Mill Pond Park

Newington, Connecticut

PRELIMINARY MASTER PLAN

MARCH 2018

Updated March 2020

TLB Architecture

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Introduction

Introduction:

In the Fall of 2017, TLB Architecture was retained by the Town of Newington, Department of Parks and Recreation to evaluate Mill Pond Park and prepare a Preliminary Master Plan to help guide the future development of the Park. Particular emphasis was to be placed on the swimming pool and bathhouse, as they are known to be in failing condition and in need of substantial renovation or complete replacement. Over the course of several walk-throughs of the Park and meetings with Town Staff, we completed a conditions assessment of existing park amenities and structures, developed a program of requirements and provided several options for potential renovations.

After much discussion, an option was selected and further developed to present to the Town, along with Probable Project Costs.

Early in the planning process, the town approved a referendum for a Town Hall and Community Center project across the street from the park. This approval played a factor in the selection of the preferred option, as it provided synergies for recreation programs, pedestrian patterns and vehicle parking.

On the following pages, we've included the analysis and the options, followed by the selected approach. The Executive Summary provides an overview of the proposed plan and the associated costs.

Process:

In addition to the site visits and meetings previously mentioned, we reviewed all available information including, but not limited to the following:

1. Newington Strategic Park Master Plan, prepared by CEHP, Inc. and Leisure Lifestyle Consulting, Inc. and adopted November 13, 2007.
2. Town mapping of known site utilities in the Park.
3. Mill Pond Park Pool Evaluation, prepared by Aquatics Group, dated March 2013.
4. Concept Design Presentation of Town Hall & Community Center, prepared by QA Architects, dated June 14, 2017 and approved at referendum in November 2017.
5. Available aerial and GIS Mapping

For the purposes of this Preliminary Master Plan, no site survey was available, nor was information on soil types and bearing capacities or groundwater levels.

Hazardous materials in the existing buildings, pools or ground have also not been identified. For planning purposes, it is assumed that hazardous materials are not present, though confirmation in subsequent design phases will be required.

Goals, Objectives and Limitations:

The planning effort undertaken herein addresses all current and anticipated needs. It was made clear at the onset of the project that the Swimming Pool is priority one, with the primary goal of ensuring the Swimming Pool is placed in the most advantageous location on the site, and it's ultimate construction would not preclude or adversely effect future improvements.

Hence, the Preliminary Master Plan addresses the potential build-out of the site, developing the Swimming Pool in more detail, to ensure consensus and proper allocation of resources.

The goal of the Preliminary Master Plan is not necessarily for the Town to "approve" the Plan, but to accept the Plan as a living document to guide development. As needs and priorities change, so too must the Plan. Approval of the location and general configuration of the Swimming Pool would allow its construction as the First Phase, should funds not be available for the full build-out, as shown.

Synergies are possible with regard to the Town Hall and Community Center project, but obstacles may also be presented if a portion of the park is utilized for temporary facilities or parking during its construction. Coordination between the Park Design team and the Town Hall / Community Center Design Team can identify and resolve potential issues.

Project Team and Participants:

As with any significant undertaking, success is dependent upon the contributions of many individuals and firms. This effort is no exception and has benefited from the energy and expertise of Town and Parks & Recreation administrators and staff. Public input will be a key component of any subsequent planning and design phases, in order to hear from all project stakeholders. The following have been and will continue to be instrumental in seeing the Preliminary Master Plan move into the implementation phase:

Town Staff:

Keith Chapman —Town Manager
William DeMaio, CPRP—Superintendent of Parks and Recreation
Nick Pizzoferrato—Recreation Supervisor
Karen Gallicchio—Recreation Supervisor
Joe Harvey—Recreation Specialist
Mark Ripley—Parks Foreperson
Dave Langdon—Director of Facilities Management

Design Team:

TLB Architecture, LLC	Architecture and Planning
Richter & Cegan	Landscape Architecture

Executive Summary

Executive Summary:

The Preliminary Master Plan, herein presented, reflects best available information at the time. Additional information, including site survey, geotechnical information, hazardous materials assessments and funding opportunities will undoubtedly affect the ultimate direction of improvements to the Park.

The goal of this plan is to evaluate opportunities to address priorities as defined by the Town and suggest an approach to phase such improvements, ultimately leading to the optimal build-out of the Park.

All parties agreed that the highest priority is the reconstruction of the swimming pool facility, which was a significant driver in the proposed Park Plan.

The placement of the pool near the street has significant advantages when it's complete, but during construction has the advantage of allowing the continuous use of the existing pool, without risk of losing a season due to weather or funding related issues.

Other elements of the Park can be renovated or constructed over time and as funding allows.

Opinion of Cost:

The Opinions of Probable Construction Cost on the following pages are broken down by specific area of the Park, and does not necessarily relate to individual Phases of the Work.

Factors affecting costs of any defined phase of work include economies of scale, temporary protection and controls, access to the site, escalation and labor & material costs at the time of the Work.

Included in the Opinions of Probable Construction Cost are the following multipliers:

General Conditions:	8%
Overhead and Profit:	8%
Design Contingency:	10%

All costs are in 2020 dollars. An escalation factor has been added at the bottom of the estimate to correct costs to the mid-point of construction anticipated in mid-2022. If construction begins later than Spring of 2021, additional escalation of 4—5% per year should be factored in to the overall cost.

Probable Phasing:

Phase 1:

A. Swimming Pool and Splash Pad

B. Soft-pave Play Surface

C. Baseball Field and Open Space, Northwest

Phase 2:

A. Court Spaces

B. Area Adjacent to Mill Pond

Development Common to, and Distributed Between Both Phases:

A. Walking Trails

B. Parking

Note: See Appendix 4 for additional explanation of potential phasing.

OPINION OF PROBABLE CONSTRUCTION COST

Mill Pond Park - Preliminary Master Plan
Newington, Connecticut
TLBA No. 2017.035
Updated March 23, 2020

A. **Baseball Field Improvements**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Dugouts	Each	2	20000	40000	$57,581
2. Backstop	Each	1	12000	12000	$17,274
3. Baseline Fencing	LF	100	25	2500	$3,599
SUB-TOTAL:					$78,454

B. **Field Sports**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Grading and Seeding with Field Mix (balanced cut-fill)	SF	120000	1	120000	$172,743
2. Layout and Striping	Allow	1	10000	10000	$14,395
SUB-TOTAL:					$187,138

C. **Aquatics**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Bathhouse	SF	3720	275	1023000	$1,472,635
2. Swimming Pool	SF	8545	203	1734635	$2,497,052
3. Pool Decks	SF	9800	16	156800	$225,718
4. Waterslide	Each	1	125000	125000	$179,941
5. Diving Board	Each	1	15000	15000	$21,593
6. Climbing Wall	Each	2	25000	50000	$71,976
7. Lawns	SF	13000	2	26000	$37,428
8. Fencing - 8-foot at pool	LF	584	25	14600	$21,017
9. Fencing - 4-foot at splash pad and deck overflow	LF	630	18	11340	$16,324
10. Splash Pad - Deck Level Recirc and Recycle	SF	4000	125	500000	$719,763
11. Shade Structure	Each	2	18000	36000	$51,823
12. Soft Play Deck Overflow Area	SF	2625	40	105000	$151,150
SUB-TOTAL:					$5,466,420

D. **Bandshell, Overlook and Pond Access**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Demolish Pool Facility (no hazmats)	Allow	1	120000	120000	$172,743
2. Regrade and Ampitheater Terraces	SF	48000	3	144000	$207,292
3. Bandshell	SF	1800	125	225000	$323,893
4. Overlook Deck and Railings	SF	1800	75	135000	$194,336
5. Pond Access Dock	SF	400	100	40000	$57,581
SUB-TOTAL:					$955,845

E. **Concessions / Toilet Building (Existing Building)**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Miscellaneous Improvements	Allow	1	20000	20000	$28,791
2. Sitework	Allow	1	20000	20000	$28,791
SUB-TOTAL:					$57,581

F. **Playgrounds and Sensory Garden (Existing)**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Fencing (4-foot chain link)	LF	680	15	10200	$14,683
SUB-TOTAL:					$14,683

G. **Court Sports**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Tennis Court (60 x 120)	Each	4	120000	480000	$690,972
2. Basketball - Standard	Each	1	155000	155000	$223,127
3. Basketball - Ollie Disabled Basketball Court	Each	1	175000	175000	$251,917
4. Pickle Ball (30 x 60)	Each	2	60000	120000	$172,743
5. Bocce	Each	2	5000	10000	$14,395
6. Sand Volleyball	Each	1	115000	115000	$165,545
7. Soft-Pave Fitness Surface	SF	1200	65	78000	$112,283
8. Concrete Fitness Surface	SF	1200	25	30000	$43,186
9. Storage Building	SF	800	125	100000	$143,953
SUB-TOTAL:					$1,818,121

H. **Soccer Field Improvements**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Irrigation	Allow	1	25000	25000	$35,988
2. Shade Pavilion 30 x 50	SF	1500	75	112500	$161,947
SUB-TOTAL:					$197,935

I **Picnic Area**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Pavion-Two at 20 x40 (no power or water)	SF	1600	75	120000	$172,743
2. Pavilion one at 20x40 (with power & water)	SF	800	100	80000	$115,162
SUB-TOTAL:					$287,905

J. **Walking Trails**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Concrete Walks -8-feet wide, vehicle rated	LF	475	60	28500	$41,026
2. Concrete Walks -5-feet wide, pedestrian rated	LF	1400	32	44800	$64,491
3. Crushed Stone Walks - 4-feet wide	LF	5000	16	80000	$115,162
4. Bridges (Short-span vehicle rated)	Each	2	24000	48000	$69,097
5. Bridges (Short-span pedestrian rated)	Each	1	12000	12000	$17,274
SUB-TOTAL:					$307,051

K. **Parking Improvements**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Hillcrest and Browning	SY	1050	80	84000	$120,920
2. Hillcrest and Browning (Existing Lot-Repairs)	Allow	1	12000	12000	$17,274
3. Brookdale	SY	850	80	68000	$97,888
4. Wilson and Brookdale	SY	1070	80	85600	$123,223
5. *Moreland and Cross (Existing Lot-Repairs)*	Allow	1550	9	13950	$20,081
6. Falls Overlook	SY	1070	80	85600	$123,223
SUB-TOTAL:					$502,611

L. **Streetscape Improvements**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Crosswalks	Each	4	3500	14000	$20,153
2. Solar Lighted Crossing Signals	Each	4	1200	4800	$6,910
3. Street Trees	Each	32	400	12800	$18,426
4. Park Entrance Signs	Each	3	2000	6000	$8,637
5. Light Poles	Each	18	2000	36000	$51,823
					$105,949

M. **Miscellaneous**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Relocate Fitness Equipment	Allow	1	7500	7500	$10,796
2. Relocate Memorial Drinking Fountain	Allow	1	1000	1000	$1,440
3. Landscaping	Allow	1	32000	32000	$46,065
4. Safety Railings (south of pond)	LF	300	50	15000	$21,593
5. Security Lighting	Allow	1	12000	12000	$17,274
6. Security Cameras	Allow	1	15000	15000	$21,593
7. Lightning Prediction System	Allow	1	5000	5000	$7,198
8. Site Benches (4-foot)	Each	4	6500	26000	$37,428
9. Bike Racks	Each	4	9500	38000	$54,702
10. Waste Receptacles	Each	4	3500	14000	$20,153
SUB-TOTAL:					$238,242

TOTAL PROBABLE CONSTRUCTION COST	$10,217,935

N. **Other Costs**

Item	Unit	Quantity	Unit Cost	Item Cost	Total Cost
1. Site Survey	Allow	1			$22,500
2. Architectural and Engineering Services	Allow	1			$1,021,794
3. Geotechnical Analysis	Allow	1			$15,000
4. Utility Marking	Allow	1			$6,500
5. Wetlands Flagging	Allow	1			$2,500
6. FEMA Flood Map Review	Allow	1			$2,500
7. Phase I and II Environmental Analysis	Allow	1			$30,000
SUB-TOTAL:					$1,100,794

TOTAL PROBABLE PROJECT COST:	$11,318,729
Escalation to 2022*	$12,360,335

Notes:
1. Total Cost Column includes General Conditions (8%), General Contractor's Overhead and Profit (8%), and a Contingency of 10% in 2020 dollars. * Escalation of approximately 4.5% per year is added to reflect cost to June 2022.
2. Hazardous Materials Abatement for building or Site is not included in this Opinion of Cost.

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Existing Conditions Analysis

Town of Newington Quick Facts

sourced from CT Economic Research Center (CERC)

Information on this page is provided as background information to put Mill Pond Park in the context of the overall Newington park system.

Population:

2000	29,306
2010	30,562
2011-15	30,638
2020	31,185

Land Area: 13 square miles

Median Age: 44 years

Age Distribution (2011—2015):

0-4	1,375	4%
5-14	3,035	10%
15-24	3,690	12%
25-44	7,545	25%
45-64	9,137	30%
65+	5,856	19%

Households: 12,649

Strategic Park Master Plan (2007)Takeaways:

Town-Wide

- Increased sense of community and community pride.
- Healthy and active residents
- Worthy title of “Lifetime Sports Community”.
- Sustainable recreational resources.
- Green spaces and trails throughout the community.
- Future economic viability.

Newington Extravaganza at Mill Pond Park

Park Sites Maintained in Newington (Total 226.14 acres):

PARK	ACRES
Beacon Park	8.32
Little Brook Park	8.58
Churchill Park	16.80
Clem Lemire	6.93
Clem Lemire	53.17
Seymour Park	3.98
Badger Field	4.29
Mill Pond Park	***33.32***
Mary Welles Park	2.12
Candlewyck Park	4.90
Starr Park	3.96
Millbrook Park	15.10
Eagle Park	6.00
Beechwood Park	4.39
Young Farm	54.29

The extents of Mill Pond Park are indicated by the yellow line at the perimeter of the Park. The most prominent natural feature of the Park is Mill Pond and Mill Brook. These features run nearly the entire length of the Park from east to west.

The site is bound to the north , east and southeast, by residential neighborhoods. To the west, the Park is bound by Garfield Street, with the current Town hall, Community Center, Library and Police facilities across the street, along with public parking. To the southwest is the Town school bus yard.

The Park is a very active community park, serving a variety of citizens of all ages with many different active and passive recreational opportunities.

While the Park is an open perimeter, there are three main access locations, including the park access road, accessed from Garfield Street to the west; the corner of Browning and Hillcrest, near the tennis courts and the corner of Moreland and Cross, near the soccer fields.

(Refer to Page 12 for Location Plan)

Park Map

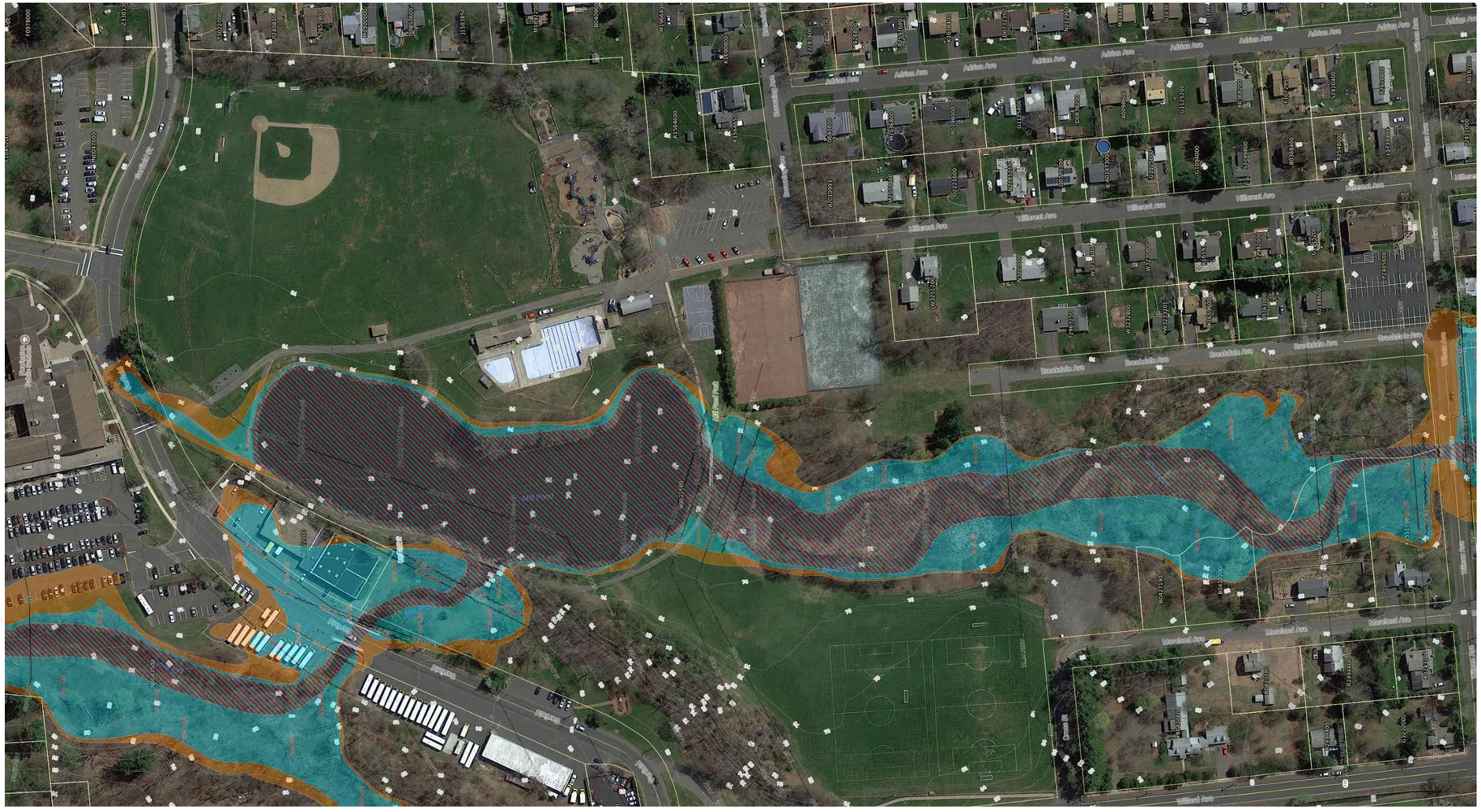
The Park currently accommodates the following programs, features and site amenities:

A. Playgrounds & Playscape
B. Sensory garden
C. Pond and Brook
D. Walkways.
E. Waterfall and Overlook.
F. Toilet Building and Snack Bar.
G. Pool and Bathhouse
H. Tennis Courts and Sheds
I. Foot Bridges
J. Basketball court
K. Baseball field
L. Soccer fields
M. Town Hall and Community Center
N. Bus Yard

Location Map

Existing Conditions Analysis

The Park is bisected by Mill Pond and Mill Brook. As a result, there is a significant swath of land that contains 100-year and 500-year floodplains, as well as a Regulated Floodway. Development in these areas should be avoided, as they would be subject to significant reviews and approvals, as well as added development costs to comply with necessary requirements.



Existing Conditions Analysis

The baseball field currently occupies a significant portion of the Park's open space, north of the pond. It is used by Newington High School Baseball Team as well as other youth and adult recreational teams. The field is in generally good condition, requiring typical maintenance to the pitcher's mound and the lip between the in-field and outfield.

The backstop and team benches are reaching the end of their useful life and replacement should be planned for player safety and functionality.

The open space between the baseball field and Garfield Street is used for unprogrammed activities much of the year, but is also the space occupied by events such as The Newington Extravaganza, Motorcycle Madness and similar community organized events.

