

AQUATICS FEASIBILITY STUDY 2017

Harrisburg, Pennsylvania



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Executive Summary

The City of Harrisburg, Pennsylvania, contracted MKSD Architects and Counsilman-Hunsaker to develop a feasibility study for the purpose of planning two option replacements for each of their two pools: Jackson Lick and Hall Manor. This study is based on extensive research to analyze needs and determine objectives through the following processes:

Aquatic Trends

- Classify Aquatic Trends for Common Vocabulary/Vision
- Identify Potential User Groups

Needs Assessment

- Analyze Market Area Demographics
- Inventory the Existing Aquatic Facility

Area Provider Analysis

- Identify Area Swimming Pools

Program Requirements

- Develop Options for Programming
- Develop Project Cost Estimates

Operations

- Estimate Revenue Potential
- Estimate Operating Expenses
- Determine Cashflow

Initial Feedback

Both the Hall Manor and Jackson Lick pools have exceeded their useful life expectancy and do not have any salvageable components.

The city needs pools to last another 30+ years to provide aquatic experiences for the Harrisburg community.

The consensus of staff and community meetings was to keep two swimming pools within the City of Harrisburg, and the current locations are preferred at this point.

When replacing both pools, it's important to maintain each pool's individuality while providing similar amenities at each location.

A need exists for at least one 6-lane 25-yard competition pool, as well as shallow water at both facilities for teaching swim lessons, programming water fitness classes, etc.

The city needs aquatic facilities that will bring about, "Wow, look at that!" from the community.

Options for Consideration

Jackson Lick Option 1

- Six, 25-yard lanes
- Shallow area for fitness, swim lessons, leisure swim
- Two, 1-meter diving boards
- Waterslide
- Crossing activity
- Climbing wall
- Spray pad with tot pool



Jackson Lick Option 2

- Children's area with zero-beach entry, play structure, children's slides and spraypad
- Two waterslides
- Crossing activity
- Climbing wall
- 8-lane lap pool with Open area for swim lessons, water aerobics and leisure swim



Hall Manor Option 1

- Six, 25-yard lanes
- Shallow area for fitness, swim lessons, leisure swim
- Two, 1-meter diving boards
- Waterslide
- Crossing activity
- Climbing wall
- Spray pad with tot pool



Hall Manor Option 2

- Children's area with zero-beach entry, play structure, children's slides and spraypad
- Two waterslides
- Crossing activity
- Climbing wall
- 8-lane lap pool with Open area for swim lessons, water aerobics and leisure swim



Operations Summary

JACKSON LICK	2017	2018	2019	2020	2021
Option 1					
Project Cost	\$4,930,789				
Attendance	26,536				
Revenue	\$132,522	\$138,426	\$146,101	\$151,309	\$158,462
Expense	\$196,559	\$202,504	\$209,525	\$215,206	\$222,005
Operating Cashflow	(\$64,038)	(\$64,078)	(\$63,424)	(\$63,897)	(\$63,543)
Recapture Rate	67%	68%	70%	70%	71%
Capital Replacement Fund	\$24,700	\$24,700	\$24,700	\$24,700	\$24,700
Debt Service	(\$379,060)	(\$379,060)	(\$379,060)	(\$379,060)	(\$379,060)
Cash Flow	(\$467,798)	(\$467,838)	(\$467,184)	(\$467,657)	(\$467,303)

Option 2

Project Cost	\$6,376,154				
Attendance	29,190				
Revenue	\$143,274	\$149,519	\$157,534	\$163,105	\$170,631
Expense	\$212,401	\$218,742	\$226,168	\$232,265	\$239,491
Operating Cashflow	(\$69,127)	(\$69,223)	(\$68,634)	(\$69,161)	(\$68,860)
Recapture Rate	67%	68%	70%	70%	71%
Capital Replacement Fund	\$31,900	\$31,900	\$31,900	\$31,900	\$31,900
Debt Service	(\$490,174)	(\$490,174)	(\$490,174)	(\$490,174)	(\$490,174)
Cash Flow	(\$591,201)	(\$591,297)	(\$590,708)	(\$591,235)	(\$590,934)

HALL MANOR

	2017	2018	2019	2020	2021
Option 1					
Project Cost	\$5,693,719				
Attendance	16,380				
Revenue	\$91,370	\$95,934	\$102,314	\$106,095	\$111,775
Expense	\$200,037	\$206,069	\$213,179	\$218,951	\$225,844
Operating Cashflow	(\$108,667)	(\$110,135)	(\$110,865)	(\$112,856)	(\$114,069)
Recapture Rate	46%	47%	48%	48%	49%
Capital Replacement Fund	\$28,500	\$28,500	\$28,500	\$28,500	\$28,500
Debt Service	(\$437,711)	(\$437,711)	(\$437,711)	(\$437,711)	(\$437,711)
Cash Flow	(\$574,878)	(\$576,347)	(\$577,076)	(\$579,067)	(\$580,280)

Option 2

Project Cost	\$7,180,664				
Attendance	19,606				
Revenue	\$104,439	\$109,390	\$116,167	\$120,360	\$126,463
Expense	\$216,130	\$222,564	\$230,087	\$236,281	\$243,607
Operating Cashflow	(\$111,691)	(\$113,174)	(\$113,920)	(\$115,922)	(\$117,144)
Recapture Rate	48%	49%	50%	51%	52%
Capital Replacement Fund	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000
Debt Service	(\$552,022)	(\$552,022)	(\$552,022)	(\$552,022)	(\$552,022)
Cash Flow	(\$699,713)	(\$701,196)	(\$701,941)	(\$703,943)	(\$705,166)

Section 1:

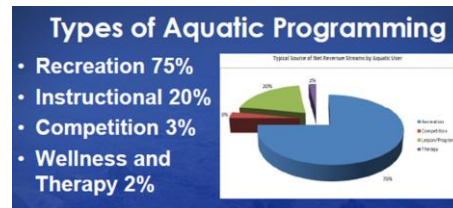
Aquatic Trends

Instructional Enthusiasts
Water Wellness Seekers
Recreation Swimmers
Competition Pools
Specific Programs
Economic Growth
Bundling Amenities
Marketing

Section 1: Aquatic Trends

Contemporary aquatic centers are fully ADA¹ accessible where everyone can benefit from aquatic activities. As more athletes cross train with water fitness components and more doctors recommend water rehabilitation for injured, obese, diabetic, and aging patients, multigenerational aquatic centers are inclusive of the entire community.

- Within the last decade, demand for higher quality and a unique pool experience has risen.
- There are four types of aquatic facility users: *instructional, wellness, recreational, and competitive.*
- Each of these groups requires specific areas, features, and services to fulfill their needs. The following descriptions make evident the very different requirements for each of these aquatic user groups when planning and designing an aquatic facility.



Instructional Enthusiasts

The following describes national trends for lessons and fitness users that includes learn to swim, water safety instruction, lifeguard instruction, life safety skills, survival swimming, scuba, and other aquatic skills.

Swim Lessons

According to the Centers for Disease Control, more than one in five people who die from drowning are children age 14 and younger. For every child who dies from drowning, another four receive emergency care for nonfatal submersion injuries, which can cause brain damage that may result in long-term disabilities, including memory problems, learning disabilities, and permanent loss of basic functioning.²



Knowing how to avoid drowning is essential for children and adults, whether living in areas with natural bodies of water or simply being invited to pool parties. With more than one available pool in an aquatic center, lessons can be maximized so that a large number of residents can be taught to swim. Ideally, water depth for instruction should accommodate young participants to stand comfortably in the water. Recreation pools easily provide this preference. Deeper competition pools offer moveable floors or other means of altering water depth for instructional purposes.

A well-run water lesson program is essential in introducing young swimmers to safe aquatic skills that can be used throughout their lives. By offering the community a comfortable, controlled aquatic environment, swimming and diving lessons can become an enjoyable learning experience. There are many different types of water safety lessons that can teach children not only how to swim and dive but how to survive in adverse water conditions. From small water craft instruction to drown-proofing, water safety is an integral part of any community. Many will



go on to formal competitive aquatic programs in school or age-group swimming programs. Some will excel to become state champions. Benefits such as scholarship offers may occur when a swimmer or diver selects a college, which could lead to national level competition.

Drown-Proofing

Aware of 74 cases of body entrapments, including 13 confirmed deaths between January 1990 and August 2004, the U.S. Consumer Product Safety Commission reported the deaths were the result of drowning after the body or limb was held against the drain by the suction of the circulation pump. The incidents occurred in both residential and public settings.³ Subsequently, a federal pool and spa safety law was signed by former President George W. Bush on December 19, 2007. The Virginia Graeme Baker Pool and Spa Safety Act requires all public pools and spas to have safety drain covers, and in certain circumstances, an anti-entrapment system.⁴ The goal of the law is to improve the safety of all pools and spas by increasing the use of layers of protection and promoting uninterrupted supervision to prevent child entrapments and drownings.



When teaching proper drown-proofing, some classes mimic the natural environment through instructor creativity (i.e., creating wave action with hands and arms to mimic river tides), while others simply require small children to memorize what they would do in a situation where drowning is likely, and then enact memorized skills with an instructor present. Knowing how to avoid drowning is essential for children and adults, and even more so when living in areas where natural bodies of water are prevalent.

Lifeguarding and CPR

Water rescue skills and CPR are typically taught to all lifeguards. However, teaching water rescue and CPR skills are integral to the community since families are the true lifeguards of one another whether at the beach or a backyard pool. Often, such courses are sponsored by the Red Cross, Ellis and Associates, and other providers of safety training.



School District Lesson Users

School districts are often valuable contributors to help efficiently program aquatic facilities. Potential programming might embrace swim lessons for elementary students, lifeguarding classes, physical education classes, therapy for high school athletes, and other joint partnership agreements to aid in directing area children to learn to swim. Aquatic sports (diving, water polo, synchronized swimming, underwater hockey, etc.) can contribute to the overall use of the facility as well as fitness use by faculty, special education therapy, and recreation. In addition, an aquatic facility may provide aquatic opportunities to pre-school children cared for by private daycare providers.

Aquatic Fitness

The more often the pool can be utilized for group activities for participants and spectators, the more likely the aquatic facility will be “alive” day in and day out. The types of activities that tend to draw a crowd are participatory, measurable, exciting, and often challenging—but not always so challenging that only elite swimmers can participate. Activities can be tailored to different ages, sizes, and/or skill levels.



The industry has responded to the continued popularity of aquatic fitness by creating a wide range of activities with related devices and equipment for a greater diversity of water-based aqua exercise options. Aerobic dancing, walking, and running in shallow and deep-water environments, including current channels for walking against the current, are just a few of the choices available to people wishing to add less stressful elements of a cross-training regimen or even to use aqua aerobics for their entire fitness program. Additionally, businesses might sponsor or subsidize aquatic fitness as part of their employee wellness training discipline.

- Water-based exercise is the *fastest* growing fitness choice in the U.S.⁵
- In 1983 there were nearly 200,000 participants
- 1988 – 2.2 million
- 2004 – 5.8 million
- 2007 – 7.2 million

Aquatic fitness also remains one of the most popular forms of exercise among senior adults. Data taken from the National Center for Health Statistics shows lifetime expectancy is up 30 years since 1900.⁶ The older adult market spans four generations from the Progressive Era 1900-1928, Depression Era 1929-1939, WWII Era 1940-1945, and Baby Boomers 1946-1964. Gray power can be a large, affluent market willing to participate in water fitness, wellness programming, and other recreation opportunities. This diverse age group from 55 to 90+ includes sub-groups of which some are still working; some have children in college; and some are focusing on retirement, grandkids, and wellness. Consequently, seniors can be willing, enthusiastic participants if certain requirements are met. They typically feel uncomfortable in an environment with teens and generally respond better to strictly defined programming of well-structured activities such as water aerobics, arthritis water exercise, water walking, physical therapy, adult swim lessons, ‘Save a Life’ workshops, lap swimming, and Masters swimming.

LIFETIME EXPECTANCY	
Year	Both Sexes
1900	47.3
1950	68.2
2000	77.0

Source: National Ctr. For Health Statistics

Water Fitness Trends

Aquatic programming accommodates beginner lessons that graduate to higher levels of intensity and skill. The following provides a snapshot of popular aquatic fitness programs.

Walking and Jogging in Shallow and Deep Water: The current channel, attached to a leisure pool, provides water traveling at approximately three miles per hour, thus creating an opportunity for walking against the current as a non-programmed or programmed fitness activity. According to waterart.org, “30 minutes of walking and jogging in shallow and deep water is equal to 80 minutes of jogging on land.”

Water Aerobics: Remaining one of the fastest growing segments of the adult fitness industry, water aerobic workouts usually combine a variety of land aerobic techniques, including walking or running backwards and forwards, jumping jacks, mimicking cross-country skiing, and various arm movements. The workout may also incorporate equipment such as flotation devices and foam water weights.

Deep Water Aerobics: This type of water aerobics offers a muscular endurance workout in deep water that consists of simulated running in the deep end of the pool aided by a flotation device (vest or belt) where the participant is held in one location by a tether cord, essentially running in place.

Finning: This active swimming program requires training fins or flippers and utilizes fitness



lap lanes of a pool. The kicking and pulling enhances conditioning and toning.

Liquid Gym: This aqua training workout can be as intense as desired with a personal trainer for the purpose of improved athletic performance.

Navy Seals: This aquatic class consists of Finning, water jogging, deep water aerobics, and scuba instruction.

Water Yoga: Warm water, as in a therapy pool, enhances asanas (stretching poses) to relax muscles and increase range of motion and balance. Pan flute music and dim lights deepen the experience. (yogaafloat.com)

Boot Camp: This amphibious program incorporates land and water fitness in a fast paced military-style interval training course with running in the pool, calisthenics, jumping jacks, pushups, and football-style drills.

Scuba and Snorkeling: These lessons are growing in popularity (possibly due to the increase of environmental professions) and typically start in swimming pools.

Scuba Rangers: Scuba and snorkeling skills are taught to kids 8 to 12 while using underwater flashlights, navigation compasses, and underwater photography.

Underwater Hockey: According to USOA Underwater Hockey, “The pool should be 25-meters by 15-meters and two-meters deep all the way across, but anything will do, even slopes (just change ends at half-time). Lead weights and three meters of rope can be used as goals, though the sound of the puck thunking into the back of a metal goal is very satisfying and should be experienced.”

Water Polo: Dimensions of a water polo pool are not fixed and can vary between 20 by 10 and 30 by 20 meters. Minimum water depth must be at least six feet. The goals are three meters wide and 90 centimeters high.

Kayak Polo: This sport involves water polo being played from kayaks. According to Carolina Kayak Polo, “It is difficult to describe the passion and excitement that is created when a kayak water polo game is in progress. The participants—speeding the length of the pool weaving through the opponent’s lines of defense and spinning in their kayaks to receive a pass—create a fast and thrilling event.”

Water Basketball: Ideated in 1986 by Italian teacher, Francesco Rizzuto, this sport is a mixture of basketball and water polo. When designing a pool, full court water basketball is more challenging when tile lines are encrypted into the floor of the pool.

Water Volleyball: Portable and floatable aqua water volleyball sets come complete with two net positions, two anchor bags, and a staked floating perimeter boundary.

Triathlons: These athletic competitions, which the contestants compete in three different events to find the best all-around athlete, typically consist of swimming, cycling, and running.

Kayak and Canoe Clubs: Due to the popularity of Extreme Sports, kayak and canoe clubs are growing in popularity and use large pools for training.

Swim lessons, lap swimming, water jogging, deep-water aerobics, life saving instruction, diving lessons, survival swimming, synchronized swimming, water polo, underwater hockey, and scuba instruction can take place in a competitive/lesson/training pool, which frees up the recreation pool for swimmers who want to use the play features. Fitness classes are usually offered in the morning, at lunchtime, and in the early evening. Instructor information and/or training can be acquired through organizations such as the Arthritis Foundation; Red Cross; Aquatic Exercise Association; American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD); and United States Water Fitness.

[Water Wellness Seekers](#)

The following describes national trends for water wellness seekers, the fastest growing aquatic user group that includes therapy programs, water exercise classes, water aerobics classes, and fitness classes.



Aquatic therapy is rehabilitation performed in warm water and involves physical activity of exercise and motion in the presence of an aquatic therapist, also called an aquatic therapy provider. Warm water may increase the dynamics of blood pressure and blood and lymph circulation, as well as decreasing swelling in skin and other tissues. Participation in an aquatic therapy program offers improvement in:

- Overall health and fitness
- Stretching capacity
- Range of motion
- Movement capabilities
- Coordination
- Physical stamina and endurance
- Swimming skills, safety, and abilities

Though many people who use aquatic therapy are enthusiasts of meditation or massage, some are looking for rehabilitating or improving a certain level of health. The Arthritis Foundation certifies instructors to teach arthritis aquatics. Many participants in these programs report reduced arthritis symptoms, including increased mobility and decreased pain and stiffness.⁷ New studies by the Aquatic Exercise Association suggest that the management of bone density can be facilitated by water exercise.⁸ When moderate exercise is recommended for obese patients, the low-gravity qualities of aquatic therapy can be very appealing to this user group. Over the past several years, water exercise programs have multiplied in health clubs, pain clinics, and hospitals. Users include:

Injured Athletes: Athletic trainers and sports medicine physicians are prescribing aquatic therapy as a rehabilitative/preventive fitness program.

Post-Operative Patients and the Disabled: Includes patients with physical ramifications such as spinal dysfunctions, post-operative muscle toning, injuries, and arthritis.

Arthritis Sufferers: The Arthritis Foundation certifies instructors to teach arthritis exercises such as Rusty Hinges and Joint Effort.

Aging Baby Boomers: Some 70 million strong, “boomers” invented the fitness movement and show no sign of abandoning it as they age, especially in warm water pools.

Obese Patients: More doctors are prescribing water wellness for overweight issues.

Pregnant Women: Effects of the low resistance of water exercise is soothing to this user group.

Meditation Enthusiasts: Fans of mind and body movements enjoy immersing in warm water pools to complete the tranquil state of meditation.

Key Components of Aquatic Therapy Centers

Aquatic therapy centers are growing in necessity for rejuvenation and social wellness for rehabilitation needs and developmental disorders. Colorful environments and interactive water is a stimulating, effective, and cathartic treatment, while specific design elements are ultimately inspired by the rehabilitative needs of patients. Key components include:



- Warm pool water capability with fast pool turnovers.
- High-quality water chemical treatment systems, including dual sanitization methods and an appropriately designed HVAC/DH system.
- Easy access from the parking lot to the locker rooms, pool deck, and into the pool.
- Ample space in locker rooms and wider pool deck for wheelchairs, walkers, dry and wet equipment, and dry-side therapy.
- In-water amenities such as perimeter railings, aerobic steppers, treadmills, underwater benches, and ramps.
- Flexible pool depths for multiple programmatic needs.
- Aesthetically pleasing and light-filled private spaces.

