Rochester Riverwalk Master Plan



April 2007 Revised April 2018 DRAFT ONI Y*** CLD | FUSS & O'Neill CASTAGNA CONSULTING GROUP, LLC

landscape architecture graphics, renderings & design solutions DESIGN





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Introduction

The Original 2007 Directive

In 2007 a Master Plan was published that was intended to satisfy the ideas developed during previous efforts:

- "The Plan for Downtown Rochester" dated June 2003
- PLAN NH, September 10 & 11, 2004 Rochester, NH Design • Charrette.
- Both of the above documents, recognize the river as an ٠ important natural, cultural, and historic community resource.
- In August 2006, the City of Rochester published a detailed ٠ Invitation to Bid/Statement of Qualifications/Request for Proposals for consulting work related to development of a Master Plan for a Riverwalk trail on the north side of the North Main Street Bridge.

January 30, 2007 Public Hearing

- Nearly 20 interested parties offered ideas, opinions, and goals for the project.
 - Safety concerns were expressed _
 - many in the room offered hope that a successful project could be designed and implemented, resulting in an improved area.
 - The Police Chief spoke and affirmed that the City is already working hard on an ongoing effort to "clean-up" Hanson Pines; more recreational use would help to limit inappropriate use.
 - Concern for the wildlife was discussed.
 - Expansion of the Riverwalk into the Downtown was also discussed.

The Revised (2018) Directive

include:

•

- Acknowledgement of the construction of Duval Park, referred to as the River Street Waterside Park in the 2007 Master Plan. •
- Acknowledgement of the Construction of a new Dewey Street • Foot Bridge, connecting Hanson Pines to the North Main Street Neighborhoods.
 - The 2007 Master Pan called for the repair of the previously existing bridge.
- Refining the Alignment of the trail and walk sections both in ٠ Phase I - Hanson Pines and Phase II – Downtown.
 - Refining the Possibilities for Phase III and acknowledging the ideas of the Charrette of 2004.
- Updating of the Construction Budgets to reflect the above ٠ changes and the passage of time.

The Rochester Riverwalk Committee has been working toward developing a refined Master Plan for its Riverwalk Project. This document is a revision of the 2007 document. Revisions requested

Summary

- This Master Plan document provides a base for future work related to development of construction plans for a Riverwalk Project.
- Research uncovered as part of this process determined that review by an archaeologist is required prior to any improvements including excavation. The New Hampshire Division of Historical Resources has indicated that the area of the Cocheco River adjacent to the proposed Master Plan area is highly sensitive. Due to the fact that the river has meandered throughout time, exact locations of historic artifacts can not be predicted. Prior to any excavation, a field walk and report by an appropriate archaeologist is required. Independent Archaeological, LLC has been consulted, but due to the timing of the extended winter season, funding, and finalizing the Master Plan document, this investigation is unable to be completed as part of the Master Plan document.
- The Natural Resource Agencies were open to phasing the Hanson Pines portion of the project independently. The advantage of this determination is such that formal Alteration of the Terrain Permitting is not required at the time of the Hanson Pines improvement (providing that less than 100,000 square feet of land area is disturbed). Any "new" path construction disturbing greater than 100,000 square feet (or 50,000 square feet within the protected shoreland which may be revised or updated at a later date) will require complete Alteration of the Terrain Permitting through the New Hampshire Department of Environmental Services. For future reference purposes, back-up documents are provided in the Supporting Documents section of this Plan.

- An Environmental Protection Agency (EPA) Stormwater Pollution Prevention Plan (SWPPP) and filing of a Notice of Intent will be required for any phase of the project, due to the fact that the project is "part of a larger plan of development" with disturbances totaling greater than one acre as defined by the EPA. We do note that whether the project disturbs greater than one acre or not, we would recommend that an Erosion Control Concept be developed and provided to any volunteers, contractors, or organizations working on any phase of the Riverwalk Project.
- Riverwalk Committee members also stressed at meetings the desire to incorporate any aspects of streetscape or plantings into each City project as they occur. This method will allow the City to stay on top of the passion to meet the Riverwalk Committee, CORE, and Main Street groups goals for the Downtown areas. The projects specifically identified the potential to incorporate streetscape features into the Memorial Bridge Project and any future work identified for the River Street area.
- Coordination of any or all future projects or phases of the projects should be coordinated with the Riverwalk Committee, the Recreation Department, the Public Works Department, and the Police the Riverwalk. Regular updates to a web site would be one aspect of a positive publicity campaign.

Department. Positive publicity is critical to the success of any aspect of

Rochester Riverwalk Committee Rochester Riverwalk Master Plan Acknowledgements

Riverwalk Committee

Stacey Marchionni, Chairperson

- ♦ Donna Bogan
- ♦ David Walker
- ♦ Sandra Keans
- ♦ Molly Meulenbroek
- ♦ Ray Felts
- ◆ Andrea Lemire

- ♦ Peter Bruckner
- ♦ Esther Turner
- ♦ Jennifer Marsh

City Staff

- ♦ Rochester Police Department and Chief Paul Toussaint
- ♦ Public Works Director, Peter Nourse
- ♦ Community Development Director, Jim Campbell

The Riverwalk Committee also wishes to acknowledge the anticipated future cooperation with CORE and the Main Street Program.

Rochester Riverwalk Committee Purpose and Mission

The creation of a Riverwalk along the Cocheco River in central Rochester, New Hampshire will serve three principal purposes.

1. Enhancement of Pedestrian Mobility and Circulation

A Riverwalk will enhance mobility and circulation of people within Rochester by encouraging pedestrian travel within the city, providing an alternative to motor vehicle travel. Pedestrians will:

•More easily reach their destinations

•Travel safely and conveniently from place to place connecting destinations

The designs will be for inclusive use, serving diverse segments of the population:

Adults
Children
People with disabilities
Teenagers
Students
Babies in Strollers
Non-drivers

2. Connection of the Urban Center to the River Corridor

Access from the urban center of the City to urban and natural segments of the Cocheco River corridor will be enhanced. The design should have an appreciation for natural resources associated with the river:

•Air	River Flow	•Water and Wetlands
•Aquatic life	•Soils and plant life	•Wildlife Habitat

The Riverwalk will provide open vistas, fresh air, and natural scenery. Amenities should be incorporated into the design for safety, comfort, and convenience that is sensitive to the urban- natural interface.

3. Provide Opportunities for Recreation, Education, and Healthful Outings

The Riverwalk will provide users with the opportunities for:

- •Education •Nature Study
- •Good Health •]
 - •Recreation

Respect for and consideration of private property rights as well as public user rights will be central to the design. The trailway will be well marked, easy to access, and well interpreted in a variety of media and topics. Committed citizens will work with City staff on safety, maintenance and recreational activity based on the Riverwalk



Looking Northeast along the Cocheco River from the Dewey Street Bridge

Examples of Resources: Hanson Pines Riverwalk Section



Existing Path Hanson Pines



Existing Out Building Along Possible Riverwalk Route



Opportunities to Create Lookout Points Along River

Examples of Resources: Riverwalk Along Wakefield Street Corridor



Looking at Wet area adjacent to Gaffney Home

View along existing path between rear of Union Street properties and Hanson Pines



Looking Northwest towards **Dewey Street Bridge**

Examples of Resources: Riverwalk Along Union Street Corridor





View of river from rear of Union Street properties

View of existing cross-walk delineation on Union Street

Planning Considerations

The Master Plan that follows is a frame made of recommended phases for projects to be built upon. It is important for the projects to be developed with the available funds, funding source and the requirements of the funding source in mind. Requirements of entities such as:

- American with Disabilities Act (ADA)
- NHDOT Local Projects Administration (LPA)
- Federal Highway Administration (FHWA)
- Community Block Development Grant (CBGD)
- City of Rochester Regulation regarding sidewalks, signage and other items employed by the riverwalk
- Requirements placed on projects by any other funding sources that will be used
- The Department of Public Works and the Riverwalk Committee envision that the Rochester Cocheco Riverwalk Project would be developed in phases.
 - The phases of the riverwalk and independent components or projects within each phase can be constructed out of order.
 - Phasing should be followed when at all possible to minimize "stranded" sections of trail.
 - Easements will be required fro work on Private Properties. No project should be considered for design and construction without first assessing landowner interest.

NO MONEY CAN BE DISCUSSED WITH LANDOWNERS WHEN DISCUSSING EASEMENTS UNTIL THE ALLOWED TIME, DEPENDENT ON FUNDING SOURCE.

Phase 1 is the Hanson Pines trail work

- Phase 2 is Downtown Riverwalk improvements
- Phase 3 is the work North of the Main Street Bridge
- Phase 4 is comprised of projects that are still being developed

It is the intent of the Riverwalk Committee to design and construct the Riverwalk and trial improvements through the use of Grants and Donations. 10 Attention to the requirements of these funding sources should be a primary consideration when selecting projects to take to design.



