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	EXCAVATION	1	LS	\$6,000.00	\$6,000
2	AGGREGATE BASE	250	CY	\$18.00	\$4,500
3	LOAMING & SEEDING	1200	SY	\$12.00	\$14,400
4	CLEANUP OF DEBRIS	1	LS	\$4,500.00	\$4,500
5	PAVEMENT MARKINGS / STRIPING	1	LS	\$500.00	\$500
6	LANDSCAPING / TRIMMING	1	LS	\$3,500.00	\$3,500
7	HOT BIT. PAVEMENT (2 1/2")	85	TON	\$110.00	\$9,350
8	MISC. DRAINAGE IMPROVEMENTS	1	LS	\$8,500.00	\$8,500
9	MOBILIZATION / EROSION CONTROL	1	LS	\$4,500.00	\$4,500
SUBTOTAL:					\$55,750
ENGINEERING AND CONTINGENCY:					\$13,938
TOTAL:					\$69,688

TRAIL SEGMENT J2 - Bridge Street to Winter Street (Past TW Dick)
New 5-foot Bituminous Multi-Use Trail along top of slope

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	EXCAVATION	1	LS	\$8,500.00	\$8,500
2	AGGREGATE BASE	250	CY	\$18.00	\$4,500
3	LOAMING & SEEDING	1,000	LF	\$11.00	\$11,000
4	SLOPE STABILIZATION (FABRIC)	300	SY	\$6.00	\$1,800
5	SPLIT RAIL CEDAR FENCING	800	LF	\$11.00	\$8,800
6	PAVEMENT MARKINGS / STRIPING	1	LS	\$500.00	\$500
7	LANDSCAPING / TRIMMING	1	LS	\$5,500.00	\$5,500
8	HOT BIT. PAVEMENT (2")	90	TON	\$110.00	\$9,900
9	MOBILIZATION / EROSION CONTROL	1	LS	\$2,500.00	\$2,500
SUBTOTAL:					\$53,000
ENGINEERING AND CONTINGENCY:					\$13,250
TOTAL:					\$66,250

TRAIL SEGMENT K - KRRT Extension to Bridge Street (Behind Hannaford)

New 10-foot Bituminous Multi-Use Trail

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	EXCAVATION/FILL	1	LS	\$10,500.00	\$10,500
2	AGGREGATE BASE	450	CY	\$18.00	\$8,100
3	LOAMING & SEEDING	1000	SY	\$12.00	\$12,000
4	SPLIT RAIL CEDAR FENCING	400	LF	\$11.00	\$4,400
5	SLOPE STABILIZATION (FABRIC)	100	SY	\$6.00	\$600
6	RESET UTILITY POLES - ALLOWANCE	1	LS	\$4,500.00	\$4,500
7	PAVEMENT MARKINGS / STRIPING	1	LS	\$500.00	\$500
8	LANDSCAPING / TRIMMING	1	LS	\$3,500.00	\$3,500
9	HOT BIT. PAVEMENT (2 1/2")	160	TON	\$110.00	\$17,600
10	CONC. BLOCK RETAINING WALL	250	SF	\$17.00	\$4,250
11	MOBILIZATION / EROSION CONTROL	1	LS	\$2,500.00	\$2,500
SUBTOTAL:					\$68,450
ENGINEERING AND CONTINGENCY:					\$17,113
TOTAL:					\$85,563

TRAIL SEGMENT L - Lower Cobbossee Stream Trail from Bridge St. to Main St.

New 5-foot Bituminous Multi-Use Trail along top of slope

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	EXCAVATION	1	LS	\$6,500.00	\$6,500
2	AGGREGATE BASE	250	CY	\$18.00	\$4,500
3	LOAMING & SEEDING	800	SY	\$12.00	\$9,600
4	SLOPE STABILIZATION (FABRIC)	250	SY	\$6.00	\$1,500
5	SPLIT RAIL CEDAR FENCING	700	LF	\$11.00	\$7,700
6	PAVEMENT MARKINGS / STRIPING	1	LS	\$500.00	\$500
7	LANDSCAPING / TRIMMING	1	LS	\$6,500.00	\$6,500
8	HOT BIT. PAVEMENT (2 1/2")	100	TON	\$110.00	\$11,000
9	MOBILIZATION / EROSION CONTROL	1	LS	\$2,500.00	\$2,500
SUBTOTAL:					\$50,300
ENGINEERING AND CONTINGENCY:					\$12,575
TOTAL:					\$62,875

TRAIL SEGMENT G - West End of Trestle to Pedestrian Bridge Site
New 10-foot Bituminous Multi-Use Trail