Recreation Swimmers

The following describes national trends for recreation swimmers, the most popular and diverse aquatic user group that is family oriented for tots, teen, and adults.

- Swimming is the 3rd most popular sport or exercise activity
 - Recreational Leagues
 - Fitness Classes
 - Lap Swimming
- There are approximately 314 million visits to recreational water sites each year.

Successful aquatic centers combine creative water play areas for various age groups in a safe, friendly atmosphere. While aquatic recreation has become much more age-defined, attractions have age limitations and appropriateness due to elements of thrill and capabilities. Tots enjoy shallow pools with gentle water features and play areas tucked securely out of the way of the more active areas. Once children grow out of the tot stage, they enjoy romping in zero-depth recreation pools, making their adventurous way across lily pad walks, and climbing on participatory play features with “just-their-size” waterslides. Older children speed down flume and drop slides and enjoy larger water play structures. Teens enjoy gathering spots like action islands with access to deep water pools and adventurous waterslides. Lazy rivers and current channels cater to most demographics while spas and lap lanes are geared towards adults.

Age Group	Recreational Aquatic Age-Group National Trends
Age 0-3	Tot Pool, Tot Slides, Gentle Spray Features
Age 4-7	Water Sprayground, Zero-Depth Pool, Participatory Play Features, Sand Play
Age 8-11	Water Walks, Large Play Structures, Full-Size Waterslides, Open Water
Age 12-16	Water Walks, Large Waterslides, Open Water, Lazy River, Gathering Places, Sand Volleyball, Mat Racer, Diving Boards
Age 17-22	Action Island, Intense Waterslides, Flow Rider, Mat Racer, Climbing Wall, Open Water, Sand Volleyball, Drop Slides, Diving Boards
Age 23-45	Zero-Depth Pool (to be w/children), Open Water, Spa, Sun Deck, Lap Lanes, Lazy River, Waterslides, Diving Boards
Age 46+	Spa, Sun Deck, Lap Lanes, Lazy River, Family-Friendly Waterslides
	Source: Counsilman-Hunsaker

Recreation Pool Features



Leisure Pool

The free-form leisure pool provides an inviting atmosphere with plenty of shallow water from zero-depth to four feet, allowing adults and children to interact for hours of splash and play entertainment. With opportunity for many different sizes and designs, the leisure pool is a desirable amenity for all age and skill levels where various attractions may be incorporated to increase the experience factor, which increases attendance, the amount of time spent at the facility, and return visits.



Zero-Depth Entry / Spray Features

Swimmers enjoy easy access into leisure pools that simulate an ocean beach, where the pool bottom slopes gradually toward the deeper water. Instead of jumping or climbing into the pool, patrons simply walk in. Lounging in the zero-depth is a pleasant way to enjoy the water and sun while watching children at play with spray features.



Participatory Play Feature

Located within the leisure pool, play features are multi-level, interactive structures where children can scamper through spraying water, climb across bridges, scurry over and under tunnels, and slide down just-their-size waterslides. As children manipulate valves and chains, they control where and when the water sprays will occur—all within sight of parents and lifeguards.



Current Channel / Lazy River

A current channel is part of the leisure pool, usually 6-8 feet wide, with water traveling at approximately two and a half miles per hour. The channel is popular as a water walking setting for fitness classes or adults seeking non-programmed exercise, walking with or against the current.



Waterslides

The thrill of mounting the stairs to the exhilaration of sliding down into the water makes waterslides a desired attraction. While some slides are straight with a steep or gentle gradient, others wind down with sharp enclosed curves or high walls on the outside of the curves. Slides can be a long tube or alternate between an open chute and closed tube. Experiences can range from family-friendly to surprisingly intense.





Drop Slide

A drop slide offers the thrill of walking up the steps of the waterslide, hearing the excitement and splash of water sliders ahead, then sliding down to the water with the added bonus of dropping into the pool upon exit in a short freefall.



Lap Lanes

Fitness lap swimming and water walking are important to many adults and seniors. Opportunities for limited practice and training exist in a two, three or four lane 25-yard lap pool adjacent to the leisure pool. Additionally, programming can be incorporated for lessons and activities.



Otter Slide

Otter slides are designed for “in-between” children who are too big for the kiddy slides, but too little for the height restrictions of larger waterslides.



Crossing Activity

Tethered to the bottom of the pool, a foam floating water walk spans across the pool with a spun braided rope or cargo net suspended overhead for hours of adventure and physical fitness.



Diving Board

A flexible springboard in 1 meter or 3 meters secured at one end and projecting over deep water provides experienced swimmers the challenge of diving. Deep water can also be programmed for advanced swim lessons, lifeguard training, diving lessons, water safety, water polo, scuba, synchronized swimming lessons, and deep water fitness classes.



Sprayground

An interactive water sprayground features entertaining components, including large above-ground water sprays and smaller flush-mounted water equipment. A water sprayground delights children in a colorful, interactive water wonderland atmosphere for hours of interactive play.



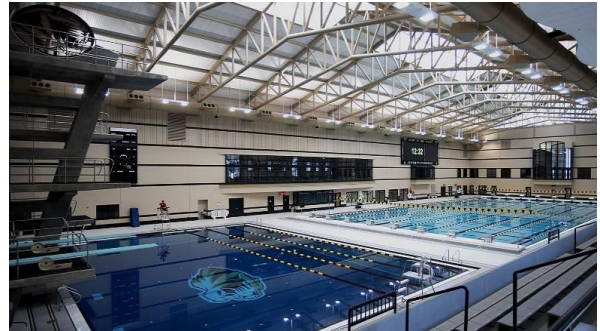
Shade Umbrellas

Fabric umbrellas come in many styles and colors to provide necessary shade while lending a festive atmosphere. They cover, connect, and join areas while providing relaxation out of the sun.

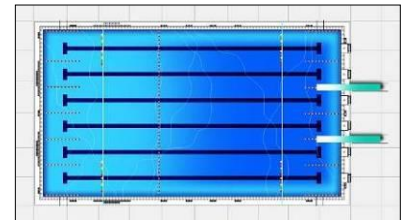


Competition Pools

- Simplest pool to define
 - 25 Yards
 - 25 Meters
 - 50 Meters
- Aquatic Governing Organizations with rules and regulations that preside over various aquatics:
 - NFSHS
 - NCAA
 - USA Swimming
 - FINA
- Cooler water temperature

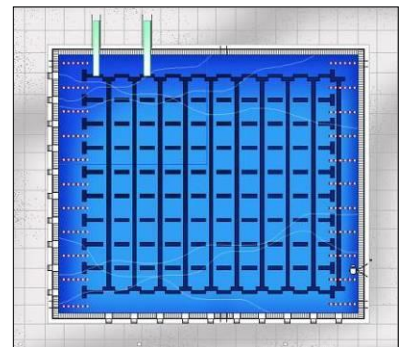


A competition pool must be 25 yards or 25 meters for short-course events and 50 meters for long-course events. USA Swimming and FINA sanction short-course 25-meter as well as long-course 50-meter competitions. Depending on the level of competition, a minimum of six lanes is required, but eight lanes are expected to

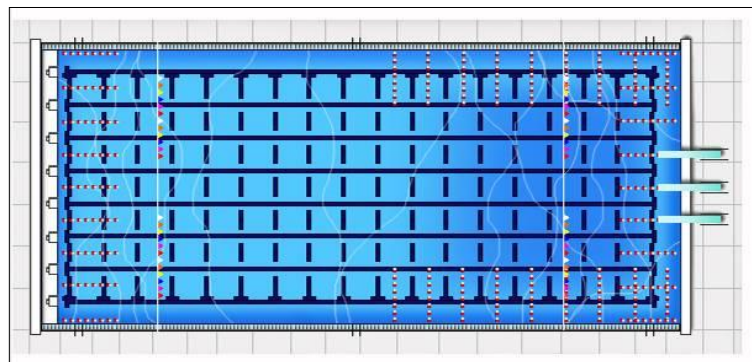


better allow for larger heats. While almost all 50-meter pools have ten lanes, 1 and 10 serve as buffer lanes. National caliber water polo matches take place in 30-meter fields of play minimum with at least a 2-meter zone behind each goal line.

High schools, USA Swimming, the YMCA, and NCAA conduct short-course 25-yard competitions. For high school and NCAA events, a pool must have a minimum of six lanes, each at least seven feet wide. Several current standards require six feet or more of water beneath starting blocks. While some shallow water is acceptable, water depths of two meters or more “is required” as per applicable rules.



High school and college water polo often use 25-yard and 25-meter pools, but all high-level meets for USA Water Polo and international events are held in 50-meter pools. Water depth of two meters or more “is required” as per applicable rules.



Synchronized swimming requires a deep 12-by-25-meter pool area. A minimum water depth of 2.5 meters “is required” as per applicable rules. National and international events are generally conducted in 50-meter pools.

Diving



Now more than ever, world-class diving venues are being constructed across the United States and abroad. There are two kinds of diving competitions: springboard and platform. Springboard competitions take place at 1-meter and 3-meter heights. At elite venues, a minimum of two 1-meter and two 3-meter springboards are provided. These competition springboards are typically placed on the same side of the pool as the platforms. Often, additional springboards are placed around the dive pool for practice and summer camps.

While not a requirement, a separate dive pool is desired for elite dive competition and training.

Springboards

- 1 Meter
 - High School, Recreation Value
 - Water Depth 12' 6"
 - Ceiling Height 20' minimum bottom of beam
- 3 Meter
 - US Diving, Club
 - Water Depth 13' 6"
 - Ceiling Height 27' minimum bottom of beam

Platform

Platform Diving competition takes place at 10 meters; however, 1, 3, 5, and 7.5 heights are also typically provided for training and warm up. Occasionally, a ½-meter platform is constructed for divers to practice take offs. A facility without a 10-meter tower but only a 5-meter tower can host a platform diving event if both teams agree on this height.



Dry-land Training Room

For high level diving training, a separate room should be equipped with dry-land springboards, trampoline, pits, and video recording. The use of video recording is popular with competitive diving. Tivo can be used to video tape and coach divers. Video recording should be available in the dry-land training area as well as on deck near the springboards and platforms. Often, dry-land training rooms are smaller, and sometimes portions of this equipment is located on the pool deck next to the dive tower.

Spectator Seating

Spectator seating from the side and elevated in a mezzanine is desired. Specifications are limited to recommendations simply because some areas hold meets that utilize temporary seating. Large world-class diving events have recently been staged with temporary pools with seating for 10,000 or more. Due to the spectator and deck seating requirements for a championship facility, the square footage of such a facility (and therefore cost) is greatly increased.

Ample deck space on the sides and end of the dive pool is also needed for viewing the dives by judges. Three, five, seven or nine judges may be positioned on the side or end of the pool depending on the level of competition.

- Program Requirements
 - Local Meets (100-150)
 - High School
 - Dual Meets
 - Regional Meets (500-750)
 - State Championships
 - Zones
 - National Venue (1,000-1,500)
 - USA Regionals



Competitive User Groups

High School Users

High school varsity swimming is typically well supported in most communities across the U.S.; however, many schools lack the ideal facility for training and competition. Because quality pool time is usually scarce in most areas, renting pool time from other area facilities can be daunting due to various needs and agendas, thus pool availability can diminish as facilities experience capacity.

High school competitive swimming requirements include:

- Course length of 25 yards with a minimum width of 45 feet for six 7-foot-wide lanes or 60 feet for eight 7-foot-wide lanes.
- 125 spectator seats.
- Pace clocks, stretch cords, mats (for sit-ups, etc.), free weights, medicine balls, weight training equipment, kickboards, fins, paddles, pull buoys, course caps, and goggles.

USA Swimming

USA Swimming has organized regional and national competitions for age group competitive swimming in the United States. USA Swimming formulates rules, implements policies and procedures, sanctions national championships, disseminates safety and sports medicine information, and selects athletes to represent the United States in international competitions. USA Swimming has 300,884 year-round members nationwide and sanctions more than 7,000 events each year. The base for popularity is primarily a young age group that begins around age eight and peaks at age 12 as shown in the adjacent chart.

8 and under	32,655
9	28,682
10	37,266
11	41,017
12	40,370
13	36,712
14	34,047
15	26,143
16	21,306
17	17,598
18	12,915
19 and over	11,192
Total	339,903

Source: USA Swimming

United States Masters Swimming

United States Masters Swimming (USMS) programs are open to all adult swimmers (fitness, triathlete, competitive, non-competitive) dedicated to improving their fitness through swimming. Founded in 1970, the non-profit corporation is organized with 450 clubs throughout the United States. Membership consists of more than 50,000 swimmers ranging in age from 18 to over 100.

Within the clubs, structured workouts offer training assistance for specific goals for a healthy lifestyle through camaraderie. Pool and open water races provide opportunities to compete and measure individual progress at the local, state, national, and international levels. USMS programs also offer stroke and technique clinics, workshops, instruction, and social functions. Competitions are organized by age groups of five-year increments (18-24, 25-29, 30-34, 35-39, etc. to 95 and over). Events include 50, 100, 200, 500, 1000 and 1650 freestyle (400, 800 and 1500 in meters); 50, 100 and 200 backstroke, breaststroke and butterfly; and 100, 200, and 400 individual medleys. There are also freestyle and medley relays for men, women, and/or mixed teams. Open water swims are held in most locales during the summer and can range in distance from one to ten miles.

USMS hosts two national championship meets per year. A short course (25-yard pool) championship is held in May and a long course (50-meter pool) championship is held in August. These four-day events rotate to different locations around the country. International championships are conducted periodically by Masters Swim organizations in countries throughout the world.

Community Swim and Dive Teams

Numerous communities sponsor competitive swimming and diving teams for children and teens. The purpose is to offer opportunity to enjoy the healthy fun of swimming; to support individual achievement of personal bests; and to promote goal setting, life skills, and sportsmanship. Teams typically adhere to recognized swimming rules and swim the standard strokes of swim meets but in shorter lengths. Swimmers with limited or no competitive experience are provided stroke conditioning clinics as a recommended alternative. Teams are usually more active in the warmer months, and not directly associated with a national swim organization. Many swimmers who begin their competitive swimming experience on a local swim team proceed to join nationally governed teams.



Pool Rental

Competitive swimmers, particularly members of independent swimming associations, are accustomed to renting lane space for training as well as leasing entire facilities, either for long-term use or on a one- to three-day basis for special events and competitions. Although there is more than one accepted way to receive fees from swim teams, pool lane rental is usually based on cost per lane/per hour. Entire facilities leased on a per-day basis generally have a fixed schedule of costs for such use. Long-term facility leases are generally the product of negotiation and, accordingly, are too varied and specialized for consideration in the context of this study.

Specific Programs

Recreation Swimmers

- Tots, children, pre-teens, teens, young adults, adults, elderly
- ADA Accessible
- Parties / Social Function Rentals

Instruction/Fitness Enthusiasts

- Club Activities: Kayaks, Canoes, SCUBA
- Water Safety Lifesaving
- Organized Water Exercise: Water Aerobics, Lap Swimming

Therapy Seekers

- Disabled / Physically Impaired Utilization

Competition User Groups

- Competitive Swimming
- Diving
- Synchronized Swimming
- Water Polo

Economic Growth

Encouraging residents to use public recreation facilities requires helpfulness of the promotional materials, perceived value against other providers, and public awareness that the facility addresses the prevailing needs and concerns of the community. The aquatic center must be seen as integral to economic development through:

- Real estate values and property tax
- Business attraction and retention
- Stimulating the creative economy
- Promoting tourism

According to the *Importance of Quality of Life in the Location Decisions of New Economy Firms*, “modern businesses typically choose communities with cultural and recreational amenities that will attract and retain a well-educated workforce.”¹¹ This enlarges the tax base and stimulates the economy, which then provides more tax revenue that parks and recreation agencies can use to enhance or expand infrastructure, facilities, and programs. Park and recreation amenities stimulate happier and healthier families, positive business growth and economic development opportunities, contributing to quality of life. Creative, active people

choose to live in communities with high quality amenities and experiences. Furthermore, championship venues bring tourism revenue to local hotels, restaurants, and retail businesses.

Bundling Amenities

Locating aquatic centers adjacent to parks, schools, businesses and transportation hubs promotes accessibility. Bundling civic destination points can encourage customers to extend the duration of their visit, nurture community identity, and increase operational efficiency for those agencies responsible for park maintenance and facility security by minimizing demand on parking lots, access roads, and traffic signals.

If the site has an existing recreation facility, utilities more than likely are already in place. Electricity, natural gas, water and sewer services can be very expensive to introduce to a site from main trunk lines, especially if those lines are several miles away. Because bringing utilities to the project site has no programmatic or recreation value, the adjacency and availability of existing utilities can dramatically and positively impact site development costs with little or no negative impact to the end user. This allows the bulk of construction monies to be allocated for recreational improvements.

Many communities choose to co-locate outdoor and indoor facilities to share spaces without either facility interrupting the operations of the other. For example, a separate outdoor entrance to an aquatic center can accommodate patrons to that facility, minimizing congestion in the main building. Plans can be made for locker rooms to support both outdoor and indoor spaces, eliminating redundancy. Physically connecting the indoor aquatic spaces with those that are outside makes for the easy transition of patrons from outdoor to indoor swimming—particularly crucial in cases of inclement weather. This also helps keep facility guests on site, thus maximizing opportunities for revenue generation.

Useful promotional tools include partnerships with local business centers, which can generate valuable word-of-mouth appeal for the facility. As noted, an aquatic center's economic well-being often depends on its proximity to well-traveled roads, highways and transportation hubs. Sites located in valleys or on hillsides adjacent to major highways can be developed into exciting destination points. A site in a valley near a main transportation artery can be oriented so that guests enter the recreation facility and instantly gain an overview of the park. This allows guests to immediately spot their favorite destinations and level of anticipation, yet because of enhanced transparency also provides for the safety and comfort of different age groups.

Marketing

Many marketing efforts will focus on the sales budget, developing an easy and concise means of explaining activities and fees to users, and creating a simple protocol for scheduling rentals and other events. Branding refers to the summation of all the amenities—state-of-the-art facilities, attractions, and programming—in an eye-appealing package with a competitive advantage. Strong aesthetic visuals include a cohesive logo, website, brochures, video spots, and staff uniforms. Competitive advantages may include cross-generational multiplicity, daily admission fees versus membership fees, cultural diversity, or perhaps the facility is the only championship venue in the region. For a loyal customer base, a great deal of marketing effort will be focused on customer outreach.



