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## Executive Summary

### Background

The planning, feasibility and demonstration of the future potential of the Greenwood Memorial Pool and Bath House was the purpose of this study. This report contains a feasibility assessment and business plan for the facility.

The report focuses on the feasibility of continued operations and sustainability of the pool facility. Evaluation of the ability of the community to support the pool financially is included in the business plan. The feasibility and probable cost of rehabilitating the building as an aquatic center as well as other diverse community uses was studied.

### History\*

The Greenwood Memorial Pool and Bath House in Gardner have been named one of Massachusetts' "Most Endangered Historic Resources". In the 1910s, Levi Heywood Greenwood, a member of one of Gardner's industrial families, made the decision to build a bathhouse as a gift to the City, and the official opening day was July 6, 1915. At a time when many residents did not have reliable access to indoor water, the pool provided a place to wash. It was also space for community recreation, allowing the city to run year-round swim programs. In addition to providing a maintained and staffed swimming space in the summer, the outdoor pool served as an ice rink in the winter. For years, the pool was used for competitions, and was the practice space for the Gardner High School swim team and home of the private Greenwood Memorial Swim Club.

In 2012 the City made the difficult decision to close the indoor pool due to a lack of funds to maintain the facility, and more significantly, due to an engineering report indicating deteriorating conditions which could potentially be dangerous to staff, occupants and users of the indoor pool. The outdoor pool remains open; in 2015 an outdoor spray park was added to the site.

\* History excerpted from City's original RFQ.

### Findings

- Building Foundation:* The foundations are in serviceable condition. Water infiltration and damaged concrete observed. Foundations can be easily repaired.
- Roof Structure:* Repairs and modifications are required to the perimeter walls, roof trusses, and balcony assembly but are serviceable and can support continued use or reuse of the facility.
- Building Envelope:* Moisture entering the perimeter walls has caused the majority of damage that is visible on the exterior of the building. Exterior walls require repointing, particularly the lower sections of the wall. As part of a reuse program, particularly as a pool, insulation needs to be introduced on the interior surface of the exterior walls to provide better thermal and moisture (condensation) control.
- Roofing:* The existing roofing must be replaced. This work must be performed in conjunction with dormer repairs, wood eave repairs, skylight replacement, decorative copper ventilator repairs/restoration, and structural repairs at the failed section of roof on the northwest corner of the pool space.
- Windows and Doors:* The metal windows and glass block glazing require repair in order to provide additional service life. The upper dormer windows must be replaced. Exterior exit doors must be replaced.

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- Interior Construction:* The locker room work and accessibility upgrades performed in 2006 meet code and can be salvaged and reused as part of a renovation program. As previously noted, the interior balcony requires structural repairs and the main pool space must receive insulation on the exterior walls. The lobby contains unique “character defining” historic features and must be preserved as minor modifications are needed for additional accessibility upgrades and upgrades to the MEP systems.
- Vertical Access:* Public use of the second level and pool space balcony requires an elevator or lift to provide access. Once at the second level, additional measures would be needed to provide access to the side offices and balcony. The amount of public space that could be created did not justify the installation of an elevator.
- Second Floor Space:* The second floor space above the main lobby provides an ideal location for mechanical equipment, storage, and staff area that would be needed to support a renovated swimming pool or large multi-use space. The second level has access from the main open stair and a narrow service stair that contains many winders. The exposed fire escape at the rear of the building requires repair and reattachment to the building. At least an enclosed fire stair would be needed to provide public access to the second floor.
- Building Expansion:* The building sits within 50 feet of Crystal Lake, classified as a great pond, and would require permitting under Chapter 91. Given the proximity to the pond, expansion of the building, including expansion towards the street, are not practical.
- Swimming Pool:* The swimming pool could be renovated in its current configuration or easily reconfigures within the existing pool footprint to provide other programming opportunities. The piping between the pool, main drains and filtration system has failed; the pool filtration equipment is not in serviceable condition.
- MEP Systems:* The existing heating and ventilation systems have failed and were not adequate for a swimming pool facility. The natatorium lacked proper ventilation and dehumidification. Ventilation of the locker room spaces are through fans directly connected to the exterior with no energy recovery. The basic plumbing to the toilet and showers is serviceable but would require closer inspection because of their lack of use since 2012. The electrical service would need to be upgraded to accommodate the additional load of mechanical equipment. A renovation would require installation of an automatic fire protection (sprinkler) system.

