Zilker Park Bathhouse Zone Feasibility Study

Draft for

City of Austin

Parks + Recreation Department

MWM DesignGroup

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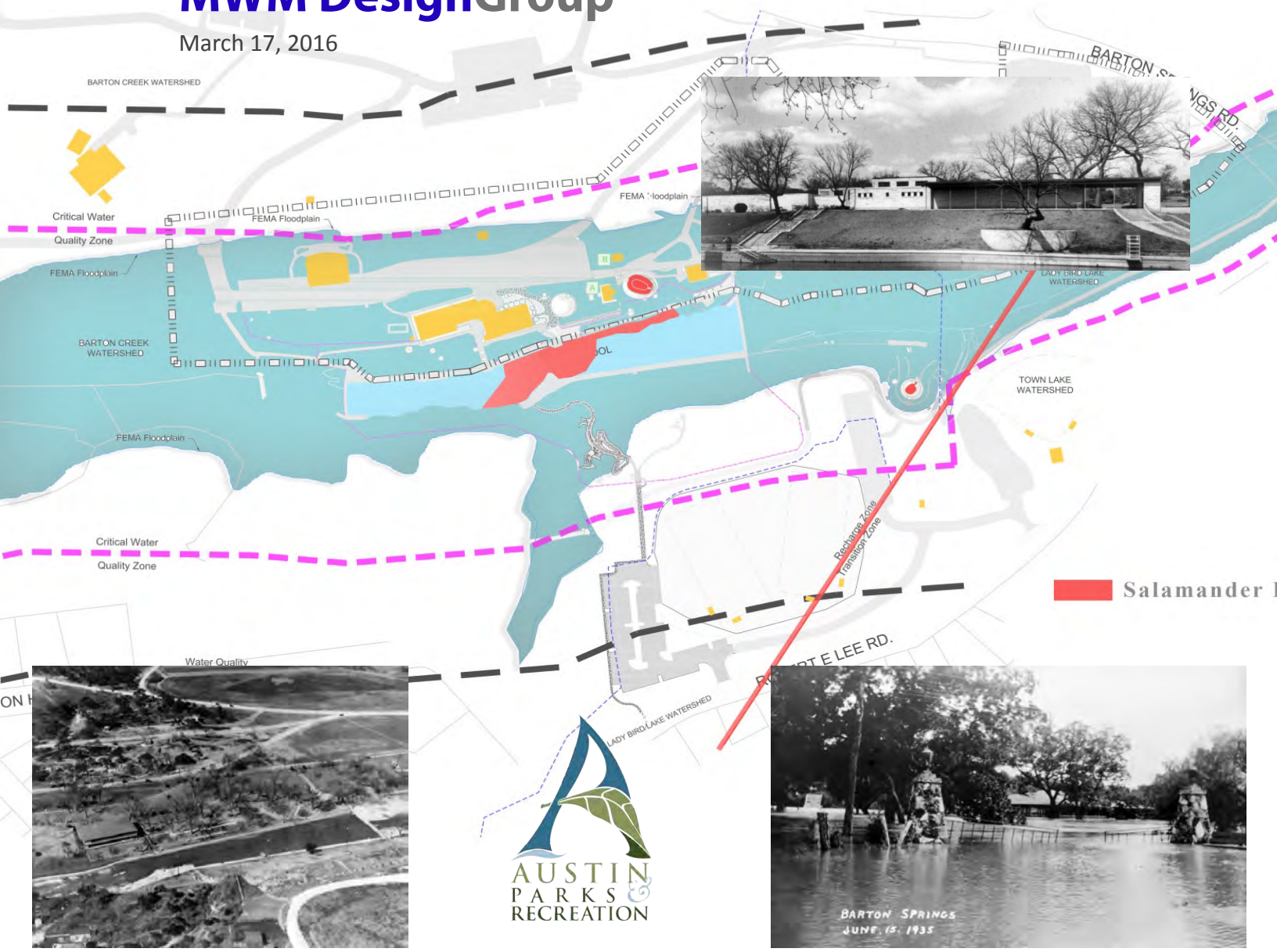


Contents

I. EXECUTIVE SUMMARY

This study examines the feasibility of various improvements to grounds and facilities in the Barton Springs Pool area of Zilker Park which has been recognized for generations as the soul of Austin. The recommendations in this study incorporate the goals of the 2008 Barton Springs Pool Master Plan (BSPMP) and the challenges of the numerous environmental, historical and local regulations that apply to this area.

This study entails an assessment of existing buildings and amenities located on the north side of Barton Springs Pool between the Violet Crown Trailhead and the Pecan Grove Picnic Area, an area referred to herein as the Bathhouse Zone.

These facility assessments include evaluations of condition, regulatory constraints and suitability for intended function. The study also includes broad investigations of the current code constraints as they may apply to rehabilitation efforts or new projects.

In addition to numerous field investigations of site and facility conditions, interviews were conducted with operating and management staff to assess current practice, operational needs and program challenges in the Bathhouse Zone.

The public was engaged in several meetings and public briefings as well as providing over 1300 responses to two surveys. This input revealed many additional opportunities, directions and priorities for consideration.

The study concludes with detailed recommendations for three broad efforts:

- Move forward with planned and funded projects including; installation of parking meters, daylighting of the Eliza Springs outlet, construction of the Violet Crown Trailhead restrooms, and replacement of the Maintenance Barn with removal of the existing maintenance facilities and surrounding fences.
- Phased rehabilitation of the Bathhouse using available funding to complete full design, access improvements and possible plumbing system replacements. Future efforts, with potential for public private partnership, would restore the bathhouse rotunda and dressing areas. This effort would be contingent on the relocation of the Sheffield Education Center and SPLASH! interactive environmental exhibit to a proposed Interpretive Center within the Bathhouse Zone and would include relocation of the Aquatics spaces (first aid, staff lockers and break/meeting area, storage and management office) into the former women's basket area. The rotunda area and former men's basket space would become an interpretive gallery and multi-purpose space.
- Site design centered on the Playscape area including; reconfiguration of the Bathhouse parking lot, replacement and expansion of the playscape with a more natural design, siting studies for a new Interpretive/Visitor's center, and circulation improvements – especially the widening of the main path and associated relocation of the Zephyr tracks.