Customer Outreach

Marketers understand their target market—a vital investment to success—by identifying potential user groups while developing a clear message that explains how the aquatic center can fulfill their needs. Marketers define the identity and mission (sell the experience) by branding around the core competencies of the facility. They continue to benchmark successful recreation providers who are meeting the needs of a market segment and generating demand, while finding what makes it work and determining what would make it better. Their single most important ingredient is customer relationships (getting them and gaining their loyalty). Valuing customers and their opinions gives users a sense of ownership and pride in the facility, a perfect combination for continued word-of-mouth promotion. Customers are a source of innovative ideas, thus marketers must:

- Identify user groups and verify that the message of each marketing campaign is being successfully communicated.
- Ask for feedback through focus groups and surveys of programs while being open to customers' observations and suggestions to help build a network within the community.
- Evaluate customer feedback to measure how users and nonusers view the image of the facility. Use the information to determine current levels of satisfaction, program fulfillment, and future needs.
- Make quantitative and qualitative improvements based on data (from what makes programs and services successful) so that services are consistently high quality to increase revenue.
- Set objectives for improvement to increase market share.
- Identify resources and means of implementation by listing key action plans and cycle times.
- Brand services with consistency; position each service to fit the market segment and promote the benefit of the experience; people buy benefits.

Marketing Development Plan

Take time to address market conditions and challenges; define steps to solve the challenges and improve all aspects of the event or program by using a marketing development plan. When developing a special event or program, answer the following questions.

1. What is the current situation you are addressing?
2. What are the market conditions?
3. What are the objectives of this marketing plan?
4. What are the key elements you wish to implement?
5. What are the timelines for each element?
6. What resources will be used for this implementation?
(funds, staff, external support)
7. How will you measure the success of the plan?

Media and Community Relations

Traditional advertising such as program brochures, school flyers, visual displays, newspaper, radio, and television can target specific campaigns. As a not-for-profit entity, various local media outlets represent a valuable opportunity for free or low-cost publicity. Develop public relation contacts with local broadcast and print media by submitting articles or suggesting topics on the aquatic center's activities and services, including issues involving education and accident prevention. The use of local celebrities, such as sports and radio personalities, can also help

promote events or sponsor organizations and outreach programs to local groups, including girl/boy scouts, hospitals, retirement communities, and corporations. Such programs can be tailored to the needs and interests of individual groups by focusing on wellness, safety, training, competition, or recreation. Utilize small segmented promotions to create an individualized plan for items of user interest, special events, and fun activities.

Corporate Sponsorship and Venue Signage

Shrinking funds and tightening budgets result in seeking opportunities to subsidize expenses of construction and operation. Marketing opportunities look to local, regional, and even national businesses for sponsorship and advertising signage. These opportunities can range from naming the entire facility for an individual or commercial benefactor, to naming individual rooms, benches, tiles, and so forth. Opportunities for revenue include selling permanent and temporary venue signage.

Digital Marketing

Marketers widen the scope of multimedia plans through the increased use of on-demand media such as online broadcasting and video spots, and utilizing email marketing. Marketing must thrive in an exciting digital culture in order to grab and retain potential customers to positively affect revenue, influence attendance, and promote sponsorships.

Embracing information sharing can prove to be a benefit to your business practices. These inexpensive information sharing platforms are becoming more and more effective in direct connection and building community. For example, You-Tube can be used as a free web host of professional video tours of the facility as well as on-going training videos for staff. A Facebook business page can be a free web host of amenities, hours of operation, and employee and program scheduling with email access to “fans” regarding specials, coupons, and special events. Twitter can quickly tweet cancelations or reminders for lessons, classes or programs to followers.

Customer email addresses may be submitted when registering for memberships, classes, and special events. With customer permission, marketers may use these email addresses for email marketing campaigns of monthly newsletters and promotional messages regarding upcoming events and classes.

Websurfers looking for exciting visual examples of recreation opportunities will stop and shop cutting-edge websites that showcase the recreation portfolio in an outstanding way. Online photo galleries and streaming video can demonstrate exciting swim meets, families playing in shallow water, teens sliding down waterslides, and seniors swimming laps, thus allowing potential customers to browse the facility without having to be on site. An immediate price quote offers a means to sell rental opportunities for birthday parties, reunions, and corporate picnics. Voice-overs can communicate classes, programs, drop-in activities, meets, and special events.

The face of fundraising is also enhanced by interactive media. When sent a video spot, potential sponsors can witness a cohesive branding package accompanied by exciting video of an event, showing crowds of people in attendance, and other sponsors’ booths.

A study conducted by Media Life Research reveals that 63% of moviegoers are not opposed to onscreen commercials; 79% of U.S. theaters offer commercial spots before a movie.¹² Onscreen ads can promote local recreation attractions to a receptive young demographic. Video spots of a



thrilling aquatic center on a hot summer day can potentially reach thousands of people in one month.

Other ways of utilizing video spots to help launch the new facility campaign include looping video spot DVDs on in-house TVs at the park and recreation headquarters, the county welcome center, the visitors' bureau, and realtor offices to communicate to the community, visitors, and potential residents the creative recreation amenities that the community has to offer.

Section 2

Needs Assessment

Area Demographics
Weather



Section 2: Needs Assessment

Area Demographics

Factors that can influence attendance include projections for growth/decline of population, income levels, and age groups. Market studies are used to predict how relevant products, services, and fees are to residents. Originating from 100 Hall Manor, Harrisburg, PA, 17104, the primary area is assumed as 25 miles, and the service area is assumed as 5 miles. The difference between “primary” (25-mile market area) and “service area” (5-mile market area) is that waterpark users will customarily drive farther to use a facility than will community pool users (about 5 miles). Thus, a study of demographic patterns in the area is helpful in projecting usage rates. The resident market area has been divided into the following distances.

Distance From Site

0 to 3 Miles

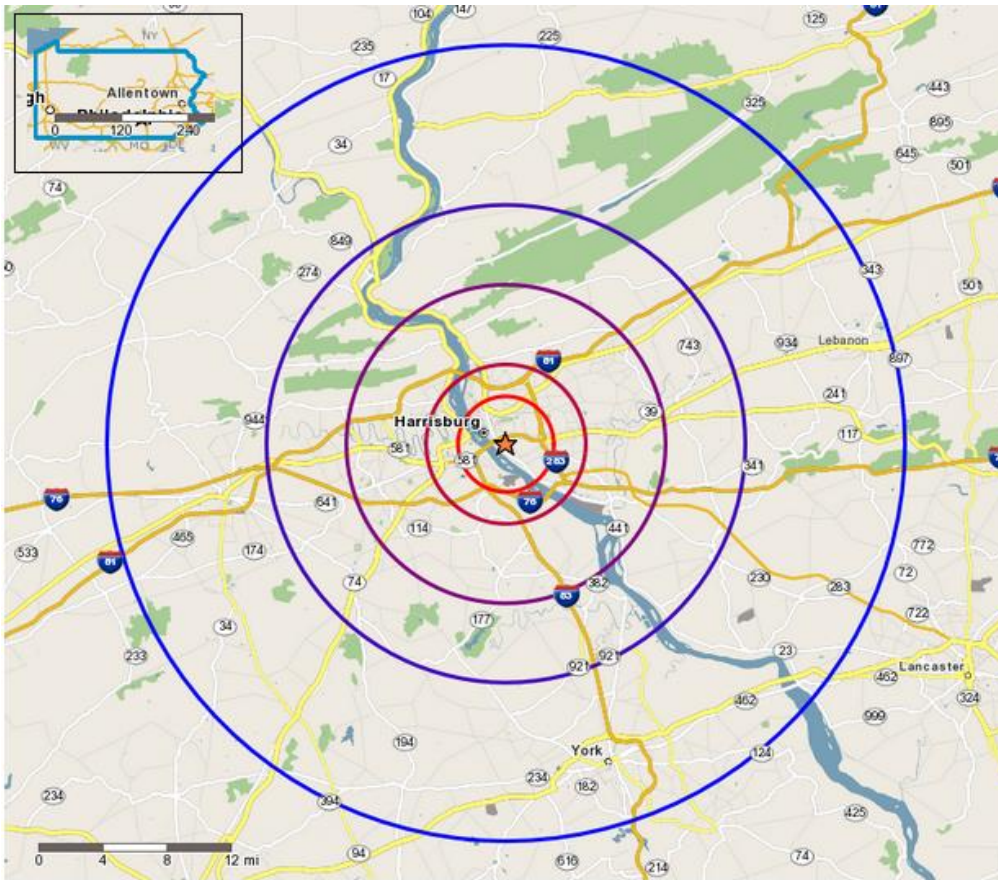
3 to 5 Miles

5 to 10 Miles

10 to 15 Miles

15 to 25 Miles

Distance Map



Population

The following chart presents a summary of market area population with concentric rings surrounding 100 Hall Manor. The 2010 U.S. Government Census was used to estimate the population for 2015 and to make projections for 2020.

- The population base for the City of Harrisburg is projected to decrease slightly from 50,400 residents in 2015 to 49,600 by 2020.
- Population is trending up in the 25-mile area.
- Over 600,000 people reside within 25 miles.

MARKET AREA POPULATION BY DISTANCE

Radius	Population						Average Annual Change			
	2010		2015		2020		2010-2015		2016-2020	
	Number (000's)	Percent of Total	Number (000's)	Percent of Total	Number (000's)	Percent of Total	Number (000's)	Percent Change	Number (000's)	Percent Change
0 to 3 Miles	91.5	9.4%	93.2	9.4%	93.0	9.1%	0.3	0.4%	-0.1	-0.1%
3 to 5 Miles	83.5	8.6%	85.8	8.7%	86.6	8.4%	0.5	0.5%	0.2	0.2%
5 to 10 Miles	193.7	19.9%	202.2	20.4%	213.6	20.8%	1.7	0.9%	2.3	1.1%
Subtotal	368.8	37.8%	381.3	38.5%	393.2	38.4%	2.5	0.7%	2.4	0.6%
10 to 15 Miles	114.1	11.7%	116.9	11.8%	121.5	11.9%	0.6	0.5%	0.9	0.8%
15 to 25 Miles	492.2	50.5%	492.2	49.7%	510.4	49.8%	0.0	0.0%	3.6	0.7%
Subtotal	606.2	62.2%	609.1	61.5%	631.9	61.6%	0.6	0.1%	4.6	0.7%
Total (0-25 Miles)	975.0	100.0%	990.4	100.0%	1,025.0	100.0%	3.1	0.3%	6.9	0.7%
Harrisburg, PA	49.5		50.4		49.6		0.2	0.4%	-0.2	-0.3%

Source: Alteryx

Income

To a certain degree, the likelihood of residents to engage in aquatics depends on their ability to pay for admission and program fees. In the following chart, the U.S. national average is set at 1.00. Index refers to the percentage higher or lower than the national average.

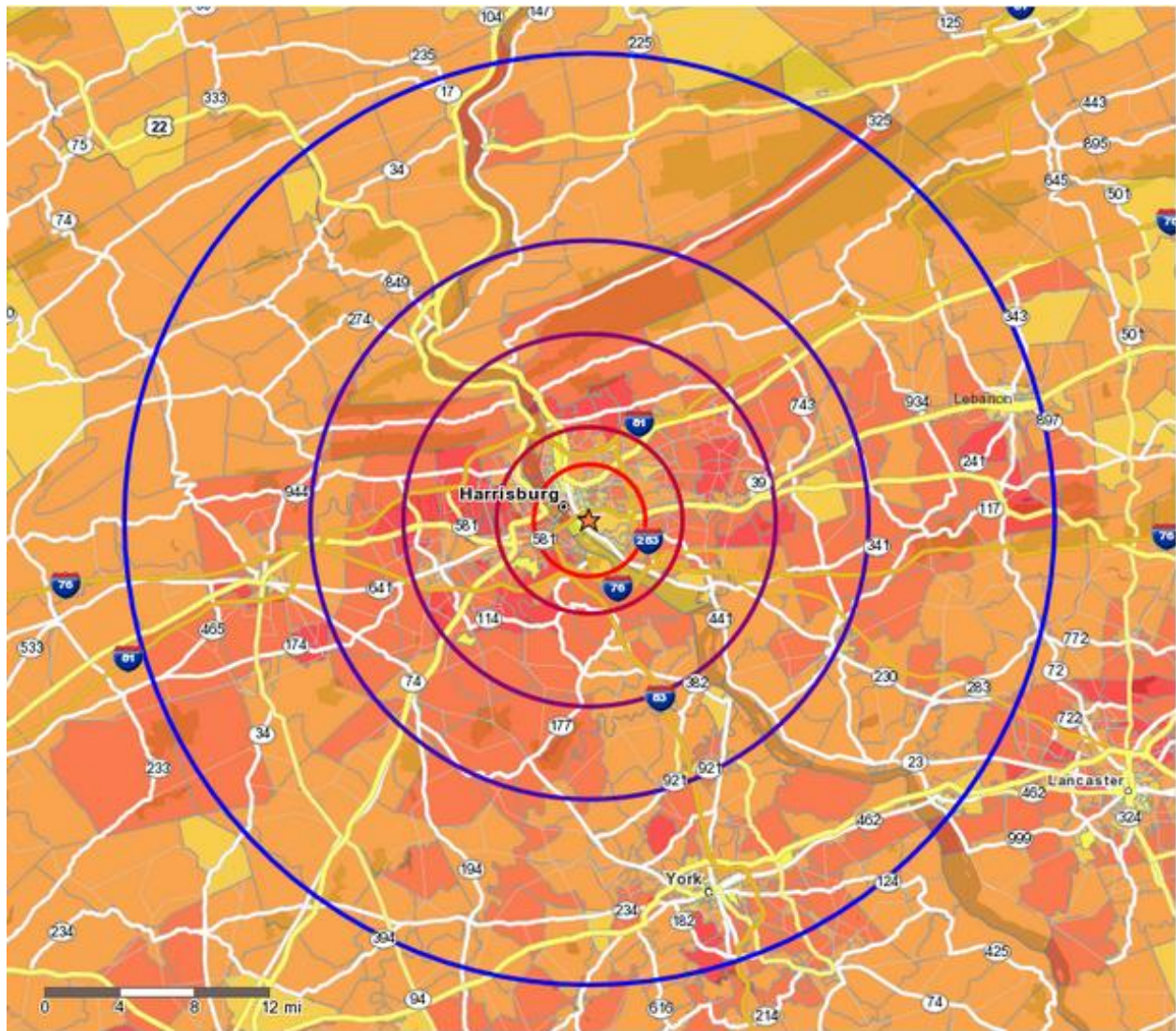
- Per capita income for the City of Harrisburg is 29% lower than the national average.
- Median household income for the City of Harrisburg is 39% lower.

MARKET AREA INCOME				
Radius	Per Capita Incomes		Median Household Incomes	
	Dollars	Index	Dollars	Index
0 to 3 Miles	\$23,358	0.88	\$40,880	0.78
3 to 5 Miles	\$32,613	1.23	\$59,997	1.14
5 to 10 Miles	\$37,368	1.41	\$70,713	1.34
10 to 15 Miles	\$32,935	1.24	\$63,993	1.22
15 to 25 Miles	\$27,910	1.05	\$56,096	1.07
Harrisburg, PA	\$18,711	0.71	\$32,236	0.61
Total U.S.	\$26,464	1.00	\$52,599	1.00

Source: Alteryx



Map of Market Area Income



- Block Groups - High (Above 46,500)
- Block Groups - Above Average (32,500 to 46,500)
- Block Groups - Average (22,750 to 32,500)
- Block Groups - Below Average (16,000 to 22,750)
- Block Groups - Low (Below 16,000)

Age Distribution

Age distribution is another population characteristic used to determine the type and level of use of any type of program. The following table provides the number of residents and the percentage of total population for each age group compared to the U.S. column, which identifies the national average.

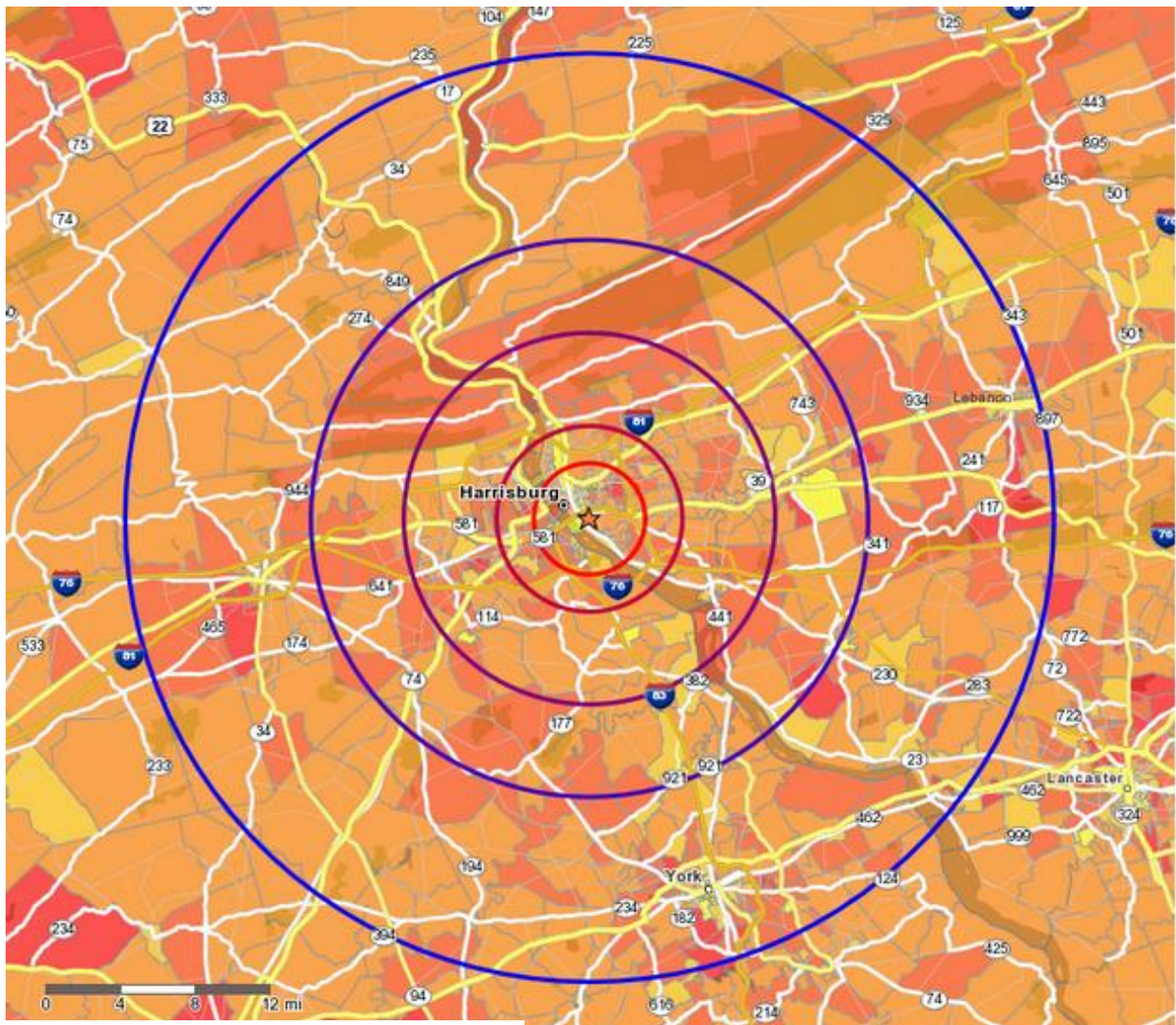
- 0-19 age group is 28.6% of the City of Harrisburg’s population compared to the national average of 26.5%.
- Median age for the city is lower than the national average (32.7 compared to 37 respectively).