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## Market Assessment

Ballard\*King & Associates (B\*K) as a subcontract of BH+A has been hired to determine the future use of Greenwood Pool, located in Gardner, MA. The following is a summary of the demographic characteristics of the City of Gardner and the Primary Service Area.

B\*K accesses demographic information from Environmental Systems Research Institute (ESRI) who utilizes 2010 Census data and their demographers for 2016-2021 projections. In addition to demographics, ESRI also provides data on housings, recreation, and entertainment spending and adult participation in activities. B\*K also uses information produced by the National Sporting Goods Association (NSGA) to overlay onto the demographic profile to determine potential participation in various activities.

**Service Areas:** Greenwood Pool is in the City of Gardner and improvements to the facility will be the responsibility of the City. As such, the City has been identified as the immediate area around the facility. Because of the geographic location of the pool and the population concentration of the City of Gardner a larger Primary Service area of a 20-Minute Drive Time has been identified.

*Primary Service Areas* are defined as the distance people will travel on a regular basis (a minimum of once a week) to utilize recreation facilities. Use by individuals outside of this area will be much more limited and will focus more on special activities or events.

### Demographic Summary

The following summarizes the demographic characteristics of the service areas.

Depending upon the size and scope of the redevelopment of Greenwood Pool it would require more than the population within the City of Gardner to support the facility. The population within the Primary Service Area is adequate, but the presence of alternative service providers must be acknowledged and accounted for.

The median age for the City, Primary Service and State are all higher than the National number. This point to a population with older children and significant retirees. As such any recreation facility, aquatic or non-aquatic, needs to have a multi-generational focus.

The City of Gardner experienced a decrease in population in between the 2000-2010 Census while the Primary Service Area experienced minor growth. These demographic trends points to consistent population, but one that should not expect significant expansion or increase in participation.

The median household income within the City and Primary Service Area could create challenges if the City wants the proposed facility to operate at a breakeven level.

### Market Programming Recommendations

It is the opinion of B\*K that the City of Gardner has two options as they consider options with the Greenwood Pool location.

1. If the City is obligated to keep the facility as a pool, B\*K would recommend the pool be a warm water therapy pool.
2. If the City is not obligated to keep the facility as a pool, B\*K would recommend the facility is developed into a multi-purpose gymnasium

### Warm Water Therapy Pool

There are a significant number of lap pools and swimming opportunities within the Primary Service Area identified for the study. The bulk of those lap pools keep their water temperature in the low 80s which is beneficial for lap swimming, competitive swimming and some swim lessons. B\*K was not able to identify a warm water therapy pool in the service area.

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*Pool Size & Shape:*

- The city should consider a rectangular shaped pool, but not the standard 25Y length.
- Shortening the pool and increasing the deck space should be a priority.
- The pool should have a zero-depth ramp entry to the water with handrails on either side.
- The pool depth should range from 4-5 feet.
- The pool should be equipped with in-water bench seating along the opposite side of the ramp entry of the pool.
- The pool should be equipped with an ADA accessible lift.
- Water temperature should be maintained between 86-88 degrees. Non-Pool Amenities:
- There should be ADA accessible locker rooms in the facility.
- Inclusion of a first aid/lifeguard/aquatics coordinator office would be important.
- Storage for programming equipment. Programming Opportunities:
- Development of a warm-water therapy pool fills a void within the market and creates opportunities to partner with local health care and physical therapy providers.

Such a facility would also create opportunities for individuals with disabilities that benefit from in-water therapy. The City of Gardner has a significant number of older adults and retirees. Introducing warm water exercise classes to this population would be well received. Outside of the adults and retirees the warm water nature of the facility would allow for various levels of swim lessons to take place. Using the American Red Cross program as an example such a facility could address the needs of infant, parent-tot, preschool, level 1 and level 2 programs all of which would appreciate warmer water

**Multi-Purpose Gymnasium or Meeting Rooms**

The primary service area is experiencing a gymnasium shortage like what B\*K has witnessed across the country. As the quantity of programming done by schools increases the availability of gymnasium space for non-school athletics and other programming has decreased. Based upon time on site and conversations with stakeholders the City of Gardner is experiencing a similar shortage. If the City of Gardner is not obligated to the development of a pool, B\*K would recommend converting the Greenwood Pool into a multi-purpose gymnasium. The design team recommends the following:

- Maximizing the floor to accommodate as large of a gym floor as possible.
- Mounted basketball hoops that can be raised when not in use.
- Cores for volleyball goals to maximize the programmability of the space.
- A traditional wood basketball floor, but rather a multi-purpose court that could host a variety of activities.

