Lake Worth Beach, Florida. The Art of Florida Living.sm

7 North Dixie Highway
Lake Worth Beach, FL 33460
561.586.1600

AGENDA
CITY OF LAKE WORTH BEACH
CITY COMMISSION WORK SESSION - BEACH COMPLEX
CITY HALL COMMISSION CHAMBER
WEDNESDAY, JANUARY 26, 2022 - 4:00 PM

ROLL CALL:

PLEDGE OF ALLEGIANCE: led by Commissioner Christopher McVoy

UPDATES / FUTURE ACTION / DIRECTION

A. Discuss the details of requirements and next steps for the Beach Complex

ADJOURNMENT:

The City Commission has adopted Rules of Decorum for Citizen Participation (See Resolution No. 25-2021). The Rules of Decorum are posted within the City Hall Chambers, City Hall Conference Room, posted online at: https://lakeworthbeachfl.gov/government/virtual-meetings/, and available through the City Clerk's office. Compliance with the Rules of Decorum is expected and appreciated.

If a person decides to appeal any decision made by the board, agency or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. (F.S. 286.0105)

LAKE WORTH BEACH COMPLEX | THE ART OF FLORIDA LIVING

NEW POOL COMPLEX CONCEPTUAL PACKAGE

August 14, 2019

EXISTING AERIAL VIEW
LAKE WORTH CASINO
BUILDING COMPLEX

NEW POOL COMPLEX
BOUNDARY

Original Schematic Design Concept
Meetings with Commissioners

2 **Conceptual Schemes**

SCHEME A

Scheme A

CPZ Architects | KEITH | Aquatic Consulting Engineers

Scheme A

Glass Wall

Open Plaza
Tiki Bar

Pool Entry

Staff and Meeting Room

Restroom

Future Stair and Drop Off

Public Restroom

Splash Pad

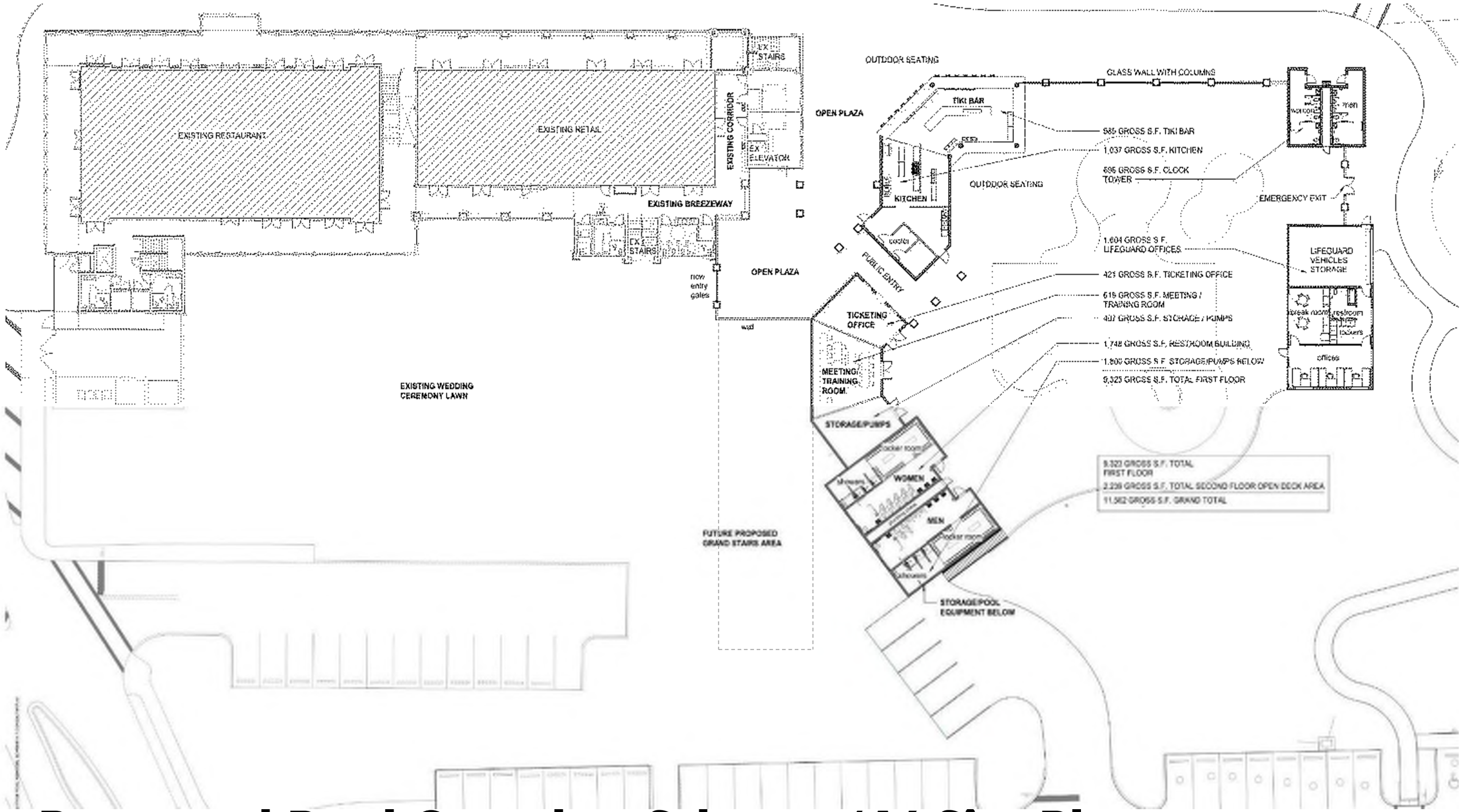
Glass Wall

Lifeguard Building

Shallow Pool Seating Area

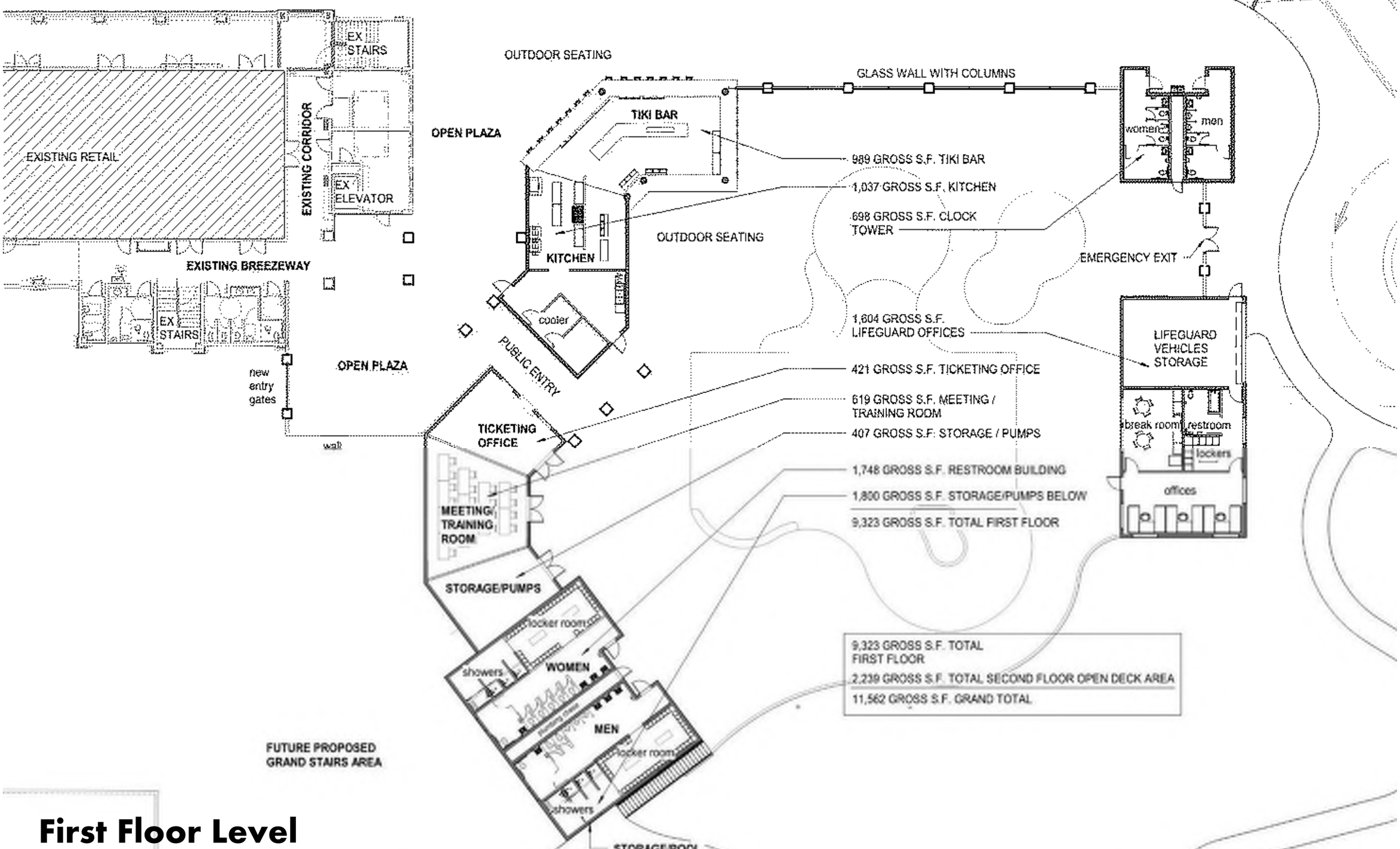
Sunset View

Service below



Proposed Pool Complex Scheme 'A' Site Plan

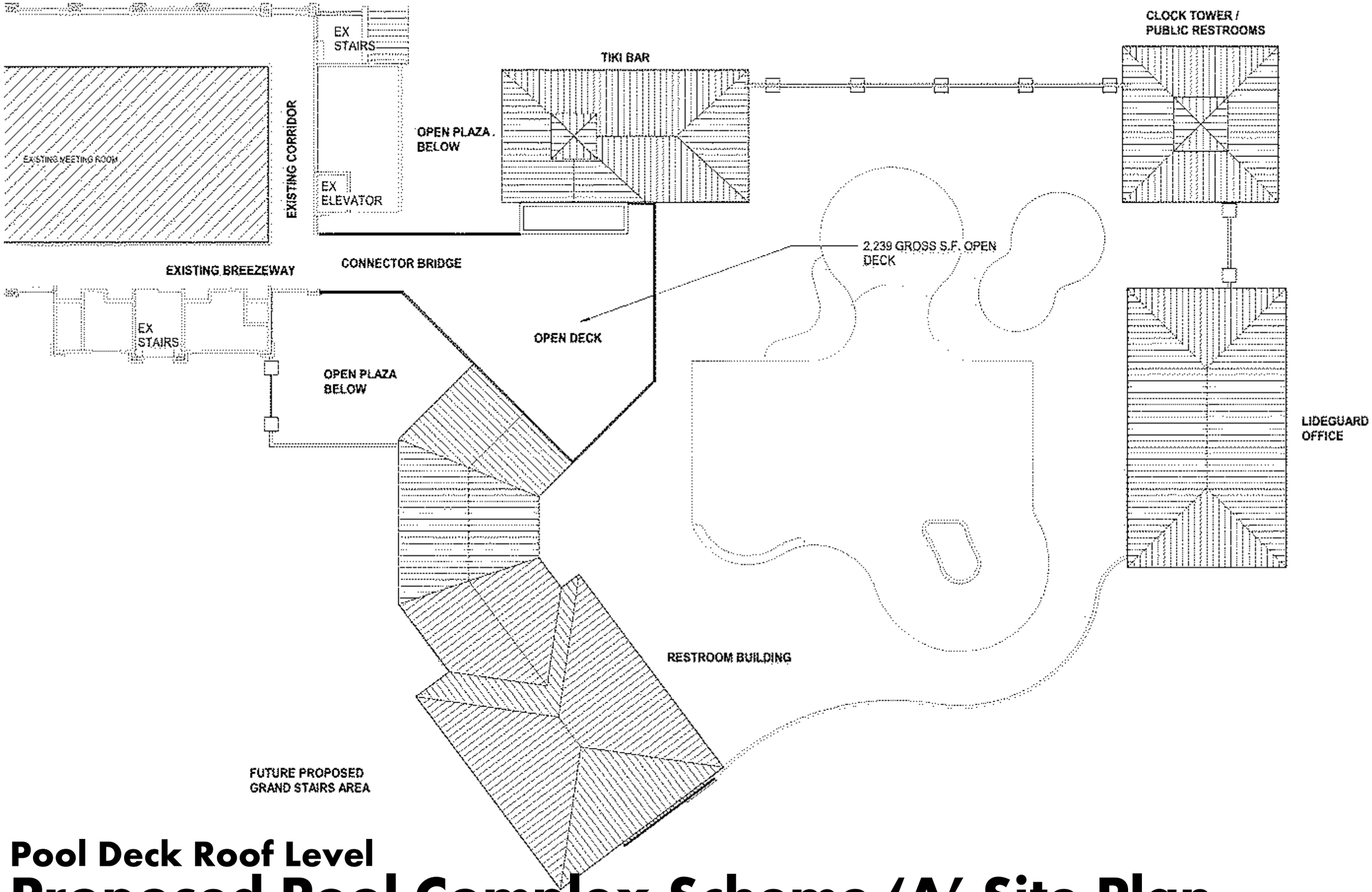
CPZ Architects | KEITH | Aquatic Consulting Engineers