MARKET AREA AGE DISTRIBUTION													
Age Groups	0 to 3 Miles		3 to 5 Miles		5 to 10 Miles		10 to 15 Miles		15 to 25 Miles		Harrisburg, PA		U.S. Age Population
	#	%	#	%	#	%	#	%	#	%	#	%	
Age 0-4	6,875	7.4%	4,973	5.8%	10,976	5.4%	6,220	5.3%	28,514	5.8%	4,433	8.8%	6.5%
Age 5-9	6,063	6.5%	4,687	5.5%	11,770	5.8%	7,233	6.2%	30,436	6.2%	3,730	7.4%	6.5%
Age 10-14	5,563	6.0%	4,617	5.4%	12,353	6.1%	7,958	6.8%	31,211	6.3%	3,253	6.4%	6.6%
Age 15-19	5,379	5.8%	4,389	5.1%	12,697	6.3%	7,790	6.7%	31,729	6.4%	3,000	5.9%	6.9%
Subtotal	23,880	25.6%	18,666	21.8%	47,796	23.6%	29,201	25.0%	121,890	24.8%	14,416	28.6%	26.5%
Age 20-24	6,573	7.0%	5,385	6.3%	11,346	5.6%	5,937	5.1%	31,895	6.5%	4,037	8.0%	7.1%
Age 25-29	7,723	8.3%	6,796	7.9%	12,279	6.1%	6,303	5.4%	30,196	6.1%	4,506	8.9%	6.8%
Age 30-34	7,378	7.9%	6,727	7.8%	12,372	6.1%	6,617	5.7%	30,361	6.2%	4,108	8.1%	6.6%
Age 35-39	5,918	6.3%	5,366	6.3%	11,818	5.8%	6,525	5.6%	28,326	5.8%	3,092	6.1%	6.3%
Age 40-44	5,737	6.2%	5,668	6.6%	13,490	6.7%	7,780	6.7%	31,853	6.5%	3,053	6.1%	6.8%
Age 45-49	5,845	6.3%	5,662	6.6%	14,180	7.0%	8,479	7.3%	33,125	6.7%	3,027	6.0%	7.1%
Age 50-54	6,559	7.0%	6,096	7.1%	15,706	7.8%	9,548	8.2%	36,241	7.4%	3,371	6.7%	7.3%
Age 55-59	6,121	6.6%	6,232	7.3%	15,815	7.8%	9,072	7.8%	35,342	7.2%	3,145	6.2%	6.5%
Age 60-64	5,282	5.7%	5,602	6.5%	14,127	7.0%	7,735	6.6%	30,684	6.2%	2,684	5.3%	5.7%
Age 65-69	3,913	4.2%	4,493	5.2%	11,247	5.6%	6,360	5.4%	25,760	5.2%	1,900	3.8%	4.2%
Age 70-74	2,596	2.8%	2,990	3.5%	7,634	3.8%	4,685	4.0%	19,024	3.9%	1,158	2.3%	3.1%
Age 75-79	2,011	2.2%	2,192	2.6%	5,436	2.7%	3,253	2.8%	14,082	2.9%	766	1.5%	2.4%
Age 80-84	1,713	1.8%	1,862	2.2%	4,324	2.1%	2,533	2.2%	10,956	2.2%	563	1.1%	1.9%
Age 85+	1,993	2.1%	2,058	2.4%	4,656	2.3%	2,897	2.5%	12,441	2.5%	622	1.2%	1.9%
TOTAL:	93,242	100.0%	85,795	100.0%	202,226	100.0%	116,925	100.0%	492,176	100.0%	50,448	100.0%	100%
Median Age	35.8		40.0		42.1		42.6		40.6		32.7		37.0

Source: Alteryx



Map of Market Area Age Distribution



- Block Groups - High (Above 48.5)
- Block Groups - Above Average (42.5 to 48.5)
- Block Groups - Average (37 to 42.5)
- Block Groups - Below Average (32.5 to 37)
- Block Groups - Low (Below 32.5)

Weather

Given the sensitivity of aquatics to weather conditions, it is appropriate to include an assessment of local weather patterns in the market analysis. The factors in the following chart from Weatherbase.com for Harrisburg, PA, were used to determine user days in the financial models.

Average Temperature													Years on Record: 30
	ANNUAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F	53.2	30.5	33	41.3	52.1	61.7	70.9	75.4	73.6	65.9	54.3	44.5	34.3

Average High Temperature													Years on Record: 30
	ANNUAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F	62.6	38	41.2	50.8	62.6	72.4	81.2	85.3	83.5	75.9	64.5	53.3	41.7

Average Low Temperature													Years on Record: 30
	ANNUAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F	43.8	23	24.8	31.8	41.6	51	60.6	65.4	63.8	55.9	44	35.7	27

Average Precipitation													Years on Record: 30
	ANNUAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
in.	40.9	2.9	2.7	3.3	3.4	4.1	3.7	3.6	3.7	3.6	3.3	3.4	3.2

Average Number of Days With Precipitation													Years on Record: 30
	ANNUAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Days	127.2	9.7	10.1	10.7	12.5	13.3	11.5	10.7	10.2	8.8	9.5	10.3	9.9



Section 3

Area Provider Analysis

East Shore YMCA
Lancaster Family YMCA
Kunkel Aquatic Center

Section 3: Area Provider Analysis

The recreation industry is a competitive market vying for disposable income driven by population trends, income levels, demographic profiles, and favorable locations. Large aquatic centers and destination facilities offer a grand scale of cutting-edge amenities, deliver a unique customer experience, and draw from a large radius. Small to medium aquatic centers compete by offering family amenities in a cozy atmosphere, thus delivering a friendly customer experience to the local market. The City of Harrisburg's goal is not to compete for services, but to deliver high quality programs at a reasonable cost.

East Shore YMCA

701

North

Front

Street

Harrisburg, PA, 17101

717-232-9622

Features

Indoor 4-lane pool 70f x 35f

Programs

Swim Lessons

Swim Team

Water Fitness Classes

Fees

Daily Admission

\$20 for two consecutive days

Annual Membership

Youth: \$146

Teen: \$162

Adult: \$484

Senior: \$436

Family: \$736



City Center Lancaster Family YMCA

265 Harrisburg Avenue
Lancaster, PA 17603
717-393-9622

Features

Indoor 6-lane 25-yard pool
Sauna, steam, whirlpool

Programs

Swim Lessons
Swim Team
Lifeguard Certification

Fees

Daily Admission

\$15

Annual Membership

Joining Fee \$25 to \$99

Youth: \$15/month

Teen: \$22.50/month

Adult: \$44.80/month

Family: \$73.60/month



Kunkel Aquatic Center / McGinness Pool

929 Harrisburg Avenue
Lancaster, PA 17603

Features

Indoor 50-meter pool

Programs

Swim Team
Swim Championships

Fees

Daily Admission

N/A



Section 4

Program Requirements

Jackson Lick Options
Hall Manor Options

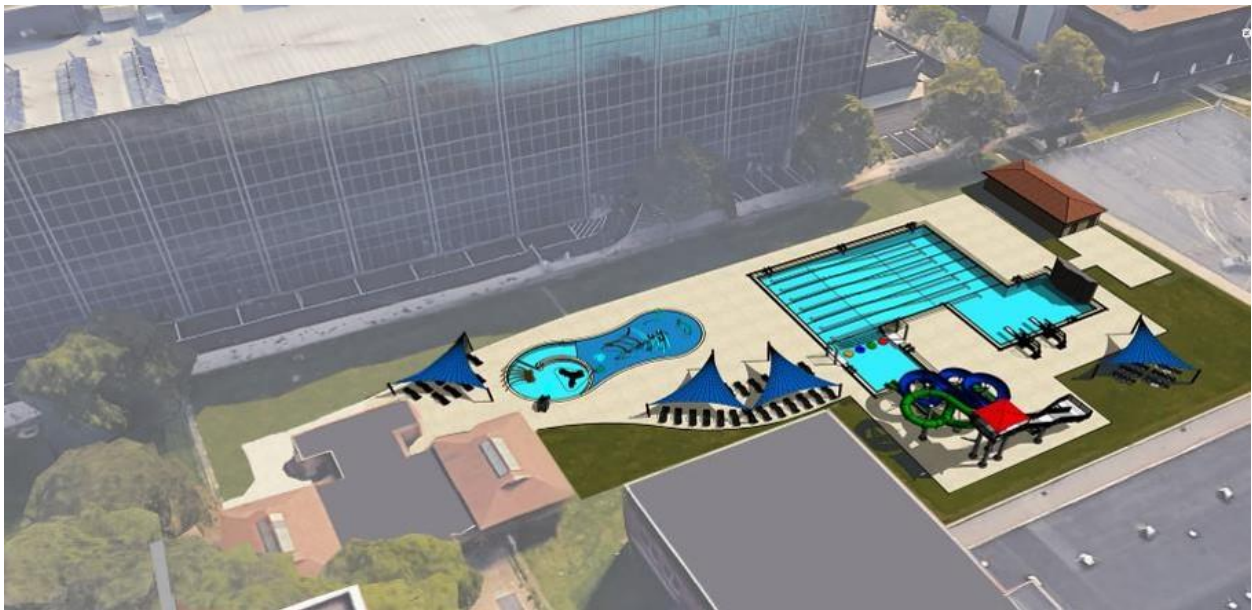


Section 4: Program Requirements

Options for Consideration

Jackson Lick Option 1

- Six, 25-yard lanes
- Shallow area for fitness, swim lessons, leisure swim
- Two, 1-meter diving boards
- Waterslide
- Crossing activity
- Climbing wall
- Spray pad with tot pool



OPINION OF PROBABLE COST: OPTION 1					
Description	Unit	Amount	Cost per Unit	Opinion of Cost	Opinion of Cost
Support Buildings		5,350	121	\$647,500	\$647,500
Bathhouse Renovation	Sq. Ft.	4,500	125	\$562,500	
Pool Mechanical	Sq. Ft.	850	100	\$85,000	
Aquatics		7,107	275	\$1,954,755	\$1,954,755
Leisure Pool	Sq. Ft.	5,177	215	\$1,113,055	
Diving Board	Quantity	2	15,000	\$30,000	
Climbing Wall	Quantity	1	35,000	\$35,000	
Waterslide	Allowance	1	275,000	\$275,000	
Crossing Activity	Allowance	1	35,000	\$35,000	
Spray Pad	Sq. Ft.	1,930	190	\$366,700	
Spray Features	Allowance	1	100,000	\$100,000	
Support		26,671	11	\$286,396	\$286,396
Outdoor Deck	Sq. Ft.	14,214	8	\$113,712	
Fence	Linear Ft.	600	70	\$42,000	
Overhead Lighting	Sq. Ft.	26,671	4	\$106,684	
Shade Structures	Quantity	3	8,000	\$24,000	
Unit	Sq. Ft.		Cost	Opinion of Cost	Opinion of Cost
Site Construction Costs (parking lot, landscaping, utilities, walks)				\$800,525	\$800,525
Total Construction Costs	Sq. Ft.	32,021	115	3,689,176	3,689,176
Furniture, Fixtures, Equipment				\$224,147	\$224,147
Subtotal				\$3,913,323	\$3,913,323
Contingency	10.0%			\$391,332	\$391,332
Inflation	5.0%			\$195,668	\$195,668
Indirect Costs	10.0%			\$430,466	\$430,466
Total Estimated Project Costs:				\$4,930,789	\$4,930,789
Say			154	\$4,940,000	\$5,000,000

Jackson Lick Option 2

- Children's area with zero-beach entry, play structure, children's slides and spraypad
- Two waterslides
- Crossing activity
- Climbing wall
- 8-lane lap pool with Open area for swim lessons, water aerobics and leisure swim



OPINION OF PROBABLE COST: OPTION 2					
Description	Unit	Amount	Cost per Unit	Opinion of Cost	Opinion of Cost
Support Buildings		5,350	121	\$647,500	\$647,500
Bathhouse Renovation	Sq. Ft.	4,500	125	\$562,500	
Pool Mechanical	Sq. Ft.	850	100	\$85,000	
Aquatics		9,808	286	\$2,807,070	\$2,807,070
Leisure Pool	Sq. Ft.	7,718	215	\$1,659,370	
Play Feature w/ bucket	Quantity	1	175,000	\$175,000	
1M Diving	Quantity	2	15,000	\$30,000	
Waterslide w/ Tower	Quantity	1	325,000	\$325,000	
2nd Waterslide	Quantity	1	125,000	\$125,000	
Crossing Activity	Allowance	1	35,000	\$35,000	
Slide Catch Pool	Sq. Ft.	600	215	\$129,000	
Climbing Wall	Quantity	1	35,000	\$35,000	
Spraypad	Sq. Ft.	1,490	130	\$193,700	
Spray Features	Allowance	1	100,000	\$100,000	
Support		34,774	10	\$362,024	\$362,024
Outdoor Deck	Sq. Ft.	19,616	8	\$156,928	
Fence	Linear Ft.	600	70	\$42,000	
Overhead Lighting	Sq. Ft.	34,774	4	\$139,096	
Shade Structures	Quantity	3	8,000	\$24,000	
Unit		Sq. Ft.	Cost	Opinion of Cost	Opinion of Cost
Site Construction Costs (parking lot, landscaping, utilities, walks)				\$1,003,100	\$1,003,100
Total Construction Costs	Sq. Ft.	40,124	120	4,819,694	4,819,694
Furniture, Fixtures, Equipment				\$240,744	\$240,744
Subtotal				\$5,060,438	\$5,060,438
Contingency	10.0%			\$506,044	\$506,044
Inflation	5.0%			\$253,024	\$253,024
Indirect Costs	10.0%			\$556,648	\$556,648
Total Estimated Project Costs:				\$6,376,154	\$6,376,154
Say			159	\$6,380,000	\$6,400,000

Hall Manor Option 1

- Six, 25-yard lanes
- Shallow area for fitness, swim lessons, leisure swim
- Two, 1-meter diving boards
- Waterslide
- Crossing activity
- Climbing wall
- Spray pad with tot pool



OPINION OF PROBABLE COST: OPTION 1					
Description	Unit	Amount	Cost per Unit	Opinion of Cost	Opinion of Cost
Bathhouse		6,350	187	\$1,185,000	\$1,185,000
New Bathhouse	Sq. Ft.	5,500	200	\$1,100,000	
Pool Mechanical	Sq. Ft.	850	100	\$85,000	
Aquatics		7,107	275	\$1,954,755	\$1,954,755
Leisure Pool	Sq. Ft.	5,177	215	\$1,113,055	
Diving Board	Quantity	2	15,000	\$30,000	
Waterslide	Allowance	1	275,000	\$275,000	
Climbing Wall	Quantity	1	35,000	\$35,000	
Crossing Activity	Allowance	1	35,000	\$35,000	
Spray Pad	Sq. Ft.	1,930	190	\$366,700	
Spray Features	Allowance	1	100,000	\$100,000	
Support		27,671	10	\$290,396	\$290,396
Outdoor Deck	Sq. Ft.	14,214	8	\$113,712	
Fence	Linear Ft.	600	70	\$42,000	
Overhead Lighting	Sq. Ft.	27,671	4	\$110,684	
Shade Structures	Quantity	3	8,000	\$24,000	
Unit	Sq. Ft.		Cost	Opinion of Cost	Opinion of Cost
Site Construction Costs (parking lot, landscaping, utilities, walks)				\$850,525	\$850,525
Total Construction Costs	Sq. Ft.	34,021	126	4,280,676	4,280,676
Furniture, Fixtures, Equipment				\$238,147	\$238,147
Subtotal				\$4,518,823	\$4,518,823
Contingency	10.0%			\$451,882	\$451,882
Inflation	5.0%			\$225,943	\$225,943
Indirect Costs	10.0%			\$497,071	\$497,071
Total Estimated Project Costs:				\$5,693,719	\$5,693,719
Say			168	\$5,700,000	\$5,700,000

Hall Manor Option 2

- Children's area with zero-beach entry, play structure, children's slides and spraypad
- Two waterslides
- Crossing activity
- Climbing wall
- 8-lane lap pool with Open area for swim lessons, water aerobics and leisure swim



OPINION OF PROBABLE COST: OPTION 2					
Description	Unit	Amount	Cost per Unit	Opinion of Cost	Opinion of Cost
Bathhouse		6,350	187	\$1,185,000	\$1,185,000
New Bathhouse	Sq. Ft.	5,500	200	\$1,100,000	
Pool Mechanical	Sq. Ft.	850	100	\$85,000	
Aquatics		9,808	290	\$2,842,070	\$2,842,070
Leisure Pool	Sq. Ft.	7,718	215	\$1,659,370	
Play Feature w/ bucket	Quantity	1	175,000	\$175,000	
Waterslide w/ Tower	Quantity	1	325,000	\$325,000	
2nd Waterslide	Quantity	1	125,000	\$125,000	
Climbing Wall	Quantity	1	35,000	\$35,000	
Diving Board	Quantity	2	15,000	\$30,000	
Crossing Activity	Allowance	1	35,000	\$35,000	
Climbing Wall	Quantity	1	35,000	\$35,000	
Slide Catch Pool	Sq. Ft.	600	215	\$129,000	
Spray Pad	Sq. Ft.	1,490	130	\$193,700	
Spray Features	Allowance	1	100,000	\$100,000	
Support		35,774	10	\$366,024	\$366,024
Outdoor Deck	Sq. Ft.	19,616	8	\$156,928	
Fence	Linear Ft.	600	70	\$42,000	
Overhead Lighting	Sq. Ft.	35,774	4	\$143,096	
Shade Structures	Quantity	3	8,000	\$24,000	
Unit		Sq. Ft.	Cost	Opinion of Cost	Opinion of Cost
Site Construction Costs (parking lot, landscaping, utilities, walks)				\$1,053,100	\$1,053,100
Total Construction Costs	Sq. Ft.	42,124	129	5,446,194	5,446,194
Furniture, Fixtures, Equipment				\$252,744	\$252,744
Subtotal				\$5,698,938	\$5,698,938
Contingency	10.0%			\$569,894	\$569,894
Inflation	5.0%			\$284,949	\$284,949
Indirect Costs	10.0%			\$626,883	\$626,883
Total Estimated Project Costs:				\$7,180,664	\$7,180,664
Say			171	\$7,190,000	\$7,200,000

Capacity

The following chart details the facility capacity of each option based on the size of the pools and the amount of shallow and deep water.

