



The Village of

**DEXTER**

*Michigan*

**OFFICE OF COMMUNITY DEVELOPMENT**

8140 Main Street • Dexter, Michigan 48130-1092 • (734) 426-8303 • Fax (734) 426-5614

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## Memorandum

**To:** Downtown Development Authority  
Courtney Nicholls, Village Manager

**From:** Michelle Aniol, Community Development Manager

**Re:** Brick Paver Re-Bid

**Date:** September 16, 2014

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Contractor re-bids for the Dexter DDA Decorative Brickwork Repairs were opened and read aloud on Tuesday, September 16, 2014 at 2:00 PM in the Village Offices. Unit price bids of from three (3) contractors were received with a range of \$11.25 to \$26.25 per square foot. The low bid was received from Todd's Services of Hamburg, Michigan. The bid assumed a total impact area of 2,500 square feet which equates to an estimated project cost of \$28,125.00. It must be noted, the total square footage of the impact area had not been quantified when the DDA budgeted \$10,000 for the project back in May.

Therefore, based on the Contractor's past experience and familiarity with the project, the recommendation is to award the contract to Todd's Services in the amount not to exceed \$28,125.00. Assuming the DDA award's the contract on September 18, 2014, the Contractor has proposed to complete all work by October 31, 2014.



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**Memorandum**

**To:** Downtown Development Authority  
Courtney Nicholls, Village Manager

**From:** Michelle Aniol, Community Development Manager

**Re:** ASTI Environmental

**Date:** September 16, 2014

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At Staff's request, ASTI Environmental submitted proposal outlining the steps needed to identify tasks and a cost range for both the Village and a potential new purchaser of the 3045 Broad Street site, based on conceptual site plans/studies and proposed density options. ASTI proposes a lump-sum not-to-exceed estimate of \$900.

Assuming the DDA award's the contract on September 18, 2014, ASTI proposes to complete the project within 3 weeks.

Mailing Address:  
P.O. Box 2160  
Brighton, MI 48116-2160800 395-ASTI  
Fax: 810.225.3800[www.asti-env.com](http://www.asti-env.com)**Sent Via Email Only**

September 15, 2014

Ms. Michelle Aniol  
Community Development Manager  
**Village of Dexter**  
8140 Main Street  
Dexter, MI 48130

*RE: Evaluation of Remediation and Control Options, 3045 Broad Street, Dexter, Michigan (ASTI File TJW091514-1)*

Dear Ms. Aniol:

Thank you for your interest in the environmental services offered by ASTI Environmental (ASTI). Per our meeting last week, this is a proposal to prepare an analysis of remediation and control costs for the above referenced property.

**Scope of Services**

Based on environmental investigations conducted to date, the property is a facility. Redevelopment plans are for multi-family residential (either rental or for sale), with consideration being given to three density options. These plans would require either remediation or engineered controls to meet due care obligations.

Therefore, ASTI will prepare an evaluation of remediation and control options for each of the three scenarios. This evaluation will identify tasks and a cost range for both the Village and a potential new purchaser. This evaluation will be based on preliminary site plans previously provided and on existing environmental data, and assumes that the data is representative of site conditions. Any change in the site design or environmental data may require changes to the cost estimates.

*Schedule*

The final report will be provided three weeks after project award, assuming that the materials requested below are available.

In order to initiate the project, we require authorization in the spaces provided at

the end of this proposal. We will schedule this project upon receipt of a signed copy of this proposal or a purchase order referencing this proposal.

**Fee**

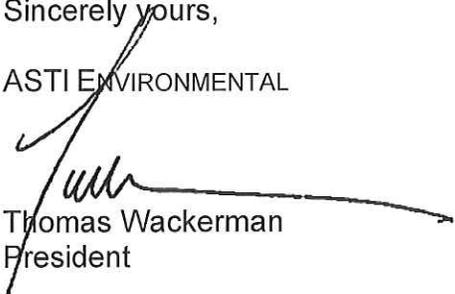
Our fee for conducting the services discussed in this proposal is provided below. This fee is based on the terms, conditions and assumptions described in this proposal, and any change to those terms, conditions or assumptions may result in additional costs. The fee is a not-to-exceed estimate and will be invoiced on a time and materials basis for actual work performed. The described services and any additional work outside the above scope of services will be performed at our standard fees, however, any additional work will not be performed without your prior authorization. This proposal is subject to the terms and conditions contained in Attachment A, which is made part of this agreement.

<u>Service</u>	<u>Not-To-Exceed Estimate</u>
Evaluation of Remediation and Control Options	\$ 900

Thank you again for your interest in ASTI. If you have any questions or comments, please do not hesitate to call me at **800.395.ASTI**. We greatly appreciate the opportunity to work with you on this project.

Sincerely yours,

ASTI ENVIRONMENTAL

  
Thomas Wackerman  
President

Client Authorization  
ASTI File TJW091514-1

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Title

\_\_\_\_\_  
Date

For: **Village of Dexter**

- C Corporation
- S Corporation
- LDHA
- Other:
- PLLC
- LLC
- LP

Federal ID Number \_\_\_\_\_

Phone Number \_\_\_\_\_

Email \_\_\_\_\_

## **Attachment A Terms and Conditions**

ASTI Environmental (CONSULTANT) shall perform for Village of Dexter (CLIENT) the services described in the proposal titled *Evaluation of Remediation and Control Options, 3045 Broad Street, Dexter, Michigan*, and dated September 15, 2014 by CONSULTANT (PROPOSAL) which is made a part of this agreement (ASTI File No.TJW091514-1). Such services shall be performed during the period mutually agreed upon by CLIENT and the CONSULTANT, and as described in the PROPOSAL.

The services will be performed on behalf of and solely for CLIENT'S exclusive use and not for others. The services performed by CONSULTANT shall be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the consulting profession in the same locale and acting under similar circumstances and conditions. Except as set forth herein, CONSULTANT makes no other representation, guarantee, or warranty, expressed or implied, in fact or by law, whether of merchantability, fitness for any particular purpose or otherwise, concerning any of the services which may be furnished by CONSULTANT to CLIENT.

Reports, maps, data, or any pertinent information or documents prepared or assembled by CONSULTANT under this Agreement are confidential, and CONSULTANT agrees that they shall not be made available to any individual or organization without prior written approval of CLIENT. CONSULTANT retains the right to destroy all historic project materials according to the time frames established by CONSULTANT in its document destruction policy.

The CLIENT shall grant or obtain a right of entry for CONSULTANT, its agents, staff, consultants, and contractors or subcontractors, for the purpose of performing and with the right to perform all acts, studies, evaluations, pursuant to the agreed services. CONSULTANT personnel will not access those portions of the subject property or adjacent properties where prearranged access has not been granted, or where personnel health and safety issues preclude entry.