First Floor Level

Proposed Pool Complex Scheme 'A' Site Plan

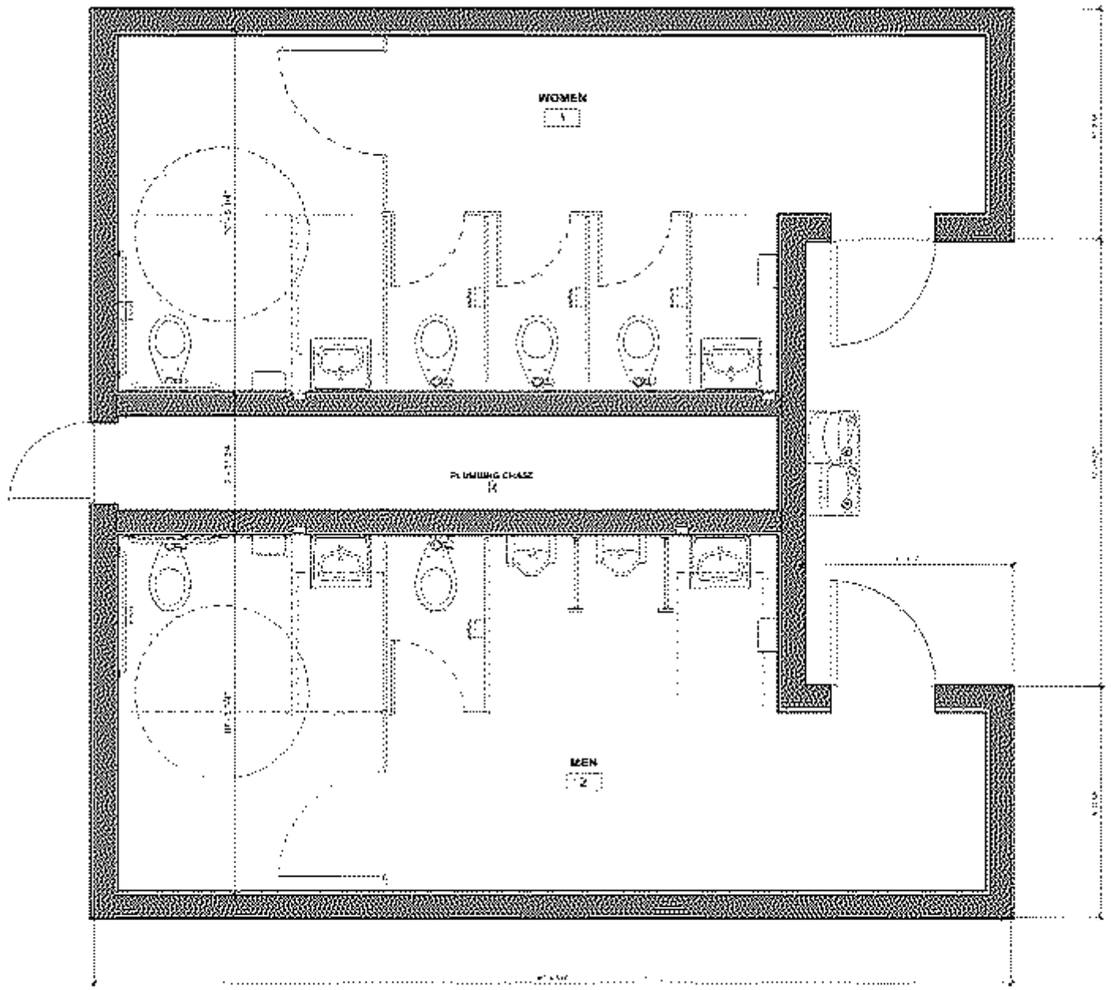
CPZ Architects | KEITH | Aquatic Consulting Engineers



Pool Deck Roof Level

Proposed Pool Complex Scheme ‘A’ Site Plan

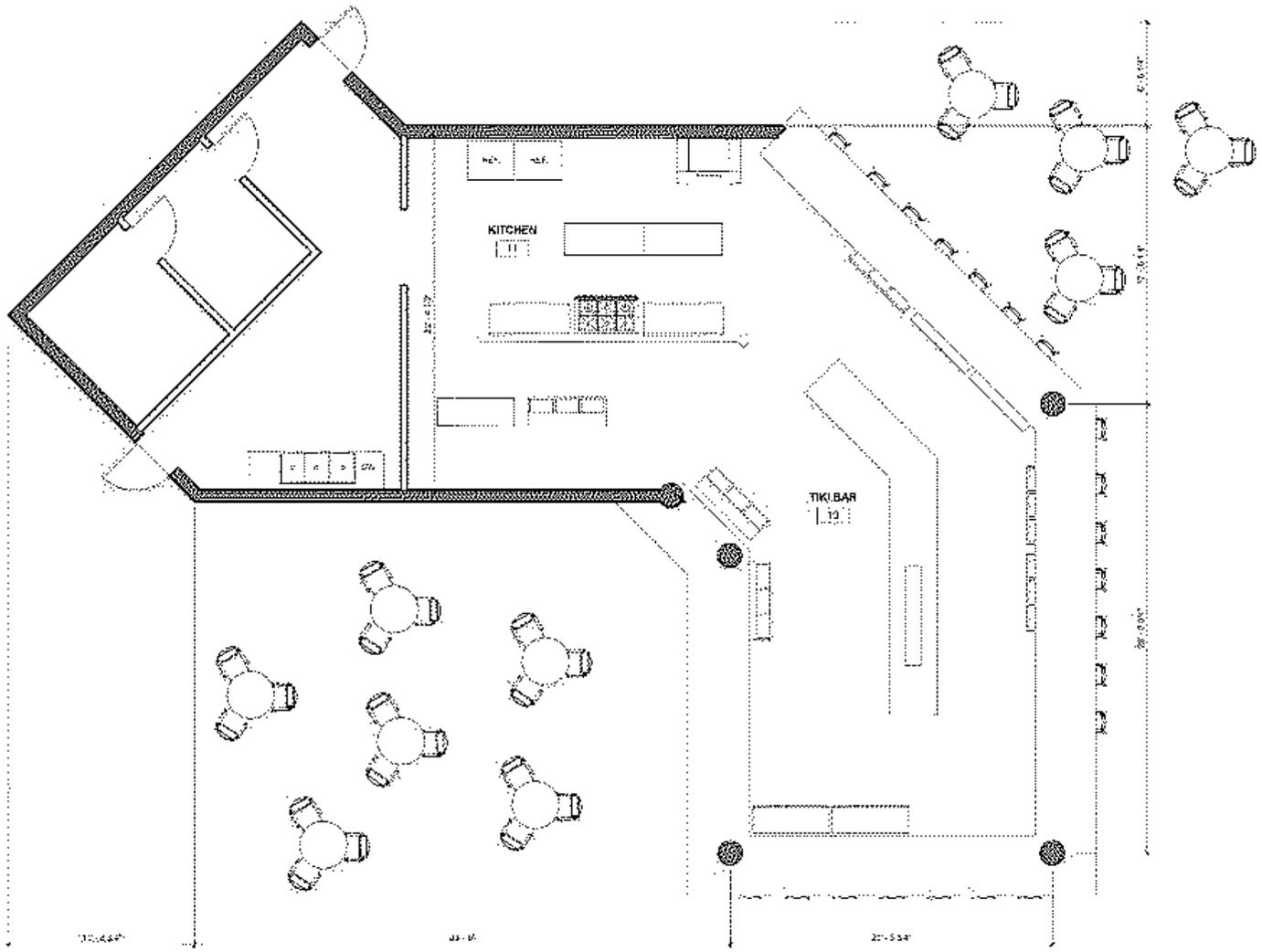
Proposed Clock Tower / Public Restrooms Building
Floor Plan Scheme ‘A’



1 CLOCK TOWER / PUBLIC RESTROOMS BUILDING

698 S.F. CLOCK TOWER.

Proposed Tiki Bar Building Floor Plan Scheme ‘A’