	Option 1	Option 2
WET-SIDE CAPACITY - JACKSON LICK		
Recreation (Surface Area Sq. Ft.)		
Outdoor Leisure	5,177	8,318
Outdoor Tot	1,930	1,490
Total	7,107	9,808
Shallow Water	4,975	6,866
Deep Water	2,132	2,942
Estimated Recreation Holding Capacity	220	304
Daily Recreation Holding Capacity	551	760
Total Holding Capacity	250	334
Total Daily Facility Capacity	641	850

	Option 1	Option 2
WET-SIDE CAPACITY - HALL MANOR		
Training (Available 25-Yard Lanes)		
Recreation (Surface Area Sq. Ft.)		
Outdoor Leisure	5,177	8,318
Outdoor Tot	1,930	1,490
Total	7,107	9,808
Shallow Water	4,975	6,866
Deep Water	2,132	2,942
Estimated Recreation Holding Capacity	220	304
Daily Recreation Holding Capacity	551	760
Total Holding Capacity	250	334
Total Daily Facility Capacity	641	850

Section 5

Operations

Opinion of Revenue
Opinion of Expenses
Operations Summary
Funding Options

Section 5: Operations

Revenue analysis includes special user group usage and facility per capita spending trends, thus developing an opinion of revenue for the first five years of operation. Recreation programming revenue is based on user groups and local programming fees. Fee structure is based on fees from members and other users to project per capita income. Revenue is estimated, taking recommended fee schedules into account. All revenue assumptions reflect multiplying attendance by per capita and adding special user group income.

Expense analysis includes a detailed budget model for estimating probable expenses for major areas of labor, contractual services, commodities, and utilities. User projections are made based on programming. Expenses are estimated, taking into account hours of operation, attendance projections, local weather patterns, local utility rates, and other key items. Operating data from other facilities in the area were reviewed and taken into account to form projections.

Opinion of Revenue

Programming

Any program schedule will require flexibility to adapt to specific needs of the community. It is the responsibility of the aquatic supervisor to monitor user group demands and adjust schedules accordingly. Revenue projections are based on marketing programming that would include the following programs:

- Swim Lessons
- Swim Team
- Water Fitness
- Lifeguard Certification
- Birthday Rentals and Facility Rentals

It is assumed that these user groups, because of their high volume of use, will pay a lower fee per person admission. Aquatic programming will need to be scheduled so as not to significantly impact community recreation programming.

The following table assumes that the cost of the program has been deducted from generated fees and shows the “net” program revenue. For example, the revenue projected for swimming lessons is after the instructor cost.



Aquatics Programs Revenue & Expenses

Revenue	Mgmt. Assump.	Price Per Session (8)		No. Sellable Sessions	Total Per Session					
		Year 1	Year 1		Year 1	Year 2	Year 3	Year 4	Year 5	
Swim Team Revenue										
Summer League	\$/Swimmer (Average)	\$100	25	1	\$2,500	\$2,750	\$3,176	\$3,335	\$3,677	
Aquatics Instruction Revenue										
Swim Lessons	8 classes/session	\$60	250	1	\$15,000	\$16,500	\$19,058	\$20,010	\$22,061	
Water Fitness	\$/Session	\$5	150	2	\$1,500	\$1,650	\$1,906	\$2,001	\$2,206	
Lifeguard Certification	\$/Session	\$200	15	1	\$3,000	\$3,300	\$3,812	\$4,002	\$4,412	
Rentals										
Birthday Party	\$/ 2 HRS of Pavillion	\$100	16	1	\$1,600	\$1,760	\$2,033	\$2,134	\$2,353	
Private (Full Pool)	\$/HR	\$175	8	1	\$1,400	\$1,540	\$1,779	\$1,868	\$2,059	
Non-capacity growth rate										
Capacity growth rate										
Area Revenue					\$25,000	\$27,500	\$31,763	\$33,351	\$36,769	
Expense										
Mgmt Assump.					Year 1	Year 2	Year 3	Year 4	Year 5	
Program Supplies	4% of year 1 gross revenue; 3% annual increase				\$1,000	\$1,100	\$1,271	\$1,334	\$1,471	
LG Class Materials	\$60 per participant for course record fee and manuals				\$900	\$927	\$955	\$983	\$1,013	
ARC LTS Facility Fee	1500 cards; ; 3% annual increase				\$975	\$1,004	\$1,034	\$1,065	\$1,097	
Marketing	5% of year 1 gross revenue				\$1,250	\$1,375	\$1,588	\$1,668	\$1,838	
Credit Card Fees	1.5% of Revenue				\$375	\$413	\$476	\$500	\$552	
Part-Time Program Staff	50% of gross				\$11,000	\$12,100	\$13,976	\$14,674	\$16,178	
Area Expense					\$15,500	\$16,919	\$19,300	\$20,225	\$22,149	
Net Revenue					\$9,500	\$10,581	\$12,463	\$13,126	\$14,620	

Admission Fees

In order to project revenue, fee schedules have been established. Three general approaches to evaluating the fee structure of an aquatic center include the following:

1. Maximize revenue by charging what the market will support. Programs and facilities operate with positive cash flow. If excess funds are available at season's end, they can be used to support under-funded programs.
2. Break-even in the operation of the facility. This approach is increasing in popularity as funding is becoming limited to organizations that use the facility. Capital funds are used to create the facility; operational funds are generated from the user on a break-even basis.
3. Subsidy pricing historically has been the policy of many community facilities.

A critical component of an enterprise fund management protocol is the revenue and pricing policy. The following chart shows recommended fee structures for the concept. The recommended fee is based on this area's demographics. The formula reflects the category for admission, the rate of each category, and the percentage of attendance that might be expected from that category.

Outdoor			
Category	Rate	Percent of Visits	Per Visit Unit
Daily Admission			
Residents			
Adult (Over 48")	6.00	32%	1.92
Child (Under 48")	4.00	18%	0.72
Seniors (60+)	4.00	2%	0.08
Free	0	3%	-
Season Pass			
Resident			
Adult (Over 48")	50.00	18%	0.60
Child (Under 48")	45.00	11%	0.33
Seniors (60+)	30.00	1%	0.02
Family (4)	145.00	15%	0.36
Subtotal / Average		100%	4.03
Credit Card Fees (2%)			0.08
Food / Merchandise			\$ 0.10
Total			\$4.05



The following table takes into consideration the revenue streams from special user group and general attendance, resulting in an opinion of revenue for each option.

Jackson Lick		2017	2018	2019	2020	2021
Attendance						
	Option 1	26,536	26,579	26,599	26,642	26,685
	Option 2	29,190	29,237	29,259	29,306	29,353
Per Capita Spending (3% Annual Increase)						
	Option 1	\$4.05	\$4.17	\$4.30	\$4.43	\$4.56
	Option 2	\$4.05	\$4.17	\$4.30	\$4.43	\$4.56
Aquatic Programming Revenue						
	Option 1	\$25,000	\$27,500	\$31,763	\$33,351	\$36,769
	Option 2	\$25,000	\$27,500	\$31,763	\$33,351	\$36,769
Total Revenue (Gross)						
	Option 1	\$132,522	\$138,426	\$146,101	\$151,309	\$158,462
	Option 2	\$143,274	\$149,519	\$157,534	\$163,105	\$170,631
<hr/>						
Hall Manor		2017	2018	2019	2020	2021
Attendance						
	Option 1	16,380	16,398	16,413	16,430	16,447
	Option 2	19,606	19,622	19,635	19,652	19,668
Per Capita Spending (3% Annual Increase)						
	Option 1	\$4.05	\$4.17	\$4.30	\$4.43	\$4.56
	Option 2	\$4.05	\$4.17	\$4.30	\$4.43	\$4.56
Aquatic Programming Revenue						
	Option 1	\$25,000	\$27,500	\$31,763	\$33,351	\$36,769
	Option 2	\$25,000	\$27,500	\$31,763	\$33,351	\$36,769
Total Revenue (Gross)						
	Option 1	\$91,370	\$95,934	\$102,314	\$106,095	\$111,775
	Option 2	\$104,439	\$109,390	\$116,167	\$120,360	\$126,463

Opinion of Expenses

Commodities

Commodities are day-to-day products used to operate aquatic centers. Office supplies, program supplies, custodial supplies, repair supplies, and chemicals are included. In determining annual chemical expense, chemical treatment assumes the use of calcium hypochlorite and muriatic acid (pH buffer). Chemical use can depend on bather load and chemical balance of the water. In estimating annual costs, medium bather load figures are assumed.

Heating/Dehumidification

In determining utility costs, current energy costs at other facilities in the area were reviewed. Total costs include energy, energy demand, and delivery charges. Caution must be used when comparing this cost with operating expenses of other facilities across the country.

Electricity

The calculations are based on 2017 utility rate information. A figure of \$0.070 cents per kWh was estimated, including both demand and energy costs.

Water and Sewer

Water and sewer services will be needed for domestic use and compensation for evaporation and backwashing purposes. Backwash water and domestic water will be released to the sanitary system. This does not include landscape irrigation.

Insurance

Insurance denotes liability for more people and more structure based on visits and labor.

Capital Replacement Fund

The manufacturers of some types of mechanical equipment recommend annual maintenance programs to ensure proper performance of their equipment. Much of this work will be performed by outside contractors. In addition, for daily operation of the facility, miscellaneous items will need to be repaired by outside firms. The capital replacement fund sets money aside for repairs/replacement.

Facility Staff

Projected annual payroll expenses are listed by summer and winter classifications reflecting benefits and taxes. Scheduling employees is determined by programming demand and management procedure. Wherever possible, pay rates were determined by local job classifications and wage scales. Cost for swim instructors and other employees associated with program income were factored in as cost against net programming revenue.



The following chart details the labor expenses associated with each option.

Job Description	Hours Per Day		Cost Per Hour		Days per Season			Total Employer Expense	
	Option 1	Option 2	Hourly Rate	Rate with overhead	Indoor	Outdoor	Sprayground	Option 1	Option 2
<i>Summer</i>									
Cashier	7	7	8.50	\$10.20	100	100	100	7,140	7,140
Pool Manager	10	10	12.00	\$14.40	100	100	100	14,400	14,400
Lifeguard	76	76	9.50	\$11.40	100	100	100	86,640	86,640
Rec Attendant	0	0	8.50	\$10.20	100	100	100	0	0
Maintenance	0	0	20.00	\$24.00	100	100	100	0	0
Summer Total	93	93						\$108,180	\$108,180
<i>Winter</i>									
Cashier	0	0	8.50	\$10.20	265	10	50	0	0
Pool Manager	0	0	12.00	\$14.40	265	10	50	0	0
Lifeguard	0	0	9.50	\$11.40	265	10	50	0	0
Rec Attendant	0	0	8.50	\$10.20	265	10	50	0	0
Maintenance	32	32	20.00	\$24.00	265	10	50	7,680	7,680
Winter Total	32	32						\$7,680	\$7,680
Annual Labor Expense								\$115,860	\$115,860

Opinion of Expense

Direct Facility Expense Budget - Jackson Lick

	Option 1	Option 2
Facility Staff		
Full Time Employment	Not Included	Not Included
Summer Employment	\$108,180	\$108,180
Winter Employment	\$7,680	\$7,680
Training	\$4,000	\$4,000
Total Labor	\$119,860	\$119,860
Contractual Services		
Insurance	Self-Insured	Self-Insured
Repair and Maintenance	\$12,400	\$16,000
Total Contractual Services	\$12,400	\$16,000
Commodities		
Operating Supplies	\$7,440	\$9,600
Chemicals	\$9,493	\$14,280
Advertising	\$0	\$0
Total Commodities	\$16,933	\$23,880
Utilities		
HVAC	\$5,842	\$5,842
Electricity	\$19,188	\$22,703
Pool Heating	\$0	\$0
Data/Communications	Not Included	Not Included
Trash Service	Not Included	Not Included
Water & Sewer	\$6,836	\$8,615
Total Utilities	\$31,866	\$37,160
Total Operating Expenses	\$181,059	\$196,901
Capital Replacement Fund	\$24,700	\$31,900
Total Expense	\$205,759	\$228,801



Direct Facility Expense Budget - Hall Manor

	Option 1	Option 2
Facility Staff		
Full Time Employment	Not Included	Not Included
Summer Employment	\$108,180	\$108,180
Winter Employment	\$7,680	\$7,680
Training	\$4,000	\$4,000
Total Labor	\$119,860	\$119,860
Contractual Services		
Insurance	Self-Insured	Self-Insured
Repair and Maintenance	\$14,300	\$18,000
Total Contractual Services	\$14,300	\$18,000
Commodities		
Operating Supplies	\$8,580	\$10,800
Chemicals	\$9,493	\$14,280
Advertising	\$0	\$0
Total Commodities	\$18,073	\$25,080
Utilities		
HVAC	\$6,934	\$6,934
Electricity	\$20,159	\$23,674
Pool Heating	\$0	\$0
Data/Communications	Not Included	Not Included
Trash Service	Not Included	Not Included
Water & Sewer	\$5,211	\$7,081
Total Utilities	\$32,304	\$37,689
Total Operating Expenses	\$184,537	\$200,630
Capital Replacement Fund	\$28,500	\$36,000
Total Expense	\$213,037	\$236,630

Expense Summary Jackson Lick

	2017	2018	2019	2020	2021
Direct Facility Expenses					
Option 1	181,059	185,585	190,225	194,981	199,855
Option 2	196,901	201,823	206,869	212,040	217,341
Aquatic Programming Expenses					
Option 1	\$15,500	\$16,919	\$19,300	\$20,225	\$22,149
Option 2	\$15,500	\$16,919	\$19,300	\$20,225	\$22,149
Total Operating Expenses					
Option 1	\$196,559	\$202,504	\$209,525	\$215,206	\$222,005
Option 2	\$212,401	\$218,742	\$226,168	\$232,265	\$239,491

Expense Summary Hall Manor

	2017	2018	2019	2020	2021
Direct Facility Expenses					
Option 1	184,537	189,150	193,879	198,726	203,694
Option 2	200,630	205,646	210,787	216,056	221,458
Aquatic Programming Expenses					
Option 1	\$15,500	\$16,919	\$19,300	\$20,225	\$22,149
Option 2	\$15,500	\$16,919	\$19,300	\$20,225	\$22,149
Total Operating Expenses					
Option 1	\$200,037	\$206,069	\$213,179	\$218,951	\$225,844
Option 2	\$216,130	\$222,564	\$230,087	\$236,281	\$243,607



Operations Summary

The following chart provides a “recapture rate” to define the percentage of operating expenses recuperated or recaptured by operating revenue.

JACKSON LICK	2017	2018	2019	2020	2021
Option 1					
Project Cost	\$4,930,789				
Attendance	26,536				
Revenue	\$132,522	\$138,426	\$146,101	\$151,309	\$158,462
Expense	\$196,559	\$202,504	\$209,525	\$215,206	\$222,005
Operating Cashflow	(\$64,038)	(\$64,078)	(\$63,424)	(\$63,897)	(\$63,543)
Recapture Rate	67%	68%	70%	70%	71%
Capital Replacement Fund	\$24,700	\$24,700	\$24,700	\$24,700	\$24,700
Debt Service	(\$379,060)	(\$379,060)	(\$379,060)	(\$379,060)	(\$379,060)
Cash Flow	(\$467,798)	(\$467,838)	(\$467,184)	(\$467,657)	(\$467,303)

Option 2

Project Cost	\$6,376,154				
Attendance	29,190				
Revenue	\$143,274	\$149,519	\$157,534	\$163,105	\$170,631
Expense	\$212,401	\$218,742	\$226,168	\$232,265	\$239,491
Operating Cashflow	(\$69,127)	(\$69,223)	(\$68,634)	(\$69,161)	(\$68,860)
Recapture Rate	67%	68%	70%	70%	71%
Capital Replacement Fund	\$31,900	\$31,900	\$31,900	\$31,900	\$31,900
Debt Service	(\$490,174)	(\$490,174)	(\$490,174)	(\$490,174)	(\$490,174)
Cash Flow	(\$591,201)	(\$591,297)	(\$590,708)	(\$591,235)	(\$590,934)

HALL MANOR

	2017	2018	2019	2020	2021
Option 1					
Project Cost	\$5,693,719				
Attendance	16,380				
Revenue	\$91,370	\$95,934	\$102,314	\$106,095	\$111,775
Expense	\$200,037	\$206,069	\$213,179	\$218,951	\$225,844
Operating Cashflow	(\$108,667)	(\$110,135)	(\$110,865)	(\$112,856)	(\$114,069)
Recapture Rate	46%	47%	48%	48%	49%
Capital Replacement Fund	\$28,500	\$28,500	\$28,500	\$28,500	\$28,500
Debt Service	(\$437,711)	(\$437,711)	(\$437,711)	(\$437,711)	(\$437,711)
Cash Flow	(\$574,878)	(\$576,347)	(\$577,076)	(\$579,067)	(\$580,280)

Option 2

Project Cost	\$7,180,664				
Attendance	19,606				
Revenue	\$104,439	\$109,390	\$116,167	\$120,360	\$126,463
Expense	\$216,130	\$222,564	\$230,087	\$236,281	\$243,607
Operating Cashflow	(\$111,691)	(\$113,174)	(\$113,920)	(\$115,922)	(\$117,144)
Recapture Rate	48%	49%	50%	51%	52%
Capital Replacement Fund	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000
Debt Service	(\$552,022)	(\$552,022)	(\$552,022)	(\$552,022)	(\$552,022)
Cash Flow	(\$699,713)	(\$701,196)	(\$701,941)	(\$703,943)	(\$705,166)

Funding Options

There are many different funding methods for the project. In addition to capital market financing (i.e., the sale of bonds or issuance of contracts to private entities such as banks or lending institutions), there are other forms of funding that have been used in other projects. Financing, in most cases, requires the sale of bonds. For any bond to be sold, an independent bond rating institution must evaluate the entity to be represented by the bond. This rating will determine the bond price and interest rate, and as a result, the overall worth of the bond. The following are four bonding institutions in the United States.