In the photo to the left, the worn grass pattern delineates the layout of the Extravaganza.

Baseball Field and Open Space, Northwest

The playgrounds and play areas within the Park provide a variety of activities for a range of age groups, including traditional playscapes and swing sets, as well as a water-play activity table and a large sand box.

These playgrounds are a heavily used asset within the Park , are in good condition and appear well-maintained. Qualified Town staff should perform safety inspection and make necessary repairs. The need to separate the toddler play area from visible water at the pond should be evaluated further, and fencing added as may be necessary. No work is required as part of this long-range planning effort, except as required for continued safety.

A sensory touch garden is provided to the north of the playgrounds. The Town has on-going improvements planned for this area.

The tennis facility, inclusive of the courts, fencing and storage buildings is in very poor condition and in need of complete replacement.

The basketball court suffers from cracks, broken edges and uneven pavement and is also in need of replacement.

Tennis Courts and Basketball Court

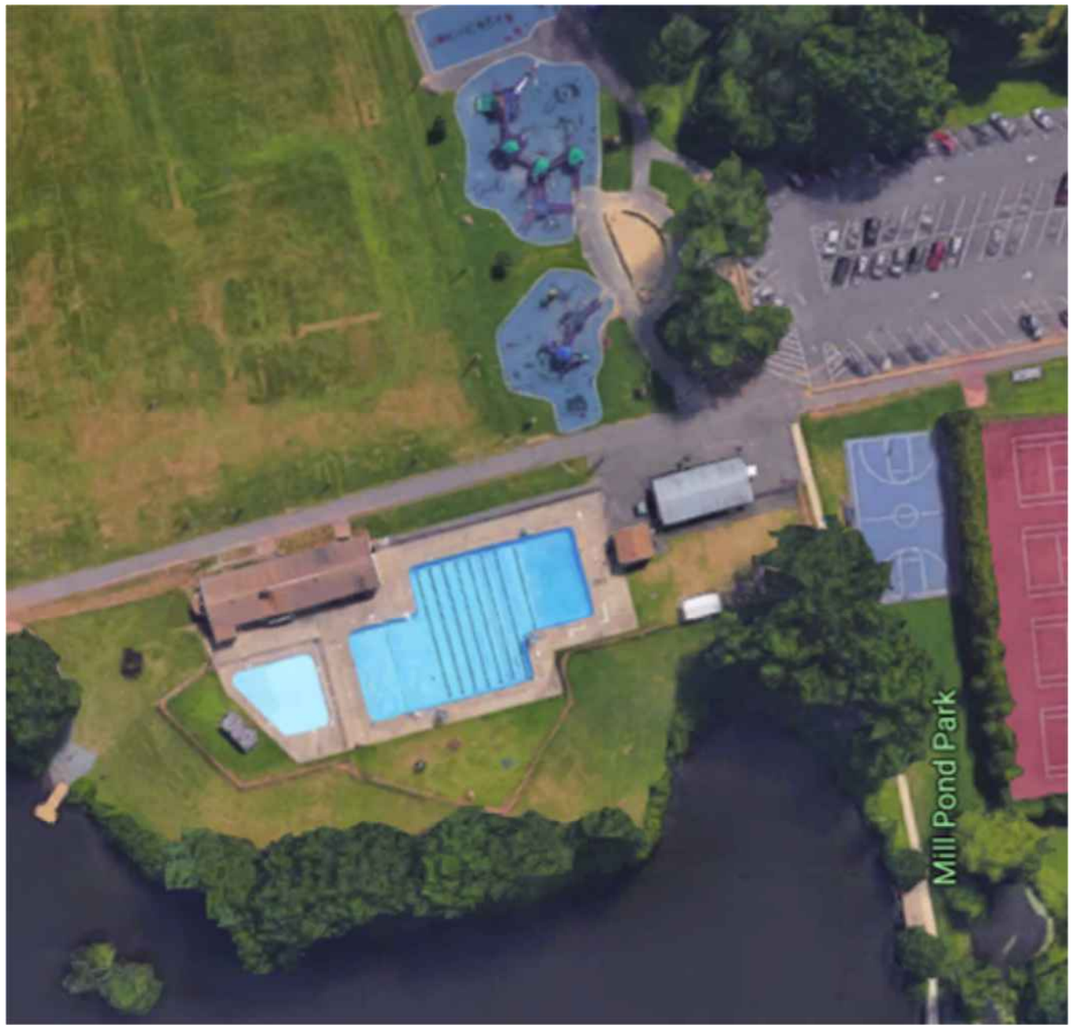
Existing Conditions Analysis

The walkways within the Park are limited to a linear path running from Garfield Street to the parking lot on Browning Street near the Tennis courts, and a loop around the Pond. These walks are bituminous concrete and are many areas are in poor condition. The Pond loop includes pedestrian bridges, which appear functional but are not rated for vehicle traffic, limiting emergency and maintenance access to areas of the Park.

There are areas at the south side of the Pond where significant grade changes pose a risk to pedestrians, including a significant drop-off in the area behind the Bus Garage. There is also a risk at the end of the smaller bridge at the east side of the Pond, where guardrails to protect the edge of the walkway, near the culvert.

There are no sidewalks on the Park side of Garfield Street. Sidewalks across Garfield connect the parking areas and Town Hall Complex, with two crosswalks to the Park.

Walking Trails and Bridges



The swimming pool complex consists of a six-lane lap pool with an attached shallow area to the north and an attached diving well to the south. There is also a separate wading pool to the north of the main pool. The pools are served by a masonry bathhouse building and surrounded by chain-link fencing. The pool was constructed in 1959 and renovated in 1999.

The pool has reached the end of its useful life and is in need of complete replacement. While significant renovation is an option, it is not recommended, as the underlying issues with ground water, deteriorated concrete and aging infrastructure can not be reliable repaired for the long-term.

In 2013 a comprehensive conditions assessment was performed, which details deficiencies with the pool. Of note in the study is the potential for PCB remediation, which will require further testing prior to demolition.

The full test of the 2013 report is attached as Appendix 01.

Swimming Pool and Bathhouse

The southeast end of the Park provides open space for two youth soccer fields, near the corner of Willard Ave. and Cross Street. These heavily used fields have access by means of pedestrian sidewalks along Willard Avenue, a small parking lot at the corner of Cross Street and Mooreland Avenue and through a field within the park, off of the Pond Loop walkway.

The soccer fields have recently had an irrigation system installed, but changes to the field orientation may require significant modifications. Currently, there is not sufficient room to shift field striping to mitigate wear patterns.

The “neck” of open space between the pond and the soccer fields is underutilized. It’s size, topography and proximity to shade lends itself to passive programming, such as picnic areas.

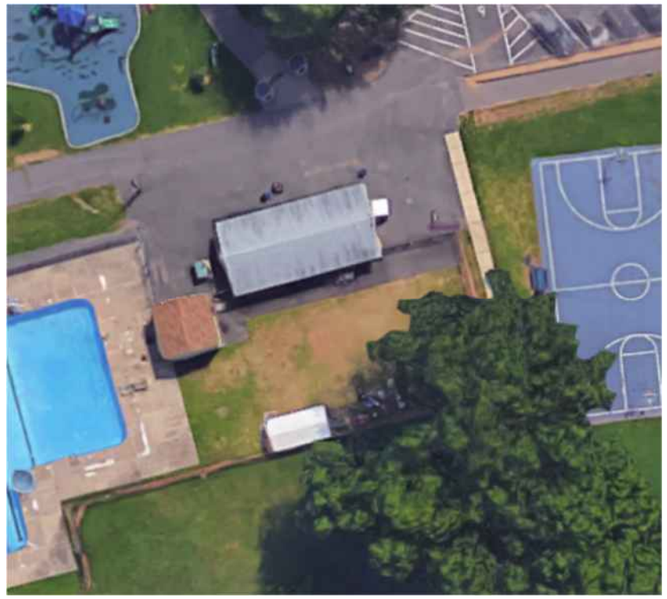
This end of the Park is somewhat separated from the upper side of the Park and could benefit from more integration with other amenities, such as the Toilet Rooms and Snack Bar.

Soccer Fields and Open Space, Southeast

In the area north of the Pond, there are three small structures, including a Gazebo, Pavilion and Dock.

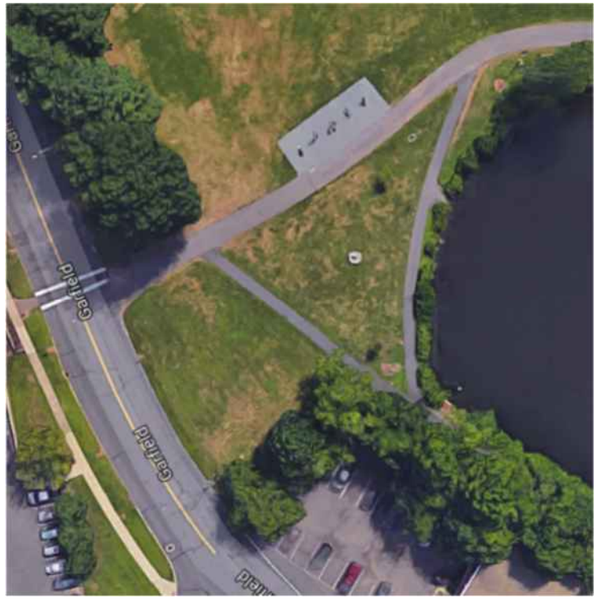
The pavilion serves as a bandstand for concerts in the Park. While functional, it is not ideally located or appointed. With concerts primarily occurring in the evening, the setting sun obscures the view to the bandstand.

These structures should be evaluated in the context of an overall plan and modified or removed as necessary.



There is a Snack Bar and Toilet Room Building located between the swimming pool and the basketball courts. The building experienced a fire recently, but has been fully reconstructed. It will continue to serve it's present use and should be included in the overall planning of the Park.

Additional architectural and programming improvements may be studied to better integrate the building with any new construction. Outbuildings may also be removed if storage is planned into a building addition.



The primary crosswalk at Garfield Street aligns with the sidewalk that runs through the Park. This walkway also provides access into the park for emergency and maintenance vehicles.

This walkway provides pedestrian access to the Pond Loop, as well as access to fitness equipment, the swimming pool, basketball and tennis courts, toilet/snack bar building and the playground and terminates a the parking lot at the east side of the Park.

Other Amenities

Programming and Needs

Elements Common to all Schemes:

- Create a recognizable streetscape at the edges of the Park that abut public streets.
- Establish recognizable Gateways at Park entrance points.
- Protect wetlands and bio-diversity within the Park
- Link Park to active and passive recreation opportunities around the Park.
- Respect buffers to neighbors with regard to noise, lighting, parking and activity.
- Do not modify topography or install improvements in the Floodway or the Floodplain

Aquatics Programming:

- Accommodate 9,000 visits/month
- Zero-depth entry, with spray features
- 25-yard, 6-lane lap pool
- 1-Meter Diving Board
- Waterslide
- Climbing Wall(s)
- Floating, inflatable dock should be evaluated
- Water polo and water basketball should be accommodated.
- Bathhouse should accommodate 200 campers (100 male and 100 female)
- Provide Splash Pad adjacent to, but separate from, the pool to accommodate use in the shoulder seasons (April to October). Options for single pass, filter and reuse, or recycle (irrigation or other grey water use) will require further discussion.
- There will not be night swimming. Only security lighting will be required.

Court and Hard Surface Programming:

- Soft-paved play area for preschool during the school year and for youth camps during the summer. It will also be used for VIPs during weekly special events in Spring through the Fall.
- Provide 4-6 tennis courts, with lighting on timers.
- Basketball Court, with lighting on timers
- “Kevin Ollie” Barrier Free Basketball Court.
- Two Bocce Courts
- Two Pickleball Courts
- Fitness Equipment
- Sand Volleyball

Active Park Programming:

- Maintain Existing Baseball Fields. Add dugouts and new backstop.
- Modifications to irrigation system at soccer fields
- Accommodate Ultimate Frisbee
- Accommodate Adult Flag Football
- Ensure space for Newington Extravaganza is maintained, inclusive of fireworks safe zone.
- Plan for pond use, such as canoe and kayak rentals.

Passive Park Programming:

- Improve and add to pedestrian paths and trails
- Replace footbridges with bridges that can accommodate emergency and maintenance vehicles.
- Provide picnic pavilions
- Include site amenities, such as benches, bike racks and trash receptacles
- Provide an overlook at the pond

Other Park Programming:

- The existing Toilet Building and Snack Bar that had a fire last year has been reconstructed and shall is operational.
- A bandstand is required to accommodate bands up to an 8-piece band. Sufficient power and lighting is required for evening concerts.
- Security lighting and cameras will be required. A 30-Day DVR recording shall be planned.
- RecTrac Management Software shall be accommodated. WiFi shall be provided in the Park.
- Lightning prediction systems shall be utilized in the Park, particularly at the pool and splash pad.
- Power to accommodate Holiday Decorations at the Bridge and Waterfall should be provided.

Conceptual Planning

The large existing spaces that define the geometry and natural features of the Park, including the Pond and Mill Brook, the Baseball Field and the Soccer Fields remain in their current location. The existing playground, known as “Our Children’s Place” also remains in its current location.

The proposed plan groups other functions by type and uses. Court sports are reconfigured in the general location of the existing tennis courts. The Pool facility is located on Garfield Street, across the street from the planned recreation center.

This approach works well with Camp and other recreational programs offered across the street, and provides good access to parking and alignment of crosswalks with new curb cuts.

This plan also preserves open park space in the center of the Park by moving “constructed” program closer to the public street.

Access to utilities and good visibility for security are also key benefits of this plan, as it relates to the Pool.

This location contributes to the “complex” of Town facilities being developed at the site across the Street, as approved at the referendum in November 2017.

This scheme also allows easier phasing of improvements, because the placement of the pool and bathhouse near the street does not displace any other program elements, resulting in minimal disruption to current Park activities during construction.

Overall Park Conceptual Plan

NORTH

Conceptual Planning

The proposed swimming pool and splash pad provides a variety aquatic programs, water depths and activities for swimmers of all ages and abilities.

The main swimming pool incorporates a zero-depth entrance with water spray features, a six-lane, 25-yard lap pool, ranging in depth from 3’-6” to 5’-0” and a deeper end incorporating a water slide, aquatic climbing walls and a 1-meter diving board, as well as competitive diving stands for training.

Adjacent to the pool is an aquatic splash pad, with a variety of water spray features. This splash pad would operate with a touch-button bollard so it can be activated only when in use, saving significant water and energy costs. Additional savings will be realized in reduced staffing costs, as lifeguards are not required.

The bathhouse building design would compliment the new construction on Garfield Street and contribute to the overall development.

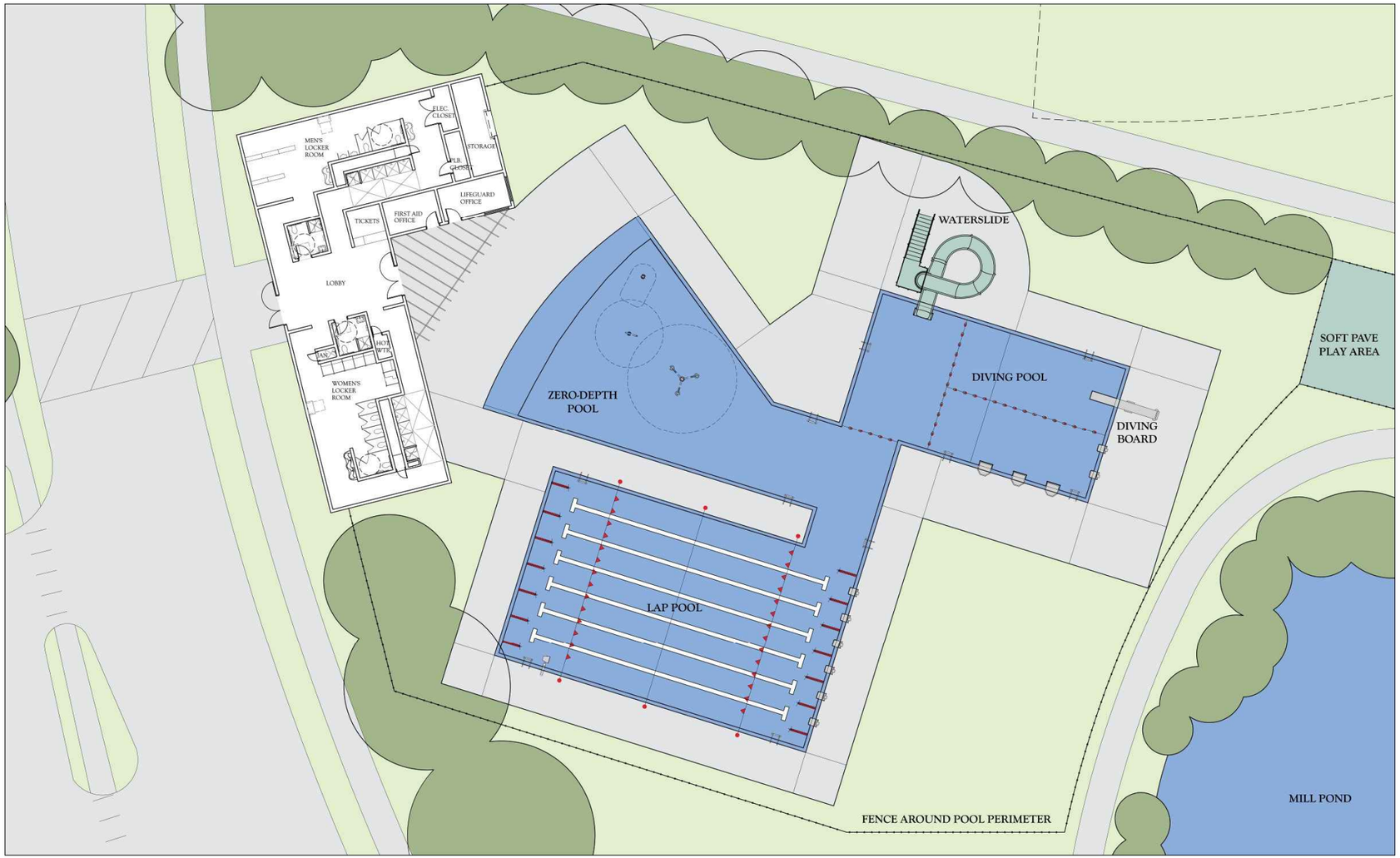
The pool area would be enclosed by fencing and would include lawn areas, hard decks, shade structures and plantings to provide comfortable space for extended visits.

Adjacent to the swimming pool is a soft-paved, fenced in play area. This area is sized to meet the State Statute of 75 sf for each of the anticipated 35 preschool campers that will use the space during the school year, providing the opportunity to move outdoors from the Community Center across the street. In the summer, older youth campers will have access to the area. This multi-use space also provides a designated area for VIPs during events, or other special event planning.

