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EXECUTIVE SUMMARY

Water Technology, Inc. prepared the following report for the City of Windom, Minnesota. The purpose of the report is to evaluate the existing swimming pool facility, evaluate potential facility sites, and provide conceptual design on the sites. The report shall address issues of the existing facility on condition and on potential life of the existing components of the facility. The report will also provide the city with concept ideas of what could be done with the existing facility and with new facilities.

After thorough investigations and observations of the facilities during and after operation, the overall facility is in poor condition. The existing bathhouse has many significant issues including: failed roofing, failing masonry walls, ADA issues, and operational issues. The wading pool is not operating properly and has significant issues as well including: poor circulation of filtered water, poor water quality, structural failures, and suction entrapment concerns with one main drain. The main pool body is in the best condition and has been updated in the early 1980's. The overall structure has some cracking, but overall is in fair condition. However, there are major issues with this pool as well including: poorly operating gutter, failed underwater lighting, and an unsafe diving well. There are also a few site concerns that include failing deck, deteriorated fencing materials, and the flood plain issue. This facility has provided the City of Windom for their needs for over forty years and has been well maintained to get to this age. However, the facility is near or at its end of the expected facility lifetime.

There were two sites analyzed for a potential new facility. The two sites include the existing facility location and the community center site. The existing facility site has many positives associated with it: the site has been accepted by the community for over forty years, all the major utilities are on the site, there is available parking, and it fits in with the other components of the overall site. The one major negative of this site is the issue with the flood plain. The top elevation of the pool slab is just above the FEMA flood plain. This would require that the new pool be built up to this elevation to meet the requirements of FEMA, which would not be an issue to provide. However, the major concern is that when a major flood event occurs, the operation of the facility may be affected and possible not

allow the pool to open for a season. This site would be a good candidate for a new facility; however the City needs to determine their opinion of the flood plain issue.

The community center site was reviewed for an addition of an indoor facility. The site and existing building pose some difficulties that could be overcome. A few issues to take into consideration for the site is the method of control needed for the new pool with the existing building control, location to connect to the building, and minimizing impact on work already done at the site. Control into an aquatic facility is a concern to prevent potential dangers to users. With the location of the existing building control, another control point would be needed and creates more labor, which is a significant yearly commitment. Attaching the new facility to the existing poses some issues with the type of existing construction and minimizing construction issues with other parts of the facility already completed. There are also positive items for this site as well including: major utilities on site, good parking is there, the existing building is already staffed and there could be some efficiencies shared, and the citizens already use the location for a destination. Through thorough analysis of the existing building and site, a new addition of an aquatic facility could be added to this building.

The last component of the report includes the conceptual designs for the existing site and for the community center site. Concept I provides an option of reusing portions of the existing pool, adding additional leisure components, and a new bathhouse to provide an exciting and programmable facility. Concept II provides all new aquatics and bathhouse to the site for another option to consider for the facility. Concept III is a concept of an indoor facility that could be added to the north side of the existing community center. All three options would provide the City with great facilities that would handle all of the programming needs of the community now and into the future.

The existing facility has served the City of Windom well for over forty years. The City has maintained the aged facility as best as possible. However, the facility is at the end of its life and the City needs to determine what the next step is for the facility. The report and concepts provided will assist the decision makers for the city in making an educated decision for the future of the City of Windom's aquatics programming.

INTRODUCTION

Water Technology, Inc. prepared the following report for the City of Windom, Minnesota. The report discusses the following:

OBSERVATIONS OF THE EXISTING FACILITY CONDITIONS

- ❑ Site
- ❑ Bathhouse
- ❑ Main Pool Structure and Recirculation System Evaluation
- ❑ Wading Pool Structure and Recirculation System Evaluation
- ❑ Pool Deck Condition

RECOMMENDATIONS FOR THE POOLS

- ❑ Site Options
- ❑ Repair Options
- ❑ New Outdoor Family Aquatic Center – Existing Site
- ❑ New Indoor Family Aquatic Center – Community Center Site

FACILITY EVALUATION

The intent of this aquatic facility evaluation is to determine the present condition of the City of Windom Pool Facility and evaluate the existing site and community center site. Options will be provided in order for the city to develop a strategy to address the needs of the community. The investigation included visual examination of the site, bathhouse, and pools including the examination of the mechanical facilities, gutter system, exposed piping, filters, chemical feed and control systems, deck areas and deck equipment. Current As-Built Drawings were provided as a reference to the evaluation.

This report summarizes the present condition of the facility and recommends options for repairs and replacements for the existing facility. Each recommendation has been assigned an associated probable cost range.

This report provides a summary of the existing operating systems currently located within the complex. This includes present condition, code compliance and pool industry design compliance.

Included in the report, but not limited to will be:

- An evaluation of the existing conditions for the site, bathhouse, and pools currently serving the facility.