TIKI BAR BUILDING SCHEME A

989 S.F. TIKI BAR.
1037 S.F. KITCHEN

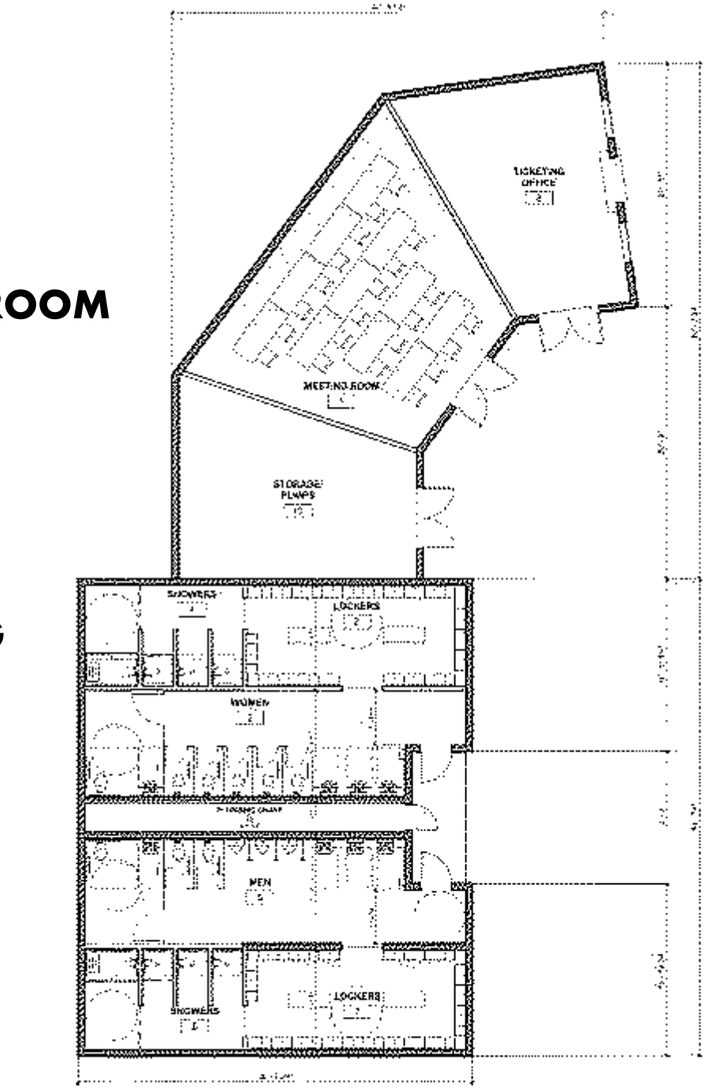
Proposed Meeting Room/ Restrooms Building/ Pool Equipment & Storage below Floor Plan Scheme ‘A’

421 S.F. TICKETING OFFICE

619 S.F. MEETING/ TRAINING ROOM

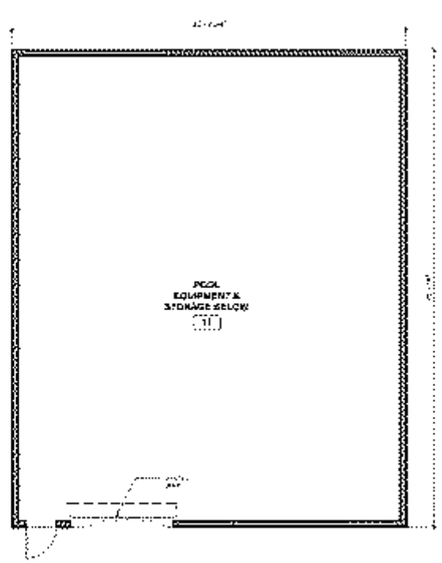
407 S.F. STORAGE PUMPS.

1748 S.F. RESTROOM BUILDING



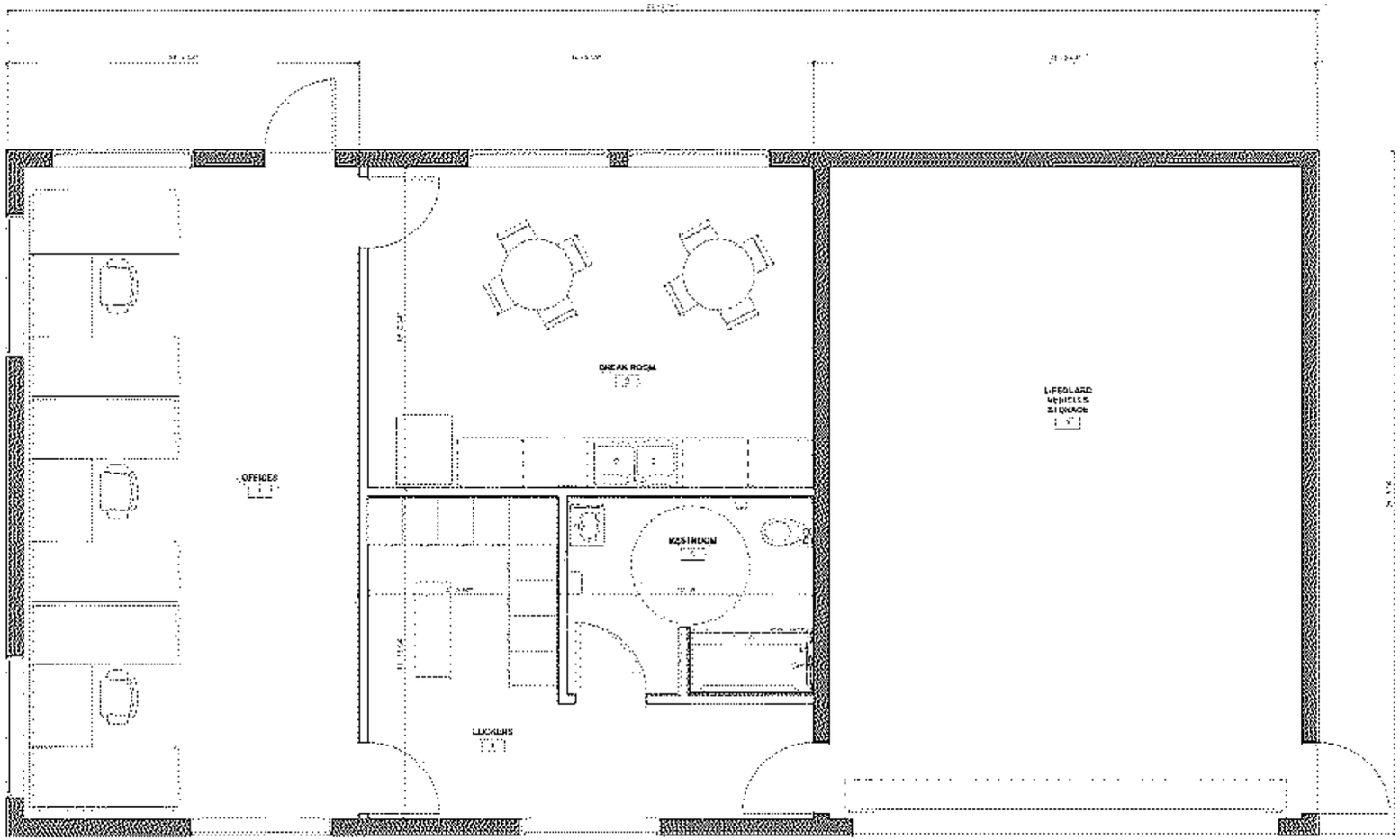
MEETING ROOM / RESTROOMS BUILDING / POOL EQUIPMENT & STORAGE BELOW SCHEME A

1800 S.F. POOL EQUIPMENT & STORAGE BELOW



POOL EQUIPMENT & STORAGE BELOW SCHEME A

Proposed Lifeguard Building Floor Plan Scheme ‘A’