Conceptual Plan at Swimming Pool and Splash Pad

NORTH

Conceptual Planning

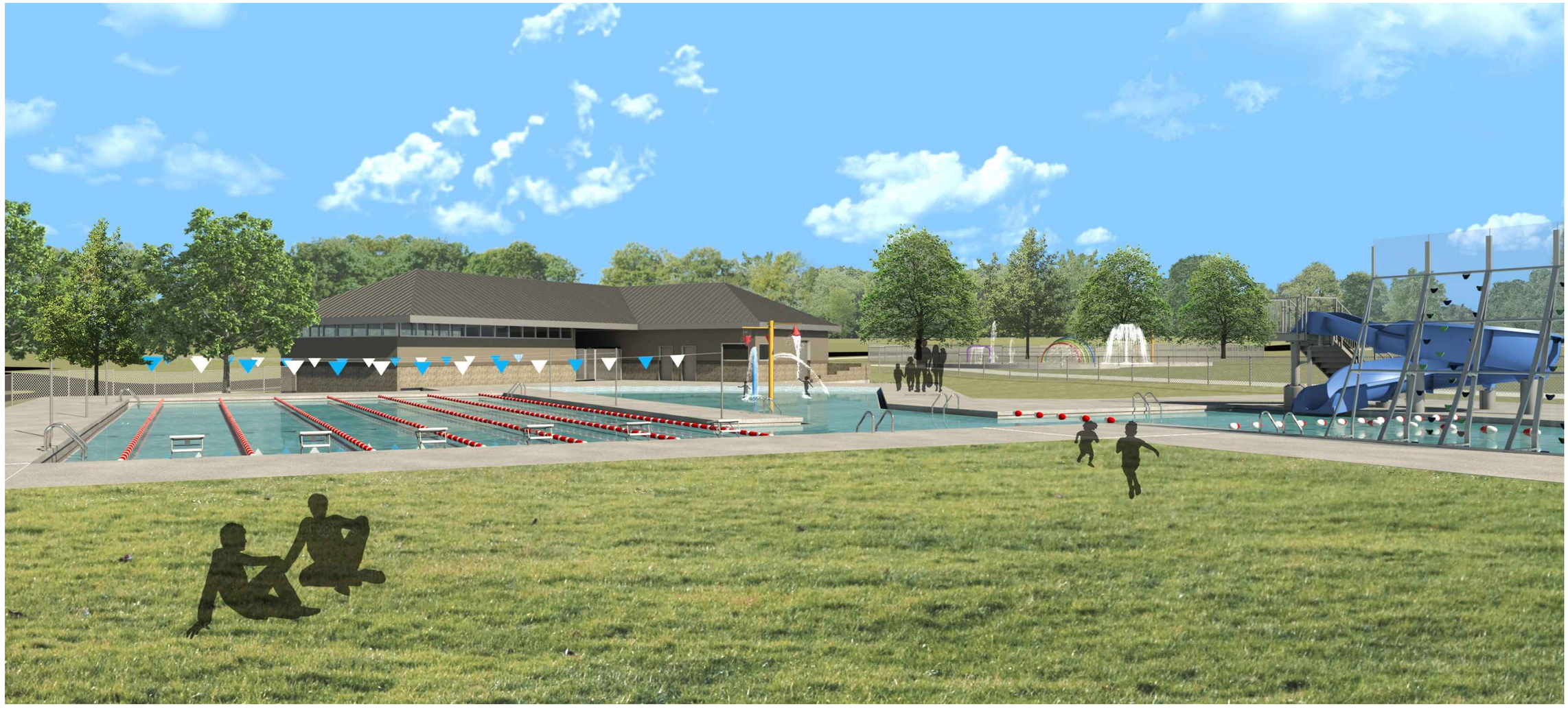


The bathhouse includes Locker and Shower Rooms, Special Needs / Family Changing Rooms, Lifeguard Office, First-Aid Room and ample Storage.

Pool decks surround the pool and are more generous in areas where patrons will tend to gather. Separate lawn areas are provided to attract swimmers for longer periods of time.

Trees and shade structures should be provided in strategic locations to provide protection from the sun and visual buffers between the pool area and the Park as a whole. The entire pool must be enclosed by fencing.

Conceptual Plan at Swimming Pool and NORTH ***Conceptual Planning***

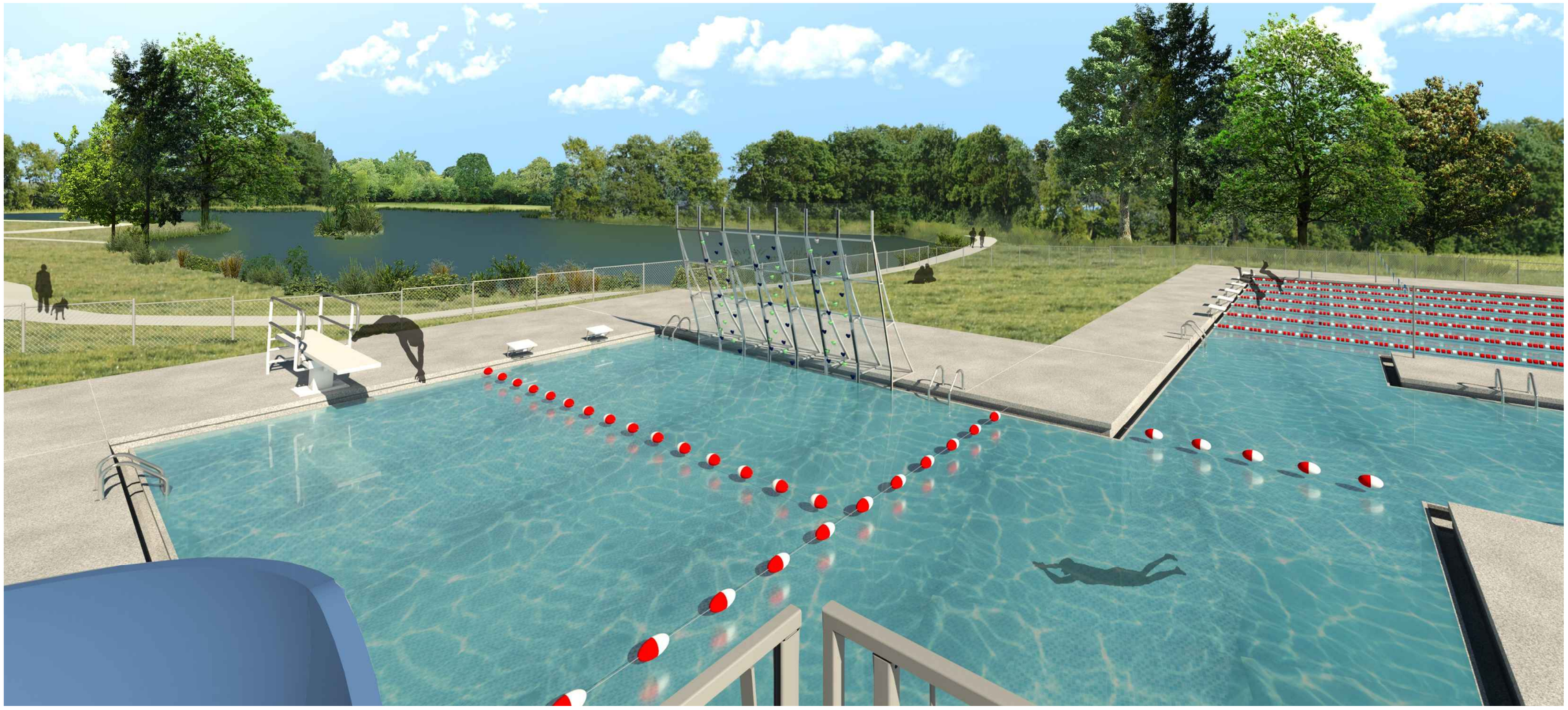


View of Pool, Looking North

Conceptual Planning

View of Pool, Looking South

Conceptual Planning



View from Top of Slide

Conceptual Planning

Active participation in a variety of Court Sports, including Tennis, Basketball, Sand Volleyball, Pickleball and Bocce are planned.

The relocation of the Saputo Fitness Center and the MDF Drinking Fountain from the area of the existing pool bathhouse complements programming for this area of the park. A small building is planned for storage of equipment necessary for this area.

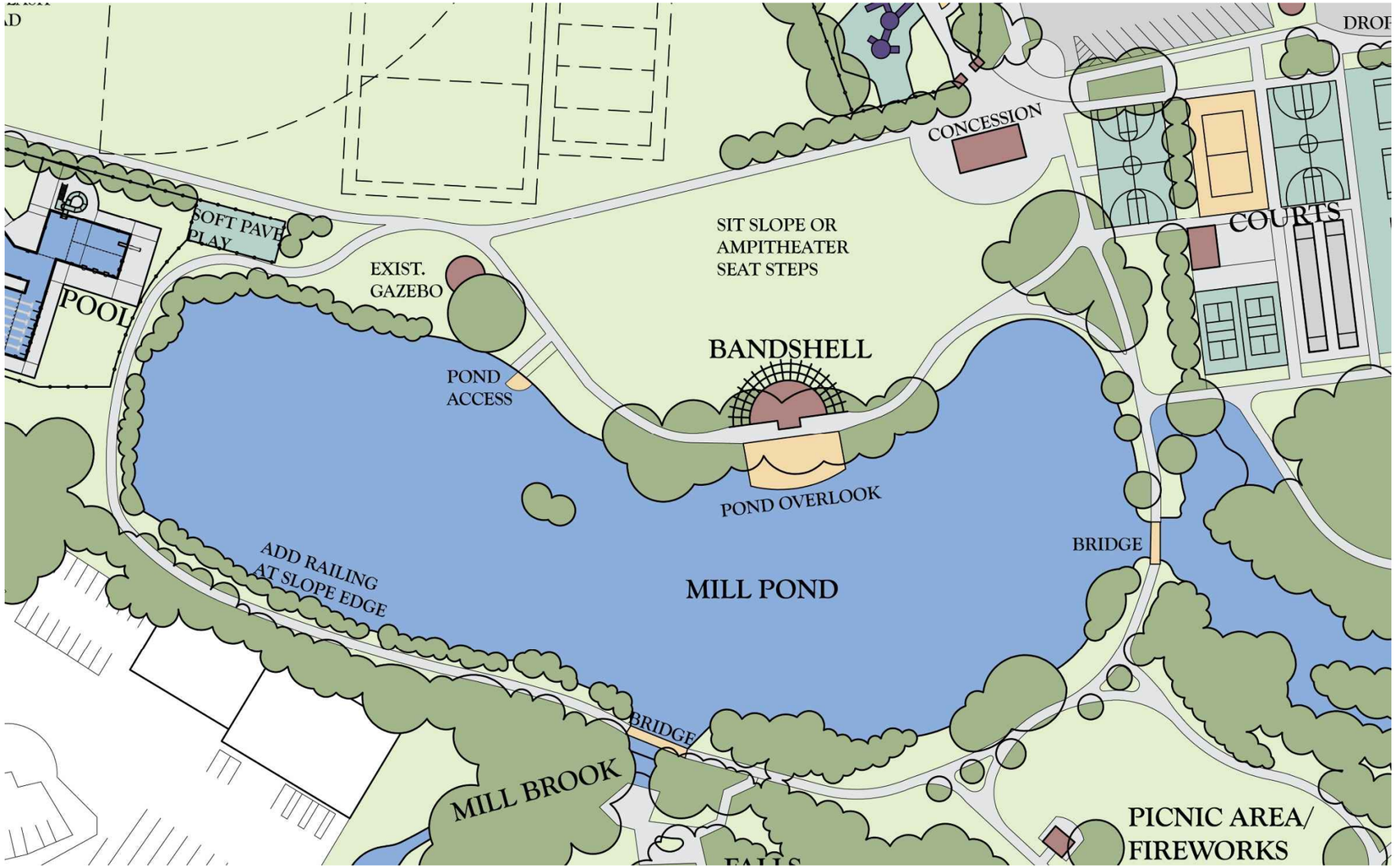
This existing toilet building and concessions adjacent to the courts and playground provides needed amenities for this area of the park.

As this is anticipated to be a heavily used area, access to existing parking infrastructure is available. Direct access to walking trails to complement the recreational and fitness aspects of the activities is also in close proximity.

Conceptual Plan at Court Sports

NORTH

Conceptual Planning



Mill Pond plays a significant role in the layout and the identity of the Park. A goal of the master Plan is to use the Pond to organize activities and provide meaningful active and passive recreation.

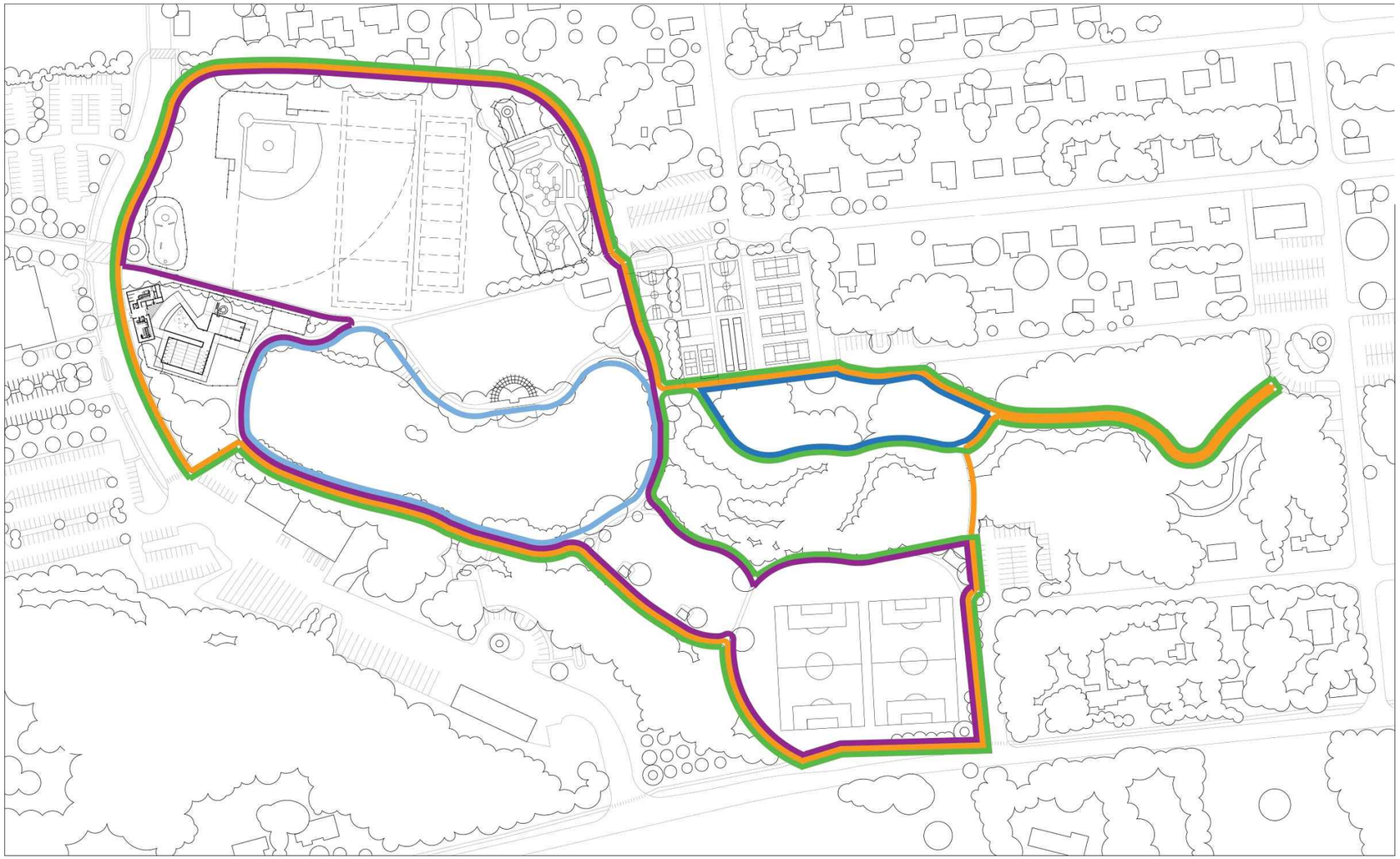
Existing walking trails remain and are extended to provide a walkway along Mill Brook, east of the pond. Bridges are replaced for vehicle access to enhance maintenance and public safety.

At the west side of the pond, there is a significant drop off in grade, near the walking trail, down to the bus yard. Railings and plantings should be added here to provide safety for walkers.

A new bandshell in the location of the removed swimming pool and adjacent to the pond, takes advantage of the natural grade of the site, to provide an amphitheater type landscape. This can be left natural, or be more formalized with tiered seating. An overlook at the Pond's edge provides an additional passive recreational opportunity. Should the Town consider access to the water for activities such as kayaking, canoeing or paddleboats, a dock can be added to facilitate these activities.

Conceptual Plan at Mill Pond

NORTH



PARK LOOP - 1 1/4 MI
MILE LOOP - 1 MI
MILE LOOP 1 MI
POND LOOP - 1/3 MI
BROOK LOOP - 1/2 MI

Existing walking paths are maintained and additional paths proposed to provide a variety of distances and types of experiences.

Trail maps and markings can be used to identify short walks of 1/3 or 1/2 mile and longer walks of up to 1 1/4 mile. Defined trails can be combined to lengthen the walk.

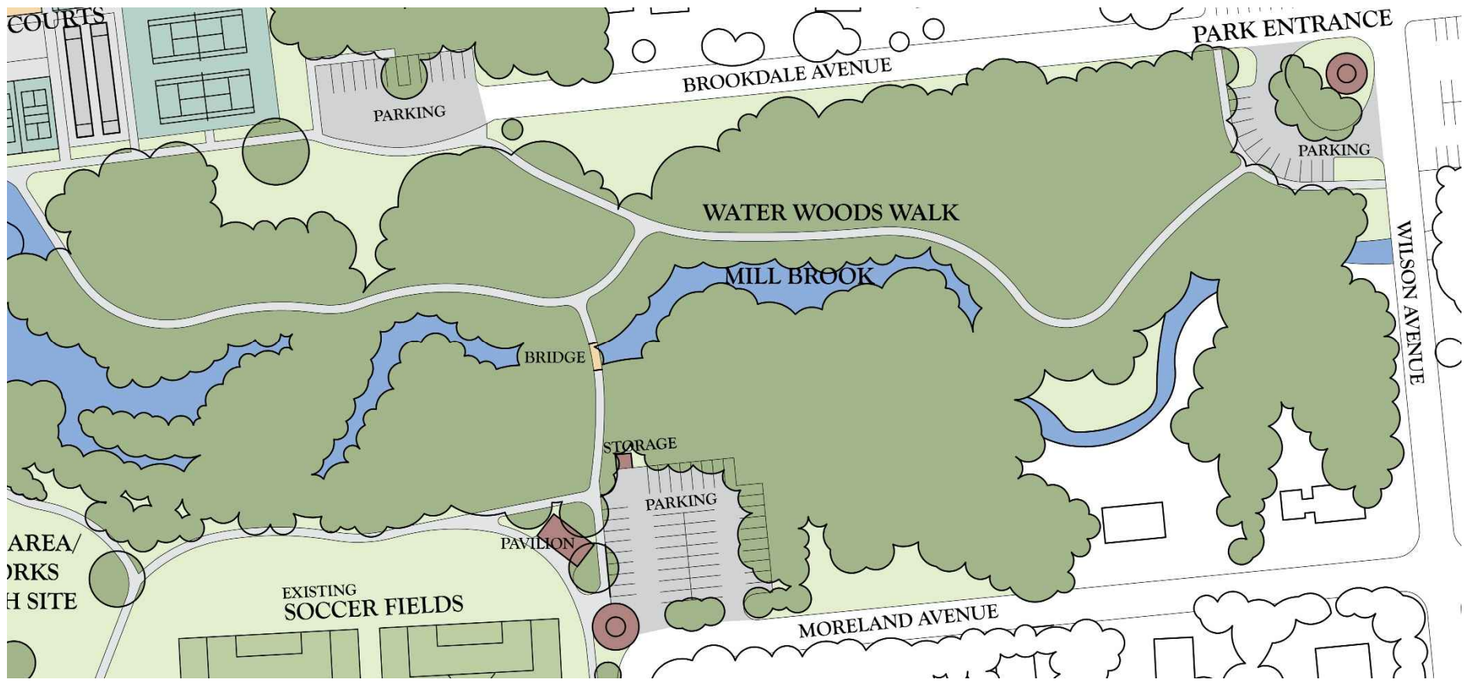
The experience varies from the more natural Brook Loop and Pond Loop to walks along the roadway.