II. INTRODUCTION

The Austin community and visitors from around the world come to Zilker Park to enjoy Barton Springs Pool and the surrounding facilities in increasingly larger numbers. The Parks and Recreation Department wants to ensure the facilities and management meet a high standard of excellence to maintain this crown jewel of the City into the foreseeable future.

Any improvements should be in accordance with the Barton Springs Pool Master Plan (BSMP), as approved under Council Resolution 20090115-028, which includes the following goals statement to guide future efforts:

> *Return the site to its rightful glory where the water was cleaner and the experience of the pool was more enjoyable. Propose appropriate additions and renovations to the swimming pool, its buildings and its grounds that respect the fragility of this unique natural and historical setting, and also accommodate the significant user demands on Austin's most popular park amenity.*

While the Barton Springs Master Plan focused on the Pool and adjacent facilities, the goals provide guidance for the whole Bathhouse Zone. The facilities in this Zone are so interconnected that careful consideration of the entire area was necessary before developing any further projects in this area. The recommendations developed in this study are an evolution of the BSMP in accordance with these goals.

The Master Plan also recommends several short-term and long-term projects. Several projects have been completed from that list including critical repairs and improvements to the south side of the Pool. Funding has been provided to initiate several other projects including relocation of the Maintenance Barn, grounds improvements, Bathhouse rehabilitation and the new Trailhead restroom.

A key element of the area is the existence of the Barton Springs Complex and the environment they provide for two species of endangered salamanders. Swimmers share Barton Springs with this critical habitat under a permit issued by the U.S. Fish and Wildlife Service that includes specific commitments to inform the community through education and interpretation. The Sheffield Education Center and the SPLASH! aquifer exhibit were built in 1998 in the areas that formerly housed the Bathhouse basket areas and rotunda to satisfy these requirements. Approximately 80,000 visitors enter the SPLASH! exhibit each year and many thousands of school children participate in various education programs.

The Barton Springs area has a long and rich history from Native American times through pioneer Texas settlement to Depression era improvements into our modern times. This legacy is detailed in the Cultural Resources Report presented to PARD in 2012. The area that comprises the Bathhouse Zone is included in the 1985 Barton Springs Archeological and Historic National Register District and the 1997 Zilker Park National Register Historic District. Furthermore, the

Barton Springs Bathhouse was designated a State Antiquities Landmark in 1994 and designated as a City of Austin Historic Landmark in 1990.

The Bathhouse is the primary architectural feature of the historical designations. When it was constructed in 1947 it included facilities to rent towels, suits and mechanized baskets. After floods in the late 1960s these services were dropped and a primary entrance was developed on the southeast corner of the Bathhouse where it remains today. Along with this effort the Aquatics group that runs the pool was expanded into a portion of the ladies dressing area. The historic Bathhouse facility is 70 years old and many elements, especially the plumbing systems, changing stalls and canopies, show significant deterioration.

Over seven hundred thousand estimated visitors enter Barton Springs Pool each year. On busy summer days over three thousand a day enter through the Bathhouse gate with many standing in long lines. Smooth access and life safety egress through the Bathhouse requires changes to the current entrance patterns.

The combination of protected environment and historical elements presents a unique opportunity to provide a comprehensive interpretive program that enhances the environmental, historical and recreational experience in the Bathhouse Zone.

The playscape in Zilker Park is perhaps the most used in the City but its components are reaching the end of their service life and do not reflect the best practices. The grounds and amenities in the Bathhouse Zone are in need of repair, replacement and improvements with new restrooms, water fountains and benches high on the list of concerns.

The plaza in front of the Bathhouse is the nexus of pedestrian, bike and vehicular circulation for the central section of Zilker Park. However, the current alignment of the Zephyr tracks and the primary trail from Barton Springs Road to the Violet Crown Trailhead is less than serviceable. The existing parking lot covers more impervious area than is required and drains directly to the bypass tunnel.

The Bathhouse Zone is perhaps the most heavily regulated area in the City of Austin. Striking an appropriate balance within the challenging regulatory environment – flood plain, impervious cover limits, building codes, Barton Springs Pool Master Plan, protected cultural resources, heritage trees, endangered species and accessibility – to meet the goals of the BSPMP and the increasing demands of the public will not be easy.

For many years the Parks Department has been challenged to meet the many demands of patrons in the Bathhouse Zone. Many of the recommendations made in this study will have impacts on staffing, operations, and maintenance obligations associated with the Pool and the surrounding areas of Zilker Park. Accordingly it is imperative that the implementation of any of these recommendations be coordinated with changes to operational and staffing requirements.

This study has been prepared in accordance with the 2008 Barton Springs Pool Master Plan and in conjunction with a process of public engagement, meetings with stakeholders, and consultation with jurisdictional officials. Many of the recommendations contained in this study are interrelated, and are intended for implementation as components of a coordinated plan of improvements.

III. FACILITIES ASSESSMENT

The following is a summary of the condition assessment of existing facilities in the Bathhouse Zone from the Violet Crown Trailhead to Pecan Grove Picnic Area. The assessment includes an evaluation, in general and comparative terms, of physical condition (serviceability), regulatory compliance, and suitability (in terms of access, adjacencies, safety and supervision) for intended function of each of the primary facilities listed below.

In regards to facility compliance, as addressed below, it should be borne in mind that many of the facilities presently existing in Bathhouse Zone maintain the legacies of development originating in the twentieth century and incorporate physical improvements constructed under regulatory policies radically different from those in force at the present time. In addition, facilities in the Bathhouse Zone are subject to State and Federal regulations as well as local Codes and Ordinances which further complicates the regulatory compliance of existing conditions. Consequently, the specific requirements for compliance of any proposed modifications would have to be confirmed through coordination with multiple regulatory authorities (whether State or Federal Agencies or individual City Departments) having jurisdiction. The compliance summaries in the following sections should be considered as an overview of the significant regulatory elements applicable to the Bathhouse Zone facilities or of health and safety discrepancies that would raise concerns regarding the future use of such features.