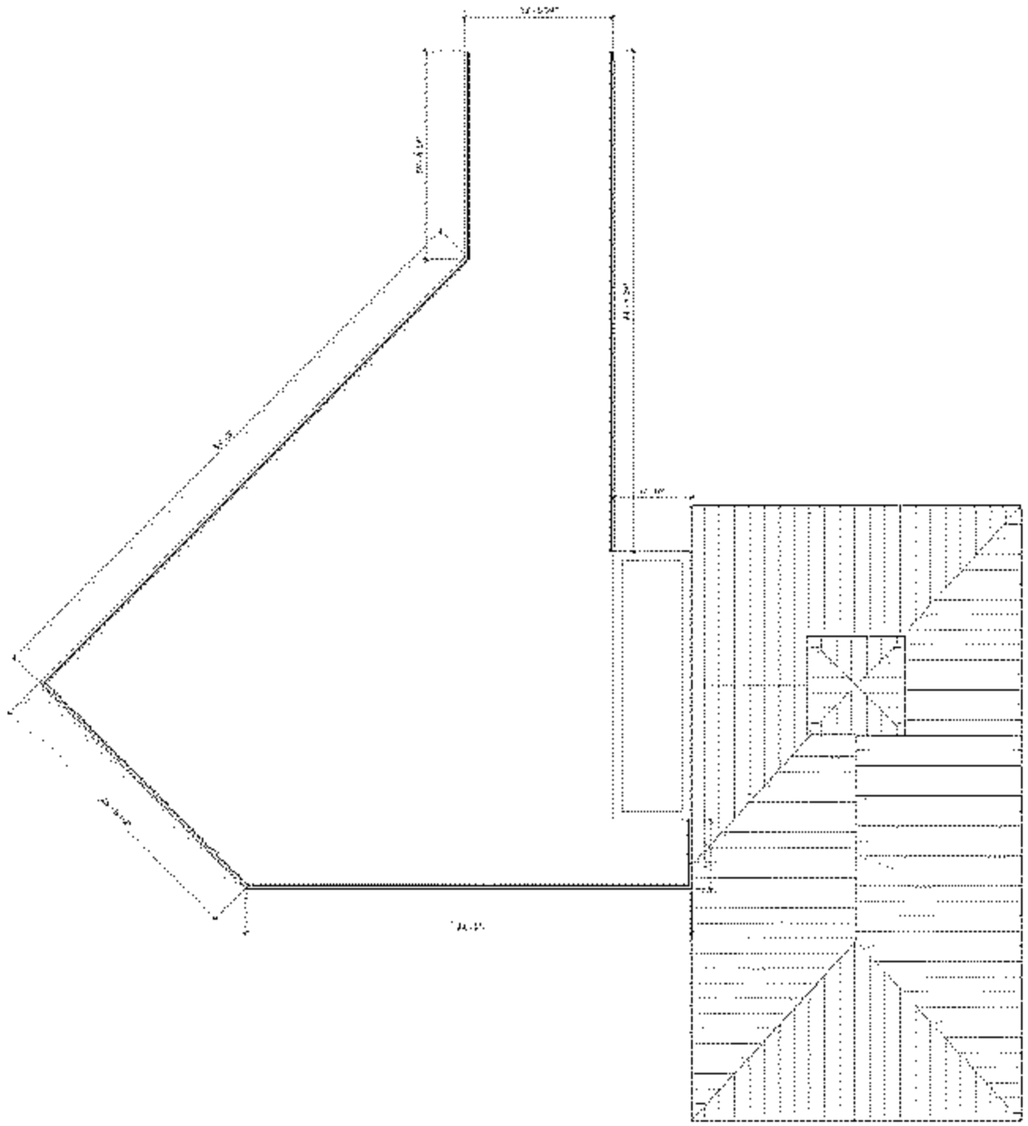


1 LIFEGUARD BUILDING SCHEME A

1604 S.F. LIFEGUARD BUILDING.

CPZ Architects | KEITH | Aquatic Consulting Engineers

Proposed Second Floor Deck Plan Scheme ‘A’



SECOND FLOOR DECK SCHEME A **2239 S.F. OPEN DECK**

CPZ Architects | KEITH | Aquatic Consulting Engineers

CPZ Architects | KEITH | Aquatic Consulting Engineers

Scheme A
OPINION OF COST

CMS-Construction Management Services, Inc.
10 Fairway Drive, Suite 301
Deerfield Beach, Fl 33441
954-481-1611
CMS FILE # 2354 ORDER OF MAGNITUDE