Examples of Bond Rating Institutions

- Moody's Investor Service
- Standard & Poor's Corporation
- Fitch Investors Service, L.P.
- Duff & Phelps Credit Rating Co.

Financing generally occurs in one of the forms or methods as outlined below.

Direct Funding

1. Direct Appropriation
2. Private Contributions
3. Joint Ventures

Capital Markets Financing

4. Local Discretionary Sales Surtax
5. The sale of General Obligation Bonds
6. The sale of Certificates of Obligation
7. The sale of Revenue Bonds
8. The sale of Certificates of Participation
9. The sale of Lease Revenue Bonds

These options are not mutually exclusive in every case. In fact, the final financing for the new facility is likely to be a package of various financing sources that collectively reach the needed total.

Direct Appropriations

The city is permitted by law to directly appropriate money to the development, construction and operation of an aquatic center. This would include money either spent directly on the project or contributed to another entity established for this purpose.

As a practical matter, the likelihood of getting a new aquatic center off the ground without extensive and direct financial support is fairly remote. The other sources of funding cannot be expected to enthusiastically embrace the aquatic center unless the city is already financially committed to the



project.

Private Contributions

For different reasons, various private individuals and corporations may have an interest in supporting an aquatic project. The center could be positioned as a major factor in building civic pride, promoting economic development, enhancing community facilities and other positive attributes. Properly structured, any of the financing and ownership options selected will permit tax-deductible giving from most private contributors. Historically, contributions from outside sources have not exceeded matching funds.

Some sample commemorative gift opportunities that have been suggested by other facilities include:

- Pool Structure \$1,000,000
- Entrance/Offices \$ 500,000
- Balcony \$ 500,000
- Campaign Name Itself \$ 250,000
- Locker Rooms \$ 250,000
- Large Brick & 1yr. Memb.\$ 10,000
- Bricks/Tiles (contributors) \$ 500

Joint Use and Joint Partnership Agreements

Joint Use Agreements and other collaborations with area municipalities, educational institutions, businesses, health care providers, and other organizations and institutions can be significant sources of revenue and programming opportunities. A Joint Use Agreement has the potential of increasing programming opportunity and financial support. While this process is difficult to manage in terms of organizing the different priorities and agendas of the different organizations, it has proven worthwhile in other communities.

The establishment of a partnership can be a positive experience for the desired aquatic facility. Recent years have provided many examples of existing partnership relationships to establish major facilities. Partnerships have allowed organizations to create useful recreational facilities that otherwise would not have been possible. The following are some reasons an organization may wish to engage into a partnership relationship:

- Cost to provide government service is high
- Creates budget and creative programming opportunities
- Spreads the risk among the partners
- Merging resources creates a higher level of service delivery
- Offers entrepreneurial opportunities not always affordable to public agencies
- Planning changes the mindset of the players and forces them to think creatively
- Encourages a market driven approach rather than a product driven approach

The desire to partner with others is popular when there is mutual interest in building a major capital asset. What potentially exists in partnership relationships frequently occurs between one

or more sectors such as two or more public sector organizations, and the public sector and the not-for-profit organizations, and the private sector and the public sector.

Partnership relationships usually exist in one of two forms as outlined in the following examples:

- **Investment Partnerships:** public sector organizations such as schools or park organizations, and/or the private sector, and/or the not-for-profit engage in equity construction of a capital asset. In recent years these facilities have included gymnasiums and fitness facilities.
- **Program Partnerships:** public sector organizations such as schools or park organizations, and/or the private sector, and/or the not-for-profit engage in the provision of programs to benefit the community or facility. These programs are typically outsourced by the public or not-for-profit sector organization to the private sector. In these instances, it is determined that the public sector is better off managing the activity rather than producing it. In recent years these programs have included facility management, specialized training programs, and specific skill activities.

Establishing an Investment Partnership relationship can be tricky, especially when considering a partnership involving several entities. The structure of such a relationship must allow for consistent operations, policy making, and operational management of the facility after it is open. There is a potential for the relationship to be very complex and challenging given the financial structure, the differences in the makeup of the policy making boards, and the administrative structures of each entity.

Program Partnerships would come after the Investment Partnership relationship is created and executed. Program Partnerships could be as complex as determining financial access to the facility to use and the allocation of time or identifying how the facility will incorporate programs. Each of these issues will need to be discussed so a clear idea of financial and operational issues are understood and agreed upon among the partners before the facility is ready to open.

Typically, before any successful partnership is undertaken, these three critical considerations must be addressed.

1. **There is a Common Vision:** a compelling picture of the possibilities must be shared by all. This does not mean that everyone necessarily needs to have the same goals, but all partners must be able to achieve their goals within the “big picture” of the project.
2. **Impact of the New Relationship:** adding real value to the agencies involved. If the involved agencies see the partnership creating the ability to improve productivity, efficiency, and profitability while achieving the desired goals, then the desired impact is mutual and the partnership is one step closer to achieving the desired goals.
3. **Knowing through Intimacy:** Intimacy (closeness, sharing, and trust) is never achieved easily or quickly. To achieve intimacy, there must be no hidden agendas; the ideas of all potential partners regarding the goals of the project must be out in the open. There must be similar interest but separate expertise regarding the project, which is to say that each partner should “bring something to the table.”



Capital Markets Financing

The final five methods of financing all involve the capital markets. General Obligation Bonds and Revenue Bonds are issued directly by the city. A third-party owner, set up expressly for this purpose, and using the tax-exempt issuing authority of the city, issues Certificates of Participation and Lease Revenue Bonds. The city would simply be leasing the aquatic center from this entity.

The suitability, structure, requirements, costs, advantages, and disadvantages of each are quite different. The remainder of this section summarizes some of these features.

Local Discretionary Sales Surtax

Issuance Requirements

If General Obligation Bonds become a part of the financing package, the issuer must accomplish all of the following:

1. Internal approvals: The city has an internal approval process before implementing the discretionary sales tax. The proposed sales tax must be endorsed by the city council.

General Obligation Bonds

In selling General Obligation Bonds (also known as Council Manic Bonds), a municipality obligates itself to levy and collect sufficient property taxes without limit as to the rate or the amount in order to pay principal and interest as it comes due. Using General Obligation Bonds (GOBs) is a way to finance capital improvement projects (such as parks, facilities and streetscapes) by taking out bonds with very low interest rates.

Tax Status to Investors

Income from General Obligation Bonds generally is exempt (to the investor) from federal income taxes.

Issuance Requirements

Should General Obligation Bonds become a part of the financing package, the issuer must accomplish all of the following:

1. Internal approvals: The city has an internal approval process before any bond issue can proceed. The proposed bond must be endorsed by the council. General Obligation Bonds could be used if approved by the voters.
2. Voter approval: A General Obligation issue must go before the voters, and must secure the approval of a majority of the voters.
3. Compliance with indebtedness limits: The city faces indebtedness limits based on the aggregate property value in the tax bases.

Certificate of Obligation

In selling Certificate of Obligation Bonds, the debt instrument is secured by the revenue from the proposed facilities, and the municipality obligates itself to levy and collect sufficient property taxes, without limit as to the rate or the amount, to pay principal and interest as it comes due.

Tax Status to Investors

Income from Certificate of Obligation Bonds is generally exempt (to the investor) from federal income taxes.

Issuance Requirements

Should Certificate of Obligation Bonds become a part of the financing package, the issuer must accomplish all of the following:

1. Internal approvals: The city has an internal approval process before any bond issue can proceed. The proposed bond must be endorsed by the city council.
2. Compliance with indebtedness limits: The city faces indebtedness limits based on the aggregate property value in the tax bases.

Revenue Bonds

Revenue Bonds are to be repaid out of the revenues generated by the operation of the aquatic center. The risk that the center's revenues will prove insufficient to cover interest and principal payments on the bonds is borne by the investor. The facility's revenue (in excess of debt service requirements) is retained by the city. It is possible that the facility will not generate sufficient revenue to cover all of its debt service obligations. A revenue bond may be appropriate for use if an entity were to underwrite the operating cost of operating the community aquatic center and thereby release the revenue stream to secure revenue bonds.

Tax Status to Investors

Like General Obligation Bond interest, income from Revenue Bonds generally is exempt (to the investor) from federal income taxes.

Issuance Requirements

The requirements to issue Revenue Bonds are slightly less restrictive than General Obligations. In this case, the city must accomplish all of the following:

1. Internal approvals: The city has an internal approval process before a bond issue can proceed. The proposed bond must be endorsed by the city council.
2. Compliance with indebtedness limits: The city faces indebtedness limits based upon the aggregate property value in their tax bases.



Certificates of Participation (Municipal Lease)

A Certificate of Participation (COP) is not a debt issue per se. Instead, the investor purchases a proportional share of lease income that the issuer expects to receive over the life of the COP. It also differs from the bond financing options previously discussed in that the issuer is not the city, but rather an independent entity created specifically for this purpose. This entity sells the COPs, uses the proceeds to develop the community aquatic center and then leases the completed center to the city. It secures the means to pay the COP's holders from the rental income it receives from the city.

In general, a COP must have sufficient revenue generated by the facility to pay for debt service. It is unlikely that the aquatic recommendations developed will generate enough positive cash flow after operations to meet this requirement. By pledging gross revenues to support the COP, this structure may be worth considering. Under this scenario, operating expenses would be paid by another source, possibly a corporate sponsor.

Third-Party Lessor

The aquatic center would be constructed and owned (initially, at least) by a third-party entity, who would function as the lessor in this deal. In general, there are three possible kinds of entities for this purpose:

- Private sector entity; for example, a leasing company or a private investment group;
- Constituted authority; for example, a Joint Powers Authority established by the city for this purpose; or,
- A not-for-profit corporation.

City as Lessee

The city would be the lessee of the aquatic center, making periodic lease payments to the owner of the facilities. The respective share of the lease payments to be made by each would be a negotiated amount, based on upcoming contributions, ongoing usage, and other factors.

Kinds of Municipal Leases

There are two kinds of leases that may be structured:

- 1) Operating Lease: The payments from the city are made for just the use of the center.
- 2) Financing Lease: The payments made by the city provide for both the use of the center and an accruing ownership in the facilities. Thus, a financing lease functions as a purchase-over-time arrangement for the city.

Impact on Indebtedness

Ordinarily, the lease obligations incurred by the municipality are not treated as debt. Consequently, entering into a municipal lease ordinarily is not subject to voter approval or debt limitation provisions.

Financing Cost

Ordinarily, the cost of municipal lease financing may range from twenty to fifty basis points above comparable financing through General Obligation Bonds. The reason for the higher rate is that the lessor is at risk throughout the life of the lease that the city will decline, for any reason, to appropriate the funds to make their periodic lease payments. There is no comparable risk in a General Obligation Bond.

Lease Revenue Bonds (Municipal Lease)

In most respects, Lease Revenue Bonds function like Certificates of Participation (the option previously discussed). The essential difference between these two is the legal nature of the financing instruments being sold by the independent entity (the lessor). A Lease Revenue Bond is an obligation of the issuing authority, whereas the Certificate of Participation provides merely for the flow-through of that authority's rental income from the city to the COP's holders.

Impact on Indebtedness

Ordinarily, the lease obligations incurred by the municipality are not treated as debt. Consequently, entering into a municipal lease ordinarily is not subject to voter approval or debt limitation provisions.

Financing Cost

The cost of Lease Revenue Bonds may be slightly less than the cost of Certificates of Participation, because the only security behind the Certificates of Participation is the pass-through of the rental income from the city.



A

ADA: Americans with Disabilities Act. Under Title III, no individual may be discriminated against on the basis of disability with regards to the full and equal enjoyment of the goods, services, facilities, or accommodations of any place of public accommodation by any person who owns, leases (or leases to), or operates a place of public accommodation.

Age Distribution: Using the 2000 Census, numbers and percentages are available by census tract showing different age groups, thus providing a median age.

American Alliance for Health, Physical Education, Recreation and Dance: AAHPERD is an alliance of five national associations, six district associations, and a research consortium which support healthy lifestyles through high quality programs.

Aquatic: Of or pertaining to water.

Aquatic Design: Detailed drawings of pool shells, pool structures, pool filtration systems, and other equipment for new or soon-to-be renovated swimming facilities.

Aquatic Center/Facility: A place designed for fitness swimming, recreation swimming, swim lessons, and water therapy programs.

Aquatic Exercise Association: A not-for-profit educational organization committed to the advancement of aquatic fitness worldwide.

Aquatic Governing Bodies: Organizations with rules and regulations that preside over various aquatics.

Aquatic Providers: Facilities offering aquatics.

Aquatic Therapy: Health-oriented water programs for arthritis, obesity, surgery recovery, athletic injuries, meditation, etc.

Aquatics: Water sports, including swimming, diving, water polo, synchronized swimming, etc.

Arthritis Foundation: A not-for-profit contributor to arthritis research.

B

Baby Boomers: An increased number of people born between 1946 and 1964.

Bathhouse: A building with restrooms, showers, family changing rooms, locker rooms, concessions, supplies, and equipment.

C

Census Tract: A small, permanent subdivision of a county with homogeneous population characteristics, status, and living conditions.

Centers for Disease Control and Prevention: One of the major operating components of the Department of Health and Human Services, CDC's mission is to promote health and quality of life by preventing and controlling disease, injury, and disability.

Center for Urban and Regional Studies: Conducts and supports research on urban and regional affairs to build healthy, sustainable communities across the country and around the world.

Competition Community: Athletes, coaches, trainers, etc. who work to compete in aquatics.



Competition Venue: Facility capable of hosting aquatics with regulation sized pools, spectator seating, etc.

CPR: Cardiopulmonary Resuscitation is an emergency medical procedure for a victim of cardiac or respiratory arrest.

D

Demographics: Selected population characteristics taken from publicly available data to determine shifting trends used in marketing.¹⁶

Disposable Income: Income available for saving or spending after taxes.

E

Ellis and Associates: Lifeguard training program.

F

Facility Audit: Report that identifies areas for extending life expectancy and/or improving operational efficiency of existing pools and natatoriums.

Feasibility Study: Business plan with concept designs and project and operating costs for a proposed aquatic or sports recreation facility.

FINA: Federation Internationale De Natation Amateur governs Masters Swimming, Open Water, Diving, Water Polo and Synchronized Swimming.

Fitness Community: People engaged in water exercise with related devices and equipment for water-based exercise options.

H

HVAC/DH System: Heating, ventilating, air conditioning / dehumidification structure for a natatorium.

L

Leisure Industry: Entertainment, recreation, and tourism related products and services.

Leisure Pools: Free-form pools that include fun attractions such as waterslides and play features.

LEED: Leadership in Energy & Environmental Design in green building practices.

Lessons Community: People engaged in swim lessons, drown proofing, lifesaving, lifeguarding, and CPR instruction.

M

Median Age: This measure divides the age distribution into two equal parts: one half of the cases falling below the median value and one-half above the value.

Median Household Income: Income of the householder and all other persons 15 years old and over in the household. Median represents the middle of the income in a demographic location, dividing the income distribution into two equal parts, one having income above the median and the other having income below the median.

Mosaic Types: Population classifications in terms of socio-demographics, lifestyles, culture, and behavior.

N

Natatorium: The room where an indoor swimming pool is located.

National Center for Health Statistics: Part of the CDC, including diseases, pregnancies, births, aging, and mortality data.

National Recreation and Parks Association: The voice advocating the significance of making parks, open space, and recreational opportunities available to all Americans.

National Sporting Goods Association: NSGA supports retailers, dealers, wholesalers, manufacturers, and sales agents with survey data in the sporting goods industry.

NCAA Swimming: The National Collegiate Athletic Association governs collegiate swimming competition in the USA.

NFHS: The National Federation High School governs high school varsity swimming.

P

Per Capita Income: Average obtained by dividing Total Income by Total Population.

Pro Forma: Projected cash flow in a business plan.

R

Recreation Community: People engaged in the fun and leisure of swimming.

Red Cross: Preparedness programs in first aid, cardiopulmonary resuscitation, and automated external defibrillator.

S

State Construction Codes: Public safety building requirements by state.

T

Therapy Community: People engaged in rehabilitation performed in water involving exercise and motion in the presence of an aquatic therapist.

Therapy Pool: Pool with warm water usually between 87 - 92 degrees Fahrenheit used for aquatic therapy.

Trends: The general course or prevailing tendency of a market.

U

United States Water Fitness: A non-profit, educational organization committed to excellence in educating and promoting aquatics, including national certifications in water exercise.

USA Swimming: National Governing Body for competitive swimming in the U.S. divided into local swimming committees.

United States Masters Swimming: National organization that provides organized aquatic workouts, competitions, clinics, and workshops for adults 18+.

U.S. Consumer Product Safety Commission: Works to ensure the safety of consumer products from unreasonable risks of serious injury or death.⁷

W

Waterpark: Destination-oriented facility that draws patrons from greater than 25 miles.



Appendix B: Footnotes

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Appendix C: General Limiting Conditions

This study is based on information that was current as of October 2017. Every reasonable effort has been made in order that the data reflects the most timely and current information possible and is believed to be reliable. This study is based on estimates, assumptions, and other information developed by the consulting team from independent research.

No warranty or representation is made by the consultants that any of the projected values or results contained in this study will actually be achieved. No responsibility is assumed for inaccuracies in reporting by the client, its agents and representatives or any other data source used in preparing or presenting this study.

This entire report is qualified and should be considered in light of the above conditions and limitations.



Aquatic Facility Audit Report



Subject: Penn National (Hall Manor) Swimming Pool Audit
Jackson Lick Swimming Pool Audit

By: George Deines

Date of Site Visit: July 18, 2017

Location: Harrisburg, PA

Attendees: George Deines Counsilman-Hunsaker
Nick Hewes MKSD Architects
Sasha Ross City of Harrisburg
Wayne Martin City of Harrisburg
Kevin Baum City of Harrisburg
Kevin Sanders City of Harrisburg

The City of Harrisburg and MKSD Architects commissioned Counsilman-Hunsaker to provide swimming pool assessments for the Jackson Lick and Penn National (Hall Manor) Swimming Pools. The purpose of the swimming pool audits is to identify items that are substandard in the pools, identify items not to current industry swimming pool design standards, or equipment not operating as designed, and to assist in defining a course of action regarding the future of both facilities.