A. Site Infrastructure, including Parking, Circulation, and Stormwater Management

Site Infrastructure includes those public improvements in the Zilker Bathhouse Zone intended to support the recreational functions of the park. In general, the site infrastructure is consistent with the present utilization of the park. However it must be noted that the present intensity of use in the Bathhouse Zone greatly exceeds the levels existing when much of the present infrastructure was planned.

1. Parking

a) Serviceability

The existing bathhouse parking lot is in serviceable condition and could viably continue in operation with routine maintenance.

b) Compliance

Insofar as the existing parking lot, site circulation and stormwater management plan are included in the most recent Site Development Permit applicable to the park (SPC-2012-0104D), these facilities should be considered to constitute existing, non-compliant conditions under the current Land Development Code. Any addition of parking spaces, even without adding impervious cover, would trigger the requirements of 25-7-95

Site Circulation: The use of landscape areas of the park for parking and pedestrian circulation has resulted in extensive environmental degradation, most specifically within the critical root zones of trees in the park.

Site Circulation: Pathways such as this bare-earth trail to the north of the Violet Crown Trailhead do not well serve existing demand.

Site Circulation: The lack of coordination between pedestrian and vehicular amenities within the park has resulted in the development of ad-hoc trails across vegetated areas. Rationalization of trails and other pedestrian amenities will concentrate pedestrian traffic in designated corridors, mitigating damage to lawns and trees within the park and allowing for effective provision of amenities such as trash receptacles and drinking fountains.

c) Suitability

At present the existing parking lot preserves the approximate footprint of the parking lot constructed in the early 1930s. This parking lot appears to have been designed in order to allow vehicles to execute a 180 degree turn within the access aisle, a design criterion no longer in common practice. By contemporary standards the existing parking lot is extremely inefficient, dedicating more than 500 square feet of pavement to each parking space, as opposed to an allocation closer to 300 square feet for a well-designed modern facility.

Currently runoff from this parking lot drains, untreated, into Barton Creek downstream of the lower dam; the excessive size of the lot provides an obvious opportunity to address both impervious coverage and water quality within the Barton Springs Zone.

2. Pedestrian Circulation

a) Serviceability

Existing pedestrian circulation throughout the Bathhouse Zone is not universally serviceable. Most significantly the lack in various locations of clearly designated and appropriately stabilized pedestrian paths has led to the establishment of ad-hoc pedestrian trails through vegetated areas and through the critical root zones of several trees. Such ad-hoc trails have resulted in significant detrimental impacts. These impacts are documented in part by the Initial Tree Assessment prepared by Carolyn Kelly Landscape Architect in support of the 2008 BSPMP, which identified the majority of trees in the Bathhouse Zone as Condition 4, one step above the condition warranting consideration for removal.

b) Compliance

As noted above, these facilities should be considered in their present conditions compliant with the current Land Development Code.

c) Suitability

Existing pedestrian circulation within the Bathhouse Zone is insufficient to accommodate the present density of users safely. It is deficient with respect to the evacuation of the Bathhouse and the pool enclosure, as noted below. Significant conflicts arise where the primary pathways and the Zilker Zephyr are squeezed together such as the area adjacent to the existing maintenance yard and through the playscape area to the Zephyr station. In addition, the absence of any defined pedestrian path from the majority of overflow parking spaces within the park to the Bathhouse has resulted in pervasive environmental degradation.

3. Stormwater Management

a) Serviceability

There are at present no water quality or stormwater controls existing in the Bathhouse Zone. Developed areas within the Zone either drain directly to Barton Springs Pool (in the immediate vicinity of the Bathhouse) or through the bypass tunnel to the lower reaches of Barton Creek.

Much of the infrastructure associated with stormwater management within the Bathhouse Zone appears to be over 50 years old and its condition needs to be more thoroughly assessed. Future planning for stormwater management improvements within the Zone should include a detailed investigation of stormwater drainage and consider options for its improvement, abandonment or replacement.

4. Utility Infrastructure

a) Serviceability

Although consideration of utility infrastructure within the Bathhouse Zone was not within the scope of this feasibility study, it should be noted that much of this infrastructure originated in the 1930s, and should accordingly be considered to be approaching a state of economic unserviceability.[1] Visible electrical infrastructure is of particular concern, particularly with respect to the electrical room adjoining the Zilker Café.

B. Site Amenities, including the Picnic Pavilion, Maintenance Facility, Pecan Grove Picnic Area and Restrooms, and Zilker Playscape

Site Amenities includes those architectural or built improvements within the Bathhouse Zone, with the exception of concession facilities such as the Zilker Zephyr and Zilker Café, which are addressed separately below.

1. Picnic Pavilion

a) Serviceability

The existing, steel and wood-framed picnic pavilion is in a reasonable state of repair given the limited demands imposed on such a structure and, with periodic maintenance, it should be viable for its intended purpose.

b) Compliance

There are no obvious code deficiencies associated with the existing pavilion. This structure is located within the FEMA-designated floodplain,

but is not considered an inhabited structure under the Building Code. Although it not apparent that the lightly-built pavilion was designed to withstand flood loads, this deficiency would not preclude the continued use of the pavilion for its intended purpose. Alteration or enlargement of the pavilion may require both structural evaluation and documentation of no adverse impact on the floodway of Barton Creek.

c) Suitability

The existing picnic pavilion is objectively suitable for its intended function. Nevertheless the number of picnic tables presently occupying the shelter suggests that it is smaller than present demand would dictate, with a corresponding reduction in the level of service, insofar as picnic tables closer to the edges of the pavilion will not enjoy the same level of weather protection as those in the interior. Likewise details of the pavilion, such as the configuration of the downspouts from the roof and the deficient slope of the concrete pad result in inadequate drainage from the picnic area.