POOL COMPLEX REMODEL
LAKE WORTH CASINO
10 S OCEAN BLVD
LAKE WORTH, FLORIDA 33460

ORDER OF MAGNITUDE
COST ESTIMATE (rev 2)
August 13, 2019

PREPARED FOR:
CPZ ARCHITECTS

SCHEDULE OF VALUES

DIVISION	DESCRIPTION	SCHEME A - BASE	SCHEME A - LIFEGUARD BUILDING	SCHEME A - MEETING ROOM	SCHEME A - 2ND FLOOR DECK	SCHEME A - TIKI BAR BUILDING	SCHEME A - CLOCK TOWER / PUBLIC RESTROOMS
		AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
01000	GENERAL CONDITIONS - SEE BREAKOUT BELOW	$ -	$ -	$ -	$ -	$ -	$ -
02000	SITE WORK / DEMOLITION	$ 731,906	$ -	$ -	$ -	$ -	$ -
03000	CONCRETE	$ 724,925	$ 120,900	$ 48,475	$ 167,925	$ 151,950	$ 52,350
04000	MASONRY	$ 90,903	$ 12,630	$ 4,840	$ -	$ 13,705	$ 8,235
05000	METALS	$ 46,615	$ 8,650	$ 3,995	$ 30,000	$ 10,130	$ 3,499
06000	WOOD AND PLASTICS	$ 33,308	$ 4,510	$ 1,399	$ 5,060	$ 3,065	$ 1,745
07000	THERMAL / MOISTURE PROTECTION	$ 233,975	$ 24,660	$ 9,295	$ -	$ 30,390	$ 18,479
08000	DOORS AND WINDOWS	$ 455,745	$ 24,660	$ 9,295	$ -	$ 30,390	$ 18,479
09000	FINISHES	$ 566,905	$ 40,100	$ 15,475	$ -	$ 50,650	$ 17,466
10000	SPECIALTIES / SIGNAGE	$ 45,900	$ -	$ -	$ -	$ -	$ -
11000	EQUIPMENT	$ -	$ -	$ -	$ -	$ -	$ -
12000	FURNISHINGS	$ -	$ -	$ -	$ -	$ -	$ -
13000	SPECIAL CONSTRUCTION	$ 1,287,175	$ -	$ -	$ -	$ -	$ -
14000	CONVEYING SYSTEMS	$ -	$ -	$ -	$ -	$ -	$ -
21000	FIRE	$ 27,900	$ 4,812	$ 1,857	$ -	$ 6,078	$ 3,094
22000	PLUMBING	$ 235,000	$ 15,000	$ -	$ 27,000	$ 49,000	$ 79,000
23000	HVAC	$ 45,885	$ 10,400	$ 5,100	$ -	$ 24,055	$ -
26000	ELECTRICAL	$ 169,845	$ 24,660	$ 9,295	$ 15,795	$ 30,390	$ 18,479
27000	TECHNOLOGY	$ -	$ -	$ -	$ -	$ -	$ -
28000	ELECTRONIC SAFETY & SECURITY	$ -	$ -	$ -	$ -	$ -	$ -
31000	SITE WORK, EARTHWORK, ASPHALT PAVING, SIDE WALKS	$ 400,394	$ -	$ -	$ -	$ -	$ -
32000	EXTERIOR IMPROVEMENTS	$ 407,000	$ -	$ -	$ 33,975	$ -	$ -
33000	SITE UTILITIES	$ 207,900	$ -	$ -	$ -	$ -	$ -
	SUBTOTAL'S: DIRECTHARD COSTS	$ 5,765,985	$ 280,942	$ 108,909	$ 303,740	$ 456,233	$ 188,774
12.00%	GENERAL CONDITIONS	$ 692,279	$ 34,453	$ 12,800	$ 36,449	$ 48,028	$ 22,653
	SUBTOTAL	$ 6,461,266	$ 321,379	$ 119,771	$ 340,189	$ 498,261	$ 211,427
4.00%	O.C. OVERHEAD	$ 258,451	$ 12,855	$ 4,791	$ 13,608	$ 17,930	$ 8,457
	SUBTOTAL	$ 6,719,719	$ 334,234	$ 124,562	$ 353,797	$ 466,191	$ 219,884
6.00%	O.C. PROFIT	$ 403,183	$ 20,054	$ 7,474	$ 21,228	$ 27,971	$ 13,193
	SUBTOTAL	$ 7,122,902	$ 354,288	$ 132,036	$ 375,026	$ 494,163	$ 233,077
1.29%	O.C. P&P BOND	$ 91,886	$ 4,570	$ 1,703	$ 4,838	$ 6,375	$ 3,007
	SUBTOTAL	$ 7,214,787	$ 358,858	$ 133,739	$ 379,862	$ 500,538	$ 236,084
5.00%	ESCALATION (ALLOWANCE)	$ 360,739	$ 17,943	$ 6,687	$ 18,993	$ 25,027	$ 11,804
	SUBTOTAL	$ 7,575,527	$ 376,797	$ 140,426	$ 398,855	$ 525,564	$ 247,888
20.00%	CONTINGENCY	$ 1,515,105	$ 75,359	$ 28,085	$ 79,771	$ 105,113	$ 49,578
	TOTAL PROBABLE CONSTRUCTION COST	$ 9,090,632	$ 452,156	$ 168,511	$ 478,626	$ 630,677	$ 297,466