CLIENT will provide CONSULTANT all information regarding the subject property that is known to or reasonably ascertainable by CLIENT, which may be necessary for completion of the services to be performed by CONSULTANT. Such information includes all records of any environmental assessment activities undertaken previously at the subject property. If, during the performance of these services, information within the description of the requested information referenced in the attached PROPOSAL becomes available to the CLIENT, the CLIENT shall provide prompt, full and complete disclosure to CONSULTANT of such new information if it could affect CONSULTANT's performance of its services or could pose potential hazardous conditions or risk to the health or safety of CONSULTANT's employees, agents, and subcontractors.

### ***CONSULTANT COMPENSATION***

Unless otherwise indicated the PROPOSAL, billings will be based on actual accrued time, reimbursables, and expenses incurred and will include additional costs for all applicable sales and use taxes. Unless otherwise indicated in the PROPOSAL, progress billings will be provided to the CLIENT at least monthly. For performance of the services described in the PROPOSAL, CLIENT shall pay to CONSULTANT according to the fees provided for in the PROPOSAL, payable upon receipt of invoice. CONSULTANT reserves the right to increase the unit rates included in this Agreement on the anniversary(s) of the effective date of this agreement.

Unless otherwise indicated in the PROPOSAL, the following credit terms will apply to the CLIENT: all invoices are net 30 days. An additional 1.5% monthly service charge will be applied to all delinquent accounts. In the event CONSULTANT is required to pursue collection of any amount due from CLIENT in connection with the scope of services contained in this letter, then CLIENT agrees to payment of all reasonable costs and attorney fees incurred in such collection efforts. CLIENT agrees Washtenaw County, Michigan will be proper venue for collection action.

Unless otherwise stated in the PROPOSAL, notice of cancellation of these services must be provided to CONSULTANT within 5 business days, and upon cancellation CLIENT will be charged 10 percent of PROPOSAL amount or at our standard fees for actual time, reimbursables and expenses incurred, whichever is greater. The PROPOSAL will remain in effect for a period of 30 days.

#### *SITE ACTIVITIES*

CONSULTANT will take reasonable precautions to minimize damage to the site due to the performance of its operations, but it shall be understood by CLIENT that in the normal course of performing these operations some damage may occur. CLIENT accepts the fact this is inherent to our work and will not hold CONSULTANT liable or responsible for any such effect, damage or alteration. Except as provided in the PROPOSAL, the costs of restoration for any damage resulting from CONSULTANT's operations are not included in the fees for the attached proposal. Upon request, and at CLIENT's sole cost and expense, CONSULTANT will provide additional services to restore the site to conditions reasonably similar to those existing prior to CONSULTANT's operations.

Unless otherwise indicated in the PROPOSAL, all site work is expected to be performed under Level D health and safety conditions. If the work is upgraded to Level C or higher, all pricing will be re-negotiated.

#### *DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS OR CONDITIONS*

CONSULTANT and the CLIENT agree that the discovery of unanticipated hazardous materials or conditions may make it necessary for CONSULTANT to take immediate measures to protect the health and safety of its employees, agents or subcontractors. CLIENT agrees to pay the reasonable costs of such protective measures as well as any equipment decontamination or other costs incident to the discovery of unanticipated hazardous materials or conditions. CONSULTANT will notify CLIENT of such discovery as soon as practically possible.

#### *LIMITATION OF LIABILITY*

Except for circumstances caused by the willful misconduct of CONSULTANT, any and all liability or claim for damages asserted against CONSULTANT by CLIENT, whether based upon contract, tort, breach of warranty, professional negligence, or otherwise, including claims against CONSULTANT's directors, officers, shareholders, employees, and agents, is limited to 50% of CONSULTANT's available insurance coverage, not to exceed \$1,000,000. CONSULTANT is not responsible for any special, incidental, indirect, or consequential damages (including lost profits) incurred by CLIENT as a result of CONSULTANT's performance or nonperformance of services. Any claim shall be deemed waived unless made by CLIENT in writing and received by CONSULTANT within one (1) year after completion of the services with respect to which the claim is made.

CLIENT shall indemnify CONSULTANT from and against claims associated with or arising out of hazardous substances or other environmental conditions at the subject property, except to the extent of any release of a hazardous substance caused by CONSULTANT at the subject property.

#### *COMPLIANCE WITH LAWS*

CONSULTANT shall observe and abide by all applicable laws, ordinances, and regulations of federal, state and local governments, and any subdivision thereof, and the rules and regulations of any lawful regulatory body acting thereunder in connection with the service performed hereunder.

CLIENT represents that CLIENT possesses all necessary permits and licenses required for the continuation of CONSULTANT's activities at the site.

## Bond Debt Pay Down – Possible Scenarios

- The Liquid Cash Flow spreadsheets do not include outstanding year-end accounts payable and accounts receivable – there are no significant transactions remaining in this version.

Combined Funds - Liquid Cash Flow (Updated 9-12-14)			
Pay Down Last Two Payments on Taxable Bond			
Date	Description	Amount	Balance
8/31/2014	Cash on Hand (Liquid)		282,400
9/4/2014	A2 State Bank CD Matures	81,600	364,000
9/25/2014	Flagstar Bank CD Matures	201,500	565,500
9/30/2014	Tax Capture from Village	260,600	826,100
9/30/2014	Reclassify Multi-Bank CD	200,000	1,026,100
11/1/2014	Bond Payments (Combined)	(148,200)	877,900
11/1/2014	Pay Down Last Year of Taxable Bond	(242,600)	635,300
11/1/2014	Pay Down Second to Last Year of Taxable Bond	(260,100)	375,200
11/1/2014	Remainder of Budget Revenue	593,200	968,400
11/1/2014	Remainder of Budget Expenditures	(934,200)	34,200
<i>FY 14-15 Year End Liquid Cash</i>			34,200

Combined Funds - Liquid Cash Flow (Updated 9-12-14)			
Pay Down Last Payment on Taxable Bond			
Date	Description	Amount	Balance
7/31/2014	Cash on Hand (Liquid)		282,400
9/4/2014	A2 State Bank CD Matures	81,600	364,000
9/25/2014	Flagstar Bank CD Matures	201,500	565,500
9/30/2014	Tax Capture from Village	260,600	826,100
9/30/2014	Reclassify Multi-Bank CD	200,000	1,026,100
11/1/2014	Bond Payments (Combined)	(148,200)	877,900
11/1/2014	Pay Down Last Year of Taxable Bond	(242,600)	635,300
11/1/2014	Pay Down Second to Last Year of Taxable Bond	-	635,300
11/1/2014	Remainder of Budget Revenue	593,200	1,228,500
11/1/2014	Remainder of Budget Expenditures	(934,200)	294,300
<i>FY 14-15 Year End Liquid Cash</i>			294,300