2. Maintenance Facility

a) Serviceability

The existing maintenance facility consists of a 1940s era steel Quonset hut with a small, conditioned office addition, various auxiliary structures (sheds) of more recent construction and a fuel point. The qounset structure and attached office are in poor physical condition and would require major structural and envelope rehabilitation for any use other than unconditioned storage. The auxiliary facilities are mostly in better condition. The condition and limited degree of enclosure of the existing buildings in the maintenance facility and the lack of modern air conditioning would limit the viability of their repurposing for any programmatic function currently existing within the Bathhouse Zone. It is understood that this facility has already been deemed unserviceable by PARD, and is scheduled for replacement.

b) Compliance

The Quonset structure contributes to the Zilker Park Historic District and any substantial change or removal of this structure requires careful consideration. Any repurposing of the existing Quonset building classified as either a change in occupancy or a substantial improvement would trigger compliance with current codes. It would be significantly more expensive to update this Quonset structure for use as a public building than it would be to construct a new building of similar size and configuration.[2]

c) Suitability

The existing maintenance facility has already been deemed unsuitable for its current use. The findings of the present study support this

determination. Furthermore, the current location in the busiest section of Zilker Park detracts from visibility, access and the environmental sensitivity of the Barton Springs locale.

It appears the best use of the existing facility would be to recover the impervious area necessary to facilitate the construction of a replacement facility in a different location, given the indications in Site Plan SPC-2012-1040D that Zilker Park has already reached the maximum permissible aggregate impervious coverage permissible for the facility.

3. Pecan Grove Picnic Area and Restrooms

a) Serviceability

The existing Pecan Grove Picnic Area is in fair physical condition, with some deteriorating infrastructure, significant environmental deficiencies, and a lack of amenities such as weather protection for picnic areas. Those existing amenities serving the Pecan Grove, such as the restrooms, are likewise in poor condition. Although these facilities may remain usable, they have reached a serviceability limit state.

b) Compliance

There are no salient code deficiencies associated with the Pecan Grove other than evident discrepancies in strict and literal compliance with the Texas Accessibility Standards. This picnic area and some of the minor structures in this area (but not including the existing restroom) date back to the 1930s and are cited as contributing to the Historic District.

c) Suitability

The existing Pecan Grove is usable as a large picnic facility with minor repairs and maintenance. Measures to enhance to viability of the existing trees shading the facility should be a priority insofar as these trees are a unique amenity existing in this location. Improvements to the facility should also include accessibility enhancements, including the elimination of elevation changes at the perimeters of concrete pads.

The close proximity of the main trail and the Zephyr tracks is troublesome and consideration should be given to relocating one or more of these facilities. Plans should be made for the replacement of the existing restroom facilities. Drainage in this area and under Barton Springs Road is a problem made even more challenging by some historic appurtenances.

Picnic Pavilion: The Picnic Pavilion and its infrastructure (such as pedestrian connections, waste receptacles, and drinking fountain) are generally serviceable.

Picnic Pavilion: The Pavilion itself is too small for the number of tables it contains, many of which are poorly protected from sun and rain.

Picnic Pavilion: The Pavilion is well-located adjacent to the Playscape, although changes in grade, and the intervening Zilker Zephyr trackway, compromise this adjacency.

Maintenance Yard: Improvised storage, as in the form of this portable building, is a problem throughout the Bathhouse Zone. The quantity of equipment stored in the open-air at the Maintenance Yard indicates that even improvised storage is at a premium.

Maintenance Yard: Ad-hoc storage is characteristic of the current Maintenance Yard. The storage of fuels and other chemicals within the yard over the decades raises concerns over the viability of any potential repurposing of this facility.

Maintenance Yard: The Quonset storage building, although an interesting structure, has reached a serviceability limit state. The extent of rust visible on the exterior of the building, and the number of open holes visible from the interior, indicate a building past economic rehabilitation. It would be less expensive to replace this building than it would to repair it for a different use.

Pecan Grove Picnic Area: The existing restrooms at the Pecan Grove Picnic Area are in poor physical condition.

Pecan Grove Picnic Area: As the existing trees in the grove continue to die off, more picnic areas will be left unshaded. The Grove warrants action both to protect and preserve existing trees, and to incorporate replacement trees for future generations.

Pecan Grove Picnic Area: The Pecan Grove is not a particularly welcoming amenity, being poorly shaded and unprotected from the weather and incorporating significant areas of bare earth.

4. Zilker Playscape

a) Serviceability

The Zilker Playscape adjacent to the Bathhouse is reaching the end of its serviceable life and is due for replacement in accordance with PARD's standards. Generally PARD's playscapes are updated on a twelve to eighteen-year cycle; most of the infrastructure associated with the Zilker Playscape is considerably older.

b) Compliance

The existing playscape is generally not consistent with current standards, such as ASTM F1487-11, *Standard Consumer Safety Performance Specification for Playground Equipment for Public Use*. Given the age and condition of much of the existing playscape infrastructure, and general dissatisfaction with its design (see below) it should be anticipated that current ASTM standards would be addressed in the context of a comprehensive renewal of the existing playscape, rather than through improvement of individual elements.

c) Suitability

The existing playscape is perceived as being too small, a conclusion substantiated by the obvious crowding on busy weekends. The present play equipment is outdated[3] and does not appropriately accommodate children of different age groups. The playscape includes a number of legacy hardscape elements, including steps, ramps and retaining walls that impede full access to the play equipment and in some cases may constitute hazards to the safe utilization of the facility. Other than the aging trees, the playscape area has limited support amenities and could use more shade, seating and water fountains.

C. Concessions

1. Zilker Café

a) Serviceability

The existing Zilker Café, constructed in the early 1960s, is rapidly approaching a serviceability limit state.

b) Code Compliance

The Zilker Café is technically consistent with current codes as an existing, non-compliant facility, as demonstrated by its continued operation. Nevertheless the age and inadequacy of certain features, such as the accessibility of the employee restroom, suggest that comprehensive upgrades to the existing structure will be inevitable at such time as the renovation of the existing facility is commenced.

Zilker Playscape: Initial impressions, from the vantage point of a grade school child, is of fences and rails rather than play equipment.

Zilker Playscape: The popular playscape is often over-crowded, and does not adequately address the differing needs of various age groups.

Zilker Playscape: The Zilker Zephyr makes a significant impact on the Playscape. Although a potential asset in differentiating areas for different age groups, the Zephyr trackway is not well integrated into the present playscape design.

Zilker Café: The size of the Café is inconsistent with the number of visitors patronizing this amenity.

Zilker Café: Due to inadequate building area, the operators of the Café rely on exterior and offsite storage. The area shown here used for vehicular parking and storage is within the pool enclosure and drains into the pool.