Existing connections to the lower park area at the base of the falls is maintained, utilizing existing stairs for access.

Conceptual Plan for Walking Trails

NORTH

Conceptual Planning



To provide additional parking, without taking space from the Park, a number of smaller parking lots have been proposed at locations that provide access points to the park at specific program areas.

Top Left: A parking area and drop-off zone is added at the intersection of Browning Avenue and Hillcrest Ave. on a small parcel of land, owned by the Town.

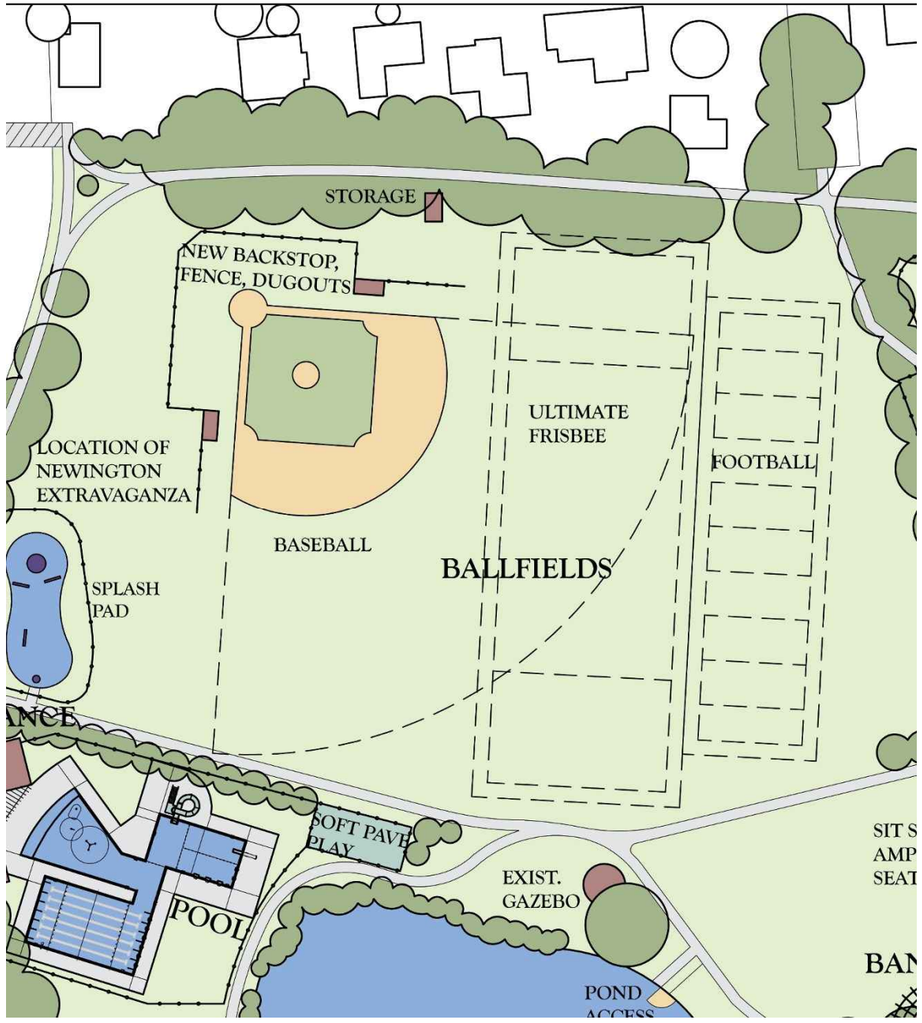
Bottom Left: A parking area adjacent to the park at the lower level near the base of the falls provides access to that area, away from the main park.

Top: A small parking lot is improved at the end of Brookdale Ave., which is a dead end road. At the intersection of Brookdale Ave. and Wilson Ave. a small lot is added that can serve trail-head access to the newly proposed water woods walk. Improvements are also proposed at the existing parking lot at the intersection of Moreland Ave. and Cross Street.

Conceptual Plan for Walking Trails

NORTH

Conceptual Planning



The Newington Extravaganza occupies the north end of the Park for the carnival-like event. In the upper-left photo, the general layout of the carnival can be seen in the pattern of the grass, following removal. Booths line the outfield of the Baseball field.

The relocation of the pool will shift some of the carnival toward the east, essentially wrapping the infield and occupying more space in the area of the Ultimate Frisbee Field.

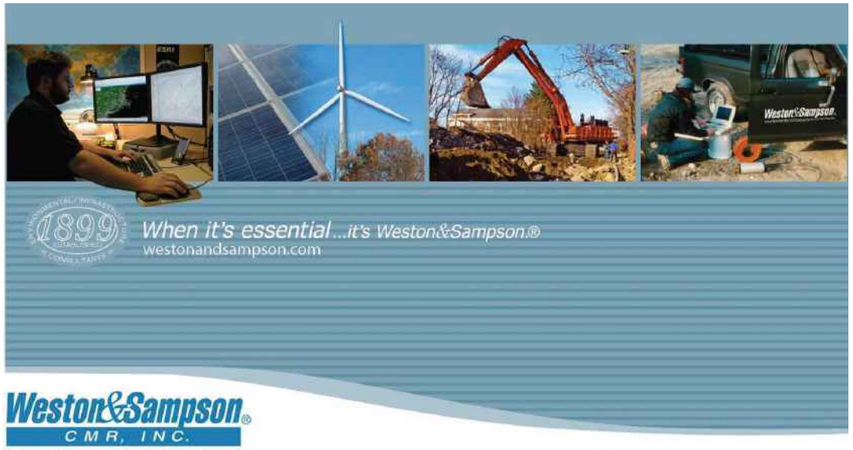
During the fireworks show, there is a regulated safe-zone that must be maintained. This safe zone will make it necessary to keep the public away from the area of the bandstand and a portion of the Court Sports.

Layout for Extravaganza and Fireworks Safe Zone

NORTH

Conceptual Planning

Appendix 01—2013 Mill Pond Pool Evaluation



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report

Mill Pond Park Pool Evaluation

Town of Newington
131 Cedar Street
Newington, CT 06111

March 2013

AQUATICS GROUP
a division of Weston&Sampson®

ENGINEERS REPORT

The Town of Newington is located in the Connecticut River valley in Hartford County, Connecticut. It is a community roughly 13.2 square miles in size, with a population of 30,599 based on the 2010 census. The Towns Recreation and Parks Department operates twelve active parks of which two contain swimming pools. Badger Field, Beacon Park, Beechwood Park, Candlewyck Park, Churchill Park, Clem Lemire Recreation Complex, Eagle Lantern Park, Littlebrook Park, Mill Brook Park, Mill Pond Park, Seymour Park, Starr Park. Each park offers many amenities for the community including athletic fields, playgrounds, tennis courts, picnicking, and swimming; this report is limited to the swimming facility at the Mill Pond Park.

Weston & Sampson has been retained to perform professional engineering and planning services in connection with the Mill Pond Park swimming pool and wading pool. Our scope of services includes the following:

- review of existing pool plans and systems
- research appropriate repairs for the main pool and wading pool
- preform code analysis for conformance with the new federal standards for ADA and Virginia Graeme Baker (VGB)
- observe leak testing as needed
- review existing conditions for structural stability
- review building condition
- examine existing piping, circulation, chemical treatment and filtration systems
- Preparation of an Engineers Report that contains pertinent information on pool replacement cost, recommended repairs and cost, and a conclusion and summary of recommendations.

BACKGROUND and PROGRAM

The Mill Pond Park, located on Garfield Street, is the largest town park. Facilities include a baseball field, boundless playground, soccer fields, tennis courts, outdoor pool, basketball court, concession stand, walking nature trail, ice skating, football field, fishing pond for children under 16 years of age, and a waterfall. The swimming pool was constructed in 1959.
There is substantial community involvement in the pool's programs, including seasonal memberships, swimming lessons, summer camps, adult swim, and competitive team usage. In all, the pool enjoys broad appeal across all population groups in the town.

The pool was replumbed in 1999 by Rizzo Pools. The bathhouse building was renovated in 1988. Renovations included: A new public restroom facility for the park, a complete interior wall

reconfiguration, mechanical and electrical upgrades, and replacement of the bathhouse interior finishes. Structural upgrades included a new concrete floor, new doors and windows, and a new roof.

EXISTING CONDITIONS

Figure 1 – Mill Pond Pool

Entrance to the facility is through a fifty five year old concrete masonry bath-house building. The entry bathhouse includes life guard staff offices, first aide room, mechanical room, men's and ladies changing/locker area and restrooms, and storage area.

The entire pool facility is enclosed by 6-foot high galvanized chain link perimeter fence with gates around the perimeter; additionally the wading pool is surrounded by a 4-foot high galvanized chain link fence and self-closing gate to provide separation from the main pool area. Patrons make their way to the pools via 6-foot wide bituminous concrete sidewalk which connect the pools with the bathhouse structure. The walkway leading from the parking lot to the building entrance is relatively flat and is in conformance with ADA requirements. The aerial photograph (Figure 2) to the right gives a general layout of the existing pool facility.

Figure 2 – Overview of Mill Pond Pool facility

The main pool configuration is a "Z" shaped pool. The north side of the "Z", "general swim area" is approximately 40-feet wide by 50-feet long with a 3-foot depth on the north side and sloping to a 4-foot depth where the racing lines begin. The middle section of the pool is the lap pool, which is approximately 50-feet wide by

75-feet long and contains 7 swim lanes. The south end of the pool is considered the deep end and is 12-feet deep. It is approximately 40-feet wide by 50-feet long and contains one diving board. The main pool has 7750 square feet of water surface, 410 linear feet of perimeter, and contains approximately 295,000 gallons. The pool has 21 return inlets and 16 skimmers. The deep end of the pool and lap area is left partially filled with water in the winter to prevent hydraulic lift.

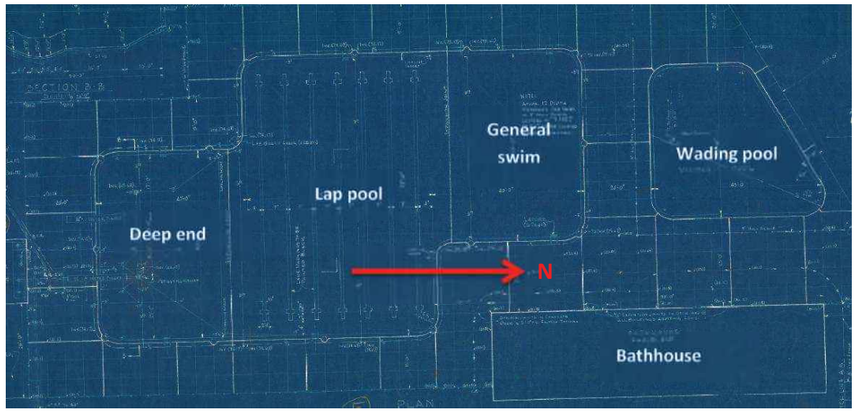


Figure 3 – Plan layout of Mill Pond

The wading pool, located to the north of the main pool, is trapezoidal shaped, and is 40-feet long by 45-feet wide and ranges in depth from 6-inches to 10-inches at the main drains. The pool has 1,450 square feet of water surface and contains approximately 6,500 gallons of water.

WATER LOSS

The pool staff reports that Mill Pond Pool is not losing significant water. The total water usage is averaging only $85/month. This is based on water bills showing approximately 425 gallons used per day, of which most is probably bathroom and shower usage and evaporation. The pool staff reports that if the pool is drained, water enters the pool through cracks in the pool walls and floor. The only reasonable explanation that the pool does not loose water is because the water table is so high and there is equal water pressure on both sides of the cracks. Mill Pond is directly adjacent to the pool. (See Figure 2)

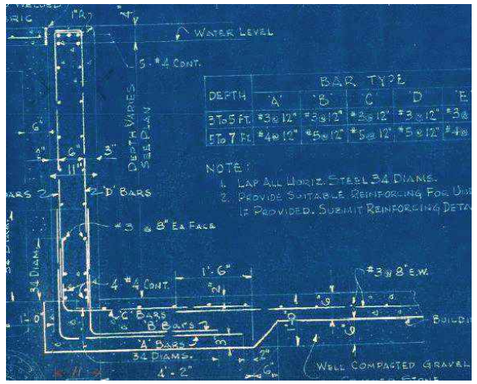


Figure 4 – Pool wall detail

POOL SHELL

The main pool consists of a "Z" shaped structure of approximately 130 feet long by 75 feet wide, and varies in depth from 3-feet to 12-feet. The original pool construction is reinforced concrete, the pool floor is poured in panels with a thickened footing around the entire perimeter. The walls were constructed on top of the floor footing and are approximately 11-inches thick. Construction plans from 1958 (Figure 4) show rebar, and expansion joints filled with joint sealant. Also called out are keyway joints with 9-inch pvc waterstop. The plans also show a French perimeter drainage system at the base of the pool floor.

Mill Pond is located very close to the pool and water comes through cracks in the wall when the pool is drained. The static water pressure relief valve in the deep end has been cemented over. The static valve should be working correctly to allow water to enter the pool if the ground water table rises. The concrete pool floor is lightly reinforced and not designed to handle upward pressures due high ground water. The pool floors and walls have numerous cracks, and have been patched in various locations. (Figure 5) The expansion joints in the pool appear to be properly caulked.


Figure 5 – Expansion joint, cracks, and patches

A core sample of the concrete floor was taken in the shallow end of the pool (Appendix B). Compressive strength was found to be 6,850psi, which is good and means the pool shell is structurally sound. The soil beneath the floor appeared to be mostly clayish gravel. Clayish material is unsuitable for a structural base because it can result in movement that along with the static pressure will cause structural cracks.


Figure 6 – Peeling paint and PVC joint separation

The curvature of the floor and walls in the deep end of the pool do not meet the requirements for a 1-meter diving board.

The pool operator plans to repaint the pool this year and stated that the concrete under the paint in some areas seems to be powdery and flakes off down to the aggregate. The paint is flaking and delaminating in many areas. The coping strip at the top of the pool walls is coming out in places and may be a source of water loss. (Figure 6)

POOL DECK

The deck shows signs of settling and cracking in some areas that creates potential tripping hazard and can be uncomfortable and possibly cause an injury to bare feet. (Figure 8) Areas of the deck are discolored and some areas have been repaired. Overall the deck is not it too bad of shape for its age. Most of the caulking in the expansion joints on the decks is old brittle and cracked allowing for water to get beneath the deck and increase settling of the deck and the possibility of frost heaves. (Figure 7) Some of the expansion joints in the middle of the deck and the expansion joints between the deck and bathhouse are not sealed.

The lack of a gutter or drain in the low spot between the bathhouse building and the pool has caused concrete deck separation. All water in this area is


Figure 7 – Failed expansion joint caulking


Figure 8 – Frost heave or settling concrete deck

draining through cracks and is saturating the soil under the deck. Water saturated soil can also put pressure on pool and foundation walls. The perimeter of the deck closest to the pool is newer than the rest of the deck. This portion of the deck was removed in 1999 when the piping was replaced. Rust is showing through the concrete deck in some areas. The welded wire mesh may have been installed too close to the surface.

POOL AREA & DECK EQUIPMENT

The depth markers on the pool walls and deck are hand painted or stickers. Most are faded or missing. (Figure 9) Some of the depth markers are incorrect. The depth must be measured from the floor of the pool to the water level. Depth markers must be provided on the pool rim at points of minimum and maximum depths, at all points where the pool floor changes slope, and at appropriate points in between. Depth markers at these points must be visible from within the pool and while standing on the pool deck. Letters and numbers must be at least 4-inches tall.

Figure 9 – Peeling depth markers

Ladders should not be no more than 75 ft apart when measured along linear feet of wall. The ladders in the deep end are over this far apart from one another.

The fence around the pool is galvanized, but is starting to show signs of rust. The fence is bent in some areas and has large gaps. The gaps between vertical members and between the ground and the bottom of the fence cannot be greater than 2-inches. (Figure 10)

Figure 10 – Fence gate

The diving board support is outdated with concrete counterweights. The diving board is 14' long. The lifeguard chairs are in good condition and appear to made of PVC composite material. The anti-slip strips on some of the lifeguard chairs are worn off and could result in a slip hazard for a lifeguard. Some of the concrete anchors holding down the lifeguard chairs are corroded and should be

Figure 11 – Copper pipe for handicap lift

replaced with stainless steel anchors. The temporary stairs do not meet ADA code requirements.

Pool staff reports new handicap lifts will be ordered for the upcoming season. The lifts will be hydraulic portable units, which need to be permanently anchored to meet ADA requirements (even though they are portable). This pool used to be equipped with a permanently mounted hydraulic (water powered) lift. The same connection can be used. The copper pipe connecting the lift was installed in an expansion joint in the concrete. The copper pipe is above the caulking and sticking out of the ground in areas. (Figure 11)

POOL PIPING

The pool piping in the filter room and under the concrete deck was completely replaced in 1999 by Rizzo Pools.

Pool staff reports the Virginia Graeme Baker (VGB) main drain covers are 24"x24" with 6" direct suction. The covers and pipe were under water during the inspection and this information is consistent with what is shown on the 1958 plans. Water is returned to the pool through a 6-inch pipe branching out to1.5-inch return inlets. The pool has 21 return inlets and 16 skimmers.

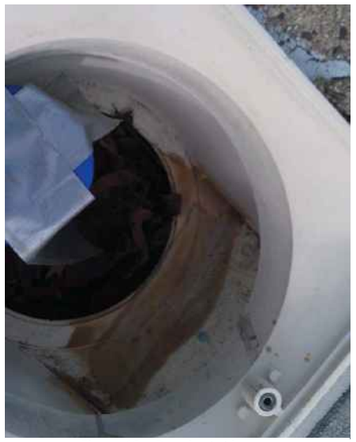


Figure 12 – Repaired skimmer

Many of the skimmers have stress cracks on the inside but have been repaired with fiberglass resin. (Figure 12) There are no skimmers along the deep end wall closest to

Figure 13 – Cracked joint between concrete and skimmer

the diving board. Skimmers are recommended in the deep end. The skimmers do not have equalization ports which are recommended by CT pool design guidelines. The skimmers appear to be cast in concrete with no caulking around the mouth of the skimmers. (Figure 13) The shrinkage between the skimmers and the concrete should be caulked to prevent water loss.

The return piping fittings are relatively new 1.5-inch PVC fittings with PVC covers. They have stainless steel hardware and appear to be in good condition. The return fittings are not original and most likely were replaced during the last major renovation.

The main drain piping is undersized and do not meet CT pool design guidelines. The flow rate must not exceed 4-feet per second at 100% design flow rate. The design flow rate for a 6 hour turnover is 819 gpm (gallons per minute). This equates to over 9-feet per second. The flow rate must be reduced to meet federal Virginia Graeme Baker (VGB) law. Surge tanks (balance tanks) should be considered to eliminate direct suction from the main drains.

This pool does not have an auto makeup or automatic water level controller. Automatic water makeup systems are recommended at public pools in Connecticut.

WADING POOL

The wading pool contains approximately 6,500 gallons. Water in the wading pool is circulated with a 1.5hp pump and filtered with a duel filter arrangement. The majority of the concrete shell appears to be in good shape with minimal cracks. As with the main pool, the caulking joints in the deck and coping around the wading pool are cracked.