Combined Funds - Liquid Cash Flow (Updated 9-12-14)			
Do Not Pay Down Taxable Bond			
Date	Description	Amount	Balance
7/31/2014	Cash on Hand (Liquid)		282,400
9/4/2014	A2 State Bank CD Matures	81,600	364,000
9/25/2014	Flagstar Bank CD Matures	201,500	565,500
9/30/2014	Tax Capture from Village	260,600	826,100
9/30/2014	Reclassify Multi-Bank CD	200,000	1,026,100
11/1/2014	Bond Payments (Combined)	(148,200)	877,900
11/1/2014	Pay Down Last Year of Taxable Bond	-	877,900
11/1/2014	Pay Down Second to Year of Taxable Bond	-	877,900
11/1/2014	Remainder of Budget Revenue	593,200	1,471,100
11/1/2014	Remainder of Budget Expenditures	(934,200)	536,900
<i>FY 14-15 Year End Liquid Cash</i>			536,900



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**Memorandum**

**To:** Downtown Development Authority  
Courtney Nicholls, Village Manager

**From:** Michelle Aniol, Community Development Manager

**Re:** Report for September 18, 2014 DDA Meeting

**Date:** September 17, 2014

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**Legislative Updates**

As you know, last week Representative Kowall (R-44<sup>th</sup> District) held a meeting at the Capital on Thursday, September 11<sup>th</sup>. At this meeting she presented draft legislation to amend the DDA Act and consolidate all TIF acts into one without eliminating the ability of any. Brownfields were not included in the pending legislation. Originally she planned to introduce the bill on Tuesday, Sept 16<sup>th</sup>. However, introduction has been postponed to Thursday, September 18<sup>th</sup>, primarily because there are so many issues with it that Representative Kowall's office is trying to get worked out beforehand. Perhaps this is another sign that this legislation should not be rushing through. Stay tuned.

**Business Development News**

- MC3 has submitted an Industrial Facilities Tax Exemption request for a 50% abatement of taxes on approximately \$4,884,200 in real property improvements and \$451,300 in personal property improvements at 2555 Bishop Circle West. Village Council will consider scheduling a public hearing for October 27<sup>th</sup>.
- Northern United Brewing Company (NUBC) submitted an application to expand its tasting room to accommodate private tastings, parties, tours, etc. The proposed expansion (see floor plan attached to this memo) would add 1,920 square feet to the existing 2,790 square foot tasting room for a total of 4,710 square feet, which is less than 15% of the total gross floor area of the facility. In addition, NUBCs proposed sanitary pre-treatment facility was approved and should be under construction.

To provide Council with some context, according to Section 3.02 of the Zoning Ordinance, the definition of a tasting room is as follows:

*An establishment that allows customers to taste samples of wine, beer or other alcoholic beverage manufactured on site or that has a State of Michigan issued liquor license as a tasting room. A tasting room may include wine, beer, or other alcoholic beverages and related item sales, marketing events, special events, entertainment, and/or food service. Establishments that are classified by the State Liquor Control Board as bars, nightclubs, taverns, restaurants or Class C liquor licenses are not included within this definition.*

Neither NUBC nor its accessory tasting room is classified as a bar, a nightclub, a tavern, and/or a restaurant by the State Liquor Control Commission. According to the MLCC, NUBC has been issued the following licenses for its facility at 2319 Bishop Circle East:

- o Small Wine Maker – this license allows a tasting room at the same premise where the wine is produced
- o Wine Tasting Room – this license allows NUBC to operate an off-site winery tasting room off-site from the winery premises.

- Micro Brewer – this license allows a tasting room at the same premise where the beer is produced
- Small Distiller – this license allows a tasting room at the same premise where the spirits are produced.
- Vender of Spirits – this is neither a license nor a permit, but rather a MLCC designation that the company has registered its products with the Commission.
- Deputy Homes submitted a preliminary zoning compliance application for Building A (the one with the existing foundations). Approval is pending submittal of the required Certificate of Insurance from the applicant.
- Mathnasium, a math tutoring and learning center is proposed to open in Dexter Crossing.

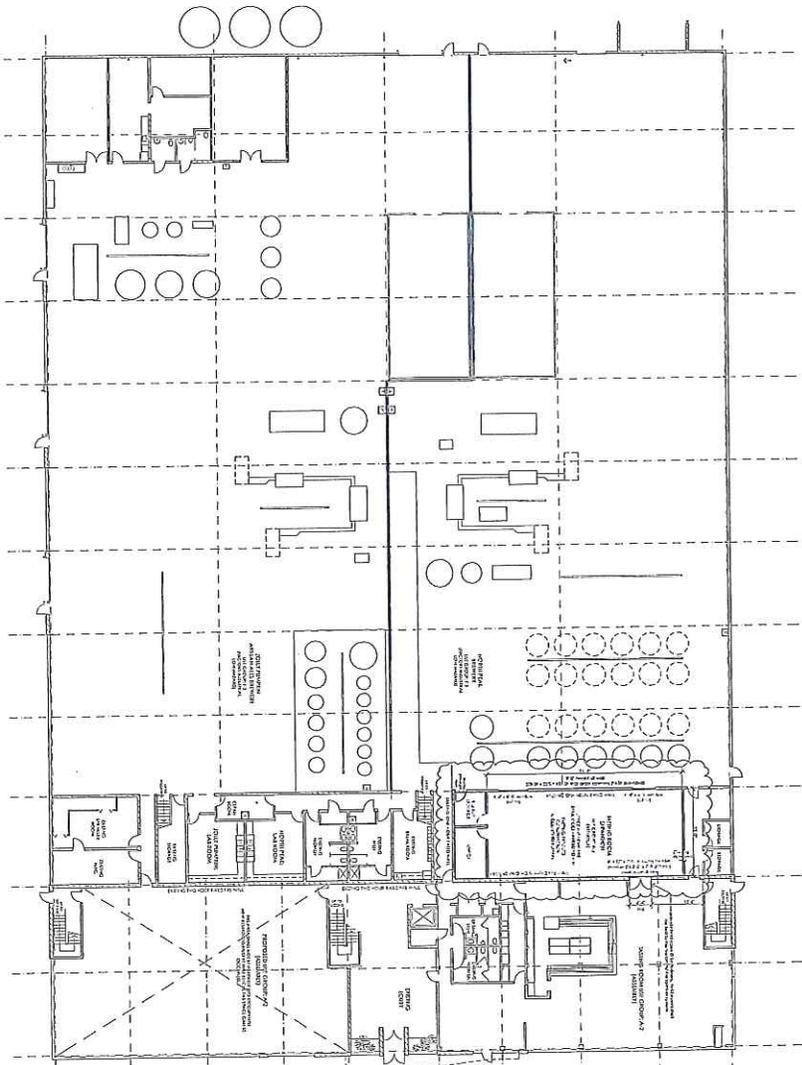
#### **Miscellaneous Updates**

- DPS Director Schlaff and I met with Mr. and Mrs. Gilbert (7610 Third St) to discuss removal of the dilapidated buggy barn in the right-of-way and relocation of an existing fence. A fieldstone wall, complete with two sets of steps also encroaches into the right-of-way. Staff has reached out to Professor Ted Ligibel, Director of Historic Preservation at Eastern Michigan University for assistance with the wall and steps. Photos of the barn, stonewall and steps accompanies this memo.
- Staff was invited to address the Saline City Council regarding MSHDA's Target Market Analysis Grant, at its meeting Monday, September 15<sup>th</sup>. Council approved its participation in the joint grant application, which means Dexter, and the cities of Chelsea, Saline and Ypsilanti can move forward with the application process.
- Staff is reviewing the Mill Creek Park Master Plan for recommendations the plan made regarding stormwater management and to identify opportunities to manage stormwater discharge for redevelopment sites in the area between Baker Road and Mill Creek, and Forest and Grand Streets.
- Staff has reached out to DTE regarding vacation of the First Street right-of-way last month and will be working with DTE's Real Estate Division.