Executive Summary

Both the Jackson Lick and Penn National (Hall Manor) Swimming Pools are approaching 50 years of age and both have seen significant usage during that time. Because of this usage, there are many areas that need an update and/or renovation in order to keep the facilities operating at a sustainable level. All of the pool equipment for both pools needs to be replaced and is not operating as designed, and the intent of this audit is to help the City of Harrisburg plan for renovation and/or replacement of these facilities.

The facilities were “state of the art” when they opened in 1968. Since then, many new features and attractions have been developed, and building and health codes have changed significantly in the past 50 years. The pool mechanical system have immediate issues that need to be addressed in the near future, and both swimming pools have critical issues in regards to the pool structure, turnover rates, Americans with Disabilities Act compliance, Virginia Graeme Baker Pool and Spa Safety Act compliance, shifting deck and trip hazards.

As pools age they tend to require more regular care to remain open. Due to restricted budgets, pool operators are often required to take a “band-aid” approach to keeping the pool operational. Due to the age of the pools and the unique characteristics of the site, and the desire of the City to offer aquatics for many years into the future, a “band-aid” approach to these swimming pools is not appropriate. For this reason, the City is looking at long-term goals that need to be considered to maintain an excellent aquatic experience for its residents. As with other pools built at this same time, they are facing both physical and functional obsolescence. Physical obsolescence refers to physical issues such as equipment that needs to be replaced or is not operating as designed. Functional obsolescence describes the pools meeting the wants and needs of the community.

While the pools are still functional for the summer swim season and providing aquatic experiences for the Harrisburg community, the facilities are showing signs of its age, particularly in the mechanical room, and lack present-day aquatic center amenities such as moving water, children’s play structures, and separate modern-day, compliant pools for young children. If the facilities do not undergo a substantial renovation or replacement within the next few years, the City can expect to see significant costs associated with the continued “band-aid” approach.

Councilman-Hunsaker would put the lifespan of an outdoor aquatic facility in the range of 30-40 years, depending on a variety of factors including quality of construction, the presence of a preventative maintenance plan, climate, amount of usage, etc. Seeing that these pools have far exceeded this lifespan, it is our recommendation that a complete replacement of both facilities be considered by the City of Harrisburg and the existing swimming pools do not have any salvageable infrastructure.

Immediate Issues

ADA Compliance – Provide lifts at each pool (\$13,000 + Installation per site)

Virginia Graeme Baker Act – Install compliant drain covers on main and tot pools at both locations (\$7,500 per site)



Pool General Information

Construction Date	April 1968
Length	Varies
Width	Varies
Surface Area	+/- 10,150 SF
Perimeter	480 feet
Lanes	Eight 25-yard lanes
Water Depth	2 ½ feet to 12 feet
Pool Volume	370,410
Flow Rate:	Not observed
Turnover:	Not observed



Pool Deficiencies

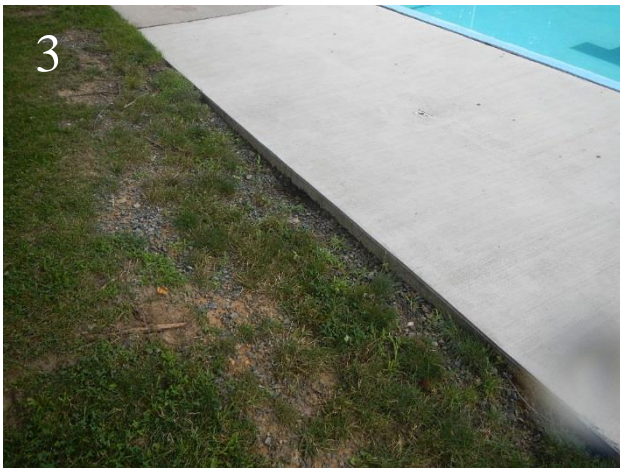
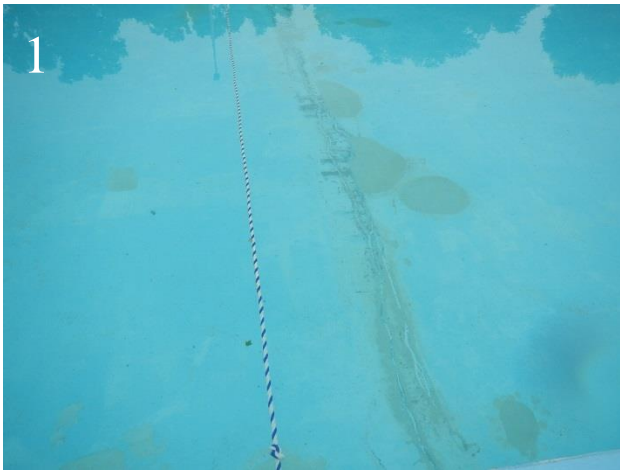
This facility has items that do not meet health department requirements, current industry design standards or are in need of replacement. The following list summarizes the conditions identified in the report, but is not all inclusive.

1. There were observable large cracks in the pool surface, and several areas where the concrete has been patched in recent years, particularly around the area that the expansion joints have been removed and replaced.
2. The paint has worn off of the concrete surface in several places exposing the concrete pool shell and is a safety concern with sharp edges for the pool guests' feet.
3. The deck is in poor condition in several areas, both around the perimeter of the pool and on the sidewalk edge where there is a 4 to 6 inch drop-off to the grassy area.
4. An Americans with Disabilities Act accessible means of entry is not provided on the main pool. The ADA Act requires that a swimming pool with a perimeter that is greater than 300' have at least two accessible means of entry, provided that the primary accessible means of entry is an ADA compliant swimming pool lift or ADA compliant swimming pool ramp with hand rails. Purchasing and installing a battery operated ADA compliant pool lift is the most economical way to satisfy this primary requirement, and installing a compliant set of railing on the stair entry or rails on the entry ramp that are within the width requirements is a way to meet the secondary requirement.
5. The existing tot pool does not meet the modern expectation for a children's pool and is not ADA compliant. Due to the depth of the pool and the existing configuration, this pool cannot be brought into compliance with the current ADA standards.
6. Sodium Hypochlorite (liquid chlorine) is the sanitizer used for this facility and muriatic acid was observed as the pH buffer. These two chemicals are located together in a single chemical storage room next to the pump room. Storing these two chemicals in the same space without isolation or secondary containment is a safety risk. Muriatic acid is classified as a corrosive and is a highly reactive liquid acid. It must be stored separate from oxidizers and in a well-ventilated space. A separate dedicated and ventilated chemical storage room for both the sanitizer and pH buffer is recommended and is the current industry standard.
7. The mechanical room floor is littered with old equipment, papers and debris which can be a trip hazard at the top of the stairs down into the pump pit.
8. The pool uses open-air vacuum Diatomaceous earth (DE) filters for its filtration. This system was installed during the initial construction. While these filters have served the facility well and provided ample water quality over the years, it is an antiquated system and should be replaced during a facility renovation with either high-rate sand filtration or regenerative media filtration.
9. The original cast iron piping shows significant signs of rust and corrosion, especially the piping that is below grade in the pump pit. All piping and mechanical equipment should be abandoned and replaced in a renovation. The mechanical system does not use a chemical controller and does not contain a functioning flow meter. Both of these items are considered industry standard for all functional swimming pools.
10. The current industry and CH design standard is for the perimeter overflow system and the main drain to be able to handle 100% of the pool's flow. The current overflow system configuration, size and number of gutter dropouts and return piping do not allow for this standard.
11. The main drains on both pools are not compliant with the Virginia Graeme Baker Pool and Spa Safety Act. All main drains with dimensions 18" x 23" or smaller are classified



as “blockable” and must have a VGB stamped and certified “unblockable” grate cover with tamper proof screws. The federal regulations of VGB were passed by Congress in 2008 and are designed to reduce the potential for suction and hair entrapment in commercial swimming pools at all suction outlets (e.g. main drains, skimmer equalizer lines, etc.). The Consumer Product Safety Commission (CPSC) is tasked with federally enforcing all VGB regulations, but due to the vast number of commercial swimming pools in the United States, enforcement most commonly is the responsibility of the local governing agencies (e.g. public health departments, building departments, etc.).

12. The tot pool does not have a mechanical system that meets industry design standards, and there is no Ultraviolet Treatment (UV) System on the pool. UV has been shown to be highly effective against chlorine resistant pathogens like *Cryptosporidium* and *Giardia*; as well as the vast majority of bacteria, viruses, yeast, and mold.





Pool General Information

Construction Date	April 1968
Length	Varies
Width	Varies
Surface Area	+/- 11,050 SF
Perimeter	480 feet
Lanes	Eight 25-yard lanes
Water Depth	0 feet to 12 feet
Pool Volume	350,400
Flow Rate:	Not observed
Turnover:	Not observed



Pool Deficiencies

This facility has items that do not meet health department requirements, current industry design standards or are in need of replacement. The following list summarizes the conditions identified in the report, but is not all inclusive.

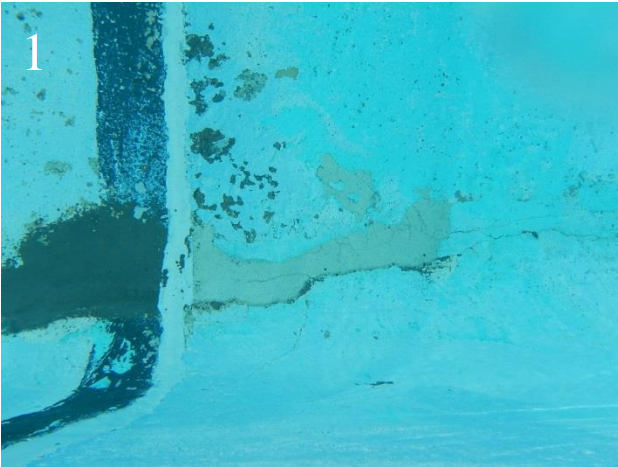
1. There were observable large cracks in the pool surface, and several areas where the concrete has been patched in recent years.
2. The paint has worn off of the concrete surface in several places exposing the concrete pool shell and is a safety concern with sharp edges for the pool guests' feet.
3. The deck is in poor condition in several areas where the ground has shifted and the deck has sunk and could be a trip hazard to pool guests.
4. An Americans with Disabilities Act accessible means of entry is not provided on the main pool. The ADA Act requires that a swimming pool with a perimeter that is greater than 300' have at least two accessible means of entry, provided that the primary accessible means of entry is an ADA compliant swimming pool lift or ADA compliant swimming pool ramp with hand rails. Purchasing and installing a battery operated ADA compliant pool lift is the most economical way to satisfy this primary requirement, and installing a compliant set of railing on the stair entry or rails on the entry ramp that are within the width requirements is a way to meet the secondary requirement.
5. The existing tot pool does not meet the modern expectation for a children's pool and is not ADA compliant. Due to the depth of the pool and the existing configuration, this pool cannot be brought into compliance with the current ADA standards.
6. Sodium Hypochlorite (liquid chlorine) is the sanitizer used for this facility and muriatic acid was observed as the pH buffer. These two chemicals are located together in a single chemical storage room next to the pump room. Storing these two chemicals in the same space without isolation or secondary containment is a safety risk. Muriatic acid is classified as a corrosive and is a highly reactive liquid acid. It must be stored separate from oxidizers and in a well-ventilated space. A separate dedicated and ventilated chemical storage room for both the sanitizer and pH buffer is recommended and is the current industry standard.
7. The mechanical room floor is littered with old equipment, papers and debris which can be a trip hazard at the top of the stairs down into the pump pit.
8. The pool uses open-air vacuum Diatomaceous earth (DE) filters for its filtration. This system was installed during the initial construction. While these filters have served the facility well and provided ample water quality over the years, it is an antiquated system and should be replaced during a facility renovation with either high-rate sand filtration or regenerative media filtration.
9. The original cast iron piping shows significant signs of rust and corrosion, especially the piping that is below grade in the pump pit. All piping and mechanical equipment should be abandoned and replaced in a renovation. The mechanical system does not use a chemical controller and does not contain a functioning flow meter. Both of these items are considered industry standard for all functional swimming pools.
10. The main drains on both pools are not compliant with the Virginia Graeme Baker Pool and Spa Safety Act. All main drains with dimensions 18" x 23" or smaller are classified as "blockable" and must have a VGB stamped and certified "unblockable" grate cover with tamper proof screws. The federal regulations of VGB were passed by Congress in 2008 and are designed to reduce the potential for suction and hair entrapment in commercial swimming pools at all suction outlets (e.g. main drains, skimmer equalizer lines, etc.). The Consumer Product Safety Commission (CPSC) is tasked with federally enforcing all VGB regulations, but due to the vast number of commercial swimming pools in the United States, enforcement most commonly is the

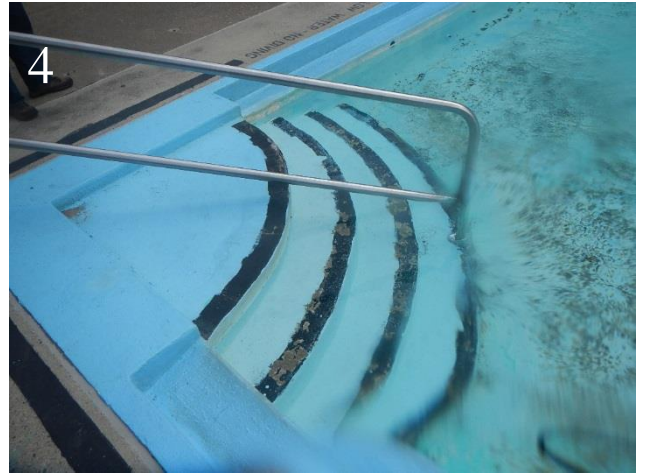


responsibility of the local governing agencies (e.g. public health departments, building departments, etc.).

11. The current industry and CH design standard is for the perimeter overflow system and the main drain to be able to handle 100% of the pool's flow. The current overflow system configuration, size and number of gutter dropouts and return piping do not allow for this standard.

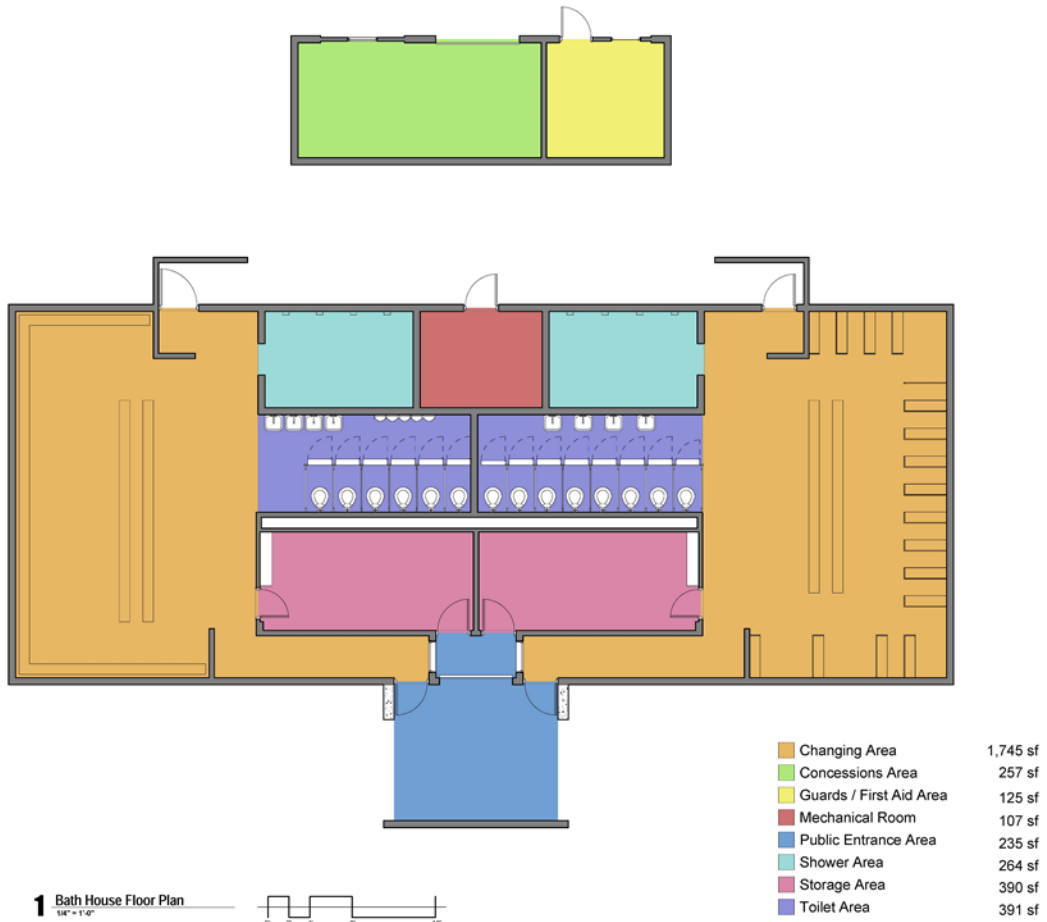
12. The tot pool does not have a mechanical system that meets industry design standards, and there is no Ultraviolet Treatment (UV) System on the pool. UV has been shown to be highly effective against chlorine resistant pathogens like Cryptosporidium and Giardia; as well as the vast majority of bacteria, viruses, yeast, and mold.