The Master Plan

The following sections discuss the 4 phases currently proposed for the Riverwalk and act as a Master Plan for moving into design and construction of phases or pieces of individual phases. Construction Budgets have been prepared for Phase 1 and Phase 2 and Phase 3. Phase 4 consists of items and ideas that are still in their infancy and need to be investigated further:

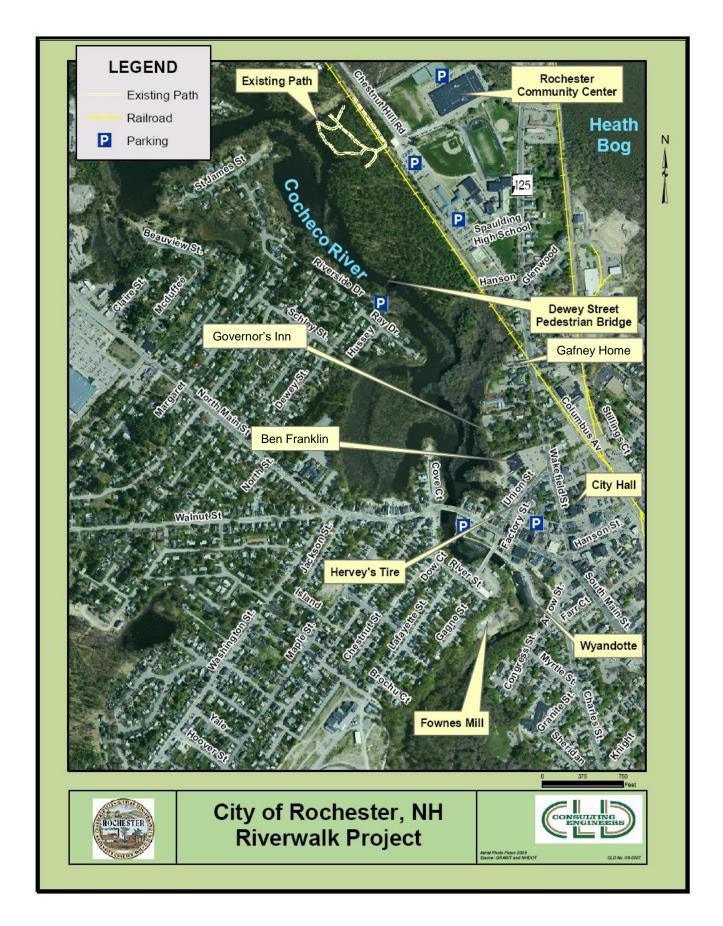
- Phase 1: Hanson Pines
- Phase 2: Downtown
- Phase 3: Riverwalk North Main Street
- Phase 4: The Intervale and Future Projects

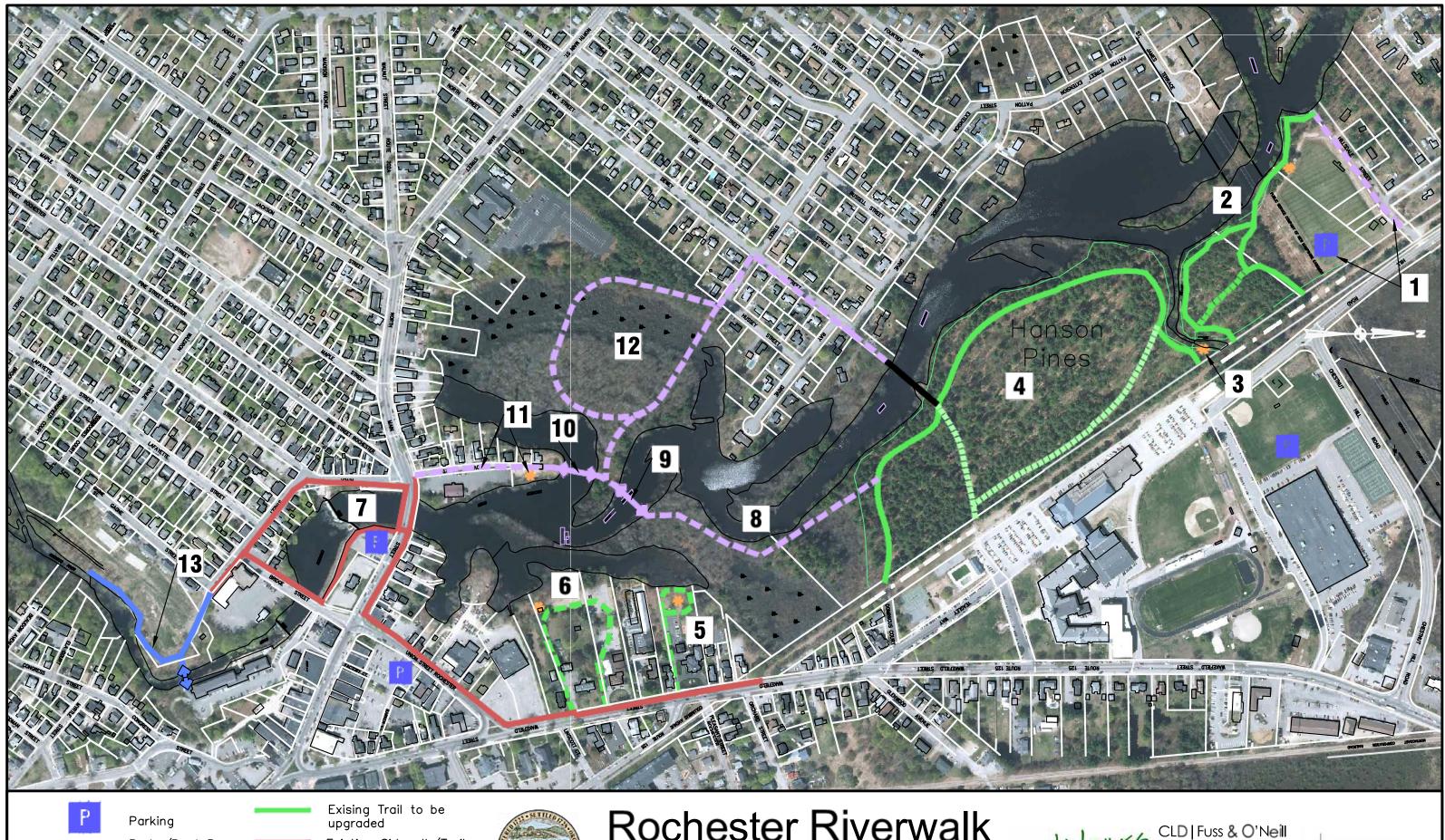
The "ideal" Riverwalk would follow directly along the edge of the river, utilizing boardwalks and bridges.

The Riverwalk alignment focuses on areas with moving water, quality wildlife habitat, serenity, scenic views, and pleasing vibrant vegetation.

The Committee noted the desire to avoid areas adjacent to shallow standing water. In addition, specific items were uncovered during the investigative process which required sensible, realistic consideration of limitations. At this time, some specific examples of the limitations which were identified for avoidance include:

- Areas of difficult topography
- Sensitive wetlands
- Abutter concerns about liability for public access on private property
- Limitation of available land area (buildings too close to squeak a path past)







Trails By Others Existing Trail Not Part of Improvement

Parks/Boat Ramp

Existing Sidewalk/Trail Future Trail/Stamped Asphalt ACCESSION AND A 1997 A



Rochester Riverwalk Master Plan



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Phase 1 – Hanson Pines

- Following is an overview diagram of the Phase 1 Hanson Pines portion of the project. The Hanson Pines portion of the project was given slightly more attention than other areas. The purpose of the additional attention was such that a volunteer group of individuals could begin construction of the path upgrades.
- Phase 1 consists of 4 main components that can each be performed as individual projects should the City so choose:
 - Hillsdale Street Canoe/Kayak Launch And Gravel Parking 1. Area. **Red** Line work and Parking "**P**" Symbol.
 - The Parking is new at the base of Hillsdale Street and is meant to alleviate pressure on the neighborhood.
 - Trails East of Heath Brook Light Green 2.
 - These Trails are existing dirt paths, lightly used an din need of upgrade to make them fully accessible.
 - Footbridge over Heath Brook Orange Asterisk "*" 3.
 - Trails West of Heath Brook Dark Green 4.
 - These Trails are existing and heavily used dirt paths. • Resurfacing and limited regrading will be necessary to maintain full accessiblity.
- Generally, the intent is to upgrade or improve the existing paths such • that roots, stones, and uneven surfaces will not pose a hazard to those using the trail system.
- An existing State of New Hampshire rail-trail network runs along the • southern edge of Hanson Pines. No additional work on this area is proposed at this time. The City should solidify any usage agreements that may be required.
- Previously, the Master Plan included the repair of the Dewey Street • Footbridge connecting Dewey Street to the Trails West of Heath Brook. This work has been accomplished with the replacement of the Dewey Street Footbridge.

- The boat launch that was proposed at Dewey Street was not completed as part of the bridge replacement project. It has been replaced with a Canoe/kayak launch at the ball fields off of Hillsdale Street.
- Previously, the Master Plan depicted a boat launch at the end of St. James Terrace. This has been eliminated in this iteration of the Master Plan and replaced by the Hillsdale Street Canoe/Kayak Launch.



Photo Looking towards Community Center/High School from Hanson Pines Path











Hanson Pines Conceptual Design Phase I

As previously noted, one goal of the Committee is to prepare enough information such that a volunteer group of individuals can immediately begin the upgrade of the Hanson Pines portion of the path. Information to be considered as the team presses forward follows:

- Acquisition of formalized legal rights to use the rail-trail area.
- State of New Hampshire Alteration of the Terrain Permitting if over 100,000 square feet will be disturbed.
- State of New Hampshire Natural and Cultural Resource Coordination if any excavation is proposed. A Phase IA Level Archaeological Review is required. The Phase IA Level Archaeological Review must include shovel testing. Completion of this advance investigation hopes to reduce the likelihood of an archaeologist needing to revisit the site during construction.
- State of New Hampshire Wetlands Permitting if any wetland areas are disturbed.
- City of Rochester Coordination for work within wetland buffer areas.

Riverwalk Signage:

Should provide directional, educational and amenity information to users.

Should be constructed from natural or vandal resistant materials.