Null tap room expansion  
 2319 BISHOP CIRCLE  
 DEXTER, MICHIGAN

ARCHITECTURAL SHEET INDEX:

FIRST LEVEL PLAN A101  
 FIRST LEVEL EGRESS/EMERGENCY LIGHTING PLAN A301e



FIRST LEVEL PLAN  
 SCALE: 1/8" = 1'-0"

CODE REVIEW:

ALL BUILDING CODE INFORMATION IS BASED ON 2009 INTERNATIONAL BUILDING CODE  
 (See Code Section 303)  
 Building Department (see Building Department)  
 City of Dexter, Michigan (see City of Dexter, Michigan)  
 Code 2 - Emergency Egress/Exit Requirements (see Section 103.10.1)

General Building Department & American  
 Professional Engineers (see Building  
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 Code 2 (see Code 2)

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PROJECT  
 Null tap room expansion  
 2319 BISHOP CIRCLE  
 DEXTER, MICHIGAN

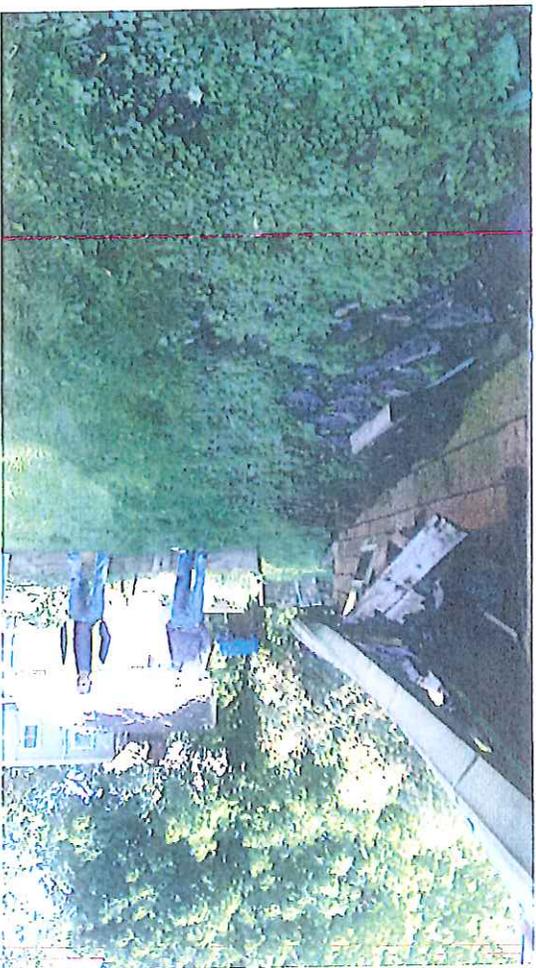
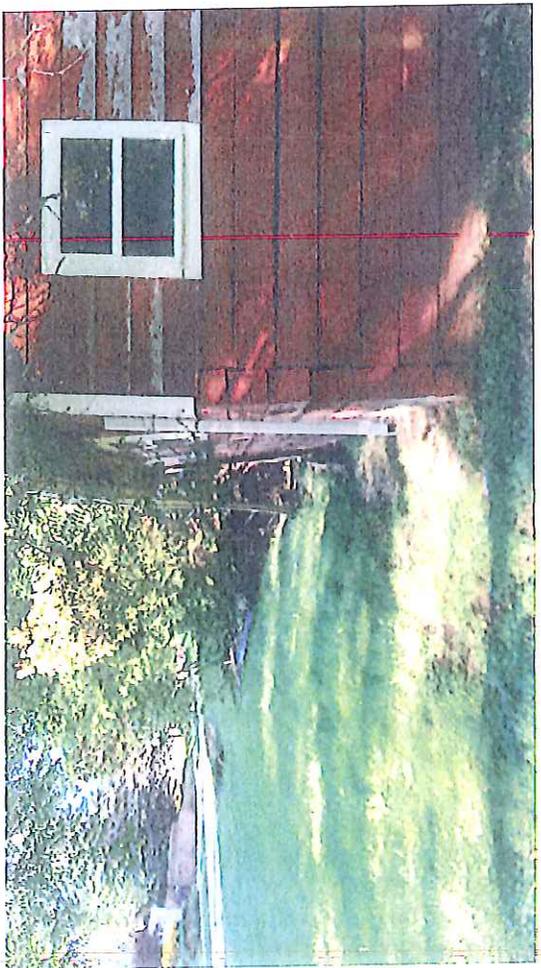
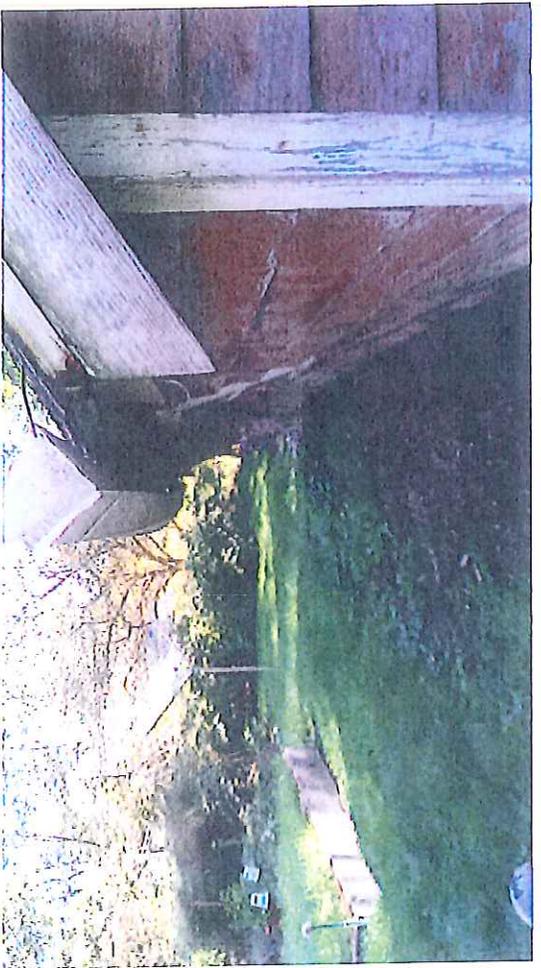