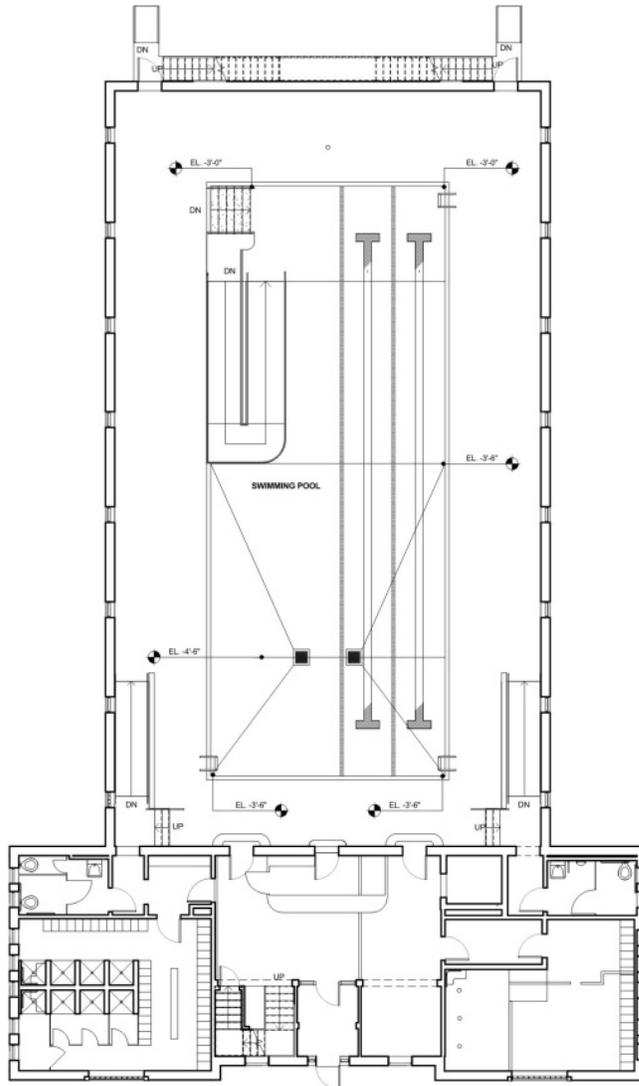
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## Design Options

**Option A:** Restore facility to its original use. This option includes the complete the interior and exterior renovation of the building and maintains the existing pool configuration. The option repairs and abandons the balcony above the pool and repairs the second level of the building to accommodate new MEP equipment, storage and service support.

**Option B (Ballard\*King Option 1):** This option will reconfigure the existing pool into a warm water pool that can be used for therapy, water exercise and lap swimming. New gunite will be placed within the existing tank to shallow-up the deep end of the pool and create a ramp and steps.