The concrete coping is cracked in areas and has heaved around one of the skimmers. (Figure 14) The

Figure 14 – Wading pool cracked coping above skimmer

Figure 15 – Cracked skimmer and coping concrete

Figure 16 – Wading pool

skimmers appear to be cast in concrete with no caulking around the mouth of the skimmers. The shrinkage between the skimmers and the concrete should be caulked. Some skimmers have cracked and have been repaired with fiberglass. (Figure 15)

The electrical panels in the wading pool equipment room show signs of corrosion. The equipment room is ventilated with two small louvers located near the ceiling (approximately 1 square feet each). Mechanical ventilation by the use of a fan and louver at a lower level will reduce corrosion. The wading pool equipment room is part of the bathhouse and contains the filter, pump, chlorine, and acid chemical tanks.

MAIN POOL EQUIPMENT ROOM

The main pool filter system consists of five (5) sand filters which were installed in 1993. The sand has not been replaced since then. Water chemistry is controlled automatically through the use of liquid chlorine and liquid acid. Stenner chemical feed pumps transport the chemicals to injection points. The pool pump is 15hp and has a 6-inch suction and a 4-inch discharge. Two (2) filters are backwashed at a time through a 2" pipe to the backwash pit. The backwash pit is connected to city sewer.

Figure 17 – Main pool filters, chemical storage, and stairs

An emergency eyewash station was present. Acid is used to lower pH. Carbon Dioxide (CO_2) is much more commonly used than acid because it is less hazardous and is commonly available. Chemical tanks should have secondary containment in case of a leak. (Figure 17)

The existence of an electrical bonding grid around the pool is unknown, and probably non-existent. If major repairs are made metal deck equipment in the pool area and concrete reinforcement will need to be connected to a bonding grid. The bonding grid must connect to the pool pump. The pump is not bonded, and no bonding is shown on the plans. A wire just outside of the equipment room has been cut after it exits the building and before it enters the ground. (Figure 18) This wire may be either a ground wire or bonding wire.

Figure 18 – Cut bonding or grounding wire

Figure 19 – Main pool pump

General corrosion inside the equipment room is apparent. Electrical panels, the pump, pipe flanges, and flange hardware are corroded. The paint on the cement block walls is delaminating (either from cement deterioration, moisture, or chemical exposure). Improved ventilation will reduce corrosion. A copper water pipe is not securely attached to the wall and is free to vibrate.

BUILDINGS – Interior/Exterior

Two separate building were inspected as part of this evaluation. The bathhouse located to the East of the pool and the main pool filter building located to the South of the pool. The bathhouse was completely renovated in 1988, at which time according to the drawings, a new system of wood trusses were installed above the flat steel bar joints to give the building a gable roof design.

Figure 20 – Rear of bathhouse

Figure 21 – Main pool filter building

The roofing shingles appear to be original to that renovation, which would make them 25 years old. The shingles do not show signs of leaking but are nearing the end of their service life and should be replaced. The roof on the filter building was converted from a flat metal roof to a wood framed pitched roof in recent years, giving the roof a similar appearance as the main bathhouse. The roof appears to be in good condition.

The exterior CMU block walls on both buildings are painted. The masonry joints needs to be caulked or repointed in numerous areas. There are a handful of holes in the CMU block on the outside of the building that should be filled with mortar or caulking. The holes may be from old piping or conduit. Some of the joints on the filter building show traveling cracks. (Figure 22)

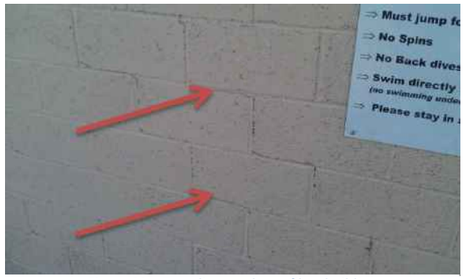


Figure 22 – Traveling cracks on filter building

The bathrooms are not ADA accessible and will need to be made compliant if any major renovations are made. A handicap shower is available (Figure 23), but does not have a private enclosure for a wheelchair bound person. In multiple locations, such as the main entrance, there is greater than a ¼-inch bump in floor elevation. Floor transitions between rooms must be smooth. The four other showers share two floor drains. Each shower floor must be pitched so that water does not pass from one bather to another. It appears the original floor was not pitched correctly in the vicinity of the showers and drainage slits were cut into the floor to reduce puddling. (Figure 24)

A clear 5' of width is required at all turning points for wheelchairs. (Figure 25)

Figure 23 – Existing handicap shower

Figure 24 – Floor drains

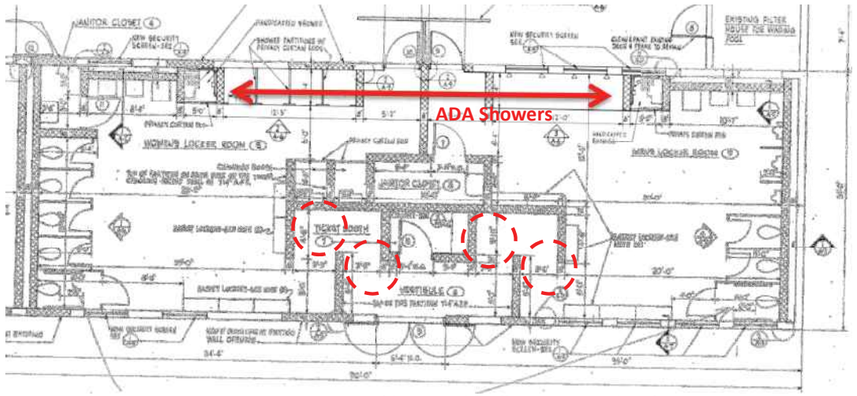


Figure 25 – ADA issue areas (showers and insufficient turning radiuses)

Health and safety signage is posted, but does not meet current standards. New signs should be mounted that are current with ADA and Health Department requirements. The bathhouse does not have a handicap mirror. The mechanical and plumbing fixtures (hot water heater, toilets, sinks, etc.) all appear to be original to 1988. There are no exit signs posted at the egress doors and no emergency lighting. The building contains no smoke detectors or fire alarms.

Figure 26 – Conduit at rear of filter building

The rear of the filter building has a snapped conduit with exposed wires (Figure 26). Conduit failure is common along foundation walls where conduit expansion joints are not installed, and the foundation has settled or heaved. The window glazing is cracked and in serious need of repair (Figure 27). The metal fascia and soffit on the bathhouse is falling out and missing in areas (Figure 28).

Figure 27 – Window glazing failure

Figure 28 – Soffit and fascia damage

BUILDING - STRUCTURE

The original building was constructed in 1958 and renovated in 1988 at which time the roof was converted into a gable roof. The building is 90 feet long by 24 feet wide, one-story masonry bearing wall structure and does not have a basement. The original roof framing consisted of 12" deep steel bar joints spaced at 30" on center clear span across the width of the building. (Figure 29)

Figure 29 – Original steel roof structure of filter building

A separate, similarly constructed building houses the pool equipment that is situated outside the immediate pool deck area adjacent to the double gate at the south end of the facility near the parking area.

The bathhouse is at the pool deck level and includes the patron's entrance, separate men's and women's lockers, showers and changing rooms. Interior partition walls are constructed of masonry block walls. Exterior walls are constructed of 8-inch masonry units.

The foundation is constructed of reinforced concrete wall with a continuous concrete strip footing set below the frost line (-3'-6"). The floor is a 6-inch concrete slab on grade reinforced with welded wire fabric.

Figure 30 – Side of bathhouse

The 1988 renovation drawings call-off the design loads which are consistent with the snow loads currently required by the Connecticut State Building Code, therefore the framing should be adequate for the anticipated snow loads.

The foundation is experiencing some cracking and spalling of concrete at the northeast corner of the building. (Figure 31) The threshold at the patron's entrance at the rear double door does not

meet ADA due to the finish grade of the bituminous walkway. There is a loose 2x plank used to mitigate the change in elevation, which poses a tripping hazard. (Figure 32)

Overall, the building does not appear to be experiencing any major structural problems.

Figure 31 – Foundation spalling

Figure 32 – Bathhouse entrance trip hazard

SUMMARY AND RECOMMENDATIONS:

In summary, the deficiencies identified at the pool facility fall into three categories – immediate safety issues, recommended code upgrades, and structural/mechanical issues. For each of these categories, we recommend that the following improvements be undertaken by the Town:

Immediate Safety Issues:

- Repair gaps in fence, and secure loose fence areas.
- Review the inventory of lifesaving equipment and replace or supplement as necessary.
- Modify the main drain piping to keep water velocity flow rates under the rating on the Virginia Graeme Baker covers. This may conflict with CT pool guidelines, but is the only short-term solution.
- Remove the existing diving boards, and install smaller up to date boards that are compliant with the deep end dimensions.
- Replace depth markings.

Recommended Code Upgrades:

- Reconfigure the bathhouse to meet current ADA standards.
- Install mechanical ventilation in the chemical storage area.
- Install larger main drain sumps and larger main drain piping.
- Eliminate direct suction from the main drains by incorporating a 4,000 gallon surge tank.
- Install double walled chemical tanks or a secondary containment basin.
- Install automatic water level controller.
- Install new skimmers and an equalization port for each skimmer.
- Install new ADA compliant stairs, handicap lifts, and correct number of ladders.

Structural/Mechanical Issues:

- Option 1: Repair cracks in the pool walls with hydrophobic polyurethane grout crack injection. Replace all caulking and backer rod in expansion joints.
- Option 2: Install a new gunite pool inside the shell of the existing pool.
- Option 3: Remove the existing pool shell and install a completely new pool.
- Replace corroded valves, fittings, main pool pump, and corroded hardware.
- Replace the acid injection system with a CO_2 system.
- Install new chemical control equipment.
- Epoxy paint entire pool
- Replace depth markings.
- Replace concrete pool deck and sub base. Incorporate deck drains where needed.
- Replace diving board & stand.

Recommendations:

We recommend option 2 as the best approach to renovate the pool. The pool has many deficiencies and any renovation will require all code compliant items to be addressed. A complete demolition and replacement of the pool shell may involve expensive PCB remediation. Ground water management will be a major expense. By shooting a new gunite pool inside of the existing shell, ground water will be easier to manage. Excavation for new main drain piping will be the most challenging task regarding ground water. The community will get a pool only slightly smaller than the existing pool and minimal excavation/demolition will be required. It is common practice when doing this kind of renovation to install a zero entry ramp in the shallow end and reduce the depth of

the deep end to approximately 6-feet. The new pool would incorporate a stainless steel gutter system, eliminating all skimmers and incorporating return piping into the gutter. This greatly reduces the chances of broken piping.

Option 1: The following table presents a tabulation of estimated project costs. Costs assume prevailing wage rates.

Item	Unit	Quantity	Unit Cost	Total
Code Issues				
Structural and bathhouse update	EA	1	$331,500.00	$331,500.00
Fence repair	EA	1	$6,000.00	$6,000.00
Fence replacement	LF	580	$60.00	$34,800.00
New Lifesaving Equipment - Allowance	EA	1	$500.00	$500.00
Chemical Storage Room Ventilation	LS	2	$4,000.00	$8,000.00
Surge tank	LS	1	$35,000.00	$35,000.00
Main drain piping & autofill	LS	1	$30,000.00	$30,000.00
Chemical containment	EA	4	$1,200.00	$4,800.00
New skimmers and equalization ports	EA	16	$3,000.00	$48,000.00
ADA stairs, handicap lift, and ladders	LS	1	$12,000.00	$12,000.00
			Subtotal	$510,600.00
Structural Issues (Option 1)				
Crack injection and caulking	LF	1,000	$40.00	$40,000.00
Expansion joint caulking	LF	1,000	$20.00	$20,000.00
Epoxy paint	LS	1	$25,000.00	$25,000.00
Tile depth markers and no diving tiles	EA	40	$200.00	$8,000.00
Remove & Replace Pool Deck & Subbase	SF	9,825	$12.00	$117,900.00
			Subtotal	$210,900.00
Mechanical Issues				
Replace pump, and corroded equipment	LS	1	$13,000.00	$13,000.00
Replace Acid System with CO_2	LS	2	$1,700.00	$3,400.00
Chemical control equipment	LS	2	$4,000.00	$8,000.00
			Subtotal	$24,400.00
			Contingency 15%	$111,885.00
			Soft Costs 20%	$149,180.00
			Grand Total	**$1,006,965.00**

Structural & Bathhouse Costs:

1. Apply block filler on the exterior masonry walls and repaint. (10 years) ($15,000)
2. Replace the asphalt shingles (5 years) (2,800 SF Roof Area, $41,000)
3. Repair foundation (5 years) ($1,000)
4. Adjust threshold at double door entrance (Immediate) ($3,000)
5. Emergency Lighting & Smoke Alarm (Immediate) ($5,000)
6. Paint Exposed Metal Deck and Bar Joist in Filter Building (5 years) ($2,500)
7. General Renovation / Updates (5 years) Cost per square foot ($60/SF, 2,200 SF, $132,000)

Option 2: The following table presents a tabulation of estimated project costs. Costs assume prevailing wage rates.

Item	Unit	Quantity	Unit Cost	Total
Code Issues				
Structural and bathhouse update	EA	1	$331,500.00	$331,500.00
Fence repair	EA	1	$6,000.00	$6,000.00
Fence replacement	LF	580	$60.00	$34,800.00
New Lifesaving Equipment - Allowance	EA	1	$500.00	$500.00
Chemical Storage Room Ventilation	LS	2	$4,000.00	$8,000.00
Surge tank	LS	1	$35,000.00	$35,000.00
Main drain piping & autofill	LS	1	$30,000.00	$30,000.00
Chemical containment	EA	4	$1,200.00	$4,800.00
ADA stairs, handicap lift, and ladders	LS	1	$12,000.00	$12,000.00
			Subtotal	$450,600.00
Structural Issues (Option 2)				
Install gunite pool inside existing pool shell	LS	1	$350,000.00	$350,000.00
Epoxy paint	LS	1	$25,000.00	$25,000.00
Tile depth markers and no diving tiles	EA	40	$200.00	$8,000.00
Remove & Replace Pool Deck & Subbase	SF	9,825	$12.00	$117,900.00
			Subtotal	$500,900.00
Mechanical Issues				
Replace pump, and corroded equipment	LS	1	$13,000.00	$13,000.00
Replace Acid System with CO_2	LS	2	$1,700.00	$3,400.00
Chemical control equipment	LS	2	$4,000.00	$8,000.00
			Subtotal	$24,400.00
			Contingency 15%	$146,385.00
			Soft Costs 20%	$195,180.00
			Grand Total	**$1,317,465.00**

Option 3: The following table presents a tabulation of estimated project costs. Costs assume prevailing wage rates.

Item	Unit	Quantity	Unit Cost	Total
Code Issues				
Structural and bathhouse update	EA	1	$331,500.00	$331,500.00
Fence repair	EA	1	$6,000.00	$6,000.00
Fence replacement	LF	580	$60.00	$34,800.00
New Lifesaving Equipment - Allowance	EA	1	$500.00	$500.00
Chemical Storage Room Ventilation	LS	2	$4,000.00	$8,000.00
Surge tank	LS	1	$35,000.00	$35,000.00
Main drain piping & autofill	LS	1	$30,000.00	$30,000.00
Chemical containment	EA	4	$1,200.00	$4,800.00
ADA stairs, handicap lift, and ladders	LS	1	$12,000.00	$12,000.00
			Subtotal	$450,600.00
Structural Issues (Option 3)				
Demo existing pool - posible PCB's	LS	1	$150,000.00	$150,000.00
Install new pool & dewatering	LS	1	$450,000.00	$450,000.00
Epoxy paint	LS	1	$25,000.00	$25,000.00
Tile depth markers and no diving tiles	EA	40	$200.00	$8,000.00
Remove & Replace Pool Deck & Subbase	SF	9,825	$12.00	$117,900.00
			Subtotal	$750,900.00
Mechanical Issues				
Replace pump, and corroded equipment	LS	1	$13,000.00	$13,000.00
Replace Acid System with CO_2	LS	2	$1,700.00	$3,400.00
Chemical control equipment	LS	2	$4,000.00	$8,000.00
			Subtotal	$24,400.00
			Contingency 15%	$183,885.00
			Soft Costs 20%	$245,180.00
			Grand Total	**$1,654,965.00**

APPENDICES

A. Concrete test results
B. Crack injection data sheets
C. Photographs

APPENDIX A. CONCRETE TEST RESULTS

APPENDIX A. CONCRETE TEST RESULTS

Of Massachusetts
"The Construction Testing People"

5 Richardson Lane, Stoneham, MA 02180 781-438-7755 (Voice) 781-438-6216 (Fax)

Compressive Strength Report - Concrete Cores

Distribution Copy

Report Date 03-25-2013
Report No. 1
Job Number 16019
Project Newington,CT-Mill Pond & Church Hill Rd

Contractor Weston & Sampson

The following are results of compressive strength tests performed on concrete cores obtained at the above site. Testing in accordance with ASTM C-42.

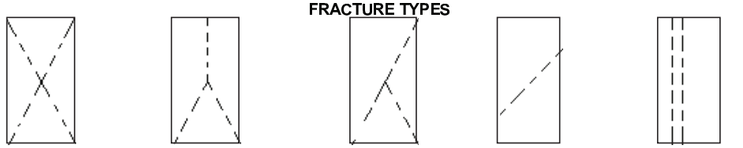
Core Mark No.	Lengt After Cap (in.)	Height (in.)	Diameter (Inches)	Height to Diameter Ratio	Area (Sq. in.)	Date Cast	Date Tested	Age Days	Required PSI	Total Load (lbs.)	Unit Load (PSI)	Corrected Unit Load (PSI)	Fracture Type
1	4.8	4.6	2.7	17.0	5.7		03/25/2013			40,000	7,020	6,850	2
2	5.6	5.4	2.7	2.0	5.7		03/25/2013		Unknown	34,000	5,960	5,960	2

GENERAL REMARKS: Core #1, Mill Pond and Core #2, Church Hill pool. Both cores were bagged and tagged for client and cores saved at the UTS lab. Corrected Unit Load - Strength correction factor applied, ratio of length of core to diameter of core, Length/Diameter as per ASTM C-42-77, if applicable.

Inspector Name	Premium Time	Hours	Travel Time
R. Granada	No		

REVIEWED BY: Robert S. Granada

FRACTURE TYPES



(1) Cone (2) Cone and Split (3) Cone and Shear (4) Shear (5) Columnar

Our reports are available in PDF form via email. Please email us at reports@utsofmass.com for more information.

CC: Weston & Sampson Paul Jensen

APPENDIX B. CRACK INJECTION DATA SHEETS

APPENDIX B. CRACK INJECTION DATA SHEETS

de neef®
CONSTRUCTION CHEMICALS, INC.

TECHNICAL INFORMATION
URETHANES

PRODUCT NAME
HYDRO ACTIVE® Flex SLV
Hydrophobic Polyurethane Grout

MANUFACTURER
De Neef Construction Chemicals, Inc.
5610 Brystone Drive
Houston, TX 77041
1(800) 732-0166

PRODUCT DESCRIPTION
HYDRO ACTIVE® Flex SLV is a very low viscosity hydrophobic polyurethane that, when used with **HYDRO ACTIVE® Flex Cat**, is designed to form a flexible gasket or plug in very tight joints and hairline cracks. In its uncured form, **HYDRO ACTIVE® Flex SLV** is a pale yellow, nonflammable liquid. When in contact with water the grout expands and depending on temperature and the amount of accelerator (**HYDRO ACTIVE® Flex Cat**) used quickly cures to a tough, flexible, closed cell polyurethane foam that is essentially unaffected by corrosive environments.