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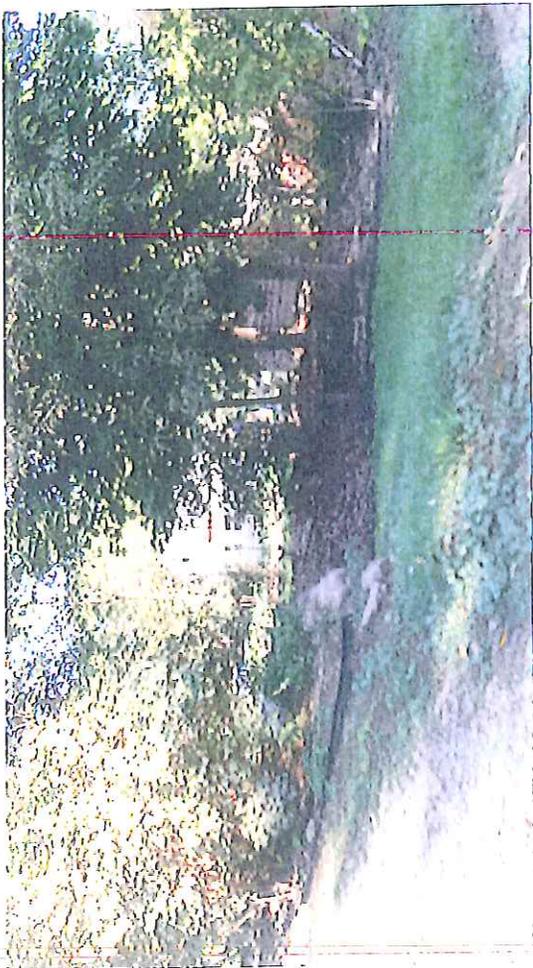
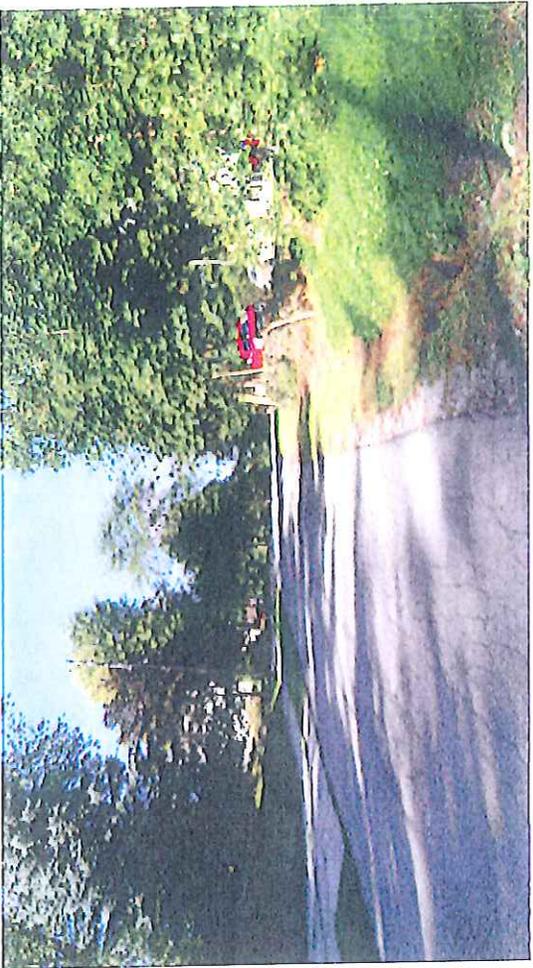
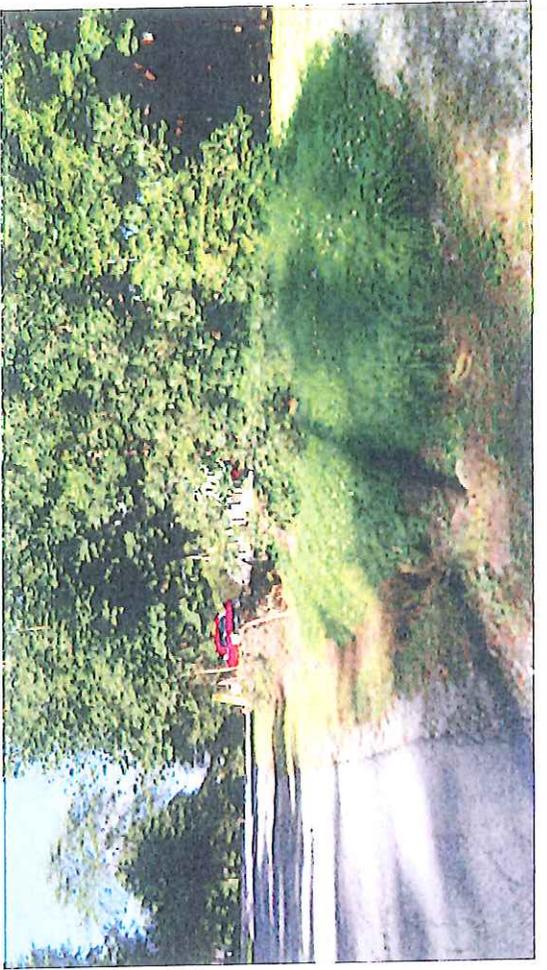
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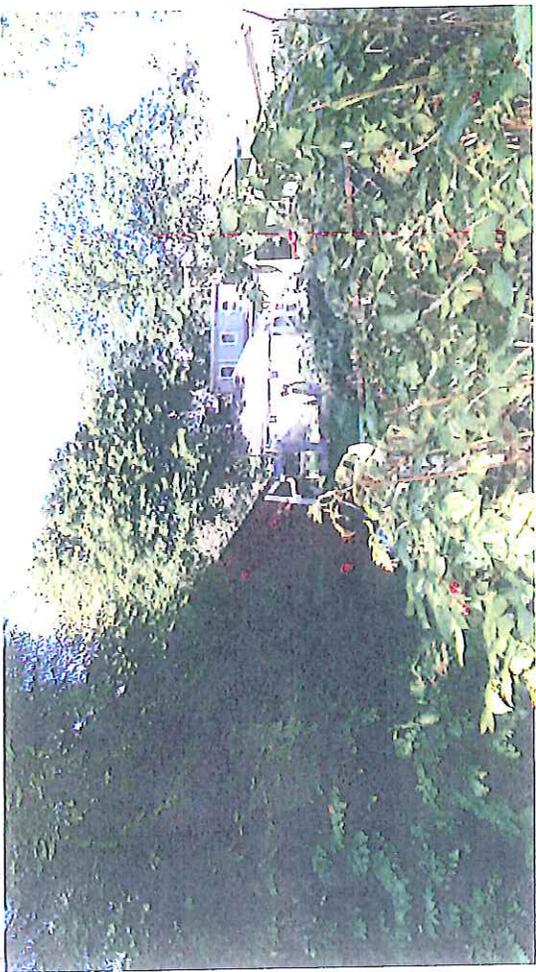
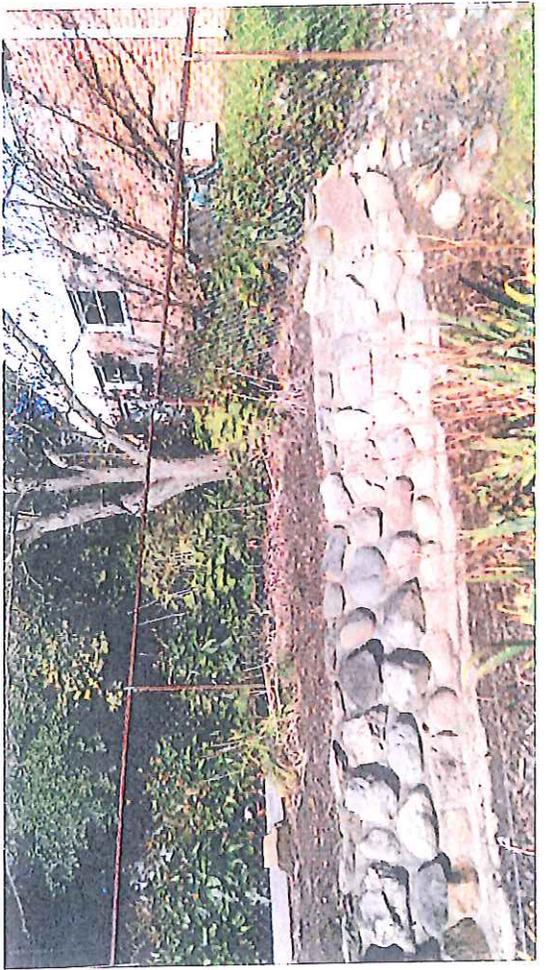
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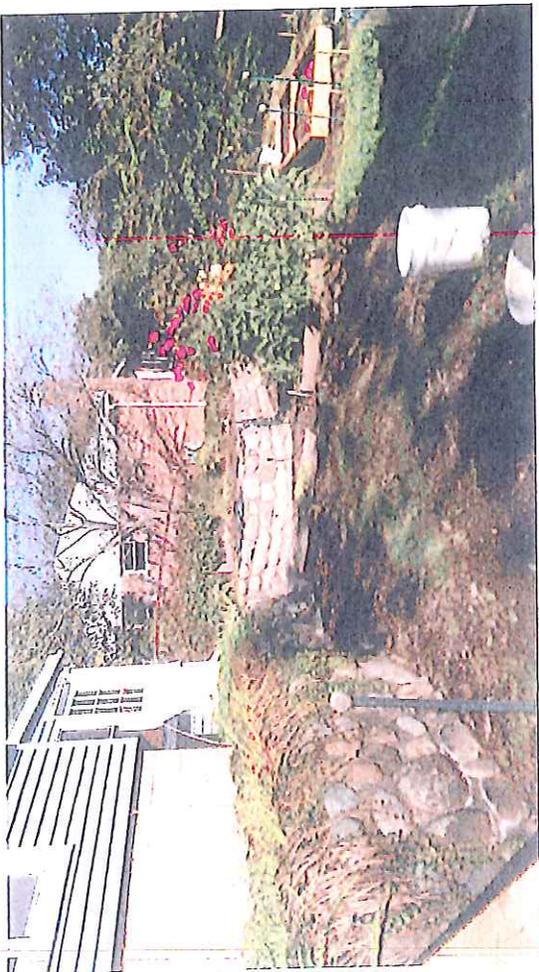
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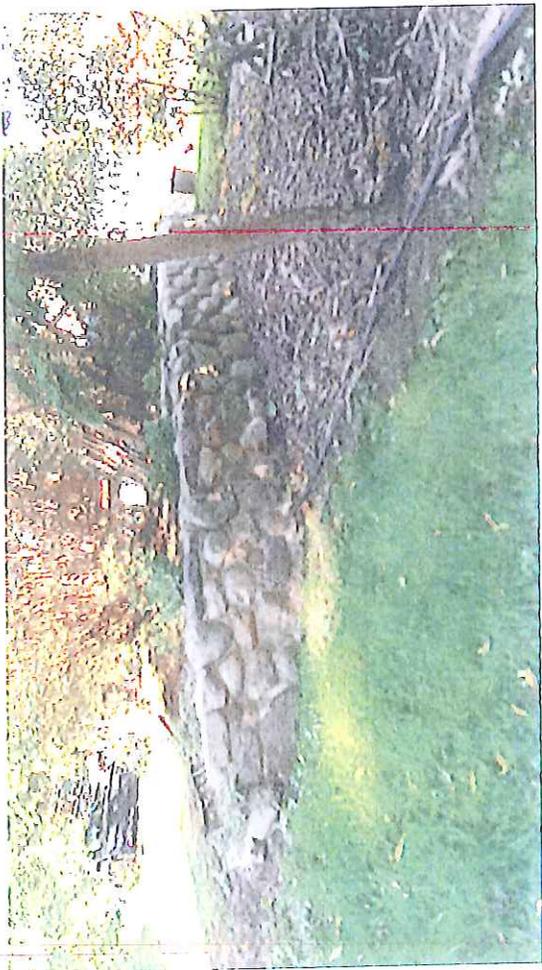