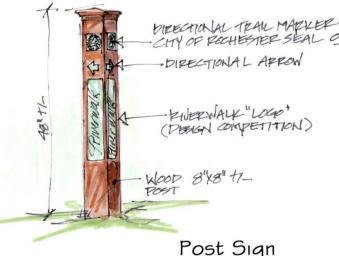
All signs should be user friendly and comply with the ADA regulations.

A qualified sign designer should be consulted to insure that all materials and specifications meet those of the industry and that signs meet existing state and local codes.

A design competition could provide a unique look to the Riverwalk signs and help set them apart from existing city signage.

Areas for sponsor's logos on the trail signs could help defray the cost of sign installation.







Directory Sign

LITY OF PACHESTER SEAL OF SPONSOF

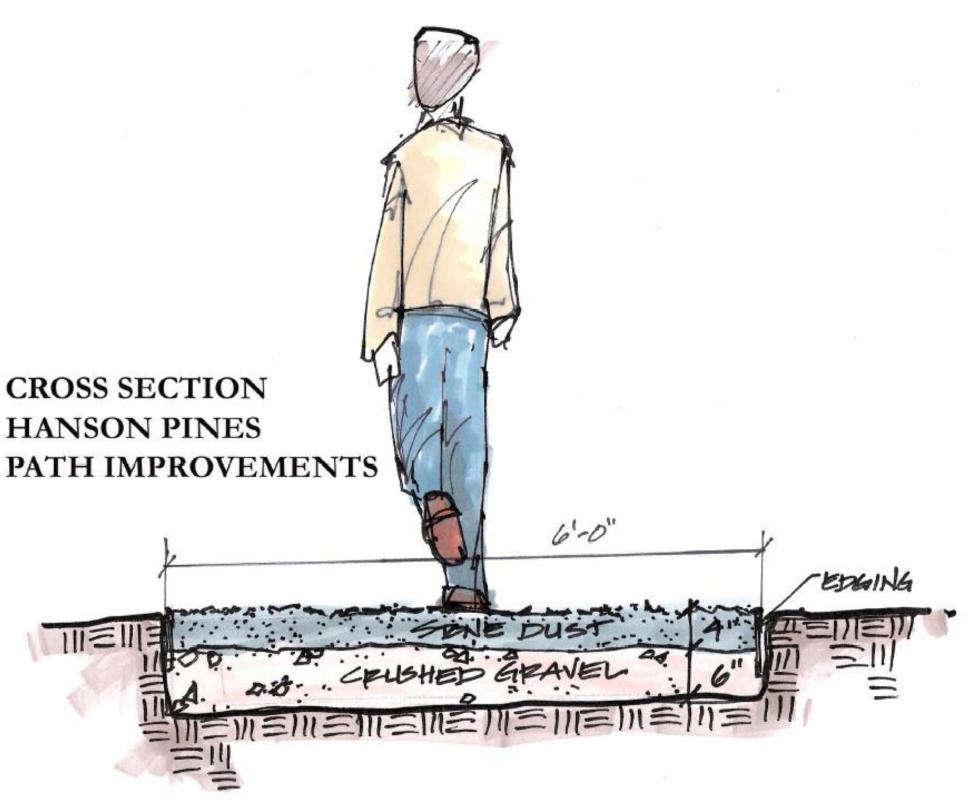
Sign locations:

Color directory signs should be provided at all trail heads and major junctions along the route.

Directional post signs should be installed to adequately direct users of the Riverwalk and the trail system at Hanson Pines. 15

Hanson Pines

- Hanson Pines currently houses a wellestablished trail network utilized by a variety of individuals, including students. Some areas of the path are paved and others are dirt. Some of the existing seating areas have become overgrown. An initial phase of the project would include trimming brush from around the seating areas, repair and painting of those areas, and providing some directional signage.
- We recommend that once the dynamics of the path are modified by any improvements, that the Riverwalk Committee members review seating locations and evaluate the need for additional seating areas.



Hanson Pines Lighting

Suggested Guidelines for Trail Lighting:

Lighting needs should be determined by a qualified lighting designer/lighting engineer prior to the creation of a design plan set. The fixtures chosen by that designer and the committee should provide adequate light along the riverwalk in order to promote the safety, security, and well being of persons engaged in lawful outdoor nighttime activities but protect and preserve dark skies needed by the astronomical community and minimize wasted energy. The design intent should focus on preventing excessive and careless outdoor nighttime lighting usage while preserving, protecting, and enhancing the lawful nighttime use and enjoyment of any and all aspects of the Riverwalk. All outdoor illuminating devices should be installed in conformance with the provisions of the building code, the electrical code, and the sign code of the City of Rochester.

A polycarbonate lens should be used to reduce maintenance to fixtures in remote areas caused by vandalism. Existing street lighting along the Riverwalk should be analyzed by the lighting designer to insure that existing fixtures provide the proper illumination for safety of individuals using the trail.



Characteristics:

Keep poles and fixtures to pedestrian scale

Be respectful of the environment by using full cut-off optics

Choose fixture with tool-free access for ease of maintenance

Use polycarbonate lens to reduce maintenance from vandalism

- The hope of the group was that by "practical" lighting.
- on this page.

• The Public Hearing comments made it clear that excessive lighting was not desired. Some of the nearby residents were concerned that the lighting would be disruptive to the wildlife in the area.

increasing the "appropriate" activities within the Pines area, the less desirable activities would be forced out, reducing the need for "safety" lighting and, instead letting the focus be on aesthetic and

• The group made it clear that any proposed lighting needed to be realistically indestructible. Noting that aesthetically pleasing and indestructible typically do not meld, our Team has proposed to use a basic lighting fixture similar to that noted

Phase 2 – Downtown

- Following is an overview diagram of the Phase 2 Downtown portion of the project. The downtown area was a major focus area of the Public Hearing group.
- Phase 2 provides for:
 - Connection to Duval Park on River Street part of the 2007 Master Plan that has been constructed.
 - Gafney Home Park.
 - Outpost at Governor's Inn
 - The Riverwalk Committee did realize that if any future shoreland improvements are desired which either encompass areas below the high water mark, or impact wetlands, State of New Hampshire Wetlands permitting (and possibly Federal Army Corps permitting, depending on the area involved) will be required.
- The blue Parking Symbol "P" designates areas where parking is currently available. No changes are proposed to these areas at this time.
- An existing State of New Hampshire rail-trail network runs along the southern edge of Hanson Pines and intersects Wakefield Street. No additional work on this area is proposed at this time. The City should solidify any usage agreements that may be required.

- The **red** lines depict areas where sidewalks or pavement exist that would be "Riverwalk" defined by addition signage and or "texture" to the existing surfaces. Limited plantings are also proposed along these areas.
- The green dashed lines indicate areas of new trails which would utilize existing driveways and abutting properties. Expansion of the trail system into these areas will require property rights and/or easement acquisitions. The "star" notations shown off of each of these trails are areas which property owners and the future Riverwalk. The first "star" notation is located on the Governor's Inn property. This notation is provided in the vicinity of the existing outbuilding depicted in a future sheet. The second "star" notation is provided on the Gafney Home property. A conceptual layout for a distinctly separate but adjoining gathering area is also provided on a future sheet.
- The **blue** lines depict areas within the Fownes Mill Development project where the developer had been planning to develop the trail as part of the housing improvement project.

have been identified which may provide benefits to both, the





Trails By Others Existing Trail

Future Trail ----

Existing Trail Not Part of Improvement





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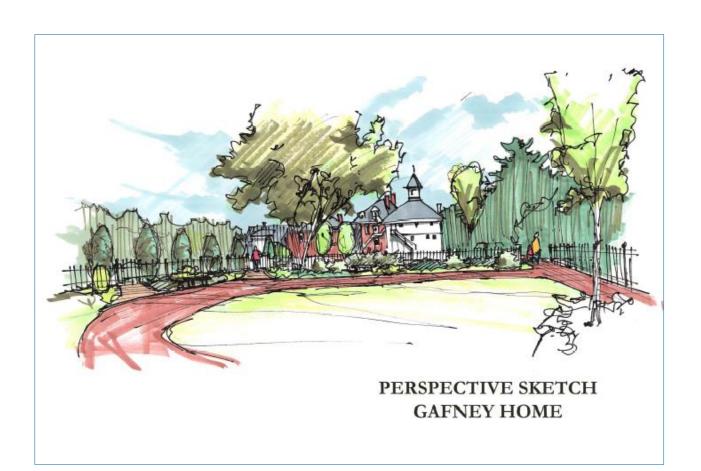
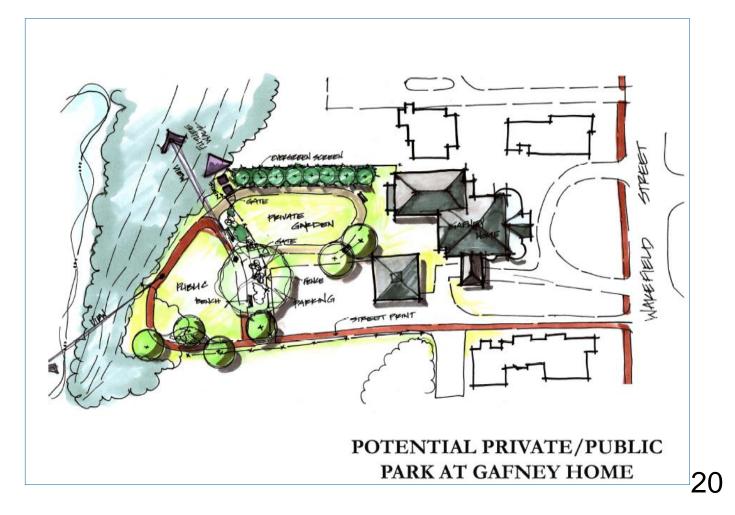




Photo (Left) -Looking East toward rear of Gaffney Home

Gafney Home Park

The "ultimate" proposed Riverwalk alignment passes behind the Gafney Home. The phased Riverwalk could make good use of the space in the interim. We understand that developing a connection in this area may be viable. One concept below shows how the transition between the Riverwalk and the Gafney Home may be achieved while maintaining the privacy for the residents of the Home.