Zilker Café: The fabric of the Zilker Café dates to the early 1960s, when it was constructed to replace a predecessor damaged beyond repair by flooding.

Although the Café is located within the Floodplain, LDC §25-7-96 explicitly identifies certain "public or recreational" facilities, including "a restroom or bath facility, concessions stand, tool shed, or pump house with an area less than 1,000 sf" as permitted uses in such locations. In order to reconcile this provision of City Code with local amendments to the Building Code the Building Official confirmed, in a meeting 22 October 2015, that such permitted uses would not be considered to be inhabited structures in the context of IBC 1612 and local amendments thereto, thereby facilitating the waiver of the most restrictive provisions of these local amendments. Nevertheless any reconstruction of the Café would have to be designed to withstand anticipated flood loads and potential damage to building systems and components in the event of inundation. The building's electrical and mechanical systems and particularly the old main supply panels in the rear of the facility may require extensive replacement to meet code requirements.

c) Suitability

Due to the regulatory limitations that would be imposed on any potential replacement for the Zilker Café the present location, and existing configuration of the Café should be considered, if not ideal, at least the best current option for the location of such a facility proximate the playscape and pool. Nevertheless certain features of the café, including specifically the provision of required storage, should be considered deficient.

2. Zilker Zephyr

a) Serviceability

The infrastructure associated with the Zilker Zephyr remains substantially as it was originally constructed in the 1960s. Although the track itself may remain usable, notwithstanding visible and pervasive variances from true gauge and alignment, the right of way associated with Zilker Zephyr occupies a land area in the most crowded and congested portion of the Zilker Park that is incommensurable with the number of visitors actually served. This situation is obviously compounded by the fact that the Zephyr right of way through the playscape and alongside the trail compromises the functionality of these elements even at times that the Zephyr is not actually in operation.

Zilker Zephyr: The right-of-way allocated to the Zilker Zephyr leaves an excessively narrow pathway between the track and the enclosure of the maintenance yard.

Zilker Zephyr: The Zilker Zephyr has been in service since the early 1960s. The track, which is visibly irregular and variable in gauge, appears to be approaching the end of its serviceable lifespan.

Zilker Zephyr: Deficient storage, as here at the Zephyr depot, is a common throughout the Bathhouse Zone.

Zilker Zephyr: The Zilker Zephyr is uncomfortably positioned in the most densely-developed, and intensely visited area of the park.

b) Code Compliance

Whether or not the station and track associated with the Zephyr complies with all applicable regulations[4], the location of its alignment in close proximity to pedestrian rights of way and to the playscape raises significant questions of operational safety. In addition, the multiple crossings and lengthy fencing separating the Zephyr alignment from adjacent park facilities restricts the main trail and presents additional safety concerns.

c) Suitability

The infrastructure associated with the Zilker Zephyr is not ideally located or configured with respect to other park uses. Nevertheless the popularity of the Zilker Zephyr, which has been in operation since the early 1960s, is undeniable, and the Zephyr is an iconic feature of Zilker Park. Accordingly any assessment of suitability, modification or realignment would have to be made on the basis of a detailed analysis of costs and benefits.

D. Barton Springs Bathhouse

1. Bathhouse Building

a) Serviceability

The physical infrastructure of the Bathhouse was the subject of a comprehensive assessment in 2007 in the context of the Barton Springs Pool Master Plan,[5] the findings of which confirmed that the building and its systems are approaching a state of unserviceability, a conclusion consistent with the age and quality of construction of the original building. Since the completion of the Master Plan repairs have been made to the bathhouse roof, alleviating a number of imminent concerns.

When the Master Plan was prepared, the mechanical systems serving the Bathhouse and the Sheffield Education Center were presumed to be in need of replacement, including wholesale replacement of ductwork and appurtenances.[6] Likewise the electrical infrastructure of the Bathhouse, including lighting and other appurtenances, was deemed to have "served most of its useful life" and noted for replacement. The same conclusions were noted for the building plumbing systems, both water and wastewater and all associated fixtures, which were recommended to be removed, replaced, or simply abandoned.

Bathhouse Men's Changing Area: The concrete canopy structures in the mens' and womens' changing areas are in poor condition, with a significant percentage exhibiting spalling concrete and exposed reinforcing.

Bathhouse Men's Changing Area: A typical example of structural deterioration of the glazed structural tile partitions in the mens' and women's changing areas. This appears to be the consequence of a flaw in the original building design, which did not include dedicated foundations for these partitions.

Bathhouse Men's Changing Area – Entry Corridor: This corridor is used both for storage (including the incorporation of an improvised mezzanine) and for the location of portions of the electrical service for the Bathhouse.

Bathhouse Men's Changing Area: An example of the failure of a sanitary sewer line in the Mens' Changing Area restrooms. Much of the existing plumbing within the Bathhouse is seventy years old and in poor physical condition.