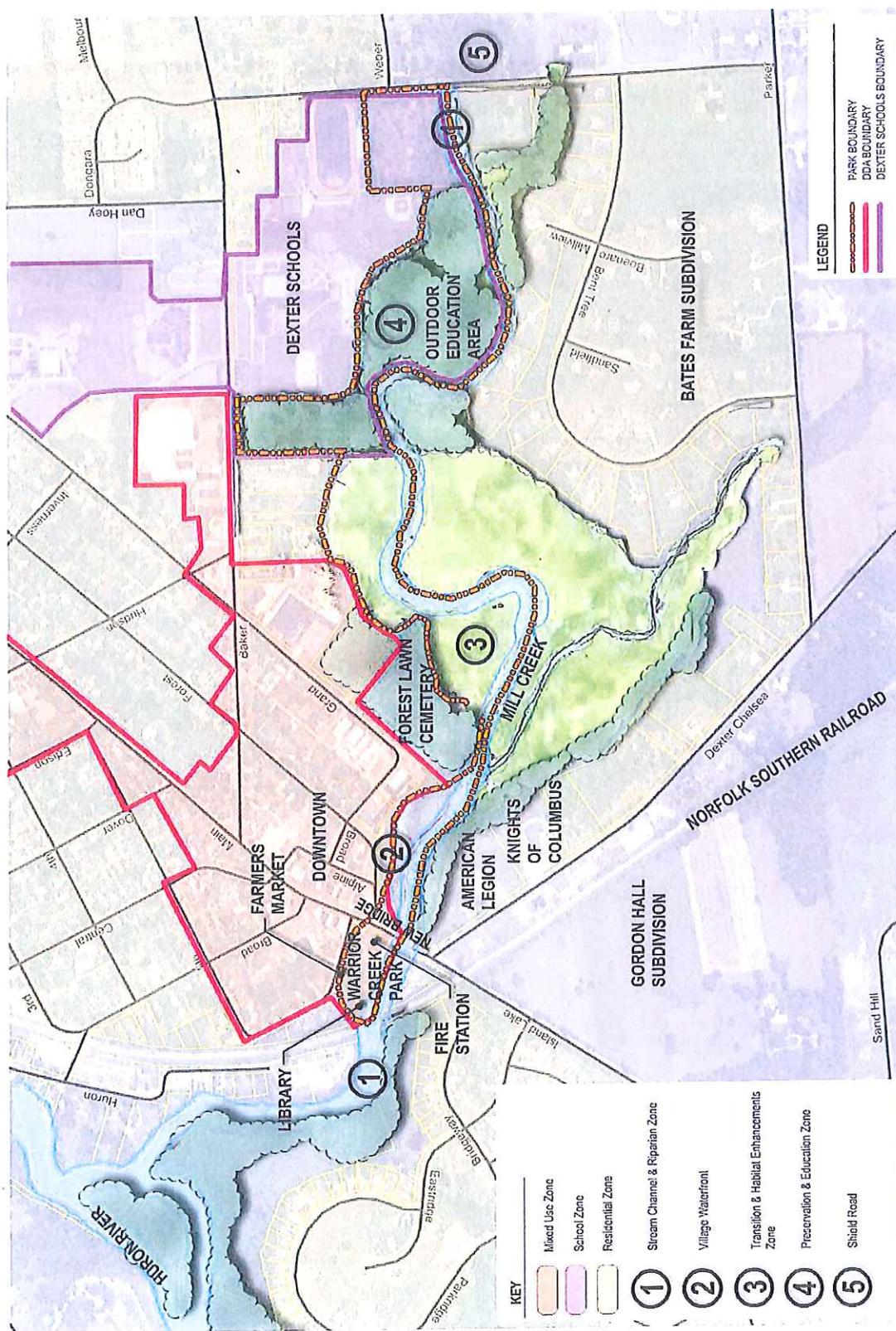


Figure 4: Mill Creek Park Framework Plan

There is a significant change in elevation between Jeffords and Alpine Streets and the land adjacent to the creek in Warrior and Mill Creek Parks. This change in grade will likely require the connection of steep slopes to transition between the downtown area and the park areas below. Pedestrian access will require ramps and steps, and providing universal access to users of all abilities may prove to be challenging.

There are three locations where stormwater from downtown is discharged into the creek. Plans for the new Main Street Bridge and Jeffords Street improvements include installation of swirl concentrators designed to remove sediments, grease, and oils from the stormwater before it enters the creek. While it will be necessary to convey this stormwater across Mill Creek Park in this area, there are opportunities to utilize this water as an amenity through the creation of decorative drainage channels that look like streams when the water is flowing during storms or like dry creek beds once the rain has stopped. Shallow basins that can detain stormwater can also be located in this area to treat stormwater prior to discharging it into the creek. Depending on the amount of water discharged and soil conditions, these basins can be designed to be dry between storms or to hold water and act as a water feature.

- (1) Opportunities: Pedestrian trails connecting the downtown with schools and the Border to Border Trail; access for canoeing, kayaking and fishing; picnicking; informal performance and vendor space; historic site interpretation; stormwater management; stormwater features
- (2) Constraints: Large change in grade; challenges in providing access for users of all abilities; provide flooding limiting the types of recreation experiences.

c.

**3**

**Habitat Enhancement Zone** The dam created inundated or saturated conditions in this zone, and this area is primarily emergent wetland. Most of this wetland is dominated by reed canary grass, with the exception of lower areas that support emergent species that prefer deeper water. Linear mounds of earth on either side of the Mill Creek channel, and the uniform channel cross-section in this area are evidence of past dredging activities. The change in water levels resulting from removal of the dam is expected to shift the vegetation community to a complex of forested wetlands interspersed with vernal pools. The presence of reed canary grass is a concern in this area, since this aggressive non-native species can crowd out native species that are necessary for diverse plant and wildlife communities.



Three storm sewer systems discharge in this area. The northern discharge is a 30" storm sewer that discharges water from the Grand South (D-14) drainage district through an unstable, eroded stream channel. The southern discharge is a 30" storm sewer that discharges stormwater from the Kensington drainage district (D-15). These are the two largest drainage districts in the Village, at approximately 50 and 90 acres, respectively. The third larger diameter pipe discharges stormwater from the residential areas south of Dan Hoey Road in the vicinity of the Outdoor Education Area. The stormwater discharged from these outfalls is untreated, since most of the

developed area served by these systems was built prior to the enactment of current stormwater regulations.

- (1) Opportunities: Creation of stormwater treatment wetlands; habitat enhancement; trail to connect Village and schools; environmental interpretation and education
- (2) Constraints: Aggressive non-native species such as reed canary grass can interfere with establishment of a diverse native plant community; untreated stormwater discharges; eroding stream channel

- d. **4** Preservation and Education Zone This zone includes the Creekside Middle School and its Outdoor Education Area. The natural areas in this zone consist largely of forested riparian areas and wetlands interspersed with vernal pools and a remnant oxbow of Mill Creek. It is expected that this area will experience the least amount of change as a result of the removal of the dam. The Outdoor Education Area includes trails, boardwalks, and overlooks, and provides important opportunities for environmental education for Dexter students. Some sections of these trails are in disrepair and would need to be upgraded to serve students of all abilities. There is an existing parking lot serving the Outdoor Education Area from Baker Road that can serve as a hub for a trail system that connects the Dexter school system with Mill Creek, the Village, and the Border to Border Trail. Dexter Community Schools has purchased the parcel on the northeast quadrant of Mill Creek and Shield Road. This site can provide parking and a canoe launch, thus serving as an important regional hub for a canoe system that can serve Mill Creek and the Huron River.