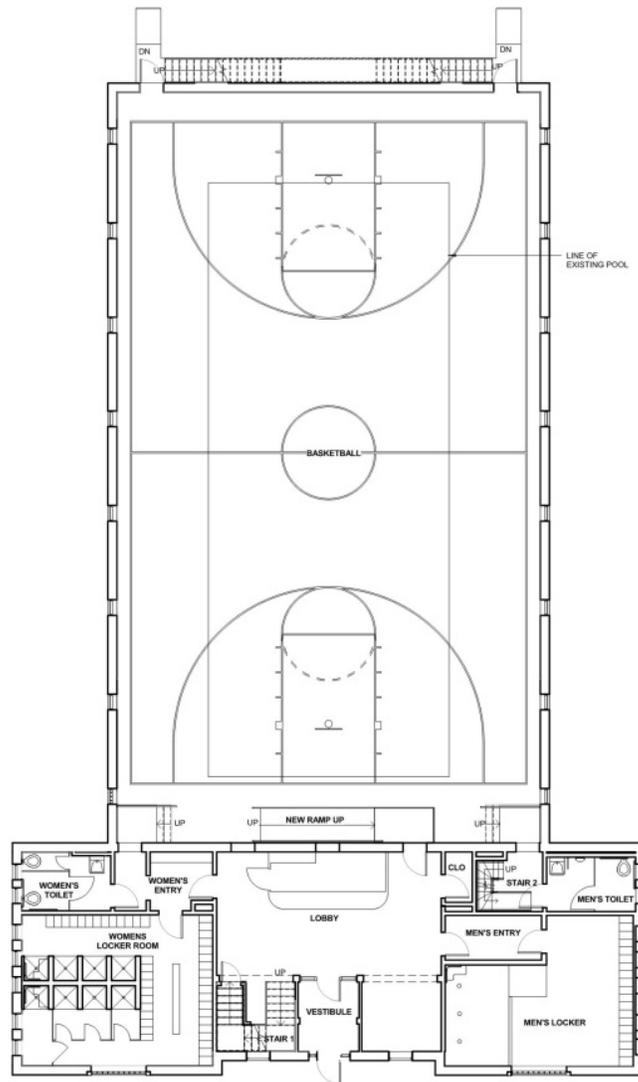
- Pool will be maximum of 4'-6" at the main drains
- Two lap lanes will be marked along one edge of the pool.
- Lane lines will be removed to provide a large 1,200 SF exercise/therapy area in the pool



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**Option C (Ballard\*King Option 2)** In lieu of a pool program, the swimming pool would be filled in and the space would be provided with a multi-use floor surface. The former pool space could be used for basketball, volleyball, Futsol, pickle ball, lecture style seating, banquet seating, and small trade shows

Ventilation and heating unit would be provided without a pool dehumidification function. For summer use as well as banquet and lecture seating, air conditioning should be provided. Equipment to house the mechanical equipment should be located in the upper level of the support building; public access would be limited to the main level. We would maintain toilets and showers for the recreational functions; the toilets would not be sized for large lecture and banquet seating.



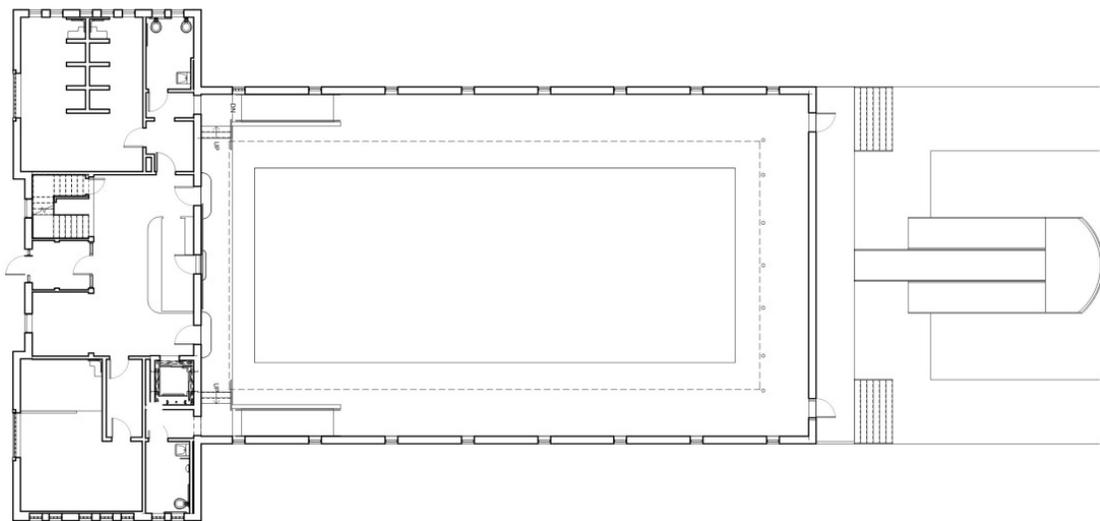
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**Option D**

In lieu of a pool program, the swimming pool would be filled in and the space would be provided with a multi-use floor surface to be used for indoor events during the outdoor pool season. A ramp would be needed to provide accessible access from the building to the outdoor pool

**Option D:** Maintain Support Building, including lockers and showers and use these facilities to support the outdoor pool. The large multi-use space would be used for summer camps and an indoor gather space for shade, meals, etc. by outdoor pool users.

**Option D.1:** Maintain only the pool wing and create an outdoor pavilion to be used by the outdoor pool users or general public when the outdoor pool is closed.