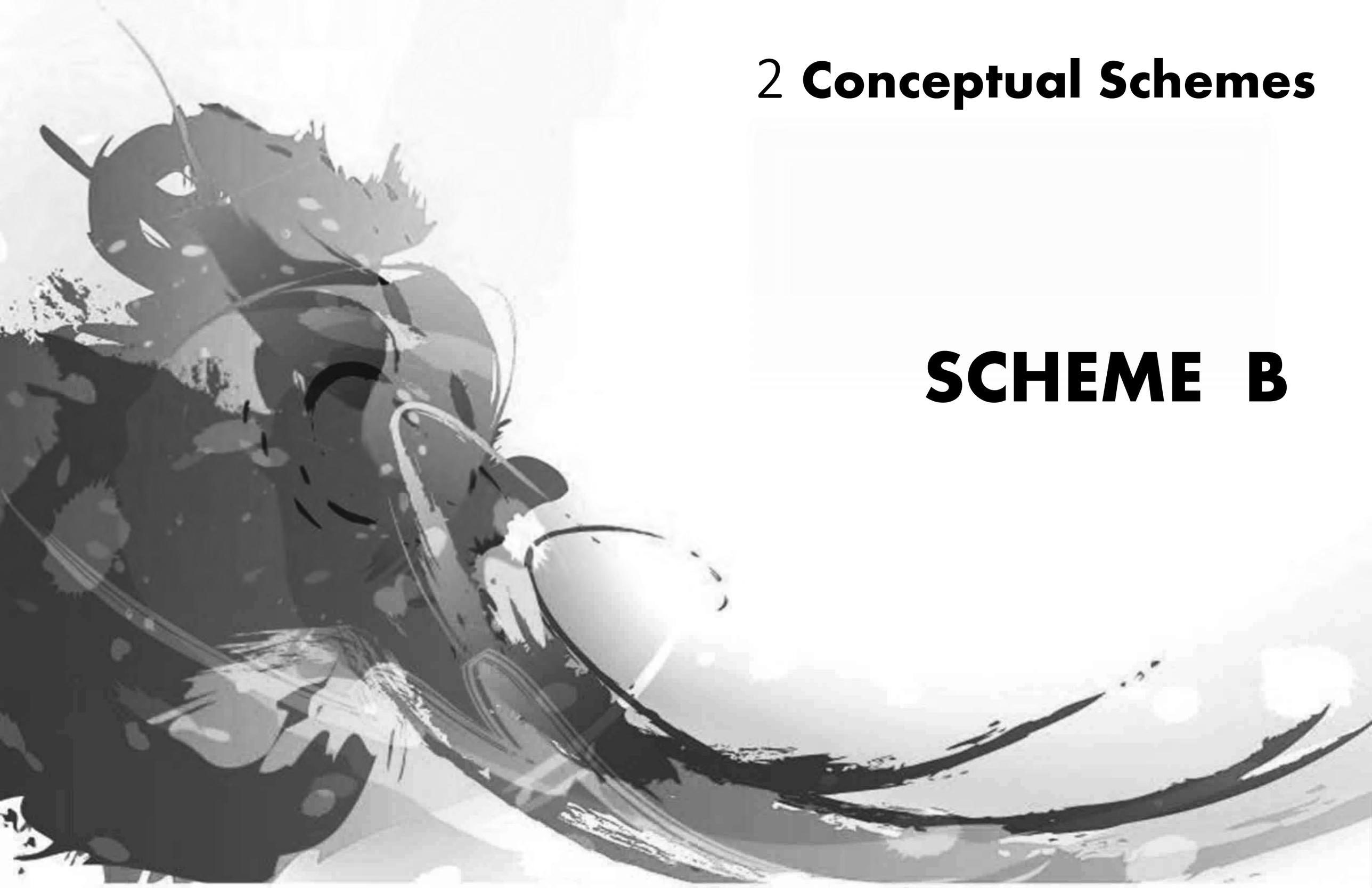
Scheme A
OPINION OF COST

DIVISION	DESCRIPTION	SCHEME A - BASE	SCHEME A - LIFEGUARD BUILDING	SCHEME A - MEETING ROOM	SCHEME A - 2ND FLOOR DECK	SCHEME A - TIKI BAR BUILDING	SCHEME A - CLOCK TOWER / PUBLIC RESTROOMS
		AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
12.00%	GENERAL CONDITIONS	$ 992,279	$ 34,433	$ 12,833	$ 36,449	$ 48,028	$ 22,653
	SUBTOTAL	$ 8,465,268	$ 321,375	$ 119,771	$ 340,189	$ 448,281	$ 211,427
4.00%	G.C. OVERHEAD	$ 258,451	$ 12,855	$ 4,791	$ 13,608	$ 17,930	$ 8,457
	SUBTOTAL	$ 8,719,719	$ 334,230	$ 124,562	$ 353,797	$ 466,191	$ 219,884
6.00%	G.C. PROFIT	$ 403,183	$ 20,054	$ 7,474	$ 21,228	$ 27,971	$ 13,193
	SUBTOTAL	$ 7,122,902	$ 354,284	$ 132,036	$ 375,024	$ 494,163	$ 233,077
1.29%	G.C. P&P BOND	$ 91,885	$ 4,570	$ 1,703	$ 4,838	$ 6,375	$ 3,007
	SUBTOTAL	$ 7,214,787	$ 358,854	$ 133,739	$ 379,862	$ 500,538	$ 236,084
5.00%	ESCALATION (ALLOWANCE)	$ 360,739	$ 17,943	$ 6,687	$ 18,993	$ 25,027	$ 11,804
	SUBTOTAL	$ 7,575,527	$ 376,797	$ 140,426	$ 398,855	$ 525,564	$ 247,888
20.00%	CONTINGENCY	$ 1,515,105	$ 75,359	$ 28,085	$ 79,771	$ 105,113	$ 49,578
	TOTAL PROBABLE CONSTRUCTION COST	$ 9,090,633	$ 452,156	$ 168,511	$ 478,626	$ 630,677	$ 297,465

Scheme A
OPINION OF COST

Scheme "A"			
		Deduct	**Total**
	Total Cost		**$9,090,632**
	Deductions:		
	Second Floor Deck	$478,626	$8,612,006
	Lifeguard Building	$452,156	$8,159,850
	Meeting Room	$168,511	**$7,991,339**
	Tiki Bar Building	$630,677	$7,360,662
	Clock Tower/ Public Restrooms Building	$297,465	$7,063,197