Outpost at Governor's Inn



Photo (Above) - Looking East from River towards outbuilding on Governor's Inn property

Above shows one existing riverside structure along the proposed alignment. The Team envisions that this structure could be renovated to house a "Snack Shack" and seating area.



GOVERNOR'S INN

Buffering Layout Ideas



Photo (Inset above) - View behind the former Brooks site.

Buffering to Existing Residences

The vision of "buffering" is designed to alleviate abutter's concerns related to pedestrian traffic and the potential for Riverwalk users to venture off the formal trail network. Buffering proposals are not designed to block any potential visibility of the property owner to the river. We do note that in most cases, the Phase II abutters do not currently have a clear view to the river. The hope is that each abutter's screening would be designed to fit the existing landscape, limit the potential "wandering" of the users and be customized to each owner's personal preferences.

Additional Possibilities for Defining the Riverwalk Limits on Existing **Driveways or Sidewalks**



Photos above depict existing Governor's Inn driveway and driveway with added texture delineating possible Riverwalk path on private drive.

Possible Change in Pavement to Delineate Riverwalk

Phase 3, North Main Street

- The Phase 3 portion of the project will require the addition of pedestrian-style bridges. This portion of the project will require substantial property owner and Cultural and Natural Resource Agency coordination, ultimately resulting in substantial property acquisition and permitting efforts, all requiring significant financial resources. The hope of the Team is that the smaller portions of the project identified in the earlier phases of the report will allow the project to gain momentum, resulting in financial backing by Rochester businesses, organizations, residents, and funding agencies.
- The repair of the Dewey Street bridge has been done and is no longer necessary as part of the Master Plan.
- Incorporation of "look-outs" and perhaps a decked terraced area is envisioned as part of the proposed bridge projects. Odor concerns were raised as part of the proposed work in the vicinity of the river crossings. The nature of the water levels is critical to the successful incorporation of any riverfront element in the area behind the properties in the vicinity of the Main Street and Union Street Intersection.

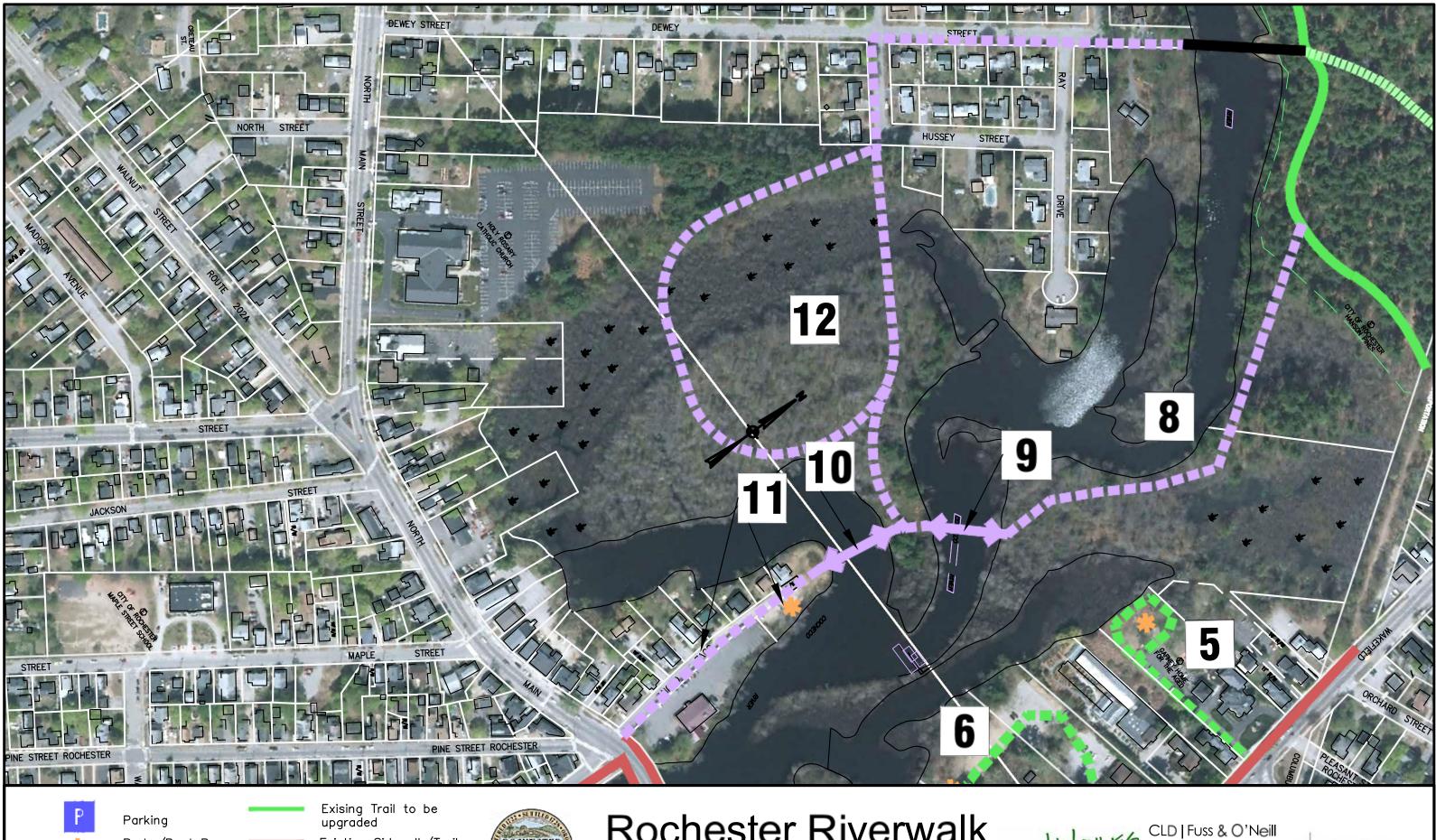
• The dashed violet line type represents areas of the trail network that is planned to be constructed as part of a future vision is that areas of the Phase 3 trail network will utilize ADA accessible paths, bridges, boardwalks, deck areas, pavement stamping, and textured sidewalk.



Photo (Above) - Looking South from Hervey's



phase. This area includes a variety of surface treatments. The





Existing Trail Not Part of Improvement

Parks/Boat Ramp Trails By Others

Existing Sidewalk/Trail

Future Trail/Stamped Asphalt



Rochester Riverwalk Phase III



orate Center , Suite D



Phase 3 and Future Layout "Pocket Park" Ideas



Through Existing Downtown/ Developed Areas



ERACI

Trail Head

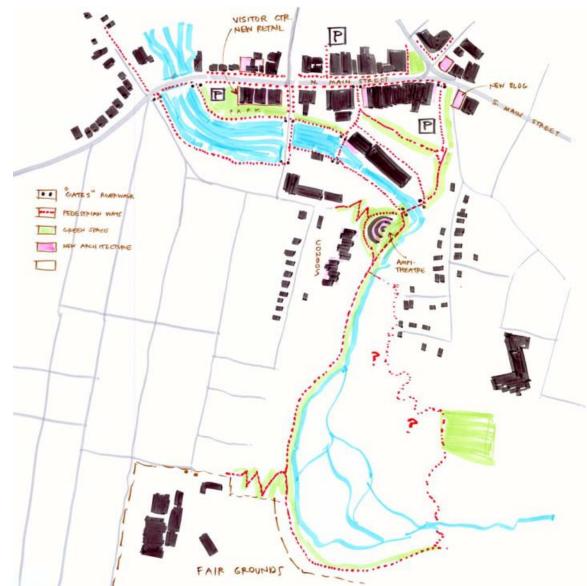
Pocket Parks

Phase 4, The Intervale and Future Projects

• A number of possible projects have been discussed over the years as things that the Riverwalk Committee would like to see undertaken. These projects and ideas however need to be further studied and fleshed out before even the most crude budgets can be developed for them.