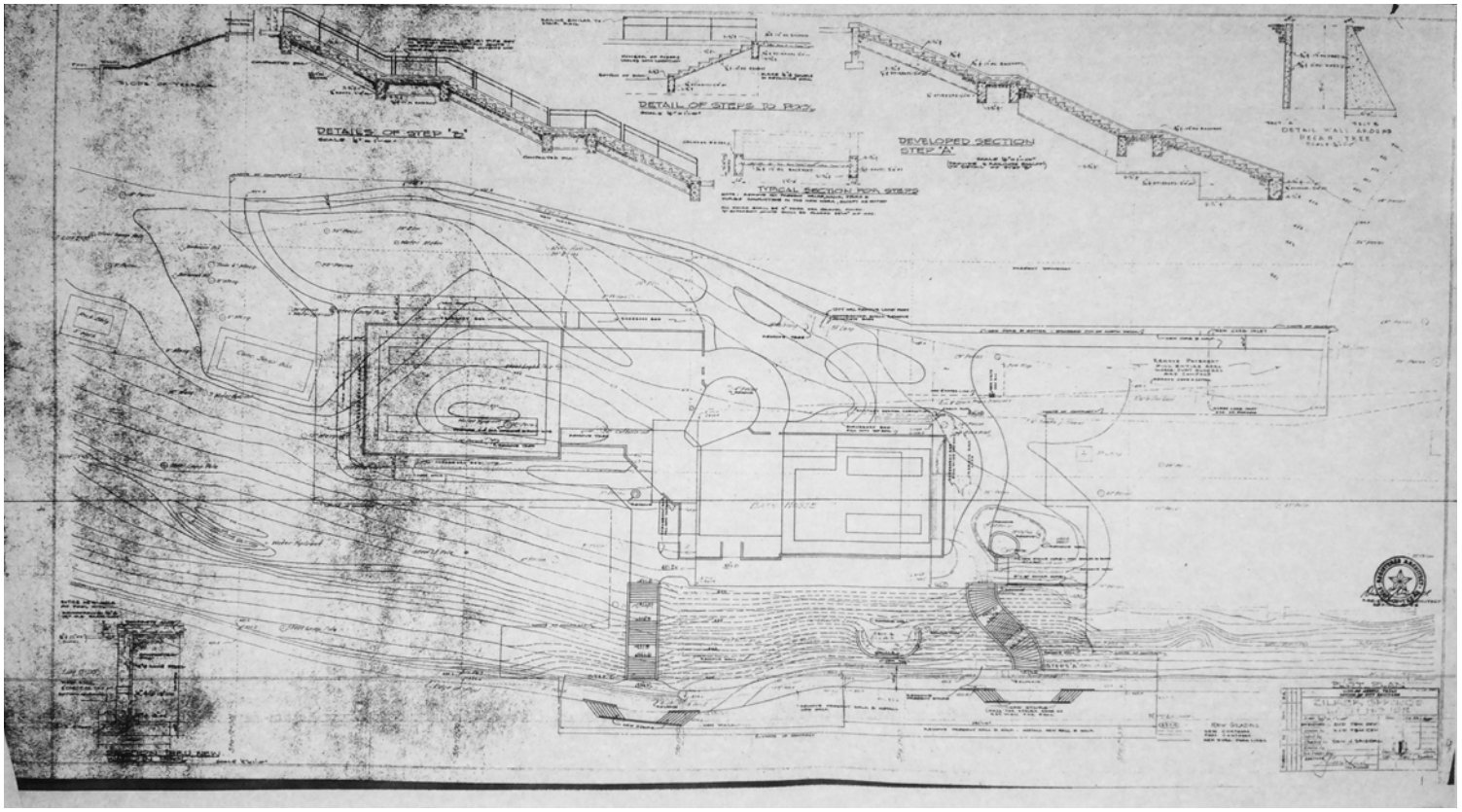
Bathhouse Rotunda: The Bathhouse Rotunda, built as the Service Office, retains much of the historic building fabric, although the interior of this space has been substantially altered over the years.

Bathhouse Mens' Changing Area: The mens' changing area specifically preserves much of the original design intent, although the louvered steel doors that originally closed the individual dressing cubicles are no longer existent.

Bathhouse Spectators' Gallery: The Spectators' Gallery serves as the principal means of access to and from the north side of the pool. The Gallery was not intended for this purpose.

Pool Enclosure: Emergency egress from the pool enclosure is a matter of significant concern. Exits from the enclosure do not comply with current code requirements, a deficiency compounded by features such as locked gates.

Pool Enclosure: Emergency egress from the pool enclosure is through the Spectators' Gallery. This is a very narrow pathway given the potential number of people within the pool enclosure.



Pool Enclosure and Bathhouse: Original Construction Plan dated 1945. Of note are the fact that the fence enclosing the pool was not included in the original design, that the present Spectator's Gallery is a legacy of the preceding bathhouse (and preserves intact a portion of the foundation of that destroyed building), and that the reconfiguration of the northeast corner of the existing parking lot was anticipated in the design of the current building.

The years since 2007 have witnessed the continued deterioration of building systems noted in the Master Plan assessment, as well as the evolution of the codes and standards governing their performance. Current field observations are consistent with the 2007 Master Plan conclusions.

b) Compliance

The Bathhouse is an existing architecturally and historically significant building, for which no change of principal use is presently proposed. In general, any existing conditions proposed to remain unchanged would be subject to the International Existing Building Code (IEBC) and could remain in their present conditions. However the IEBC would defer to the International Building Code (IBC) for new construction. These provisions are further clarified by Local Amendments to the section 1612 of the Building Code concerning life safety requirements applicable to buildings located in Flood Hazard Areas.

The existing Bathhouse is located within a Flood Hazard Area, in a location approximately nine feet below the FEMA Base Flood Elevation (commonly identified as the 100-year floodplain).[7] As a consequence, local code will require that modifications to the Bathhouse include life safety improvements required to bring the building, and the pool enclosure of which it is a component, into compliance with the egress provisions of current code.

At present, the number and location of emergency exits from the north side of the pool are conspicuously deficient with respect to the requirements of the Building Code. Per visitor data provided by PARD, the north side of the pool should be provided per code with not less than four means of egress, with a total width of not less than 25'. Current egress from the north side of the pool, consisting in terms of clearly identified exits of a single turnstile at the main entrance with a clear egress width of less than three feet, is dangerously deficient.

The City Building Official confirmed that the provision of appropriately sized means of egress from the Bathhouse and from the entire enclosed area of pool, would be required for any modifications to the existing facility that necessitate Building Plan Approval. Present conditions such as padlocked access gates pose obvious hazards to the safety of pool visitors, and should be rectified at the first opportunity. The minutes of this meeting are attached hereto as Appendix A.

In the case of the Bathhouse, questions of egress will be further constrained by local amendments to the Building Code pertaining to structures located in Flood Hazard Areas, specifically that "normal access to the building shall be by direct connection with an area that is a minimum of one (1) foot above the design flood elevation, unless otherwise approved by the building official."[8] A well-marked safe access route out of the floodplain with an associated flood warning system may be advisable to alleviate public concern.