<u>NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>COST</u>
1	EXCAVATION/FILL	1	LS	\$8,500.00	\$8,500
2	AGGREGATE BASE	450	CY	\$18.00	\$8,100
3	LOAMING & SEEDING	1,100	LF	\$11.00	\$12,100
4	SLOPE STABILIZATION (FABRIC)	400	SY	\$6.00	\$2,400
5	SPLIT RAIL CEDAR FENCING	250	LF	\$11.00	\$2,750
6	PAVEMENT MARKINGS / STRIPING	1	LS	\$500.00	\$500
7	LANDSCAPING / TRIMMING	1	LS	\$4,500.00	\$4,500
8	HOT BIT. PAVEMENT (2 1/2")	160	TON	\$110.00	\$17,600
9	MOBILIZATION / EROSION CONTROL	1	LS	\$2,500.00	<u>\$2,500</u>
SUBTOTAL:					\$58,950
ENGINEERING AND CONTINGENCY:					<u>\$14,738</u>
TOTAL:					\$73,688

**GARDINER CITY COUNCIL
RESOLUTION TO URGE MDOT TO CONSTRUCT A SIDEWALK AND BIKE ROUTE TO THE
GARDINER REGIONAL MIDDLE SCHOOL ON ROUTE 9/126**

WHEREAS about 0.73 miles of Route 9/126 between the New Mills bridge and the Gardiner/West Gardiner town line is slated for pavement and shoulder rehab by the MDOT (Project #11352.00), with design work scheduled to begin in winter 2004/2005 and construction to be completed in 2005

WHEREAS no sidewalk or bicycle lanes exist along this stretch to connect the Gardiner Regional Middle School (on Route 9/126) to the downtown, its neighborhoods, and the Cobbossee Corridor; and

WHEREAS there is a critical need to provide school children with safe walking and bicycling routes to local schools in general and the Middle School in particular; and

WHEREAS the City of Gardiner has committed \$175,000 towards its 2004 application for a Transportation Enhancement Grant from the State of Maine Department of Transportation (MDOT) to address alternative transportation needs within the community and specifically within the Cobbossee Corridor (which links Route 9/126 at New Mills to downtown Gardiner); and

WHEREAS residents of Gardiner, and especially parents of school children, have frequently pointed out to the Council that children are at risk when trying to walk and/or ride to school along Route 9/126

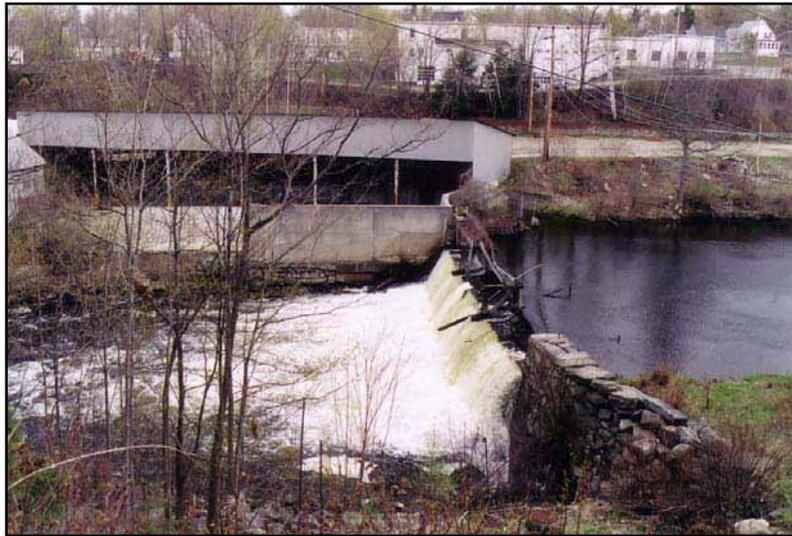
BE IT RESOLVED THAT the City of Gardiner strongly urges the Maine Department of Transportation to include **a new sidewalk and bicycle route** in its upcoming design and construction work on **Route 126** from the New Mills bridge to the West Gardiner town line.

NO. 5 DAM REMOVAL (GARDINER PAPERBOARD)

Provided by Matt Bernier, Kleinschmidt Associates

I thought I'd provide some additional information about the dam, its proposed removal, and my thoughts about the feasibility of a bridge across the stream.

As you probably know, the Gardiner Paperboard dam (also known as the Yorktowne Paper Company dam or Dam No. 5) is in poor condition. The dam was originally constructed in the mid-1800's, and was of similar construction to the upstream dam, which apparently failed decades ago. The only significant maintenance performed on the Gardiner Paperboard dam was the installation of the concrete apron, downstream of the dam, at an unknown date. The apron was probably built to prevent erosion and undermining of the dam at its toe.