- (1) Opportunities: Environmental education; habitat protection and enhancement; parking; canoe launch
- (2) Constraints: Sections of existing trail system are in need of repair

- e. **5** Shield Road This zone includes the new high school, which is located on the southwest quadrant of Mill Creek and Shield Road. The high school property includes about a ½ mile of forested riparian area on Mill Creek, which can be developed to include environmental education opportunities and extend a trail system further south towards the Scio Township Park property. An unpaved parking lot exists in this location and can serve as parking for hikers. A canoe launch in this area may be a possibility. There are no sidewalks in this area; the school system is currently studying potential pedestrian links between the Dexter High School and Creekside Middle School.



Figure 7: Village Waterfront and Warrior Creek Park Enlargement Plan

The ramp construction will be the same as the feature 3A ramp except that segmented block retaining walls will be necessary due to the excessively steep slopes below the Dexter Farmers Market, to protect the two large oak trees near the bottom of this ramp, and to maintain parking on the east side of the fire station.

Construction of this design feature is considered low priority due to the uncertainty of future improvements at the fire station, which may provide alternative means of access to Warrior Creek Park.

- (3C) Walks All walks in Warrior Creek Park will be concrete. Other sustainable materials should be considered as a concrete substitution. The pavement will have varying widths based on location and use (between 5 and 10 feet wide). Intended for pedestrian use only, this feature will serve as the primary walking surface in the park. It will be constructed on grade and will not require railing.

Construction of this design feature is considered high to low priority depending on its location in the park and the timing of construction of other features.

- (4) Stormwater Treatment Area Down slope and immediately to the south of the Stone Seating Area (feature 2), a 0.5-acre stormwater treatment wetland is proposed. This feature will be designed to improve the quality of stormwater discharge from the existing and future streets and building rooftops located to the east of Jeffords Street. The wetland will generally be dry (saturated soil) except after rain events. After each rain event, stormwater will be discharged into this wetland via two storm sewer pipes (feature 5). Nutrients and suspended sediments will be filtered through dense wetland vegetation. The accumulated rainwater will percolate into the ground, and surplus rainwater



will reach Mill Creek via overland flow. Other benefits to this wetland will be to compensate for lost resources attributed to the dam removal and to create a transition area from the mowed lawn areas (feature 11) and the floodplain and wetland areas to the south.

The wetland will require up to 3 feet of excavation and occur as part of the overall mass grading of the site. Excavated soil will be placed on the slope areas above the wetland to meet the fill requirements necessary to construct features 1, 2, 10 and 11. Once excavated, the wetland will be seeded with a wet meadow seed mix that will contain a diverse collection of wetland grasses and forbs. Long-term maintenance of this wetland will be required to control invasive plant species (volunteer program). Native shrubs and small trees and bird houses will be strategically located around the perimeter of the wetland to provide habitat for birds and small mammals. Interpretive signage will also tell the story of the wetland and its multiple functions.

In the future, should it be desired, the site could be maintained as a mowed lawn area.

Construction of this design feature is considered a high priority since the earthwork to be excavated from this area will be used as part of site mass grading.

- (5) **Stormwater Features** In three locations, stormwater outlets will be constructed or are already in place along the east edge of the park. These outlets create the opportunity to develop a creative and functional approach to outletting the water to the creek in lieu of extending pipes directly to the creek bank. In these locations, the outlet pipes will be extended or slightly altered so that they discharge into small rock-lined stream channels. Two of the channels will outlet into the stormwater treatment wetland (feature 4) while the third will discharge into Mill Creek.



These features will be sized based on the amount of anticipated flow and constructed with boulders, rock outcroppings, and smaller aggregate, and will be dry except during rain events. A natural edge of native grasses, forbs, and shrubs is suggested to create an appearance of a small stream.

Interpretive signage will be included.

Construction of this design feature is considered a high priority for the two outlet pipes that currently discharge onto the site.

- (6) **Boardwalk** Trails through and along the floodplain areas of the park require the development of a walking surface that will minimize impacts to these areas, create safe passage during and after minor flood events and minimize permitting issues associated with wetland and floodplain fill.



This feature will be 8 feet wide and constructed of wood and recycled decking or other sustainable materials. They will be situated as close to existing grade as possible (slightly elevated for floodwater conveyance), negating the need for railing except where adjacent to or cantilevered over the open water.

Interpretive signage will be added where applicable to provide information on the creek ecosystem, riparian buffers, and the stormwater wetland.

Construction of this design feature is considered a high priority and will be built when funding becomes available.

APPENDIX • ITEMIZED CONSTRUCTION COST ESTIMATE

**(3A) Accessible Ramp (South Side of Main Street)**

Earthwork	1,000 CYD	\$10,000
Concrete Pavement - 10 Feet Wide	3,200 SFT	\$12,800
Handrail	600 LFT	\$24,000
Site Restoration	Allowance	\$5,000
Engineering and Contingency (15% & 15%)		\$15,540
<b>Total Accessible Ramp:</b>		<b>\$67,340</b>

**(3B) Accessible Ramp - Warrior Creek Park**

Clearing	Allowance	\$7,000
Earthwork	1,000 CYD	\$10,000
Concrete Pavement - 10 Feet Wide	3,800 SFT	\$15,200
Handrail	760 LFT	\$30,400
Site Retaining Walls	400 LFT	\$52,000
Site Restoration	Allowance	\$5,000
Engineering and Contingency (15% & 15%)		\$35,880
<b>Total Accessible Ramp:</b>		<b>\$155,480</b>

**(3C) Concrete Walks (Various Widths)**

Earthwork	70 CYD	\$700
Concrete Pavement	5,300 SFT	\$21,200
Restoration	Allowance	\$500
Engineering and Contingency (15% & 15%)		\$6,720
<b>Total Concrete Walks:</b>		<b>\$29,120</b>

**(4) Storm water Treatment Wetlands (Optional)**

Earthwork	2,500 CYD	\$25,000
Seeding	1 Acre	\$4,000
Bird Boxes/Nesting Platforms	3 Each	\$150
Landscape Plantings	Allowance	\$7,000
Stabilized Wetland Outlet Swale	Allowance	\$1,000
Interpretive Sign	2 Each	\$4,000
Engineering and Contingency (15% & 15%)		\$12,345
<b>Total Storm water Treatment Wetlands:</b>		<b>\$53,495</b>

**(5) Storm Water Feature - 3 Locations**

Pipe Extensions	200 LFT	\$10,000
Drainage Structure	3 Each	\$9,000
Dry Stream Channel	175 LFT	\$26,000
Interpretive Sign	3 Each	\$6,000
Engineering and Contingency (15% & 15%)		\$15,300
<b>Total Storm water Feature:</b>		<b>\$66,300</b>

**(6) Boardwalk**

Timber Structure with Recycled Decking Products (8 Feet Wide)	5,800 SFT	\$290,000
Wire Mesh Railing with Wood Frame	120 LFT	\$6,000
Interpretive Sign	2 Each	\$4,000
Engineering and Contingency (15% & 15%)		\$90,000
<b>Total Boardwalk:</b>		<b>\$390,000</b>