These Projects include:

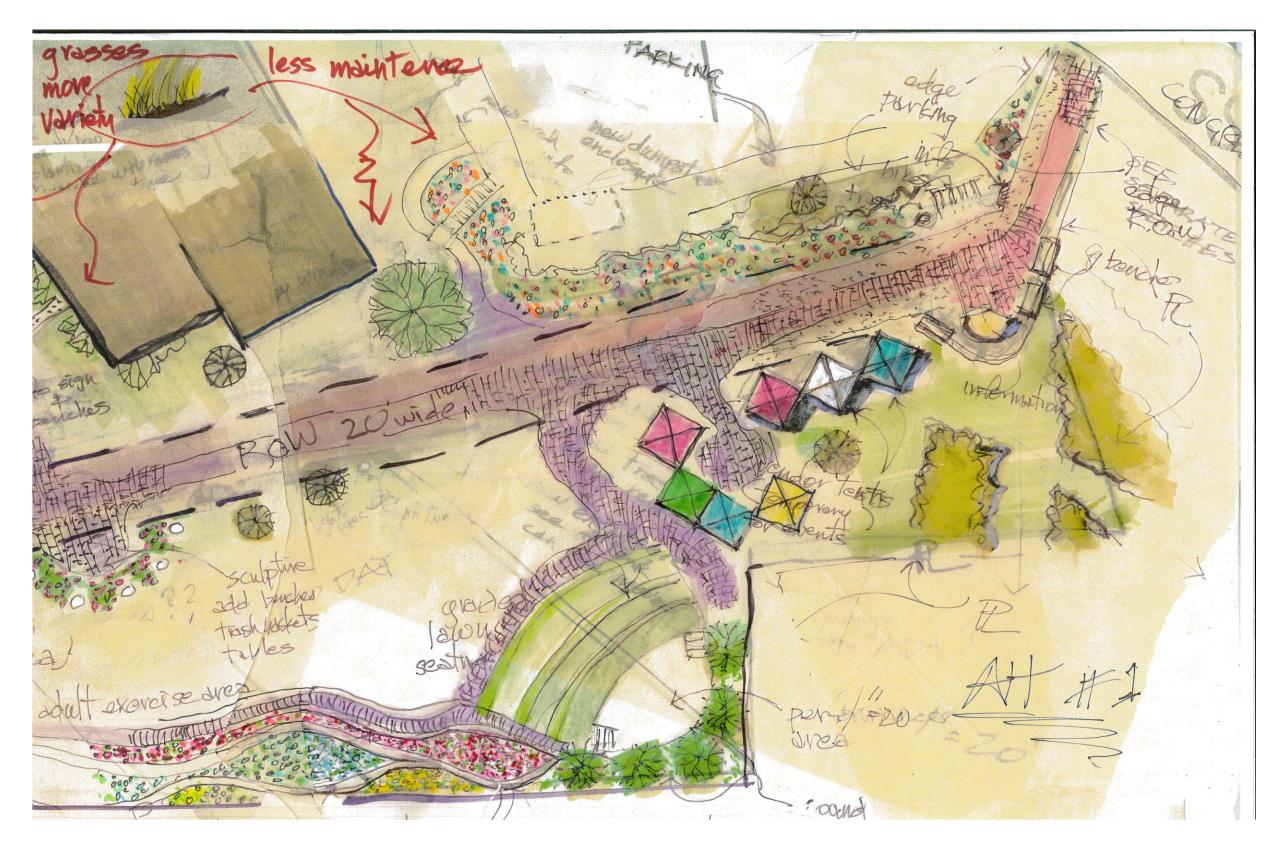
- Intervale Trails; An area running along the Cocheco River on Tax Map 124 Lot 27 and Lot 14, William Allen School. The hope would be to provide access to Fownes Mill/Gagne Street via footbridge.
- Improvement of Water Street; Recently, an effort has been made to look at Water Street and how to make use of it. It is recommended that further study be performed on a project for that area. See the images that follow for examples of concepts already developed.
- Items form the 2004 PlanNH Charrette found as an Appendix. This Charrette encouraged connection of the Riverwalk to the Fairgrounds and creation of trails and amenities on that property if possible. See image to the right for an example of that Charrette's suggestions.



PlanNH Charrette Excerpt: Possible Trail Configuration

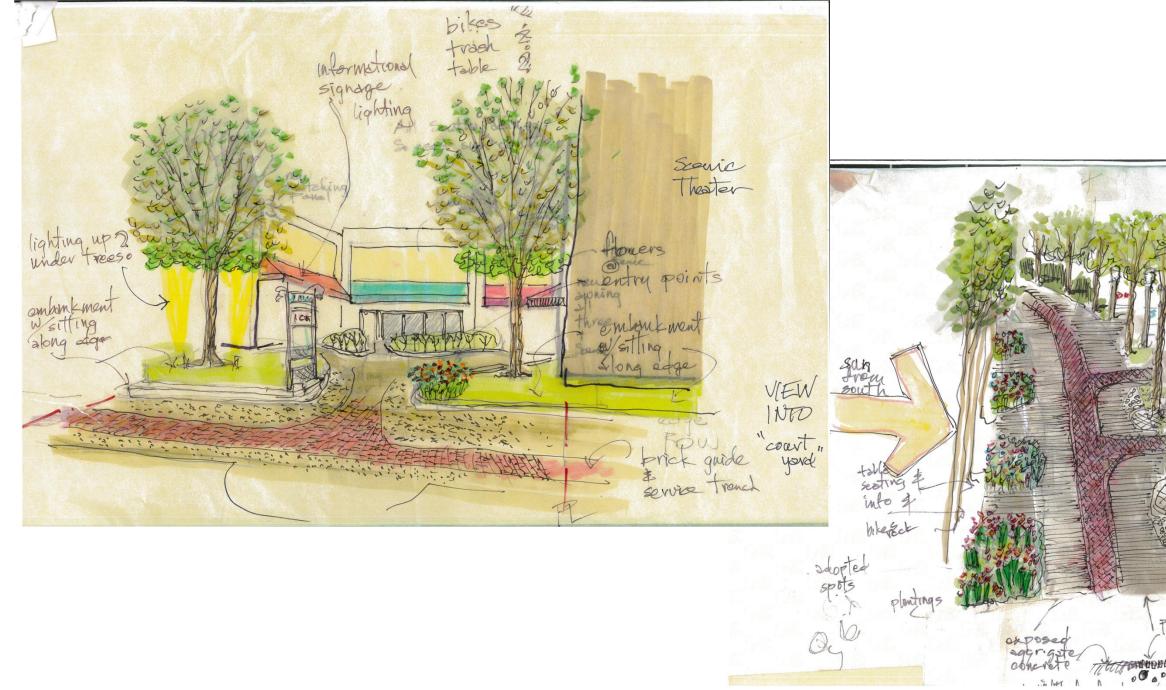






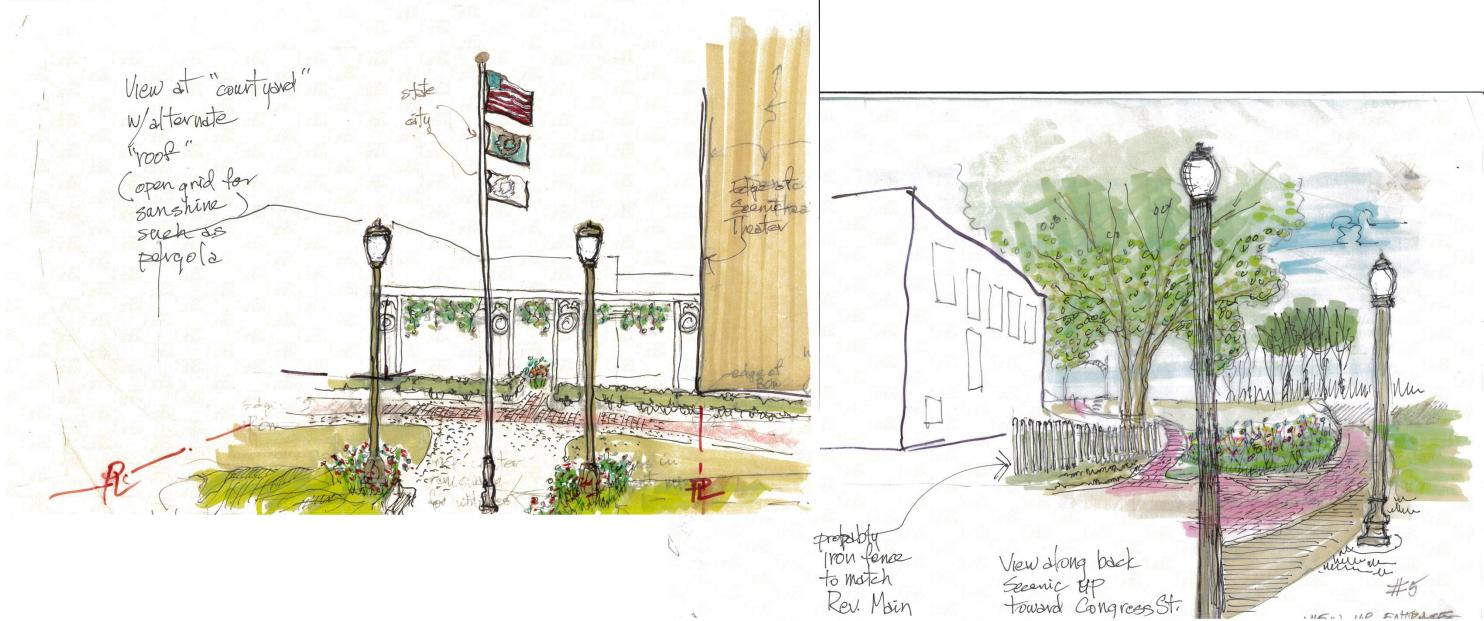








View #1a along walk of scenic thentification as downtown similiar to maybe surie minima maintenan (readily vermousles) for anometices. us Knoe povers/bindes/other Stresst o o o o o o