- Recommendations for future City of Windom Aquatic Facilities

METHODOLOGY

The evaluation consists of two on-site visual inspections, one during operation and one following winterization, of the site, bathhouse, swimming pools, deck and deck equipment, exposed piping and the mechanical equipment rooms. In addition, operations staff was interviewed regarding the system's performance and specific areas of concern.

GENERAL OBSERVATIONS

The facility consists of two swimming pools, a main pool and a wading pool, bathhouse, concrete deck, and fencing. Both pools were observed in operation and winterization modes for the evaluation. Site is located in a park with other sports fields and activities. The site is also located within the FEMA Flood Plain.

OBSERVATIONS

EXISTING SITE

The current aquatic center is located in a city park. The current parking lot is a combination of asphalt and gravel. There is adequate parking available on this site and one handicap parking space by the bathhouse. Drainage was not observed and cannot be commented on.

There is a main ramp up from the parking lot to the bathhouse. This ramp does not meet current A.D.A. requirement as the slopes and elevations do not meet the requirements and there are no handrails provided.

The current pool fencing does not meet current code. The existing fence is six foot high with 2" mesh. Current code requires that the fence either be six foot high with 1 ½" mesh or eight foot high with 2" mesh. When a renovation occurs, new fencing will be required.

The pool deck areas are in poor condition. There are many areas of the deck that are severely cracked and causing an unsafe condition for bare feet. These cracks need to be repaired as soon as possible to prevent a hazard to the patrons.

There are many site issues that need to be addressed in the future to provide A.D.A. accessibility and safety for the patrons of the facility. These items listed are the main concerns for the facility.

BATHHOUSE/POOL MECHANICAL SPACE

The existing bathhouse is the original bathhouse, with minimal upgrades and additions. This building is in poor condition. There are many significant issues with this building. The roofing is failing and leaking into the building. This roof has just passed the warranty period and needs replacement/repairs. There are several masonry walls that are failing. There is evidence that water has worked its way into the voids of the masonry walls and has expanded during freezing, which damages the blocks. There are several areas of the building where this condition exists. There are also problems per current A.D.A. code with the building. There have been some modifications made to help with the A.D.A. code, but the building is not fully compliant. There are problems with the building operational as well. The current control point does not function well as patrons can easily enter the locker rooms when the entry controller is busy. There also are not any private areas in the main core of the building for meetings, lifeguard breaks, or first aid, which is important for a good functioning bathhouse. The pool mechanical room has significant issue and the space is limited. There is little room to work on the systems in the room. A significant issue in this space is that the sewer is undersized and the backwash from the main pool filters can flood the pump pit, potentially creating a major electrical issue. One of the positives for the building is that newer water heaters that were installed in 2002. These are working well and providing adequate hot water to the facility. Overall, the bathhouse is in poor condition and needs to be replaced. Putting money into the repairs will cost the city more money in the long run than replacement of the bathhouse

EXISTING MAIN POOL

The existing main pool is “L” shaped and comprised of a 50 meter lap area and a diving well. The shallow end of the pool is three feet in depth and the deepest area in the diving well is twelve feet deep. The pool has an estimated 320,000 gallons of water in it. This pool is in fair condition as it has had some work done to it in the 1980’s. There are some cracks in the pool that should be repaired to prevent leaking from the pool. The one significant concern with the pool is the gutter system. The gutters are overflowing, which prevents proper removal of the surface wastes from the pool. This gutter was installed as part of the work done in the 1980’s, however the water removal from the gutters is not sized or operating properly. This gutter system would need to be modified as necessary to allow the water to freely flow out of it to the filter system.

Another concern is the diving well and associated diving boards. A surveyor needs to verify all depths and measurements to insure that the existing layout and pools meet the current pool codes. This is a significant issue as there could be injuries if this area does not meet the code. Water Technology, Inc. highly recommends that this gets done prior to the next year of operation.

Other issues with this pool are the guard chairs, A.D.A. accessibility, underwater lights, and pool surface. The existing chairs are made of galvanized steel and wood. Wood is not recommended around a pool as there are potential hazards associated with wood. These chairs need to be changed out to modern lifeguard chairs for lifeguard safety. The second issue is that there isn’t a readily available means of entry to the pool for A.D.A. accessibility. A means of entry needs to be available at all times. The underwater lights in the pool do not work. This is common for all pools. The recommendation is to remove the lights and fill in the holes. The only potential problem doing this is if the pool is used for night swimming and these lights are required for illumination requirements. The last issue is the painted pool surface. Pool paint simply does not last on pools. The current paint has been on the pool for two years and is failing. An option for this pool would be a special aggregate finish that would last for over 10 years with proper maintenance, but that would outlast the remaining life of the pool.

The pool mechanical systems in the bathhouse also have some issues. The pool filter has exceeded its expected life and has issues. There is not a good way to backwash these tanks without potentially flooding the pump pit, which is very dangerous. The valves on the filters do not work as designed and the operator needs to adjust the best that they can for operation. The other potential problem is handling the gas chlorine system. Water Technology, Inc. does not recommend that facilities use gas chlorine due to significant concerns with the use of gas. Most communities have removed these systems for other safer systems, such as liquid chlorine or calcium hypochlorite. There are a couple of good things with the pool system. The pool heaters have recently been replaced and working well. Also, the chemical control system is working well and is reliable.