APPROPRIATE APPLICATIONS
- Sealing leaks thru very tight joints and hairline cracks in concrete and masonry.

ADVANTAGES
- NSF 61 Potable water approved
- Contains no volatile solvents
- Single component
- High elongation creates tight seal in moving cracks
- Controllable cure time
- Free foam expansion up to 15 times its liquid volume
- Very low viscosity permits injection into hairline cracks
- Resistant to most corrosive environments

TYPICAL PROPERTIES

Uncured		
Solids	100%	ASTM D 2369 B
Viscosity at 77°F	150-250 cps	ASTM D 2196 A
Color	Pale yellow	
Density	9.0 – 9.15 lbs/gal	ASTM D 3574
Flashpoint	>130°C	ASTM D 92
Corrosiveness	Non-corrosive	
Influence of pH	No influence between 2-11	
Flex Cat		
Appearance	Transparent Liquid	
Viscosity	5-16 cps at 77°F	ASTM D 2196
Density	8.50 – 8.60 lbs/gal	ASTM D 3574
Flashpoint	> 200° F	ASTM D 92
Influence of pH	No influence when pH < 7	
Cured		
Density	8.76 – 9.20 lbs/gal	ASTM D 3574
Tensile Strength	174 psi	ASTM D 3574
Elongation	250%	ASTM D 3574
Shrinkage	Less than 4%	ASTM D 1042
Influence of pH	No influence between 2-11	
Toxicity	Non-toxic	

The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result.

Reactivity

	%HYDRO ACTIVE® Flex Cat	Geltime in min-sec
*** at 50°F**	1%	7' 50"
	3%	3' 50"
*** at 68°F**	1%	6' 00"
	3%	3' 00"
*** at 86°F**	1%	5' 50"
	3%	2' 30"

Example - 1% Flex Cat =1.3 oz. per gallon of Grout
Note: Flex Cat must be agitated by shaking the can prior to adding to resin.

PACKAGING
HYDRO ACTIVE® Flex SLV:
- 55 gallon metal drum sealed under dry nitrogen.
- 5 gal metal pail sealed under dry nitrogen.

HYDRO ACTIVE® Flex Cat Accelerator:
- 25 oz. cans.

LIMITATIONS
Low temperatures will significantly affect viscosity. If site temperatures are extremely low, heat bands or heated water baths may be used on the pails before and during installation to maintain the product's temperature. Avoid splashing water into open containers, as the material is water activated. Avoid exceeding 90ºF when warming.

CAUTION: pH NOTICE. Water used to activate HYDRO ACTIVE® Grouts must be in a range of pH 3-10 for optimum foam quality.

SURFACE PREPARATION
Refer to De Neef Surface Preparation Guidelines for more details.

INSTALLATION PROCEDURES
Prior to installation, both the grout and accelerator must be agitated separately before combining by vigorously shaking the containers or by mixing with a jiffy mixer. The grout should never be used with more **HYDRO ACTIVE® Flex Cat** than the amount recommended on this data sheet. Excess acceleration will cause a vigorous expansion that is prone to shrinkage. Pour the desired amount of **HYDRO ACTIVE® Flex SLV** into a clean pail. Measure the appropriate amount of **HYDRO ACTIVE® Flex Cat** and pour it into the **HYDRO ACTIVE® Flex SLV** and stir until adequately mixed. During injection the grout will follow the path of least resistance. When the material has stopped penetrating it will continue to expand against the confines of the crack/joint and compress within itself, forming a very dense, closed cell material stopping the leak.

For application procedures in extreme temperatures and specific environments or equipment recommendations call the DeNeef Technical Service Department.

STORAGE & HANDLING
Store in dry area in original resealable containers.
Warning! If **HYDRO ACTIVE® Flex Cat** is allowed to freeze, it will lower performance.

PRECAUTIONS
Always use protective clothing, gloves and goggles consistent with OSHA regulations during use. Avoid eye and skin contact. Do not ingest. Ventilation is recommended. Refer to Material Safety Data Sheet for detailed safety precautions.

SAFETY INFORMATION
In the event of an EMERGENCY call:
CHEM-TREC 800-424-9300.

WARRANTY INFORMATION
De Neef Construction Chemicals, Inc. products are warranted under the policy set forth under the WARRANTY section of the De Neef Construction Chemicals Inc., product catalog. Warranty information can also be obtained via the De Neef Construction Chemicals Inc. website at www.deneef.com, by calling 713-896-0123 or toll free at 1-800-732-0166.

Rev. 08/2009

DRINKING WATER SYSTEM COMPONENTS
ANSI/NSF 61
3N76

"HYDRO ACTIVE® FLEX SLV GROUT"
MAXIMUM SURFACE AREA TO VOLUME RATIO
0.25 CM²/L AT 23ºC
ONLY WHEN MIXED WITH
"HYDRO ACTIVE® FLEX CAT" ACTIVATOR (1-3%)

CLASSIFIED UL WATER QUALITY

5610 Brystone Dr. Houston, TX 77041●Tel: 800-732-0166●Fax: 713-849-3340●www.deneef.com

APPENDIX C. PHOTOGRAPHS









ON
OFF









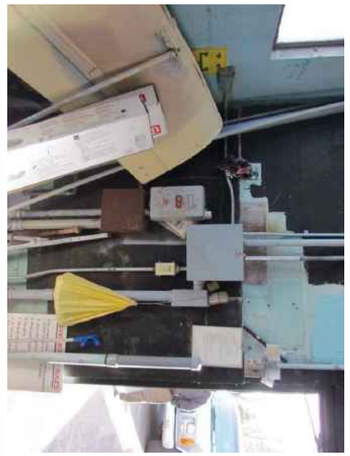


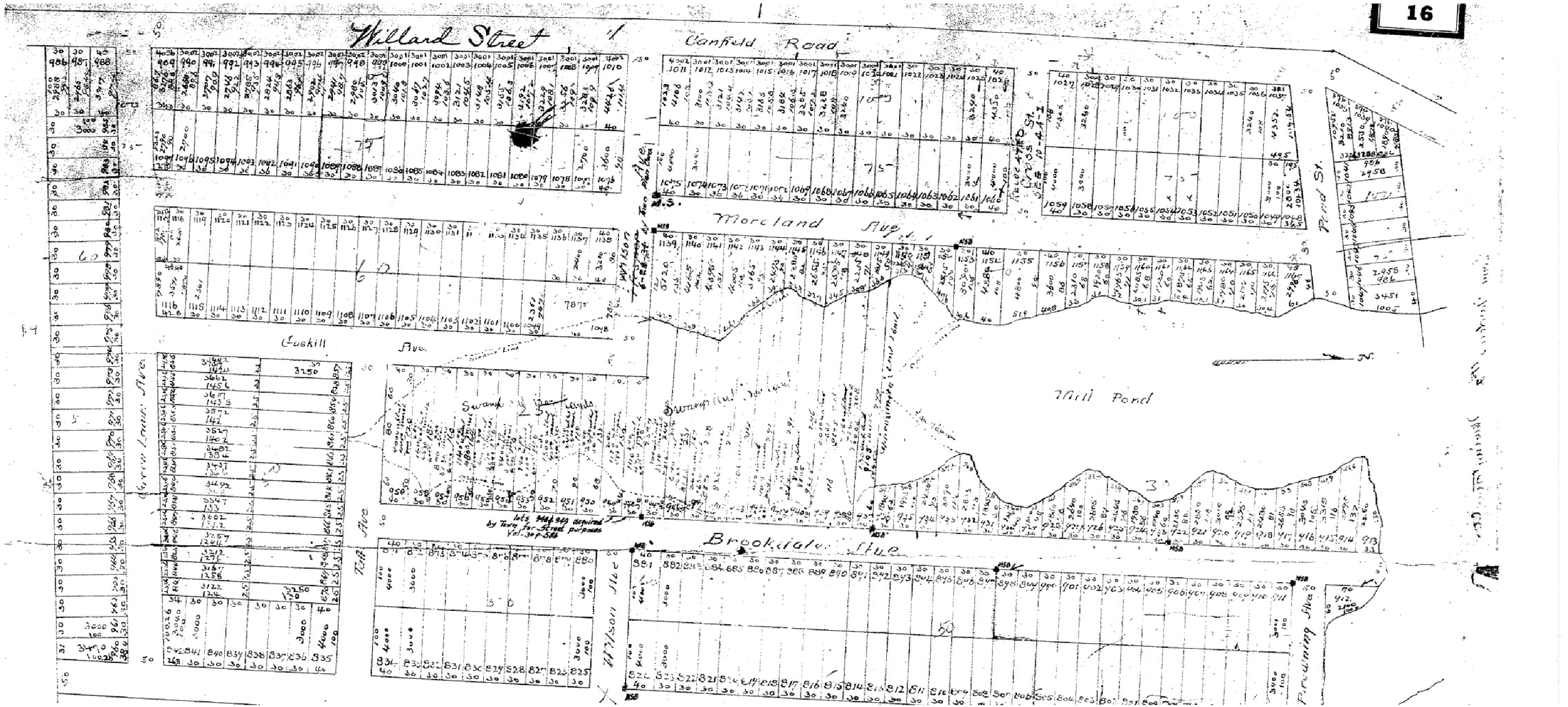







TRITON
PERMANENT MEDIA WATER FILTER
MODEL
TR-140
SERIAL
FILTER AREA:
FLOW RATE:
FILTER/BACKWASH
MINIMUM CLEARANCES:
VERTICAL
HORIZONTAL
HYDROSTATIC
TEST PRESSURE
MAXIMUM OPERATING
PRESSURE
MAXIMUM OPERATING
TEMPERATURE
INSTRUCTIONS
PAC•FAB, INC.



Appendix 02—Existing City Utility Mapping

NOT TO SCALE

PLAN
PROPOSED WORK - MILL POND PARK
NEWINGTON, CONN.
SCALE 1"=50' JULY 1941
PARK BOARD - ALNEBOK CHURCHILL
SHAUENAW

100-1A-26

Home Gardens

Mill Pond

Area to be developed

MILL ST

Home Gardens

DITCH 600'

Garfield St.

"HARTTLAWN"

BASE LINE

M/F HEIRS OF HENRY LUCAS

100-1A-26

H125

H126

H126

MILL POND

Water Level = 73.8 5-24-60

Edge of Pond

Anchor Post

Fence

BATH HOUSE

Retain for Swale Drainage

Limit of Project

Little League

Regulation

NOT TO SCALE

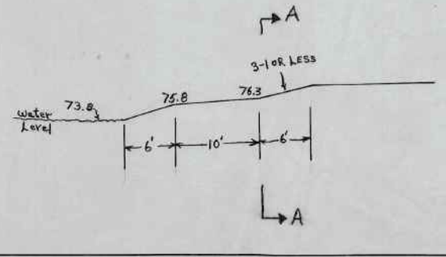
TOWN OF NEWINGTON

MILL POND PARK

GRADING PLAN

SCALE 1"= 50' MAY 1960

E.C. FRESEN, LAND SURVEYOR



MET. DIST. ELEV.

Suggest Grade : 82.3

Area 139,000 sq. ft ±

Quantity 6000 c.y. ±

H126

100-5-18

H126

100-5-18

H127

H127

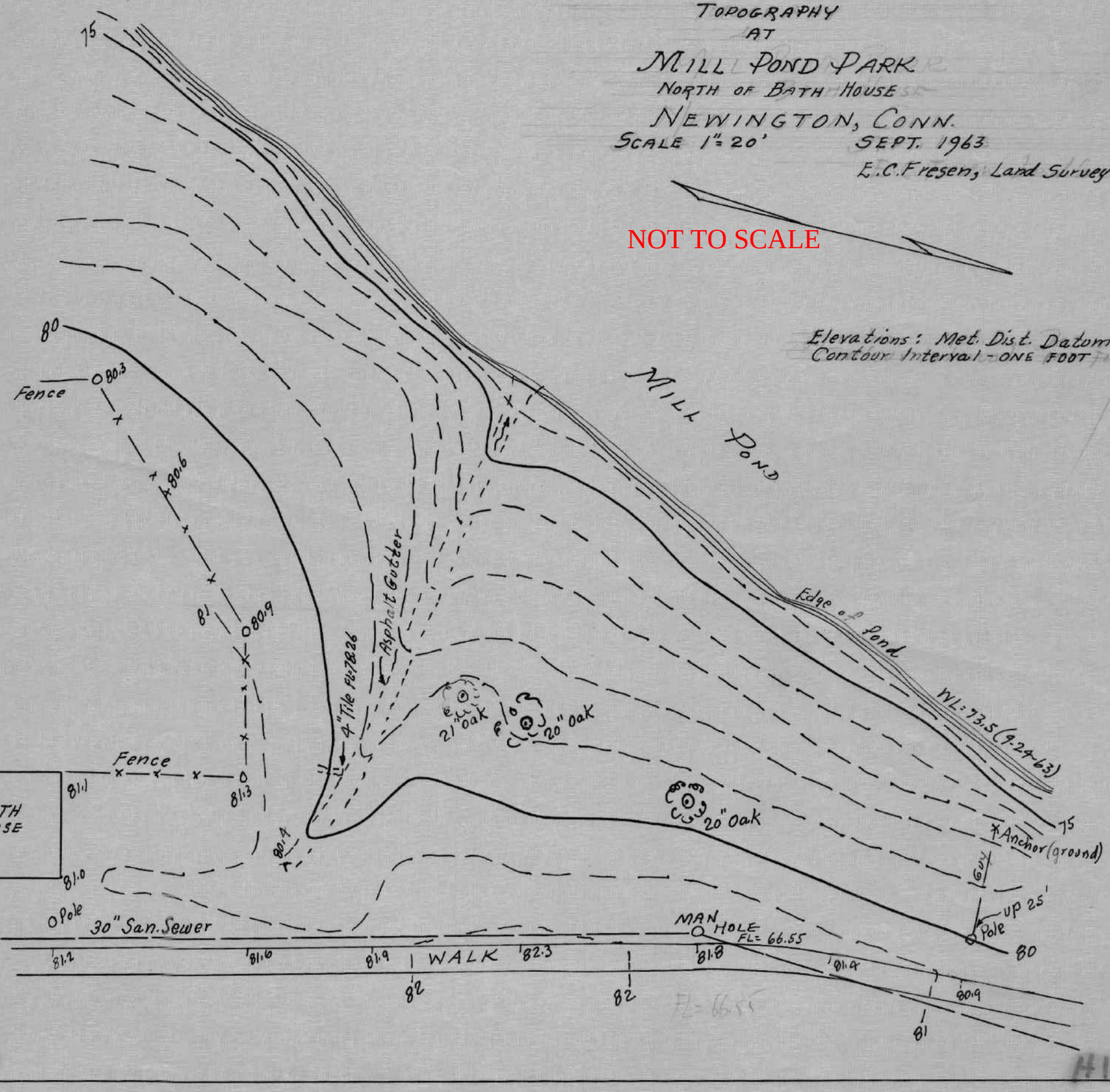
TOPOGRAPHY AT MILL POND PARK NORTH OF BATH HOUSE NEWINGTON, CONN.

SCALE 1"=20' SEPT. 1963

E.C. Fresen, Land Surveyor

NOT TO SCALE

Elevations: Met. Dist. Datum
Contour Interval - ONE FOOT



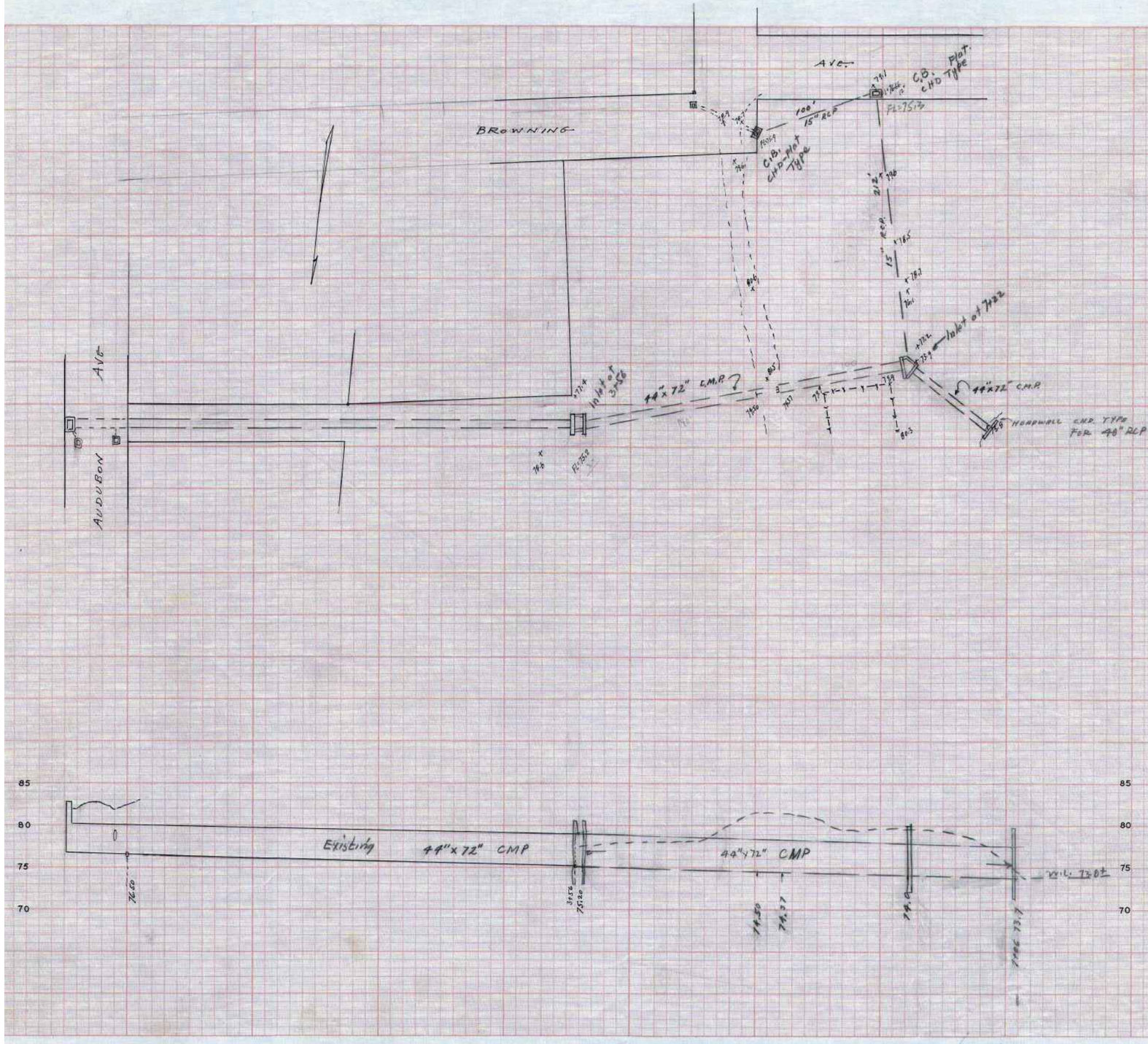
H127

H127

H12B

114-2-32

H12B



STORM SEWER

MILL POND PARK

NEWINGTON, CONN.

SCALES: HOR 1"=40'
VERT. 1"=6'

APRIL 1964

NOT TO SCALE

114-2-32

114-2-32

H12B

H130F

H130F

100-1A-22

WILLARD ST.

CROSS ST.

R.C. CATHOLIC CHURCH

POND ST.