Budgets

Phase 1: Hanson Pines

Number	Item	Quantity	Unit	2018 Unit Cost	2018 Cost	Add'l 10% Range			
1	Hillsdale Street								
	Parking Area (20 Spaces assumed, crushed gravel surface)								
	860-FT WIDE DOUBLE LOADED PARKING 90-FT (10 SPACES LONG) LONG + 100FT X 24-FT								
	DRIVEWAY Site Preparation	1	LS	\$10,000.00	\$10,000	\$11,000			
	6" Crushed Gravel	867	SY	\$13.00	\$600	\$11,945			
	12" Bank Run Gravel	867	SY	\$39.00	\$33,640	\$37,004			
				ποτιο σ	\$54,499	\$59,949			
	Stamped Asphalt along Hill	sdale Street to	End of T	rail					
	Street Print on Hillside	2500	SF	\$18.00	\$45,000	\$49,500			
	<u>Canoe/Kayak Launch</u>								
	Small Dock, Kayak Launch	1	Unit	\$40,000	<u>\$40,000</u>	<u>\$44,000</u>			
			Const	ruction Sub-Total	\$139,499	\$153,449			
			10% C	ontingency	\$13,950	\$15,345			
		*Enş	gineering	Design Sub-Total	\$15,344.87	\$16,879.35			
		** Construction	n Adminis	stration Sub-Total	\$23,017.30	\$25,319.03			
			Hillsdal	e Street Sub-Total	\$191,810.82	\$210,991.90			
2	East Section – Hanson Pi	nes Trail							
	10-FT WIDE TRAIL, UND			C, SECURITY CALL	BOXES EVER	RY 300-FT,			
	PATH LIGHT EVERY 100-I								
	6"Crushed gravel (2260lf)	420	CY	\$60.00	\$25,200	\$27,720			
	4"Stone Dust	280	CY	\$64.00	\$17,920 \$2,100	\$19,712			
	Path Preparation	1 4520	LS LF	\$2,100.00 \$12.00	\$2,100 \$54,240	\$2,310 \$59,664			
	Path Edging Underground Electrical	4320 2260	LF	\$12.00 \$42.00	\$54,240 \$94,920	\$104,412			
	Street Lights	2200	Each	\$1,800.00	\$41,400	\$45,540			
	Security Call boxes	8	Each	\$200.00	\$1,600	\$1,760			
	Signage	1	LS	\$5,000.00	\$5,000	\$5,500			
	Benches	5	Each	\$600.00	\$3,000	\$3,300			
	Landscaping	1	LS	\$15,000.00	\$15,000	\$16,500			
	Fence	550	LF	\$90.00	\$49,500	<u>\$54,450</u>			
				ruction Sub- Total	\$309,880	\$340,868			
				10% Contingency	\$30,988	\$34,087			
		*Eng	gineering	Design Sub-Total	\$34,086.80	\$37,495.48			

- ****Construction Administration Sub-Total** \$51,130.20 \$56,243.22
- East Section Hanson Pines Trail Sub-Total \$426,085.00 \$468,693.50



Budgets Phase 1: Hanson Pines

Number	Item	Quantity	Unit	2018	2018	Add'l
				Unit Cost	Cost	10% Range
3	Bridge over Heath Broc	ok				
	Bridge	1	LS	\$120,000.00	<u>\$120,000</u>	<u>\$132,000</u>
	C		Cons	truction Sub-Total	\$120,000	\$132,000
				10% Contingency	\$12,000	\$13,200
		*Enş	gineering	Design Sub-Total	\$13,200.00	\$14,520.00
		** Construction	n Admini	stration Sub-Total	\$19,800.00	\$21,780.00
			Hillsdal	e Street Sub-Total	\$165,000.00	\$181,500.00
		Die er Treil				
4	West Section – Hanson					
	10-FT WIDE TRAIL, UN PATH LIGHT EVERY 100			RIC, SECURITY CA	ALL BOXES E	VERY 300-FT,
	6"Crushed gravel (2260lf)	465	CY	\$60.00	\$27,900	\$30,690
	4"Stone Dust	310	CY	\$64.00	\$19,840	\$21,824
	Path Preparation	1	LS	\$2,100.00	\$2,100	\$2,310
	Path Edging	5000	LF	\$12.00	\$60,000	\$66,000
	Underground Electrical	2500	LF	\$42.00	\$105,000	\$115,500
	Street Lights	25	Each	\$1,800.00	\$45,000	\$49,500
	Security Call boxes	8	Each	\$200.00	\$1,600	\$1,760
	Signage	1	LS	\$5,000.00	\$5,000	\$5,500
	Benches	10	Each	\$600.00	\$6,000	\$6,600
	Landscaping	1	LS	\$15,000.00	\$15,000	\$16,500
	Fence	550	LF	\$90.00	<u>\$49,500</u>	<u>\$54,450</u>
			Cons	truction Sub-Total	\$336,940	\$370,634
				10% Contingency	\$33,694	\$37,063
	*Engineering Design Sub-Total					\$40,769.74
	**Construction Administration Sub-Total				\$55,595.10	\$61,154.61
	W	Vest Section – Ha	anson Pin	es Trail Sub-Total	\$463,292.50	\$509,621.75

Phase 1 Total \$1,246,188 \$1,370,807

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Budgets

Phase 2: Downtown

Number	ltem	Quantity	Unit	2018 Unit Cost	2018 Cost	Add'l 10% Range
5	Gafney Home Park					
	Site prep/Path construction allowance	1	LS	\$150,000.00	\$150,000	\$165,000
	Plantings	1	LS	\$50,000.00	\$50,000	\$55,000
	Streetprint	1200	SF	\$18.00	\$21,600	\$23,760
	Benches	1	LS	\$600.00	\$600	\$660
	Signage	1	LS	\$2,500.00	<u>\$2,500</u>	<u>\$2,750</u>
			Constr	ruction Sub-Total	\$224,700	\$247,170
			10% Co	ontingency	\$22,470	\$24,717
		*Engineerin	g Design	Sub-Total	\$24,717.00	\$27,188.70
	•	** Construction	n Adminis	tration Sub-Total	\$37,075.50	\$40,783.05
		Ga	fney Hom	e Park Sub-Total	\$308,962.50	\$339,858.75
6	Outpost @ Governor's In	n				
	Building	1	LS	\$4,200.00	\$4,200	\$4,620
	Benches	1	LS	\$600.00	\$600	\$660
	Site prep/Path construction allowance	1	LS	\$12,000.00	\$12,000	\$13,200
	Streetprint	10000	SF	\$18.00	\$180,000	\$198,000
	Plantings	1	LS	\$36,000.00	\$36,000	\$39,600
	Signage	1	LS	\$2,500.00	<u>\$2,500</u>	<u>\$2,750</u>
	0 0			ruction Sub-Total	\$232,800	\$256,080
			10% Co	ontingency	\$23,280	\$25,608
		*Engineering Design Sub-Total			\$25,608.00	\$28,168.8 0
	:	** Construction	n Adminis	tration Sub-Total	\$38,412.00	\$42,253.20
		Outpost @) Governo	r's Inn Sub-Total	\$320,100.00	\$352,110.00

Budgets

Phase 2: Downtown

	er Item Quantity	2018	Add'l
Unit Cost	7 Downtown Additional Sidewalk Side	st Cost	10% Range
	Convert to U/G Utilities 100	2.00 \$42,000	\$46,20
		20.00 \$42,000 \$8,400	\$9,24
	Overlook Deck (20 x 30) 60	30.00 \$18,000	\$19,80
10 Each \$1,800			\$19,80
	River Street Streetscape 100	40.00 \$240,000	\$264,00
2 Each \$2,400	Crosswalks		\$5,28
Construction Sub-To	Closswaiks		\$364,32
10% Continger		ency \$33,120	\$36,43
0		•	
Engineering Design Sub-To	* <u>H</u>	fotal \$36,432.00	\$40,075.2
tion Administration Sub-To	**Construct	fotal \$54,648.00	\$60,112.8
Side Improvements Sub-To	Downtown Additional Sidewalk S	otal \$455,400.00	\$500,940.0
to Bridges to Holy Rosa	8 Trail from West End of Hanson Pines	ary Property	
	6" Crushed Gravel (1120LF) 21	50.00 \$12,600	\$13,86
	4" Stone dust 14	54.00 \$8,960	\$9,85
1 LS \$1,000	Path preparation	. ,	\$1,10
1 LS \$2,500	Signage		\$2,75
Construction Sub-To	0.0		\$27,56
10% Continger		ency \$2,506	\$2,75
Engineering Design Sub-To	*E	fotal \$2,756.60	\$3,032.2
tion Administration Sub-To	**Construct	Cotal \$4,134.90	\$4,548.3
oly Rosary Property Sub-To	Trail; Hanson Pines to Bridges to Ho	Cotal \$34,457.50	\$37,903.2
eco River	9 Bridges over Main Thread of Coche		
	Pedestrian Bridge 19) <u>\$874,000</u>	<u>\$961,40</u>
Construction Sub-To	r edesthan Druge		\$961,40
10% Continger		ency \$87,400	\$96,14
Engineering Design Sub-To	*E	Cotal \$96,140.00	\$105,754.0
tion Administration Sub-To	**Construct	fotal \$144,120.00	\$158,631.0
d of Coobooo Divor Sub T	Bridge over Main Three	otal \$1.001.750.00	¢1 201 005 0
d of Cocheco River Sub-To	Bridge over Main Threa	otal \$1,201,750.00	\$1,321,92



Phase 2: Downtown

Number	Item	Quantity	Unit	2018	2018	Add'l
				Unit Cost	Cost	10% Range
10	Bridge From Penisula to	Holy rosary P	roperty			
	Pedestrian Bridge 190 LF \$4,600.00		<u>\$874,000</u>	<u>\$961,400</u>		
		Construction Sub-Total			\$874,000	\$961,400
				10% Contingency	\$87,400	\$96,140
		*En	gineering	Design Sub-Total	\$96,140.00	\$105,754.00
		**Constructio	n Admini	stration Sub-Total	\$144,210.00	\$158,631.00
	Bridge From Pe	eninsula to Hol	ly rosary P	roperty Sub-Total	\$1,201,750.00	\$1,321,925.00
11	Cove Court					
	Street Print	3000	SF	\$15.00	\$45,000	\$49,5 00
	Canoe/Kayak Launch	4	TT .	* 1 0,000,00	* 1 0 0 0	* 4 4 000
	Small Dock, Kayak Launch	1		\$40,000.00	\$40,000	\$44,000
	Signage	1	LS	\$2,500.00	<u>\$2,500</u>	<u>\$2,750</u>
			Const	ruction Sub-Total	\$87,500	\$96,250
				10% Contingency	\$9,625.00	\$10,587.50
		*En	gineering	Design Sub-Total	\$9,625.00	\$10,587.50
		**Constructio	n Admini	stration Sub-Total	\$14,437.50	\$15,881.25