Additional life safety improvements would pertain to the Sheffield Education Center and the SPLASH! exhibit. Per local amendments to Section 1612 of the 2012 IBC, within FLOOD HAZARD AREAS "all new construction of buildings, and alterations to buildings and structures, structures and portions of buildings and structures, including substantial improvements and restoration of substantial damage to buildings and structures, shall be designed and constructed to resist the effects of flood hazards and flood loads"[9] as meeting the following requirements:

> The design and construction of buildings and structures, and additions and alterations to buildings and structures located in flood hazard areas, shall be in accordance with ASCE 24, Flood Resistant Design and Construction.[10]
>
> A minimum freeboard of one foot shall be added where the design flood elevation or other elevation requirements are specified.[11]
>
> Buildings or structures constructed in the flood hazard area where the ground surface is below the design flood elevation, or where flood water velocities at the building may exceed five feet per second, shall be provided with an enclosed refuge space one foot or more above the design flood elevation of sufficient area to provide for the occupancy load with a minimum of 12 square feet per person. The refuge space shall be provided to an exterior platform and stairway not less than three feet wide.[12]
>
> No floor level or portion of a building or structure that is lower than one foot above the design flood elevation, regardless of the structure or space classification, shall be used residentially, or for storage of any property, materials, or equipment that might constitute a safety hazard when contacted by flood waters.[13]

> Normal access to the building shall be by direct connection with an area that is a minimum of one (1) foot above the design flood elevation, unless otherwise approved by the building official.[14]

Variances from some of these requirements may be needed given the constraints that could reasonably be accommodated in the existing historic building. Consultations with the Building Official indicated that the provision of a direct, unambiguous, and accessible evacuation path from the bathhouse to a location above the design flood elevation would facilitate consideration of such variances.

Existing building and State regulations pertaining to pool enclosures require all entrances to public pools to be monitored.[15] The current classroom exit likely does not meet these requirements.

c) Suitability

The existing Bathhouse is, in general terms, adequate to the use for which it was originally designed. The additional uses built into the Bathhouse over the years - including the accommodation of operational and storage facilities for Aquatics, the installation of the Sheffield Education Center, and the associated changes in circulation - have met operational restrictions with modifications that detract from the historical design. The use of an adjacent temporary building for storage of equipment necessary for Watershed Protection Department endangered species biologists is inefficient.

Aquatics facilities, presently distributed throughout the Bathhouse, are restrictive and poorly suited to the current requirements of their function. The scattered nature of these accommodations is inefficient and ad-hoc appropriation of areas of the building such as the former entrance corridor to the men's' dressing room where pool equipment is presently stored in close proximity to the building electrical service, is inappropriate.

Notwithstanding floodplain considerations, the present accommodation of the Sheffield Education Center is likewise functionally inadequate. The building volume and space allocated to the offices and classrooms are less than ideal. Most significant in this regard are considerations of emergency egress from the Sheffield Education Center, in accordance with current code as the Building Official has stated, are a prerequisite for any modifications to the existing facility.[16] Although staff have been adept at making the best use of the physical resources presently available, the limitations of the existing building area has been repeatedly noted in interviews with facility stakeholders.

Similar concerns would apply to the SPLASH! exhibit. The exhibit space is small for its continuous operation, relying on in-accessible (not TAS-compliant) space for support functions and not incorporating any of the "back of the house" space required to effectively manage a modern exhibit by facilitating in-service maintenance, partial closures to facilitate updates or repairs, or additional rotating exhibition space.

Continued operation of the SPLASH! Exhibit in a location proximate to Barton Springs is a required conservation measure of the operating permit from the U.S. Fish and Wildlife Service that enables continued recreational use of the springs through the year 2033. Revisions, including the temporary suspension of operations of SPLASH!, to conservation measures in an incidental take permit are considered to be major amendments by the U.S. Fish and Wildlife Service, subject to National Environmental Policy Act requirements.

IV. PUBLIC ENGAGEMENT

A. Public Meetings and Presentations

Assessment of the Bathhouse Zone included an extensive series of public meetings planned to solicit and record input from stakeholders with an interest in the proposed improvements. The meetings also provided a forum for the presentation of findings and recommendations.

The program of public meetings included the following events. Documentation of the materials presented at each of these meetings has been posted for public review on the City of Austin's website: https://austintexas.gov/department/zilker-park-improvement-projects-barton-springs.

- October 27th Open House, 6:00-8:00 PM Zilker Botanical Gardens
- November 3rd Environmental/Infrastructure Focus Group, 6:00-8:00 PM McBeth Recreation Center
- November 12th Bathhouse Focus Group, 6:00-8:00 PM Zilker Botanical Gardens
- November 18th Children's Facilities Focus Group, 6:00-8:00 PM Zilker Botanical Gardens
- December 9th Review and Alternatives, 6:00-8:00 PM 721 Barton Springs Rd, Room 130
- January 9th Draft Recommendations, 2:00-4:00 PM Zilker Botanical Gardens

B. Surveys

In addition to the public meetings, the project team has published a survey to solicit stakeholder input. Results of the survey are published on the City of Austin's website: https://austintexas.gov/department/zilker-park-improvement-projects-barton-springs.

V. PROGRAM NEEDS

The preparation of this study included multiple meetings and consultations with project stakeholders. Minutes of these meetings are included as Appendix B.

The following lists represent a summary of points raised during these meetings and consultations, formatted as program objectives for future improvement projects.

Many points raised during the preparation of this study, including some referenced as program needs below, pertained to matters of regulatory compliance. All findings of this study presume compliance with applicable City, State and Federal regulations, although it should be noted that in many circumstances variances will be required to reconcile preexisting conditions with the constraints of current code.