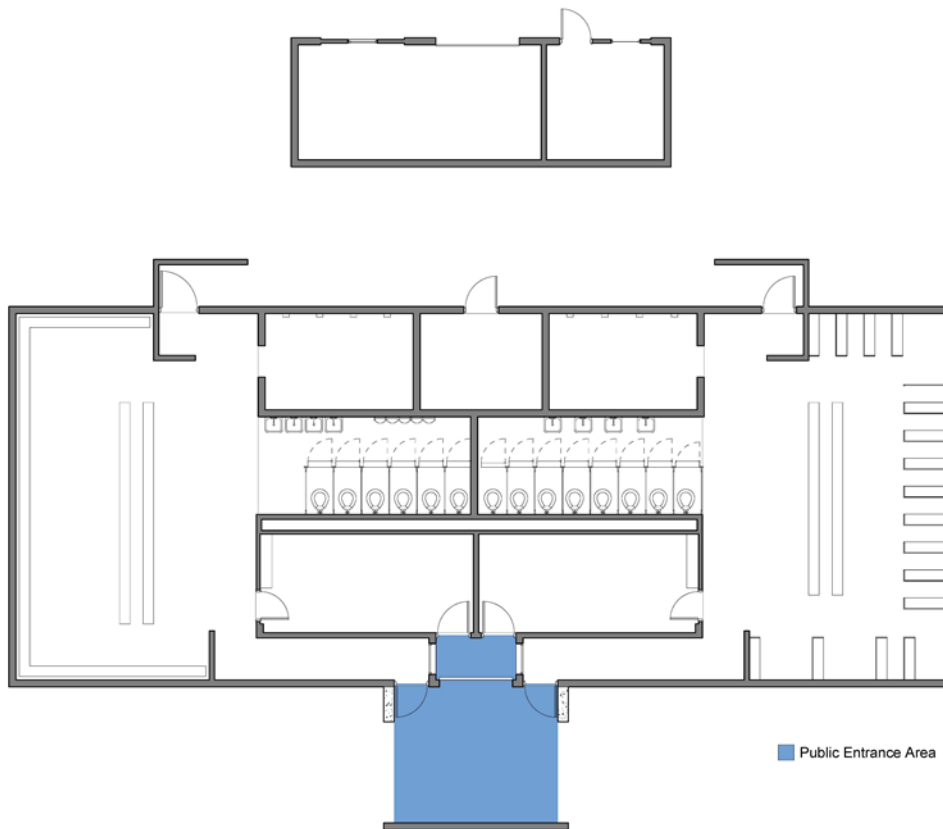
Bathhouse Renovations

- Replace all exterior lighting
- Replace Flat roofs
- Repaint perimeter fencing black
- Remove existing fencing within the facility, near the Concessions / Picnic Area
- Replace all existing Windows, Doors and Hardware
- Repair / Replace existing roof drainage system
- Clean existing masonry
- Replace sealants



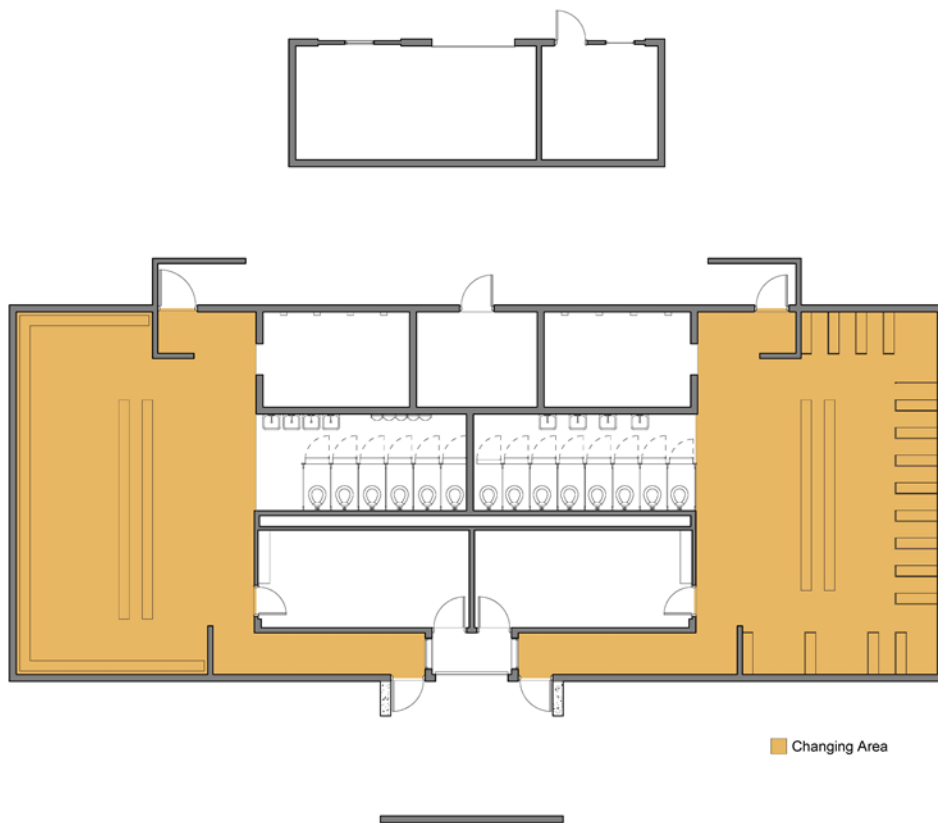
Public Entrance

- Create a more inviting entrance
- Update finishes & signage
- Possibly showcase local Artwork on Entrance wall
- Replace doors & hardware
- Replace front desk counter & window system
- Upgrade existing lighting



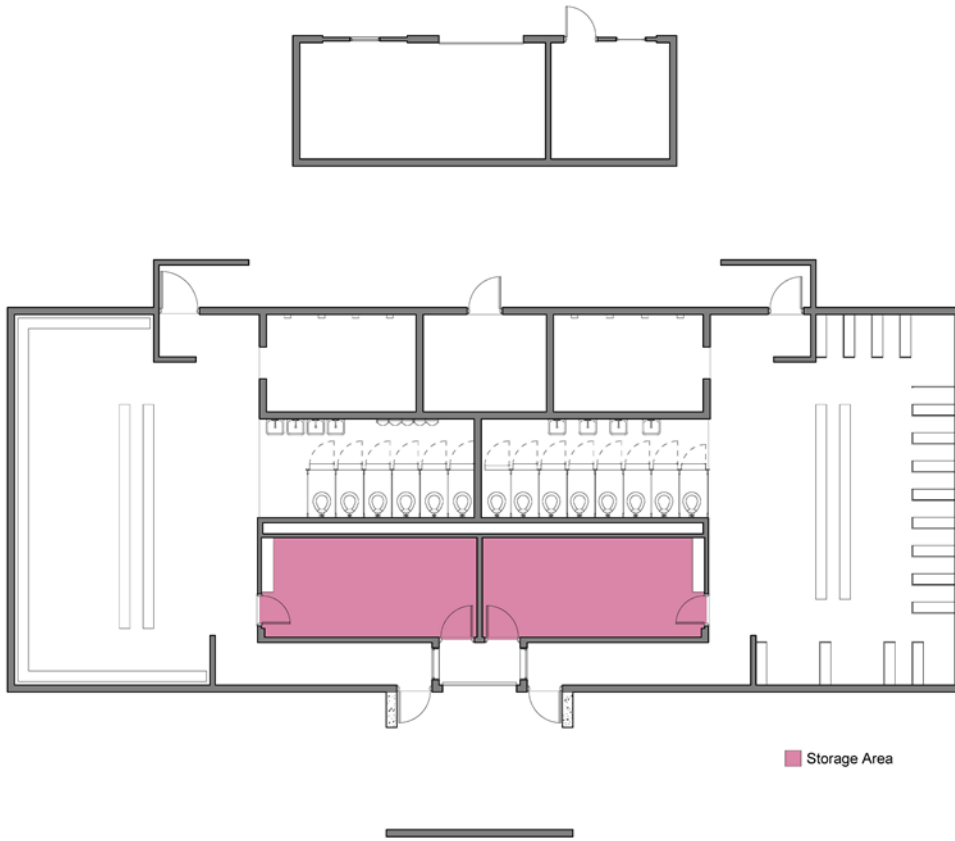
Changing Areas

- Repair / Replace skylights
- Look for opportunities to introduce more Natural Light into the space
- Replace benches
- Replace / Add Changing stalls, including privacy curtains or doors.
- ADA accessibility throughout
- Install seamless flooring system on existing concrete floor slab
- Paint all walls
- Replace existing lighting



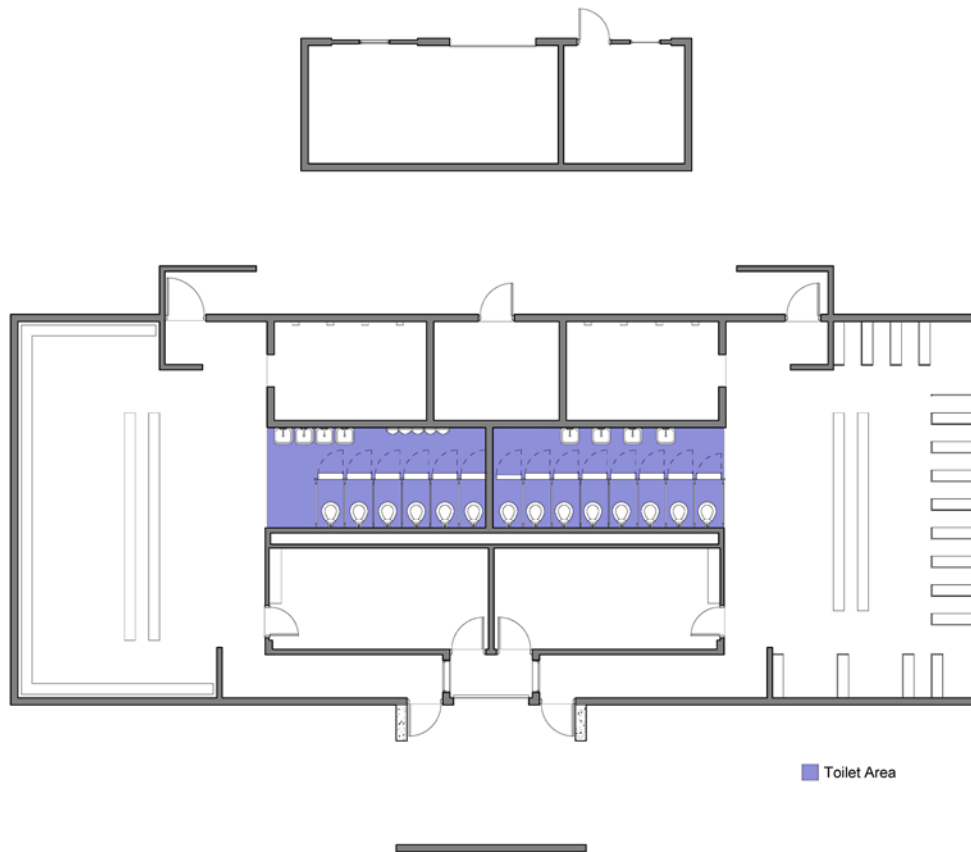
Storage Area

- Repair damaged walls
- Install solid surface countertop and shelving
- New Doors & Secure Hardware
- Replace existing lighting



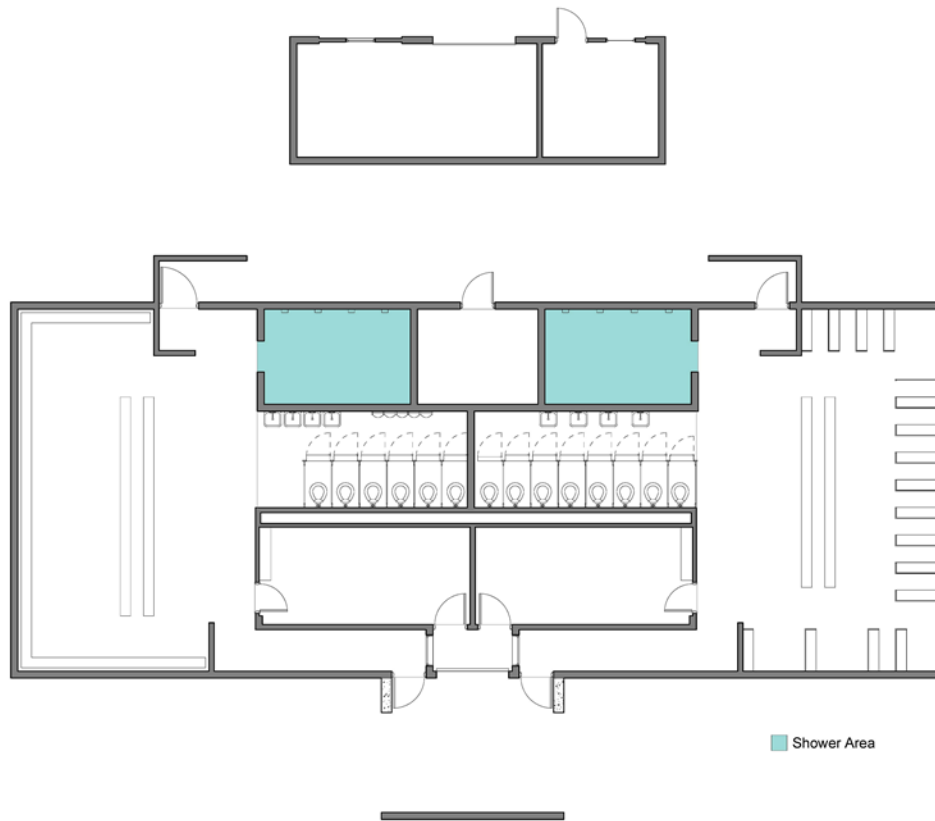
Toilet Area

- Replace all Plumbing trims, Fixtures, and piping from distribution main
- ADA accessibility
- Replace the Toilet Partitions
- Install seamless flooring system on existing concrete floor slab
- Paint walls
- Install new mirrors and toilet accessories
- Replace existing lighting



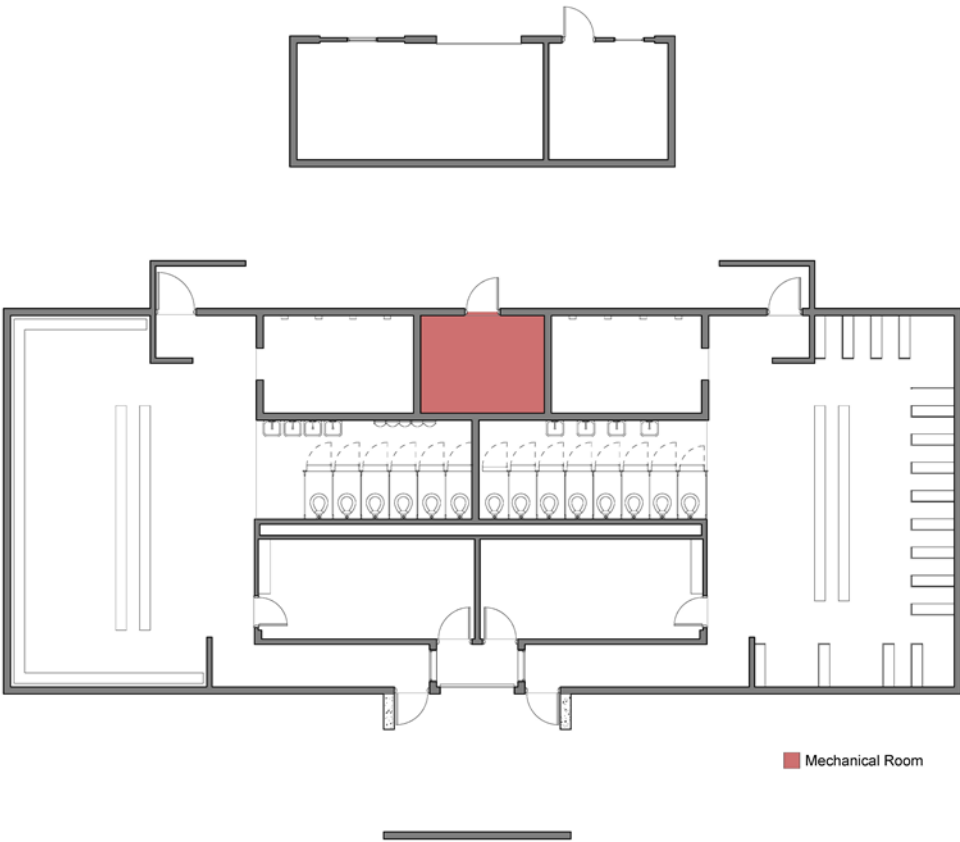
Shower Area

- Repair / Replace shower heads, controls & piping from distribution main
- Install seamless flooring system on existing concrete floor slab
- Paint all walls
- Install ADA benches and towel rack accessories
- Replace existing lighting



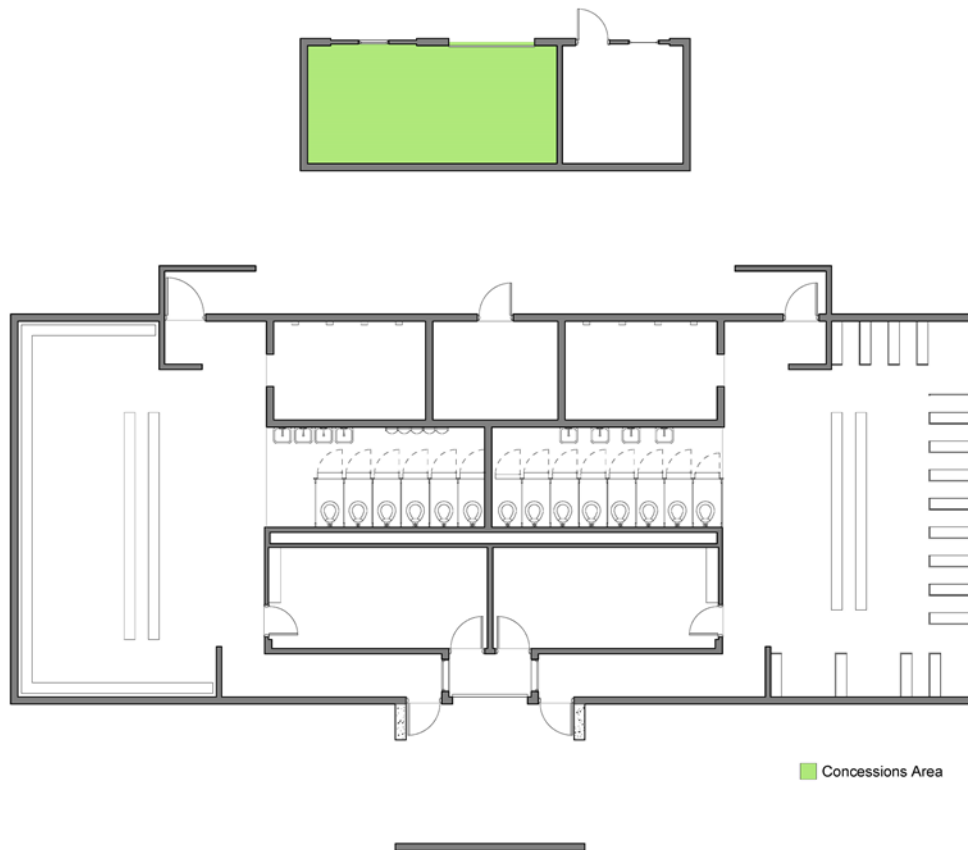
Mechanical Area

- Upgrade the Mechanical, Electrical, and Plumbing systems throughout the building



Concessions

- Update finishes & signage
- Add Shade structure / Awning
- Repair / Replace the existing wood-paneled infill wall
- Install solid surface transaction counter
- Replace existing lighting
- Paint all walls



Lifeguard / First Aid Area

- Repair / Replace the existing wood-paneled infill wall
- Increase visibility towards pool area
- Replace windows
- Paint all walls