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**Project Costs**

Using the recommendations for maintaining, reconfiguring the pool, or reusing the building as a multi-use space, we have developed some order of magnitude estimates based on current projects and unit prices from the winter of 2017-18. We assume that the work would be publicly bid.

**Baseline**

Scope includes a major renovation of the building envelope and MEP services and renovation of the swimming pool to maintain the original use of the pool.

*This work would be in the range of* ..... **\$4,720,000**

**Pool Reconfiguration**

Scope includes a major renovation of the building envelope and MEP services and renovation of the swimming pool to provide a shallow warm water therapy, exercise pool.

*This work would be in the range of* ..... **\$5,046,497**

**Multi-Use Reconfiguration**

Scope includes a major renovation of the building envelope and MEP services and reuse of the pool space as multi-use recreational space.

*This work would be in the range of* ..... **\$4,022,000**

**Total Project Costs**

Total project cost must be included for all three approaches. Total project costs include Architectural/Engineering fees, expenses, and testing.

**A/E Fees**

Based on the value of construction, budgets for design and engineering fees, OPM fees, etc.

Baseline.....	\$5,252,000
Pool Reconfiguration.....	\$5,597,000
Multi-use Space.....	\$4,529,000

**Operational Plan**

As part of their overall contract, Ballard\*King & Associates (B\*K) has developed an operational plan for Greenwood Pool Re-Development. The side-by-side analysis looks at the cost of continuing to operate the facility as a pool v. the cost to operate the facility as a gymnasium or large gathering space.

**Assumptions:** With the development of the operational plan, there have been some assumptions made, which include:

- The market will not drastically change over the next 3-5 years.
- As a pool the focus will be on warmer water, to accommodate programming and some lap swimming.
- The facility will operate year around, to include when the adjacent outdoor pool is open.
- The staffing structure is reflective of other models B\*K has observed and focuses on having a managerial level position on-site almost 100% of the time.
- The lifeguard staffing plan assumes that if the pool is open and occupied, by anyone, that there is a lifeguard on-duty and on-stand.
- The fee structure for programs and admissions is consistent with the area.
- The hours of operation are comparable to other facilities.

**Schedule:** Schedules for both a pool and multi-purpose program were developed and included in the full report.

**Pool:** The schedule is relatively focused and does not have significant overlap of activities, which is to say there are not multiple things going on in the pool at the same time. It is also important to note that the schedule has outlined a 50-week operation, which accounts for a 2-week shut down during the year

**Multi-Purpose Use:** The success of the gymnasium operation hinges on a successful summer camp program and after school program. It is also important to note that the schedule has outlined a 50-week operation, which accounts for a 2-week shut down during the year

**Pool Revenue/Expense Comparison:**

Year #1	
Expenses	449,524
Revenues	212,926
Difference	(236,598)
Cost Recovery Percentage	47%

The following provides a 5-year comparison for the operation of the Greenwood Pool and is based upon the best information available at the time the report was completed. It is important to note that the operational expenses are anticipated to increase at a rate of 3% per year over this 5-year span. It is also important to note that this 5-year span projects a 5% increase in revenues from year 1-2 and year 2-3 with a 3% increase in year 3-4 and a 1% increase in year 4-5.

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Expenses	449,524	463,009	476,900	491,207	505,943
Revenues	212,926	223,572	234,750	241,793	244,211
Difference	(236,598)	(239,438)	(242,149)	(249,414)	(261,732)
Recovery %	47%	48%	49%	49%	48%

**Gym Revenue/Expense Comparison:**

Year #1	
Expenses	389,232
Revenues	312,278
Difference	(76,955)
Cost Recovery Percentage	80%

The following provides a 5-year comparison for the operation of the Greenwood Pool as a gymnasium based facility and is based upon the best information available at the time the report was completed. It is important to note that the operational expenses are anticipated to increase at a rate of 3% per year over this 5-year span. It is also important to note that this 5-year span projects a 5% increase in revenues from year 1-2 and year 2-3 with a 3% increase in year 3-4 and a 1% increase in year 4-5.

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Expenses	389,232	400,909	412,937	425,325	438,084
Revenues	312,278	327,891	344,286	354,615	358,161
Difference	(76,955)	(73,018)	(68,651)	(70,710)	(79,924)
Recovery %	80%	82%	83%	83%	82%