MORELAND AVE.

"HOME GARDENS" #2

LOTS #1153 TO 1167 INCLU. VOL. 14 P. 575 - 576 - 586

MARSH

MILL POND

3.7 Ac.

SPILLWAY

8.3 ACRES
TOTAL POND ACREAGE

4.6 Ac.

MILL ST.

G. & H. CLEMENS

VOL 14 P. 579 - 14 - 581 - 16 - 639

LOTS #936 TO 928 INCLU.

BROOKDALE AVE.

HILLCREST AVE.

BROWNING ST.

19.0 ACRES (Land)
EXCLUDING LOTS

M. WELLS ET AL. TO THOS. GARVAN VOL. 16 P. 11

F. CARPENTER TO THOS. GARVAN VOL. 5 P. 782
D. TURNER TO THOS. GARVAN VOL. 5 P. 720
THOS. GARVAN TO GARVAN INC. VOL. 14 P. 573-9

H. LUCAS

BRISTOL LANE

TRULL LANE

"HOME GARDENS" #1

GARFIELD ST.

THOS. GARVAN INC.

MAP
PROPERTY OF
TOWN OF NEWINGTON
NEWINGTON, CONN.

PURCHASED FROM THOS. GARVAN INC.

SCALE 1"=100' JULY 1935

NOTE:- MAP BUILT UP FROM FERA ASSESSMENT MAP SURVEY, DEC. 1939 AND "HOME GARDENS" MAP #1 & 2 BY A.L. ELLIOT C.E. SEPT. 1912. ON FILE IN TOWN CLERKS OFFICE

NOT TO SCALE

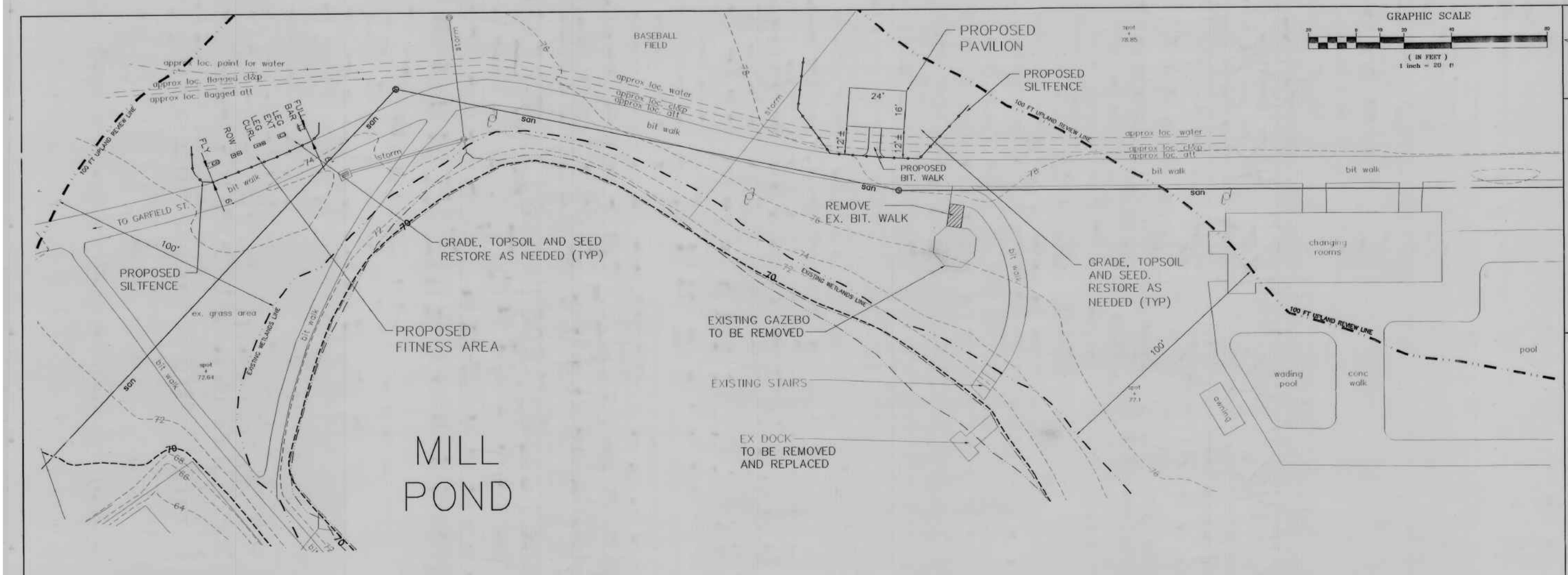
DRAWN ON FERA PROJECT 93-F2-21

Jas. C. Gilbert Adm.,
E. C. Fresen

100-1A-001

H130F

H130F



REVISIONS

TOWN OF NEWINGTON
ENGINEERING DEPARTMENT

SITE PLAN FOR
PAVILLION AND FITNESS AREAS
PREPARED FOR
TOWN OF NEWINGTON PARKS AND RECREATION
131 CEDAR STREET

DATUMS:
HORIZONTAL NAD 83
VERTICAL NGVD 29
F.B. # 13, P.XX
PROJECT 1400X
DATE 03/12/2014
DRAWN HD
CHECK CMG
SHEET 1 OF 1
SCALE: 1" = 20'

TOWN OF NEWINGTON
131 Cedar Street Newington, Connecticut 06111
Conservation Commission

John Salomone
Town Manager

Certified Mail No. – Picked up in person

"OFFICIAL NOTIFICATION OF ACTION"

March 17, 2014

Bruce Till
Director of Parks & Recreation
131 Cedar Street
Newington, CT 06111

Re: Application 2014-06AA
Mill Pond Park
Newington CT 06111

Dear Mr. Till:

I have reviewed the above-referenced application and find that it will not have any adverse impact or effect on the abutting wetland or watercourse. Therefore, under the provisions of Section 22A-42a(c)(2) of the Connecticut General Statutes, an Administrative Permit is hereby issued subject to the following conditions. A legal notice to that effect will be published on or about March 19, 2014.

1. This permit shall be valid for sixty (60) months from the date of this action.
2. This PERMIT SHALL AUTOMATICALLY EXPIRE if the proposed work has not been completed within two (2) years of the date site improvement commences or at the expiration of this PERMIT unless the Commission shall have previously extended this permit.
3. Permits are not transferable without the prior written consent of the Agency.
4. FAILURE TO COMPLY WITH ANY CONDITION REQUIRED BY THIS PERMIT SHALL AUTOMATICALLY REVOKE THIS PERMIT AND SUBJECT THE APPLICANT, HEIRS, SUCCESSORS AND ASSIGNS TO THE ENFORCEMENT AUTHORITY OF THE COMMISSION.
5. All conditions listed on this permit must be printed on the approved plan(s) within six (6) months of the report issued by the Commission. The annotated plan(s) must be presented to the Commission for signature by the Chairman within six (6) months of the report issued by the Commission; otherwise this permit is null and void.
6. Applicant will incorporate the "Official Notification of Action" onto original tracings.
7. When the actual field conditions differ from those asserted by the approved plans, the Town Engineer in consultation with the Chairperson may direct that certain modifications or amendments be made to accomplish the intent of this permit.
8. No regulated activity within the designated wetlands, watercourses, and/or buffer area shall be performed on the site until all soil and erosion control measures are installed in accordance with the plans and approved by the Town Engineer.
9. The Agency has relied in whole or in part on information provided by the applicant, and if such information subsequently proves to be false, deceptive, incomplete or inaccurate, the permit may be modified, suspended or revoked.
10. All permits issued by the Agency are subject to and do not derogate any present or future rights or powers of the Agency or the Town of Newington, and convey no rights in real estate or material nor any exclusive privileges, and are further subject to any and all public and private rights and to any federal, state and municipal laws or regulations pertinent to the subject land or activity.
11. In conducting the authorized activities, the permittee shall implement such management practices consistent with the terms and conditions of the permit as needed to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands and watercourses.
12. Hay bales or silt fencing may be used for sedimentation control.
13. All excess native soils, materials and natural debris generated from land preparation activity shall be removed from the property and disposed in accordance with law.
14. This permit is valid for wetlands only; additional approvals/permits may be required from other Town departments. It is the responsibility of the applicant to verify what other approvals/permits may be required for this project.

Please be advised that this permit is effective immediately, but the statutory appeals period does not expire until an additional fifteen days after a legal notice to that effect has been published.

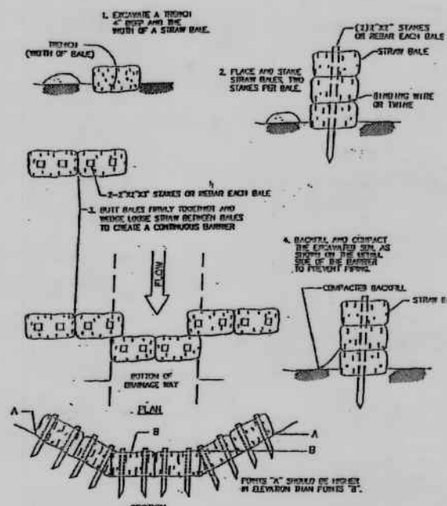
Yours truly,

Christopher Greenlee, P.E.
Agent

cc: Commission members
Douglas Jourdan, Chief Building Official
Craig Minor, Town Planner
Arthur Hanke, Zoning Enforcement Officer
file

Phone: (860) 665-8570 Fax: (860) 665-8577
www.newingtonct.gov

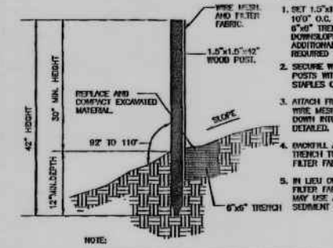
Phone: (860) 665-8570 Fax: (860) 665-8577
www.newingtonct.gov



NOTES:
1. HAY BALES SHALL BE MAINTAINED AND/OR REPLACED AS REQUIRED OR AS DIRECTED BY THE ENGINEER.
2. PLACE HAY BALES SUCH THAT TWINE OR BINDING WIRE IS PARALLEL TO THE EXISTING GROUND.

HAYBALE DETAIL
NTS

NOT TO SCALE



SILTFENCE DETAIL
NTS

LEGEND

- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- WETLANDS LINE
- UPLAND REVIEW LINE
- EXISTING CONTOUR (INTERVAL=2 FT.)
- OHW OVERHEAD WIRE
- CATCH BASIN
- UTILITY POLE
- TURF ESTABLISHMENT
- HAYBALES

APPROVED BY THE NEWINGTON CONSERVATION COMMISSION

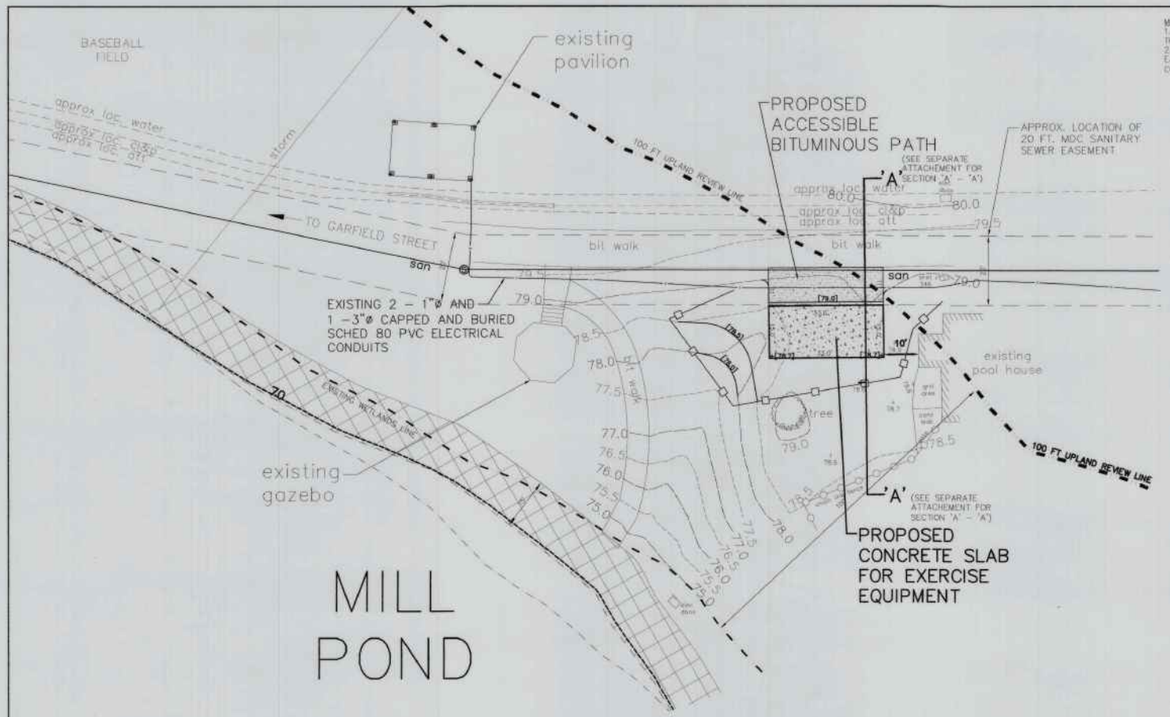
PETITION NO.: 2014-06AA

AT THE MEETING OF: 3/17/14

CHAIRMAN: [signature]

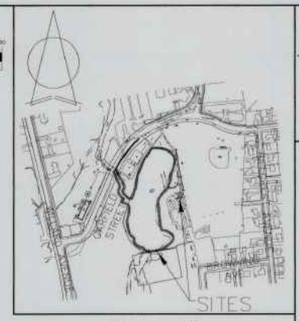
DATE: 3/24/14

732

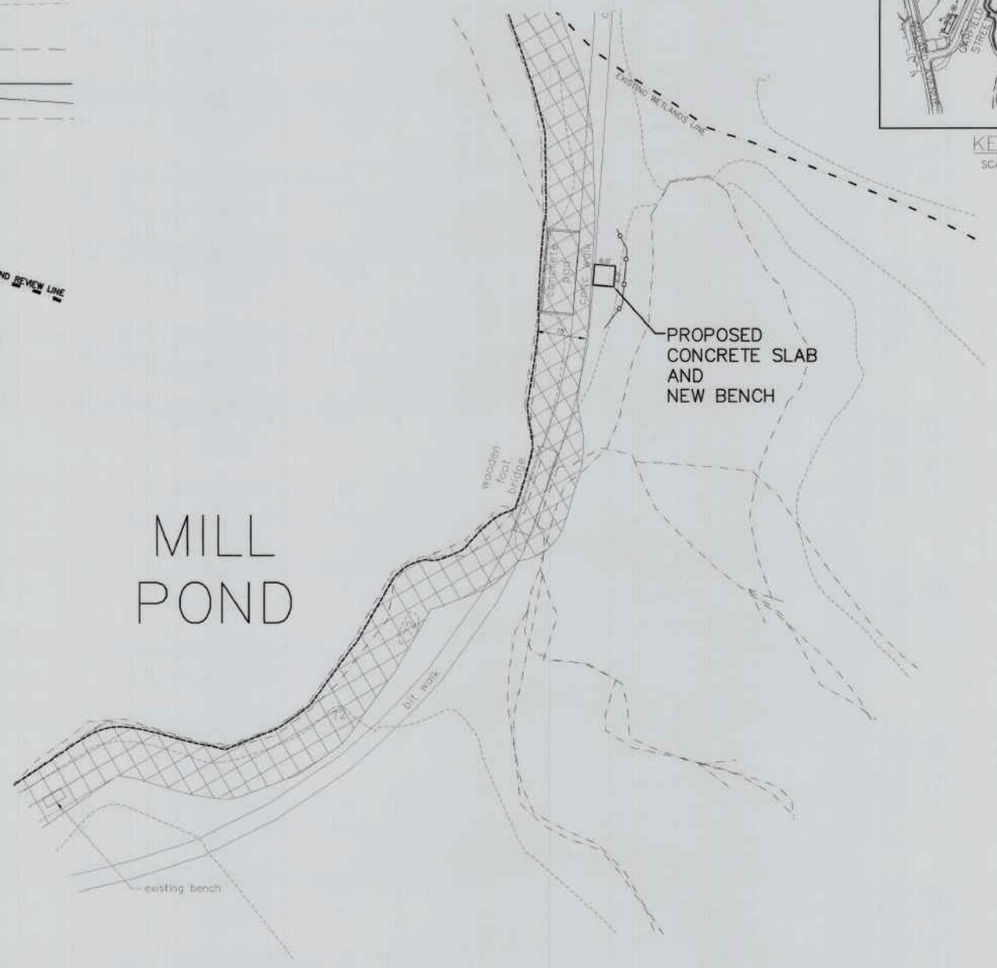


MDC NOTES:
1. AN MDC INSPECTOR MUST BE ON THE JOB SITE WHENEVER WORK IS BEING PERFORMED WITHIN THE SANITARY SEWER EASEMENT.
2. 48 HOURS PRIOR TO PERFORMING ANY CONSTRUCTION WITHIN THE MDC SANITARY SEWER EASEMENT, THE TOWN, ITS CONTRACTOR, SUBCONTRACTOR OR AGENT MUST NOTIFY THE MDC CONSTRUCTION DEPARTMENT AT (860) 278-7850, EXT. 3632.

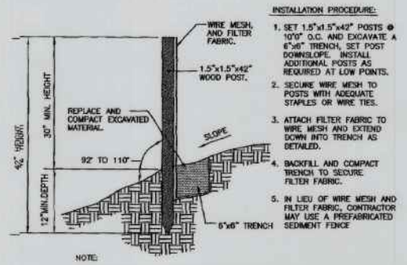
GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.



KEY MAP
SCALE: 1"=500'



NOT TO SCALE



INSTALLATION PROCEDURE:
1. SET 1.5"x1.5"x42" POSTS @ 10'0" O.C. AND EXCAVATE A 6"x6" TRENCH. SET POST DOWNSLOPE. INSTALL ADDITIONAL POSTS AS REQUIRED AT LOW POINTS.
2. SECURE WIRE MESH TO POSTS WITH ADEQUATE STAPLES OR WIRE TIES.
3. ATTACH FILTER FABRIC TO WIRE MESH AND EXTEND DOWN INTO TRENCH AS DETAILED.
4. BACKFILL AND COMPACT TRENCH TO SECURE FILTER FABRIC.
5. IN LIEU OF WIRE MESH AND FILTER FABRIC, CONTRACTOR MAY USE A PREFABRICATED SEDIMENT FENCE

NOTE:
SEDIMENT FENCE IS TO BE CHECKED AFTER EVERY STORM EVENT AND/OR ONCE EVERY TWO WEEKS (MIN.)