Overall, this pool is at the end of its expected life. There are some remodeling options for the pool, but they may cost nearly as much as replacing the pool completely. Our recommendation would be to consider replacement of this pool with a modern style pool.

WADING POOL

The wading pool is a “U” shaped pool with depths from 6” to 18”. This pool is in overall poor condition. There is evidence that this pool has a lot of shifting occurring in during the freeze-thaw cycles. The pool and pool coping/deck is in poor condition with a lot of cracks, spalling, and other failures. The pool also has a failed grout joint and leaks between the pool coping and the pool wall. The pool is finished with pool paint and has the same issues as the main pool.

The water quality appears to be within code requirements despite evidence of significant issues with the recirculation system. There are two original skimmers on the pool that are cracked and are missing the floating weirs, which means this pool is not properly removing the surface wastes. There is also only one main drain, which has an anti-vortex cover to meet code, however proper design requires that two drains be provided for patron safety. The inlets are missing the fittings to control flow direction and velocity, which would also help with proper water quality.

Other issues with the wading pool include missing depth markers, failed caulk, and significant deck issues around this pool. Depth markers are needed around the pool perimeter on the deck. There are areas of caulk that have failed and been removed that need to be replaced. The deck around this pool is in the worse condition around the facility and needs replacement.

The pool mechanical systems are in good working order. This system have been replaced and working well in the filter room. The heater on this system is newer and working well. The only concern here is the chlorine gas again, and we would recommend that it be changed out.

SITE EVALUATIONS

There are two sites for consideration for a future aquatic center. The first site is the existing site and the other site is at the Community Center. Both of these sites have been inspected and reviewed for consideration of a new aquatic center.

Existing Site

The current aquatic center is located in a city park. The park is located along a river and within the FEMA flood plain, as determined by FEMA. The park has several other amenities, including athletic fields, play grounds, camp site, and parking. The overall site is appealing as there are commons uses of space and utilities within the site for the different amenities and it is aesthetically pleasing in the park. The other benefit of the existing site is that the facility has been accepted by the community in this location. The one major drawback to the site is the potential flooding of the site within the flood plain. There have been significant floods in the past that have affected or prevented operation of the facility in the past. The current pool was built on an area of ground that was raised approximately three feet above the surrounding area due to the potential flooding of the site.

This existing site is a great selection of a future aquatic site, with the exception of potential flooding of the area. The new pool could be built up higher to get it further out of the flood levels. With all of the other pieces of the park, this would be an ideal setting. However, the city needs to determine the amount of risk that they are willing to take on the future flooding of this park area.

Community Center Site

The existing Community Center has adequate land to expand for an outdoor or indoor facility. This newer facility has good utilities to the site that would require minimal work with a new facility. There also is parking on the site, with additional areas available for overflow parking. This would also be a good location for a new aquatic center as many of the community members are familiar with the current site and community center. This site would eliminate concerns of flooding of the facility as it is well out of the flood plain.

IMPROVEMENT OPTIONS

The following are improvement options for this facility. Associated with each recommendation is a budget opinion of probable cost, which includes project development cost, such as fees, testing, contingencies and reimbursables.

Renovation of Existing Facility

This option would renovate and replace the existing facility as it currently is. The issues discussed in the report would be addressed. The two main issues with this option is that you would still have older components to the facility and that the improvements will not increase the amount of users at the facility. Water Technology, Inc. does not recommend this option for the facility.

Estimated Cost of Renovation of Existing Facility: \$900,000 to \$1,300,000

New Outdoor Family Aquatic Center

This option would completely remove the existing pool and build a new facility on the site. The new facility would include new bathhouse, new multipurpose pools, play amenities, and proper facility amenities.

Estimated Cost of New Outdoor Facility: \$2,000,000 to \$3,500,000

New Indoor Family Aquatic Center (Located at Community Center)

This option would provide a new indoor family aquatic center and potentially a therapy pool. Facility would incorporate zero depth entry pool, play amenities, bathhouse facilities, therapy pool, and other potential components.

Estimated Cost of New Indoor Facility: \$3,000,000 to \$4,000,000

CONCLUSION

The report finds that overall the facility is in poor condition and past its expected life. With so many issues and failures, our recommendation is to consider a new outdoor or indoor facility for the community. The main reason for this recommendation is that by repairing or renovating the existing facility, there will still be components to the facility that are past their expected life. Also, many times these projects cost as much as getting a completely new facility.

The City of Windom has some options as to what they would like to provide their community for aquatics. Indoor facilities are quite popular as a year round operation, however the subsidy can be quite heavy. Outdoor facilities are only used three months, but provide a great place for recreation. With whatever decision the city makes, the city of Windom has taken the proper steps to understanding their current aquatic situation and can start planning accordingly for the future.