			Cove	Court Sub-Total	\$120,312.50	\$13
		**Construction	Adminis	tration Sub-Total	\$14,437.50	\$2
		*Eng	ineering I	Design Sub-Total	\$9,625.00	\$ 1
			-	10% Contingency	\$9,625.00	\$1
			Constr	ruction Sub-Total	\$87,500	
	Signage	1	LS	\$2,500.00	<u>\$2,500</u>	
	Small Dock, Kayak Launch	1	Unit	\$40,000.00	\$40,000	
	Street Print <u>Canoe/Kayak Launch</u>	3000	SF	\$15.00	\$45,000	
11	Cove Court	2000		#15 00	* 15 000	

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** Construction Administration: 15% of (Construction Cost + 10% Contingency) was used as a typical Construction Administration fee for each item, until specifics are known it is unclear what the fee will be and this is a standard estimate percentage. Construction Administration is typically a requirement of Grant based funding

132,343.75

Phase 2 Total \$3,642,733 \$4,007,006

Budgets

Phase 3: Dewey Street to Trails at Holy Rosary

Number	Item	Quantity	Unit	2018 Unit Cost	2018 Cost	1
12	10-ft Wide Trail on Holy Re	osary Proper	ły			
	6" Crushed Gravel (1600LF)	300	CY	\$60.00	\$18,000	
	4" Stone dust	200	CY	\$64.00	\$12,800	
	Path Preparation	1	LS	\$12,000.00	\$12,000	
	Street Print	3750	SF	\$18.00	\$67,500	
	Boardwalk	1000	LF	\$1,200.00	\$1,200,000	
	Signage	1	LS	\$5,000.00	<u>\$5,000</u>	
		Construction Sub-Total		\$1,315,300		
			10% C	Contingency	\$131,530	
		*Engineerin	g Design	Sub-Total	\$144,683.00	
	** Co	onstruction Ad	ministrat	ion Sub-Total	\$217,024.50	
Right of W	vay Acquisition / Easements	1	LS	\$24,000.00	\$24,000	
			DI			60

Phase 3 Sub-Total \$1,832,537.50 \$2,015,791.25

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Add'l 10% Range

- \$19,800 \$14,080 \$13,200 \$74,250 \$1,320,000 \$5,500 \$1,446,830
- \$144,683
- \$159,151.30
- \$238,726.95
 - \$26,400

Supporting Documents



540 Commercial Street Manchester, NH 03101 (603) 668-8223 • Fax: (603) 668-8802 cld@cldengineers.com • www.cldengineers.com New Hampshire • Vermont • Maine



TO: File

- FROM: Jameson R. Paine, Environmental Planner
- **DATE:** January 24, 2007
- RE: City of Rochester **Riverwalk Project** NHDOT Monthly Natural Resource Agency Meeting CLD Reference No. 06-0307

On this date, the following people met at NH Department of Transportation's (NHDOT) Offices in Concord, NH to discuss concerns related to a proposed multi-phased river walk in Rochester.

Bill Neidermyer	US Fish and Wildlife Service
Mike Hicks	US Army Corps of Engineers
Bill O'Donnell	Federal Highway Administration
Gino Infacelli	NH Wetlands Bureau
Kim Tuttle	NH Fish and Game Department
Charlie Hood	NHDOT
Kevin Nyhan	NHDOT
Jamie Paine	CLD

Jamie Paine of CLD Consulting Engineers, Inc. described the proposed project. The project is a City-only funded effort to construct a river walk along and possibly over the Cocheco River. The project is currently in a master planning stage for long term incorporation. It is anticipated that the project will be multi-phased depending on the amount of monies available for the effort.

1. ROCHESTER RIVERWALK

The City of Rochester is currently proposing to construct a recreational walkway along the Cocheco River within the area from Hillsdale Street (north of downtown, west of the Rochester Community Center and Spaulding High School) to the Rochester Fairgrounds site (within the downtown area). A Plan NH Charette Report previously reviewed the placement of a recreational walkway from the Rochester Fairgrounds to a point further south. This 'master plan' for the northern section of the walkway combined with the Charette Report will be a guide for the City to detailed design work in subsequent phases.

Greenway Initiative

The City of Rochester seeks to restore a vital Downtown mixed use center in an attractive and pedestrian, oriented environment. Through a comprehensive planning initiative, the City generated "The Plan for Downtown Rochester" in 2003, as a community-based blueprint for revitalization. One key strategy identified in the plan is the development of a greenway system that includes a Cocheco Riverwalk, comprised of a series of linked destinations and open spaces.

Memorandum to Files CLD Reference No. 06-0307 January 24, 2007 Page - 2

In 2004, Rochester hosted a Riverwalk design Charette through Plan NH, which helped shape a community vision for Downtown Revitalization based on reestablishing a relationship with the Cocheco River. The river is recognized as an important natural, cultural, and historic community resource, with an ever-changing character as it winds to and through the heart of the Downtown. In tandem with Downtown enhancement, Rochester continues to expand recreation facilities associated with the Community Center on Wakefield Street. Because the Cocheco River passes the Community Center site, the City recognizes an excellent opportunity to establish a link between the City's primary recreation destination and the Downtown along a riverside trail.

First Phase

The first phase of the Riverwalk Project will begin on City owned property in the vicinity of the Rochester Community Center and Spaulding High School, follow an existing informal path on the east side of the river, and terminate at the end of the City owned property, ending at or near a branch of the existing informal path network. This project will begin to establish the standard for pedestrian and bicycle facility improvements as part of the City's plan to provide safe access between community facilities and the Downtown. The Rochester Cocheco Riverwalk project will actively promote the sensitive development of pedestrian pathways to give people better access to river resources, while making important pedestrian connections throughout the community. The design would respond and relate to the river, taking advantage of the views and recreational opportunities, contribute to the redevelopment of the Central Business District, and maximize visual and physical connectivity to the river, adjacent neighborhoods, and Downtown destinations.

Relevant Elements/Facilities

The location of plan elements, which may include but not be limited to lighting, emergency telephones, landscaping, fences, ADA compliant trail access alternatives, solutions addressing cross street conflicts, seating, public art, informational kiosks, signs, overlooks, neighborhood connections, end-of-trip bicycle storage, and proposed bridge structures will be developed as part of the Concept Plan. The Concept Plan would also address emergency and maintenance access, parking, facilities to meet the needs of persons with disabilities and trail barriers. It is expected that all cross-country links of the project would initially consist of a stone dust (or similar natural material) walking surface.

Along with the input from public meetings, staff meetings and community organizations, this plan will become the basis for all further conceptual design. It will take into account potential Riverwalk alignments, the best possible connections and links between the river and the downtown from neighborhoods, schools, recreational facilities and trail systems. It will look at seasonal opportunities for the trail; the trails compatibility with existing land uses and highlight those areas where buffers and or screening should occur to lessen impact of the trail to the existing land uses and these uses to the proposed trail.

Memorandum to Files CLD Reference No. 06-0307 January 24, 2007 Page - 3

Schedule

The City would like to construct as much of the first phase as they can this year (dependent on the required permitting process and the amount of funding available). They hope to utilize AmeriCorps labor to place the stone dust path, and possible conduit and/or lighting along the path, with overlook/rest areas situated along the walkway. The schedule for future phases will be developed once the concept plan is completed.

2. AGENCY COMMENTS ACOE

Mike Hicks stated that a staff member from the National Marine Fisheries Service (NMFS) should be contacted once the riverwalk's master plan has been prepared. The NMFS reviews the Cocheco River for fish habitat. He thought that they would want to walk over the length of the whole project to better familiarize themselves with what is being proposed.

NH Fish and Game Kim Tuttle stated that blandings turtles have been identified in the area. The turtles may use stone dust paths to make nests or place their eggs.

Ms. Tuttle also asked if a vernal pool survey had been conducted and mentioned that there will be concerns with any vernal pools located within close proximity to the trails, as these serve as breeding grounds for various amphibians and other animals. NHF&G would like to review a vernal pool survey for this area.

NH Wetlands Bureau Gino Infasceli assumed that all project areas will be reviewed by a certified wetland scientist for wetlands prior to commencement of construction. If the project impacts wetlands, the proper permit for the scope of impact and type of work must be obtained prior to construction.

JRP:shk



Supporting Documents (continued)



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TO: File

- FROM: Jameson R. Paine, Environmental Planner
- DATE: January 4, 2007
- City of Rochester RE: **Riverwalk Project** NHDHR/NHDOT Monthly Meeting CLD Reference No. 06-0307

On this date, the following people met at NH Department of Transportation's (NHDOT) Offices in Concord, NH to discuss concerns related to a proposed multi-phased river walk in Rochester.