A. Site Infrastructure, including Parking, Circulation, and Stormwater Management

1. Parking

- The inefficient layout of the existing parking lot should be improved to permit the elimination of excessive impervious cover
- Any modifications to the existing parking lot should improve the accessibility of existing facilities
- Modifications to the existing parking lot should improve the viability of existing trees in the Bathhouse Zone

2. Pedestrian Circulation

- Improvements to pedestrian circulation in the Bathhouse Zone must address life safety concerns applicable to the pool enclosure
- Improvements to pedestrian circulation in the Bathhouse Zone should include enhancement of the connection between the Violet Crown Trailhead and Barton Springs Road
- Pedestrian improvements should also safely accommodate bicyclists, particularly in areas constrained by the present alignment of the Zilker Zephyr
- Pedestrian Improvements should be planned to minimize damage to the critical root zones of existing trees
- Elements of the Barton Springs Pool Interpretive Plan should be included throughout the Bathhouse Zone

3. Stormwater Management

- Any improvements to the Bathhouse Zone should provide improved water quality controls compliant with the intent of the SOS Ordinance

B. Site Amenities, including the Picnic Pavilion, Maintenance Facility, Pecan Grove Picnic Area and Restrooms, and Zilker Playscape

1. Picnic Pavilion

2. Maintenance Facility

- The Maintenance Facility should be relocated to a less environmentally-sensitive area of the park
- The existing Maintenance Facility should be demolished and its site restored to a more natural condition
- Provision should be made for relocation of materials presently stored within the Maintenance Facility, and required for the operation of facilities within the Bathhouse Zone, to other locations within the Zone

3. Pecan Grove Picnic Area and Restrooms

- Existing restrooms serving the Pecan Grove should be replaced

4. Zilker Playscape

- The Playscape is too small for the number of visitors using the facility
- Playscape needs to better accommodate children of different age groups
- Play equipment is outdated
- Play equipment should be specific to Zilker Park, and consistent with overall interpretive plan for the Bathhouse Zone
- Playscape is inadequately shaded
- Playscape should be better coordinated with existing trees, both to mitigate hazards to Playscape users and promote long-term viability of trees
- Conflicts with Zilker Zephyr should be addressed
- Playscape should have better access to amenities such as restrooms and drinking fountains

C. Concessions

1. Zilker Café

- The Café building needs to be larger to better serve peak demands
- Additional seating is required to meet current demands
- Additional storage is required for the Café to function efficiently

2. Zilker Zephyr

- The station needs to be larger to accommodate peak demands
- The present location of the station conflicts with a number of other park uses
- The alignment of the Zephyr trackway should be improved to better address conflicts, and associated safety concerns, with the trail and the Playscape

D. Barton Springs Bathhouse

1. Bathhouse

- Life safety concerns pertaining to the evacuation of the Bathhouse and the pool enclose must be addressed
- Unserviceable building systems should be replaced
- Historic character of the building should be preserved
- Inefficient storage located throughout the Bathhouse should be consolidated and rationalized
- Present facilities for Aquatics operations are too small for current needs
- Entry to the pool, including management of admissions and queuing areas, should be improved
- Women's changing room should be restored

2. Sheffield Education Center, including the SPLASH! Exhibit

- The Sheffield Education Center must be closely connected with the landscape, the aquifer, and the springs to fulfill its mission
- Classrooms cannot be more than 8 minutes' walk [for a third grader] from the springs: Class visits are very short, the more time spent walking around the less time there is for learning
- The SPLASH! Exhibit needs access to aquifer water to support the display tanks for the endangered Barton Springs salamanders
- The Sheffield Education Center could better serve its function with a building that was more versatile, for accommodating groups of different sizes and ages
- The Sheffield Education Center possesses insufficient "back of house" space (including storage, workshop and office space) to support present operations
- Existing classrooms are too small for the present functions
- The Sheffield Education Center needs additional multipurpose space (this could also serve as the common space cited above) to serve as a gallery, venue for changing exhibits, occasional workspace and venue for film screening, etc.
- City funds to operate and maintain the existing SPLASH! Exhibit and Sheffield Education Center are limited. Expansion of the function and use of these

facilities would require additional operating funds to be identified and allocated.

- Regardless of the Sheffield/SPALSH! Location, the Rotunda and any general public space should include interpretive elements of the history, environment and architecture of the Barton Springs area.

3 Visitor's Center

- The Visitor's Center should be fully staffed for generous park hours.
- It should have clear paths and visibility to major features including the Bathhouse, the Pool, the Springs Complex and other amenities.
- It should be at a prominent location visible to Barton Springs Road entrances
- It should have provisions for safe school and transit bus unloading.
- It should have visibility and access to the upper parking and overflow parking areas.
- Any new facility should be located out of the flood plain
- Any new facility should include children's toilet facilities and drinking fountains.
- Any new facility should integrate the educational and play facilities in the interpretive experience.

VI. BATHHOUSE REHABILITATION

The Bathhouse is both the most prominent element existing within the Zilker Bathhouse Zone, and the building with the most complex program. Given that the extent of improvements recommended for the Bathhouse Zone as a whole will be contingent on the specific solutions adopted for the Bathhouse itself, the following is a detailed description of specific programmatic considerations applicable to the Bathhouse deriving from the summary of Program Needs and from the objectives of the Master Plan.

A. Life Safety and Access Improvements

Bringing the north side of the existing pool enclosure into compliance with current codes will necessitate fundamental revisions to the existing means of access to the pool. These revisions pertain most specifically to egress from the pool, although given the requirements imposed by the Texas Administrative Code on access to public pool facilities, specifically that "all doors, gates, and windows in the enclosure [be] directly and continuously supervised by staff at the pool during hours of operation, or locked to prevent unauthorized entry",[17] it is recommended that where feasible the required means of egress correspond to supervised points of entry.

Insofar as "moving [the] ticket counter back to rotunda" is an explicit objective of the Master Plan[18], due consideration has been given to the access implications of such an intervention. Objectively a staff member stationed in the rotunda could provide the mandated supervision of as many as four additional entry and egress points divided between the two original entry corridors in the Bathhouse. There is no other solution that would offer such an improvement in the access to and from the pool enclosure for so small an obligation in staff supervision. The rotunda was specifically designed in order to provide supervision of the two original entry corridors.

Of alternative locations for access to the north side of the pool, the existing entry point is too constrained by both existing trees and the configuration of the historic spectators' gallery to be easily expanded, whereas a location at the opposite end of the Bathhouse, although located at the top of the only accessible route to the pool deck, does not presently possess a viable ticket office.[19]

The restoration of the original entry corridors would require the identification of an alternate location for the storage activities presently occurring adjacent to the men's changing area, as well as modifications to the existing electrical infrastructure in this location.

With respect to the men's and women's changing areas, the historic gender segregation of the original corridors should be abandoned. From a code standpoint, a corridor that is proposed as a required means of egress cannot be segregated by gender (nor can it be located in an area so segregated). Pragmatically the de-segregation of the corridors