A dam inspection performed for the State of Maine in 1998 noted considerable leakage through the dam and large voids in the stone masonry. There has been no maintenance on the structure since that time, and it is felt to be in even worse shape than in 1998. In 1999 the preliminary cost estimate for dam rehabilitation was \$241,700, and at about that time the mill began entertaining thoughts of dam removal and an alternative means of providing process water for its mill operations. For years the sole purpose of the dam had been to provide gravity flow of water from Cobbossee Stream into the mill. In 2000 a mill water intake study was conducted and found that the dam wasn't even necessary to provide water, except when the pumps needed to be primed and restarted after a mill shutdown. As part of that study several alternatives to the dam for pump priming were proposed, but the study became moot when the mill subsequently closed.

Dam removal is proposed for two primary reasons. One reason, the ecological benefits of dam removal are tremendous, since dam removal will restore upstream passage and habitat for lots of resident and anadromous (sea run) fish such as brook trout, Atlantic salmon, eels, alewives, blueback herring, sea lamprey, juvenile striped bass, etc. The removal of the Gardiner Paperboard dam will trigger fish passage at the upstream dams, further enhancing fisheries restoration, and is also expected to improve water quality.

The second reason for dam removal is that the Newark Group believes that the mill property will be a lot more saleable with the dam removed. The dam is contributing to

increased leakage through the mill foundation and deterioration of structural elements; there is also increased liability that comes with dam ownership. Therefore, the dam removal will increase the chances for conversion of the mill property to other use, which I suspect is very much a goal of the Cobbossee Corridor group.

The idea of a pedestrian bridge across the stream is a great one. Having walked this reach many times, on both the east and west banks, I think it is a beautiful stretch and deserves more public use.

Unfortunately, the dam in its existing configuration does not enhance the feasibility of a bridge across the stream. Although the dam once supported a timber walkway, the walkway was for private (mill) use and would not have been built to the design standards required today for public use.

During the dam removal design Kleinschmidt did consider the question of whether part of the dam could be retained as supports for a pedestrian walkway. We carefully considered the question. On the east (mill) side the abutment will remain, primarily because it is an integral part of the existing mill foundation, including the concrete walls of more recent vintage. The challenge is more on the west side, where an old penstock (4-foot diameter pipe) runs through the masonry abutment to where an old water wheel sat. However, the west side abutment is in very poor shape. I have included a photo to show the construction of this abutment, which is of laid granite blocks. The blocks are not pinned or concreted together. In order to have an abutment

capable of supporting a bridge, the abutment would need to be very secure. Simply put, the granite stones would not be able to serve as a bridge abutment by themselves, there would still be a need for a very large anchor of some sort (like a concrete abutment). Also, it looks like much of the west abutment is going to have to be removed during dam removal. If this abutment isn't lowered it will become an "attractive nuisance" and hazard with a trail leading to an abutment of loose stones with a sharp dropoff to the stream, not to mention the 4-foot diameter hole (old penstock) through the abutment that would be attractive for kids to crawl through but would always be in danger of collapsing. The west side of the dam will also be where the stream is temporarily diverted during dam removal, requiring removal of most of the abutment.

I think the best way to explain the bridge issue is for you to look at this excellent website for a pedestrian bridge in New Hampshire:

http://www.new-boston.nh.us/orgs/conservation/Projects/nbcon_footbridge.htm

I think this is an exciting option for Cobbossee Stream and its future trails network. I was pleasantly surprised to see this, since I wasn't aware that single span, prefabricated pedestrian bridges were available for spans of this length. If you look at this you can see that the bridge ties into new concrete abutments on either side of the stream, with stone used for approaches and aesthetics, but not necessarily structural support. I think this is a very similar situation to what will be required for Cobbossee Stream. I even think

that the cost (\$54,534) is very reasonable. If there is an engineer working with you on the Cobbossee Corridor study, he or she can probably provide more input on bridge options and costs. Given the steep topography, a suspension bridge ("swinging bridge") may also be an option.

Therefore, keeping parts of the existing dam does not increase the feasibility of a pedestrian bridge. In fact, I believe that dam removal will help with bridge options in two important ways. One, dam removal increases options for placing bridge abutments. The west side of the dam is very congested with the dam abutments crowded in with the City sewer line--there is very little room to incorporate a concrete abutment in with the existing granite abutment unless the granite is removed. And two, the dam removal provides an important source of material (granite blocks) that could be used in architectural aspects of the bridge, trail, gated entrances, etc. (The availability of the granite remains to be determined since it is owned by the mill and dam owner, but it could be available to the City. A lot depends on the value of the granite versus the costs of its removal.)

I hope this helps provide some additional information. I think you will see that the dam removal creates some great opportunities to move forward with future enhancements in this area, and it will be exciting to see the removal completed later this summer.



Dam No. 5, Gardiner.