Linda Wilson	NH Division of Historical Resources (NHDHR)
James Garvin	NHDHR
Edna Feighner	NHDHR
Joyce McKay	NHDOT
Jamie Paine	CLD

Jamie Paine of CLD Consulting Engineers, Inc. described the proposed project. The project is a City-only funded effort to construct a river walk along and possibly over the Cocheco River. The project is currently in a master planning stage for long term incorporation. It is anticipated that the project will be multi-phased depending on the amount of monies available for the effort.

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Memorandum to Files CLD Reference No. 06-0307 January 4, 2007 Page - 2

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Memorandum to Files CLD Reference No. 06-0307 January 4, 2007 Page - 3

path, with overlook/rest areas situated along the walkway. The schedule for future phases will be developed once the concept plan is completed.

2. NHDHR DETERMINATION/REQUIREMENTS It was determined that the entire length of the walkway and any future segments brought forward for consideration would need to be reviewed by a professional archaeologist to determine archaeological sensitivity. This work is required to be conducted prior to any construction.

This review would be at a Phase IA level review, which would require review of any historical documentation and a walk-over of the project area. NHDHR requested that during the walkover, the archaeologist should also review the soils along the pathway by conducting periodic shovel testing. This testing will help to minimize future efforts and reduce the need for an archaeologist to revisit the site.

JRP:shk

Relevant Elements/Facilities

The location of plan elements, which may include but not be limited to lighting, emergency telephones, landscaping, fences, ADA compliant trail access alternatives, solutions addressing cross street conflicts, seating, public art, informational kiosks, signs, overlooks, neighborhood connections, end-of-trip bicycle storage, and proposed bridge structures will be developed as part of the Concept Plan. The Concept Plan would also address emergency and maintenance access, parking, facilities to meet the needs of persons with disabilities and trail barriers. It is expected that all cross-country links of the project would initially consist of a stone dust (or similar natural material) walking surface.

Along with the input from public meetings, staff meetings and community organizations, this plan will become the basis for all further conceptual design. It will take into account potential Riverwalk alignments, the best possible connections and links between the river and the downtown from neighborhoods, schools, recreational facilities and trail systems. It will look at seasonal opportunities for the trail; the trails compatibility with existing land uses and highlight those areas where buffers and or screening should occur to lessen impact of the trail to the existing land uses and these uses to the proposed trail.

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Previously Completed Projects

• Duval Park – previously referred to River Street Waterside Park.

• Dewey Street Footbridge.



River Street Waterside Park

• As noted above, the Public Hearing strongly recommended that a "Downtown Aspect" of the Riverwalk be incorporated. The Team's response to the passion was to incorporate the River Street Waterside Park into the Riverwalk Master Plan. Although the plan included is only a conceptual level Master Plan, our hope is that momentum can be realized such that work can begin to put together documents for future permitting and construction.

River Street Waterside Park





The Public Hearing uncovered the need to consider a "Downtown" improvement as part of the proposed Riverwalk Project. The most popular area chosen for development of a "pocket park" is the area at the intersection of River Street and Chestnut Street. This parcel is currently City-owned and has been under consideration for many years for development of a "sitting park". Final design of this park would be closely coordinated with any proposed City roadway improvement projects. The Riverwalk Team understands the importance of maintenance of the existing on-street parking in this vicinity.

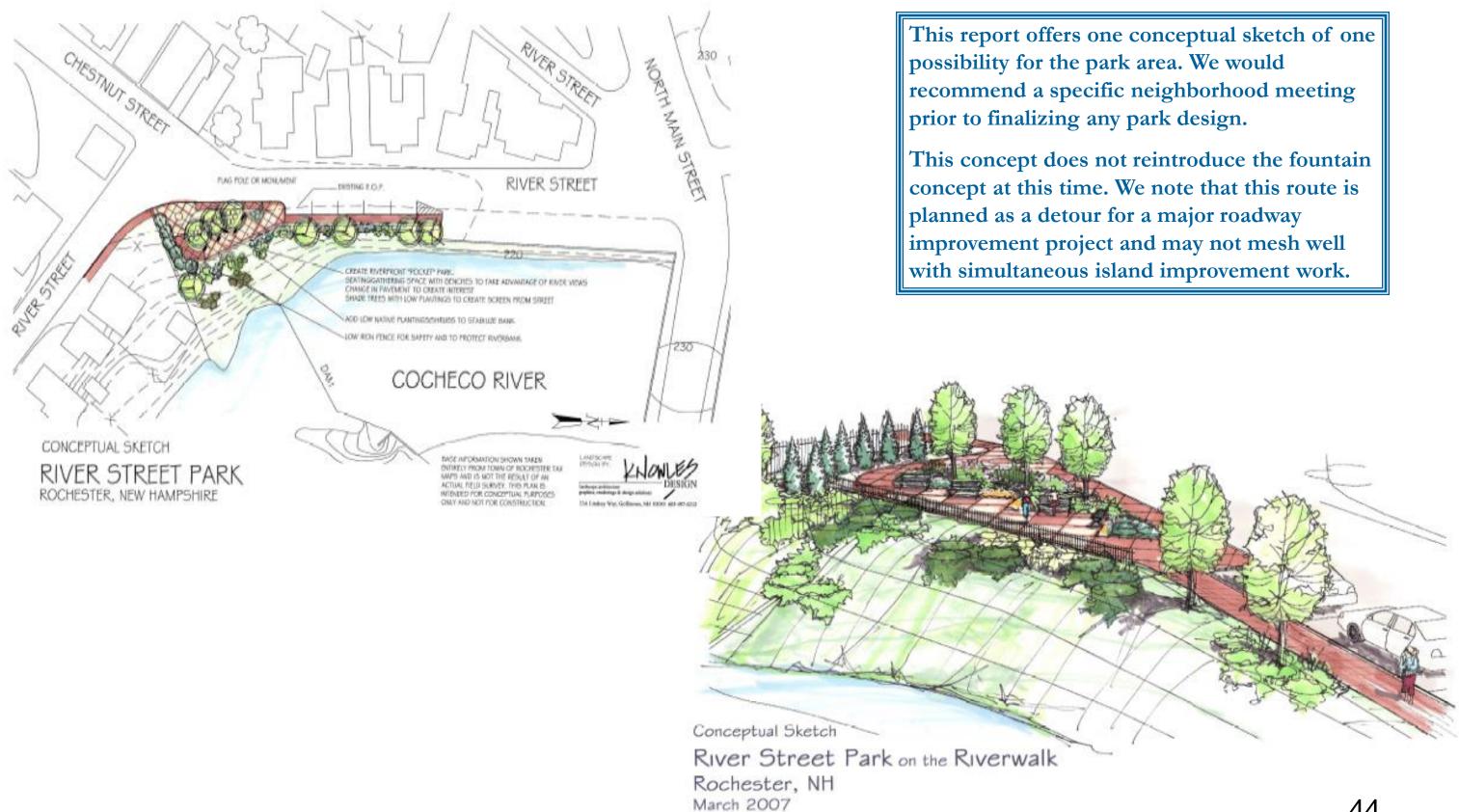
Members of the Committee reminisced about the vintage when River Street had a fountain in the island. The Committee certainly would welcome consideration of a return of the fountain.

Photos (Left) -**Existing City owned** land where the Committee proposed that a Downtown park be created.

Photo (Right) -Existing traffic island where the committee proposed to consider replacement of the fountain that was once located on the island.

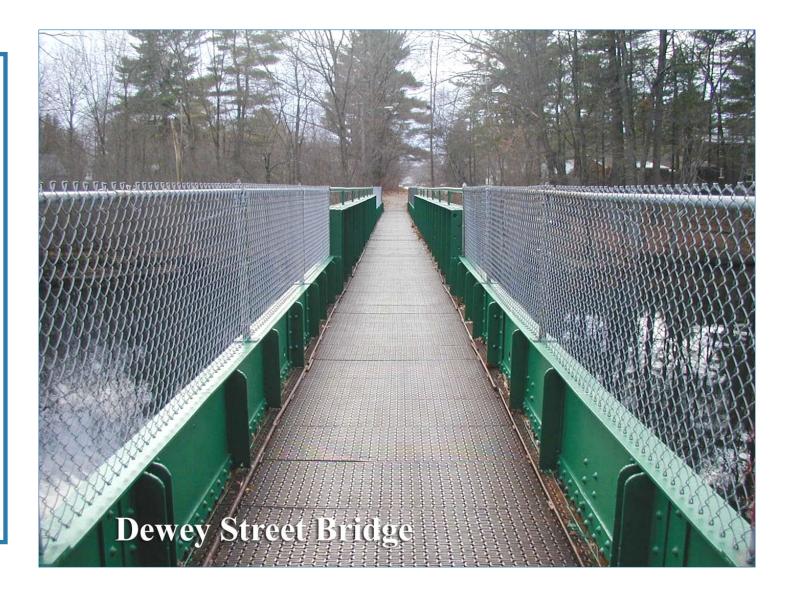


River Street Waterside Park



Hanson Pines – Dewey Street Bridge

- The Dewey Street Bridge is centrally located within the Hanson Pines parcel. This bridge is heavily used by pedestrians to cross the Cocheco River. Based upon input received at the Public Hearing, areas of the bridge are in disrepair. The Team realizes the importance of this significant community connection and has included an estimate for some minor improvements to the bridge if, upon closer inspection by an appropriate individual, deemed necessary.
- The Team believes that further defining designated parking areas at the end of Dewey Street will allow for convenient access to this future car-top boat launch site, while not becoming a safety hazard or nuisance for the City safety services and the residents.







- For reference purposes, we have attached a copy of the September 2004 Charrette booklet.
- This booklet continues the Riverwalk Master Plan from the ulletdowntown area to the Rochester Fairgrounds.