SILTFENCE DETAIL
NTS

LEGEND

- EXISTING EDGE OF PAVEMENT
- WETLANDS LINE AS DELINEATED ON T.O.N. MAPPING
- UPLAND REVIEW LINE AS DELINEATED ON T.O.N. MAPPING
- EXISTING CONTOUR
- EASEMENT LINE
- CHAIN LINK FENCE
- SANITARY MANHOLE
- UTILITY POLE
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- HAYBALES
- SILTFENCE
- DECIDUOUS TREE

APPROVED BY THE NEWINGTON CONSERVATION COMMISSION
PETITION NO.: 2016-19
AT THE MEETING OF: 1/17/17
CHAIRMAN: [signature]
DATE: 1/19/17

TOWN OF NEWINGTON
131 Cedar Street Newington, Connecticut 06111
Conservation Commission

Tanya D. Lane, Town Manager
Christopher Grosskopf, P.E., Town Engineer

CERTIFIED MAIL: **HAND-DELIVERED** January 18, 2017

"OFFICIAL NOTIFICATION OF ACTION"

William DeMaio
Town of Newington
Parks & Recreation
131 Cedar Street
Newington, CT 06111

Re: **Application No. 2016-19, 123 Garfield Street, Newington, CT 06111**

Dear Applicant:

The Newington Conservation Commission, at its meeting of January 17, 2017, voted to issue you a permit by Summary Ruling to conduct certain regulated activity(ies) at the subject location. Issuance of this permit is subject to the following conditions and/or modification which are considered to be safeguards to bring the proposed activity or activities into compliance with the purpose of the regulations and statutes governing wetland and water course activities:

1. This permit shall be valid for sixty (60) months from the date of this action.
2. This PERMIT SHALL AUTOMATICALLY EXPIRE if the proposed work has not been completed within two (2) years of the date site improvement commences or at the expiration of this PERMIT unless the Commission shall have previously extended this permit.
3. Permits are not transferable without the prior written consent of the Agency.
4. FAILURE TO COMPLY WITH ANY CONDITION REQUIRED BY THIS PERMIT SHALL AUTOMATICALLY REVOKE THIS PERMIT AND SUBJECT THE APPLICANT, HEIRS, SUCCESSORS AND ASSIGNS TO THE ENFORCEMENT AUTHORITY OF THE COMMISSION.
5. All conditions listed on this permit must be printed on the approved plan(s) within six (6) months of the report issued by the Commission. The annotated plan(s) must be presented to the Commission for signature by the Chairman within six (6) months of the report issued by the Commission; otherwise this permit is null and void.
6. Applicant will incorporate the "Official Notification of Action" onto original tracings.
7. When the actual field conditions differ from those asserted by the approved plans, the Town Engineer in consultation with the Chairperson may direct that certain modifications or amendments be made to accomplish the intent of this permit.
8. No regulated activity within the designated wetlands, watercourses, and/or buffer area shall be performed on the site until all soil and erosion control measures are installed in accordance with the plans and approved by the Town Engineer.
9. The Agency has relied in whole or in part on information provided by the applicant, and if such information subsequently proves to be false, deceptive, incomplete or inaccurate, the permit may be modified, suspended or revoked.
10. All permits issued by the Agency are subject to and do not derogate any present or future rights or powers of the Agency or the Town of Newington, and convey no rights in real estate or material nor any exclusive privileges, and are further subject to any and all public and private rights and to any federal, state and municipal laws or regulations pertinent to the subject land or activity.
11. In conducting the authorized activities, the permittee shall implement such management practices consistent with the terms and conditions of the permit as needed to control storm water discharges and to prevent erosion and sedimentation and to otherwise prevent pollution of wetlands and watercourses.
12. Hay bales or silt fencing may be used for sedimentation control.
13. This permit is valid for **wetlands only;** additional approvals/permits may be required from other Town departments, State or Federal agencies. It is the responsibility of the applicant to verify what other approvals/permits may be required for this project.
14. The applicant's horticulturists in consultation with the wetland agent shall field identify and flag vegetative species to be saved prior to maintenance operations commencing.
15. The primary maintenance shall be located on the easterly side of the pond commencing at the wooden (inlet) bridge northerly to the outlet structure at the bus garage parking lot.
16. Maintenance shall be performed on the remaining perimeter of the pond to keep the pathway unobstructed.

Please be advised that the effective date of the permit and final day for appeal of the Commission action will be **February 6, 2017.**

Please have your engineer affix this letter on to the original tracing (s) and submit the original tracing (s) to this office for signing by the Chairman of the Commission. The permit does not become valid until the tracings are signed.

Very truly yours,

Christopher Grosskopf, P.E.
Town Engineer

Note: This letter is to serve as your "Official Notification of Action" to conduct the proposed activities.

cc: Craig Minor, Town Planner
Douglas Jourdan, Chief Building Official
Michael D'Amato, Asst. Town Planner/ ZEO

Phone: (860) 665-8570 Fax: (860) 665-8577
www.newingtonct.gov

(860) 665-8570 Fax: (860) 665-8577
www.newingtonct.gov

REVISIONS:
- 1/30/2016 – Concrete slab location
- 12/01/2016 – Cross section
- 01/04/2017 – Remove 15 ft. Hatching
- 01/05/2017 – New Bench Location. Changed to one sheet
- 01/13/2017 – Add 15 ft. Hatching
- 01/19/2017 – Notification of Action

TOWN OF NEWINGTON
ENGINEERING DEPARTMENT

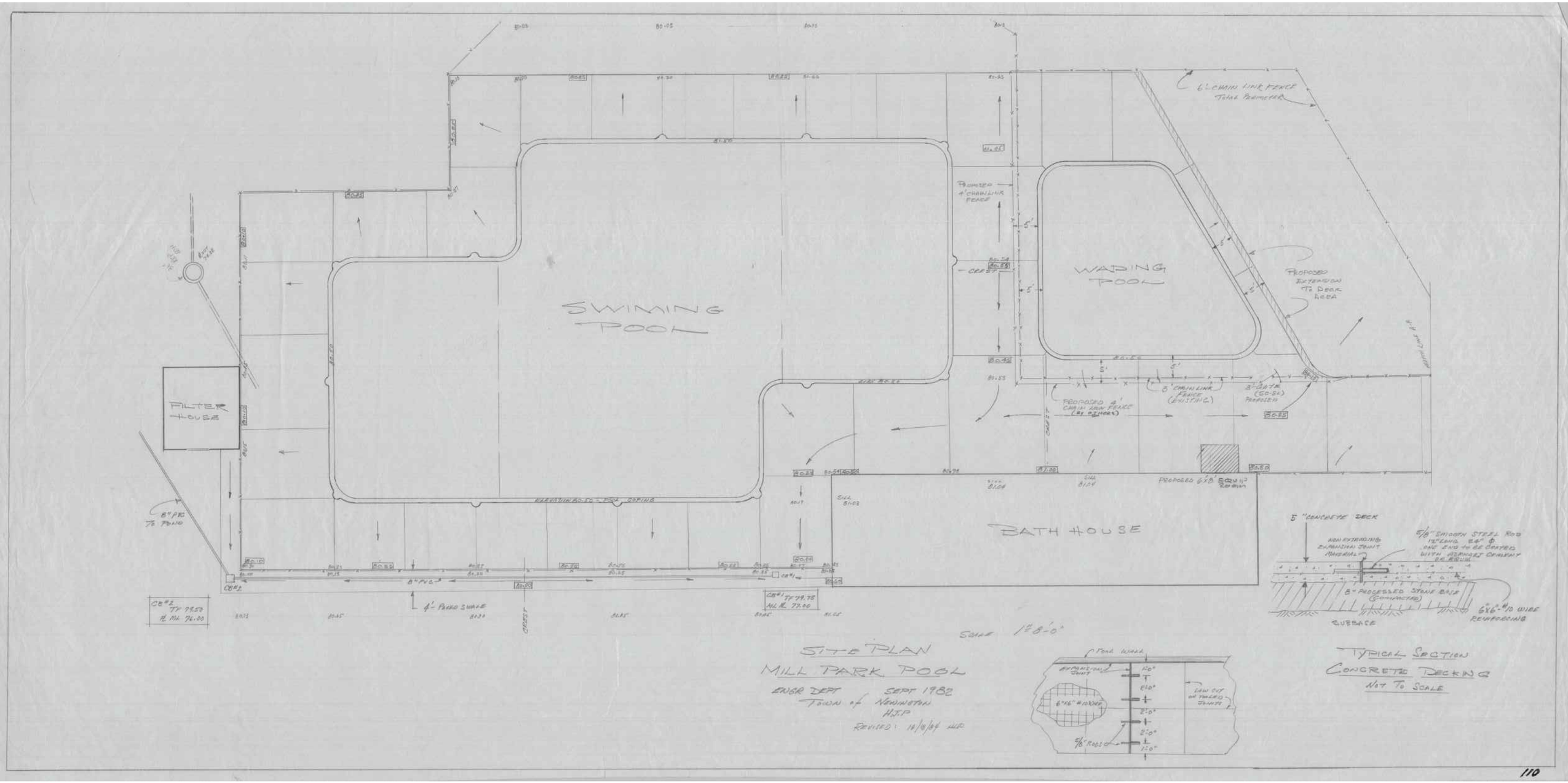
SITE PLAN FOR
EXERCISE AND VIEW AREAS
INLAND WETLAND APPLICATION # 2016-19

PREPARED FOR
TOWN OF NEWINGTON PARKS AND RECREATION
131 CEDAR STREET NEWINGTON, CT 06111

DATUMS:
HORIZONTAL NAD 83
VERTICAL NGVD 29

F.B. # 115, P. 28
PROJECT 16006-Garfield St-Mill Pond
DATE 12 / 09 / 2016
DRAWN JHD
CHECK CMG
SHEET 2 OF 2
SCALE: 1" = 20'

803 B



SITE PLAN
MILL PARK POOL
ENGR DEPT SEPT 1982
TOWN of NEWINGTON
HJP
REVISED: 10/18/84 HJP

SCALE 1"=8'-0"

TYPICAL SECTION
CONCRETE DECKING
NOT TO SCALE

NOTES:

REVISIONS

DTC

2321 Whitney Avenue - Hamden Center II - Hamden, CT 06518
Ph: 203 336 4200 Fax: 203 234 7376
www.dtcarchs.com

Newington
Town Hall

131 Cedar Street
Newington, CT

SITE PLAN

DTC PROJECT NUMBER: 16341
DTC DRAWING FILE:
SCALE: AS SHOWN | DRAWN BY: GM
DATE: 7/10/2017 | CHECKED BY: GC
SHEET: C.1

Town Hall Front & Rear Entrance

Newington Municipal Center | June 14th, 2017

COMMUNITY CENTER

Newington Municipal Center | June 14th, 2017

Appendix 03—Approved Referendum Site Plan of Town Hall Complex

M E M O R A N D U M

November 12, 2018
Updated March 2020
Mill Pond Park – Preliminary Master Plan Summary

To: William A. DeMaio, CPRP – Newington Superintendent of Parks and Recreation
From: Michael P. Fortuna, AIA
Copy: file

Re: Mill Pond Park Preliminary Master Plan – March 2018

Bill,

The Mill Pond Park Preliminary Master Plan, prepared by TLB Architecture, LLC in March 2018 is intended to help guide the future development of the Park. Particular emphasis was placed on the swimming pool and bathhouse, as they are known to be in failing condition and in need of substantial renovation or complete replacement. Over the course of several walk-throughs of the Park and meetings with Town Staff, a conditions assessment of existing park amenities and structures was completed, a program of requirements developed and several options for potential renovations were presented.

After much discussion, an option was selected and further developed to present to the Town, along with Probable Project Costs. The Plan allows for phasing of the project with the greatest emphasis on the highest priority programs. The currently planned Town Hall and Community Center construction also provides an opportunity to enhance the functionality, appearance and safety of Garfield Street. A recently received grant will provide solar lighted crosswalks to link the Community Center with the Park, which further enhances synergies for recreation programs, pedestrian patterns and vehicle parking.

The goal of the Preliminary Master Plan is not necessarily for the Town to "approve" the Plan, but to accept the Plan as a living document to guide development. As needs and priorities change, so too must the Plan. The composition of the plan also allows for a phased construction, as both a tool to control budget outlays, but also as a practical matter to ensure minimal disruption of Park programs.

Overall Park Conceptual Plan:

The large existing spaces that define the geometry and natural features of the Park, including the Pond and Mill Brook, the Baseball Field and the Soccer Fields remain in their current location. The existing playground, known as "Our Children's Place", also remains in its current location.

The proposed plan groups other functions by type and uses. Court sports are reconfigured in the general location of the existing tennis courts. The Pool facility is located on Garfield Street, across the street from the planned recreation center.

This approach works well with Camp and other recreational programs offered across the street and provides good access to parking and alignment of crosswalks with new curb cuts.

This plan also preserves open park space in the center of the Park by moving "constructed" program closer to the public street.

Access to utilities and good visibility for security are also key benefits of this plan, as it relates to the Pool.

This location contributes to the "complex" of Town facilities being developed at the site across the Street, as approved at the referendum in November 2017.

This scheme also allows easier phasing of improvements, because the placement of the pool and bathhouse near the street does not displace any other program elements, resulting in minimal disruption to current Park activities during construction.

Key Elements of the Design:

- Create a recognizable streetscape at the edges of the Park that abut public streets.
- Establish recognizable Gateways at Park entrance points.
- Protect wetlands and bio-diversity within the Park
- Link Park to active and passive recreation opportunities around the Park.
- Respect buffers to neighbors with regard to noise, lighting, parking and activity.
- Do not modify topography or install improvements in the Floodway or the Floodplain

The Master Plan Document details various aspects of the proposed design. Subject to further review, the Park Renovation is contemplated as two phases, with primary elements as described below:

Phase 1:

The focus of Phase 1 is to complete the highest priorities, accomplish the work along Garfield Street and complete the programmatic spaces that link to the new Community Center programs. Specifically, these are as follows:

A. Swimming Pool and Splash Pad:

The proposed swimming pool and splash pad provides a variety of aquatic programs, water depths and activities for swimmers of all ages and abilities.

The main swimming pool incorporates a zero-depth entrance with water spray features, a six-lane, 25-yard lap pool, ranging in depth from 3'-6" to 5'-0" and a deeper end incorporating a water slide, aquatic climbing walls and a 1-meter diving board, as well as competitive diving stands for training.

Adjacent to the pool is an aquatic splash pad, with a variety of water spray features. This splash pad

would operate with a touch-button bollard, so it can be activated only when in use saving significant water and energy costs. A significant reduction in staffing expenses can also be realized when compared to a swimming pool, as lifeguards are not required.

The bathhouse building design would complement the new construction on Garfield Street and contribute to the overall development.

The pool area would be enclosed by fencing and would include lawn areas, hard decks, shade structures and plantings to provide comfortable space for extended visits.
Adjacent to the swimming pool is a soft-paved, fenced in play area to allow summer camp children the opportunity to move outdoors from the Community Center across the street.

The bathhouse includes Locker and Shower Rooms, Special Needs / Family Changing Rooms, Lifeguard Office, First-Aid Room and ample Storage.

Pool decks surround the pool and are more generous in areas where patrons will tend to gather. Separate lawn areas are provided to attract swimmers for longer periods of time.

Trees and shade structures should be provided in strategic locations to provide protection from the sun and visual buffers between the pool area and the Park as a whole. The entire pool must be enclosed by fencing.

Once completed, the existing pool and bathhouse can be demolished, and the site returned to open park space.

B. Soft-pave Playground Surface:

Adjacent to the pool and splash pad area, a soft-paved play area is proposed as an extension to indoor play areas at the Community Center and for general use during unprogrammed times. This area is enclosed by fencing for security of organized groups, and due to proximity of the play area to the pool and pond. This area will be used by preschool children during the school year and for youth campers during the summer. It will also provide space for VIPs during special event in the Spring through the Fall.

C. Baseball Field and Open Space, Northeast:

The baseball field currently occupies a significant portion of the Park's open space, northeast of the pond. It is used by High School Baseball, Youth Baseball leagues and Adult Sports leagues. The field is in generally good condition, requiring typical maintenance to the pitcher's mound and the lip between the infield and outfield.

The backstop and team benches are reaching the end of their useful life and replacement is planned for player safety and functionality.

The open space between the baseball field and Garfield Street is used for unprogrammed activities much of the year but is also the space occupied by events such as The Life. Be in it Extravaganza, Motorcycle Madness and similar community organized events. The Master Plan anticipates that this space will be graded and striped (as needed) for Flag Football, Ultimate Frisbee and Soccer.

Phase 2:

The completion of Phase 1 allows the demolition of the existing pool and bathhouse, and makes space for other park improvements, as follows:

A. Court Sports:

Active participation in a variety of Court Sports, including Tennis, Basketball, Sand Volleyball, Pickleball and Bocce are planned.

The relocation of the Saputo Fitness Center and the MDF Drinking Fountain from the area of the existing pool bathhouse complements programming for this area of the park. A small building is planned for storage of equipment necessary for this area.

This existing toilet building and concessions adjacent to the courts and playground provides needed amenities for this area of the park.

As this is anticipated to be a heavily used area, access to existing parking infrastructure is available. Direct access to walking trails to complement the recreational and fitness aspects of the activities is also in close proximity.

B. Area Adjacent to Mill Pond:

Mill Pond plays a significant role in the layout and the identity of the Park. A goal of the master Plan is to use the Pond to organize activities and provide meaningful active and passive recreation.

Existing walking trails remain and are extended to provide a walkway along Mill Brook, south of the pond. Bridges are replaced for vehicle access to enhance maintenance and public safety.

At the west side of the pond, there is a significant drop off in grade, near the walking trail, down to the bus yard. Railings and plantings should be added here to provide safety for walkers.

A new bandshell in the location of the removed swimming pool and adjacent to the pond, takes advantage of the natural grade of the site, to provide an amphitheater type landscape. This can be left natural or be more formalized with tiered seating. An overlook at the Pond's edge provides an additional passive recreational opportunity. Should the Town consider access to the water for activities such as kayaking, canoeing or paddleboats, a dock can be added to facilitate these activities.

Development Common to, and Distributed Between Both Phases:

A. Walking Trails and Parking:

Existing walking paths are maintained, and additional paths proposed to provide a variety of distances and types of experiences. Trail maps and markings can be used to identify short walks of 1/3 or 1/2 mile and longer walks of up to 1 1/4 mile. Defined trails can be combined to lengthen the walk.

The experience varies from the more natural Brook Loop and Pond Loop to walks along the roadway.

Existing connections to the lower park area at the base of the falls is maintained, utilizing existing stairs for access.

To provide additional parking, without taking space from the Park, a number of smaller parking lots have been proposed at locations that provide access points to the park at specific program areas, including the following:

a. A parking area and drop-off zone is added at the intersection of Browning Avenue and Hillcrest Ave. on a small parcel of land, owned by the Town.
b. A parking area adjacent to the park at the lower level near the base of the falls provides access to that area, away from the main park.
c. A small parking lot is improved at the end of Brookdale Ave., which is a dead-end road. At the intersection of Brookdale Ave. and Wilson Ave. a small lot is added that can serve trail-head access to the newly proposed water woods walk. Improvements are also proposed at the existing parking lot at the intersection of Moreland Avenue and Cross Street.

Opinion of Cost:

The Opinions of Probable Construction Cost on the following pages are broken down by specific area of the Park and does not necessarily relate to individual Phases of the Work.

Factors affecting costs of any defined phase of work include economies of scale, temporary protection and controls, mobilization costs, access to the site, escalation and labor & material costs at the time of the Work.

Included in the Opinions of Probable Construction Cost are the following multipliers:

General Conditions:	8%
Overhead and Profit:	8%
Design Contingency:	10%

All costs in the attached Opinion of Probable Cost, dated November 12, 2018, are escalated to reflect construction in 2019-2020, anticipating the mid-point of construction in June 2020. We have anticipated escalation costs to be 4 ½% per year.

A logical phasing plan might include completion of proposed improvements at the north side of the site, along Garfield Street in conjunction with the Community Center and Town Hall as Phase 1. Phase 2 would be enabled by the relocation of the pool and the improvements to park access and parking which would be completed in the earlier phase. Several factors will need further evaluation, but an allocation of approximately $8M for Phase 1 and $4M for Phase 2 seems to be viable.

Z:\2017.00 Projects\2017-035_Mill Pond Park Master Plan - Newington\Master Plan Summary of Phasing_March 2020.docx

TLBA

www.tlbarchitecture.com