SCHEME B



CPZ Architects | KEITH | Aquatic Consulting Engineers

Scheme B

Glass Wall

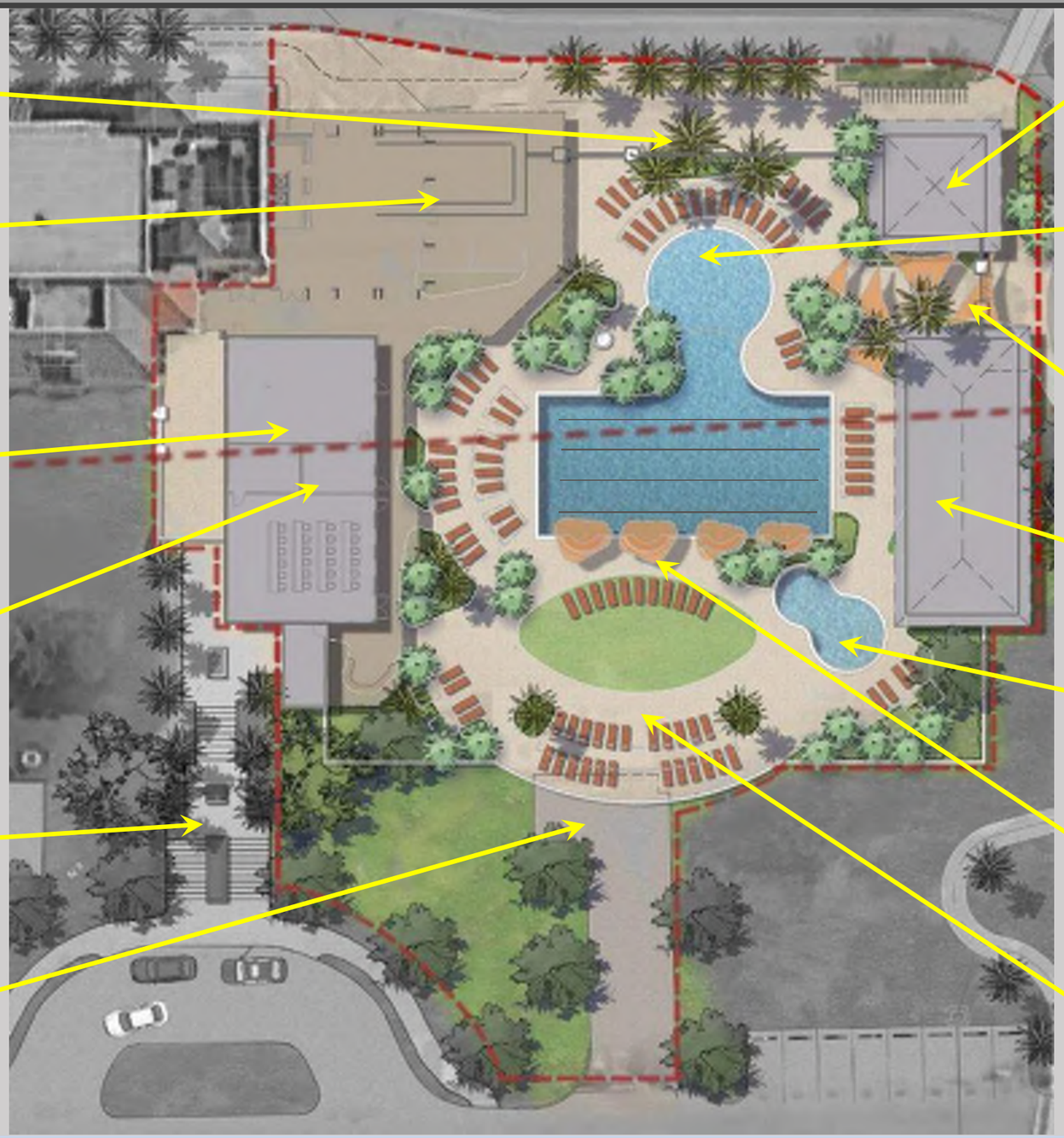
Tiki Bar

Staff and Meeting Room, 2nd FL

1st FL Restroom

Future Stair and Drop Off

Service Below



Public Restroom

Zero Entry Pool

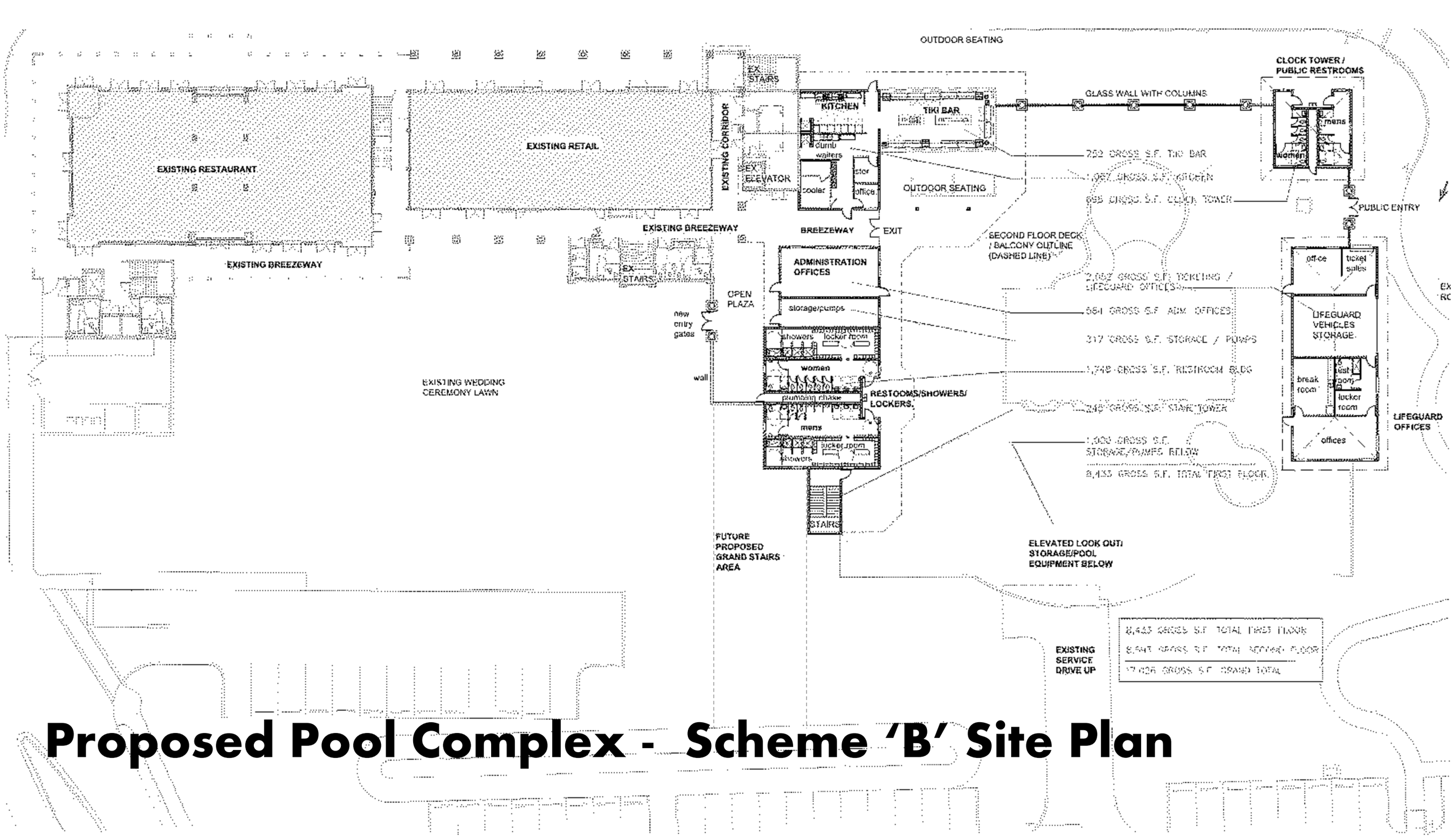
Pool Entry

Lifeguard Building

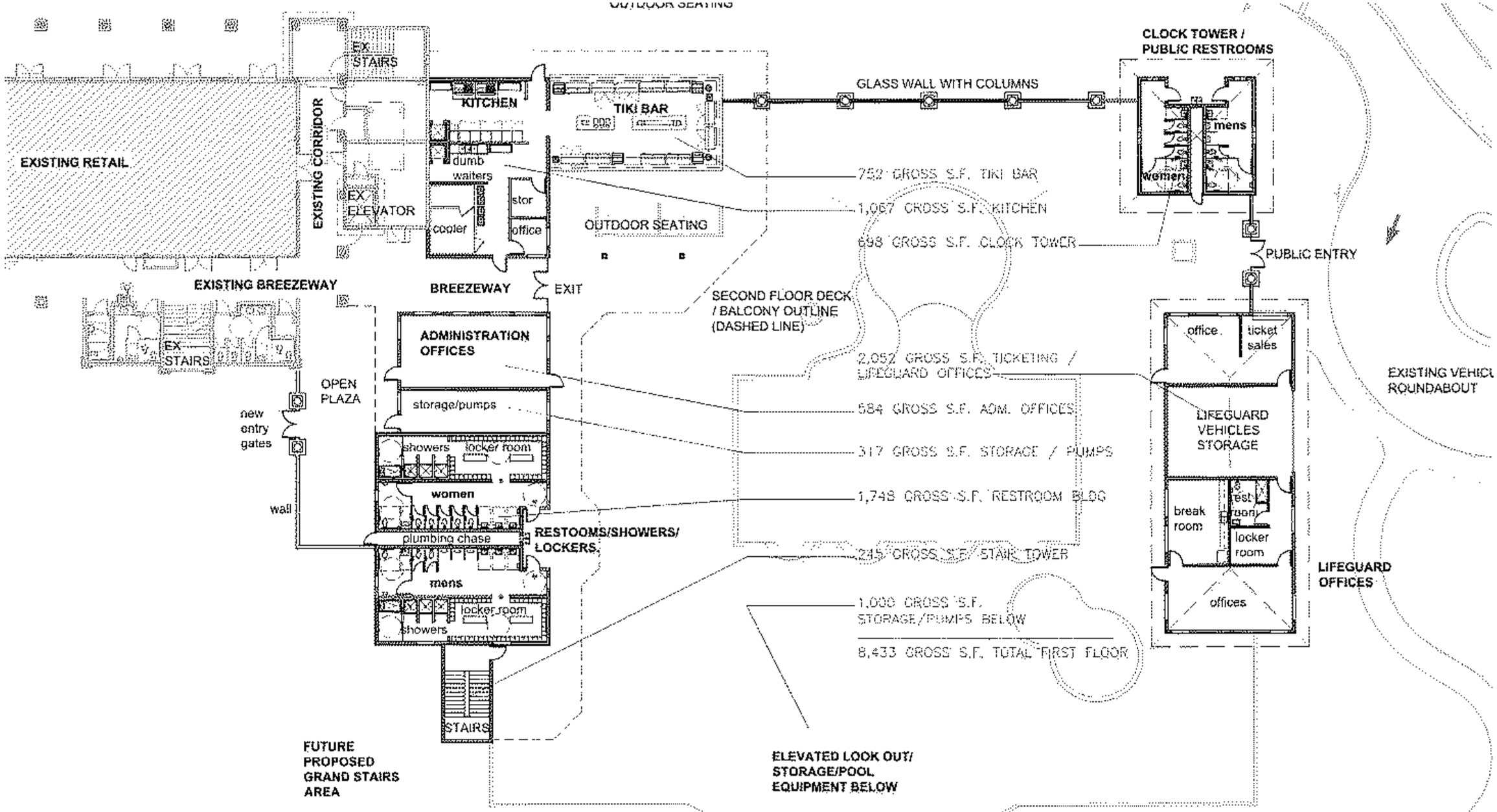
Splash Pad

Pool Seating

Sunset View

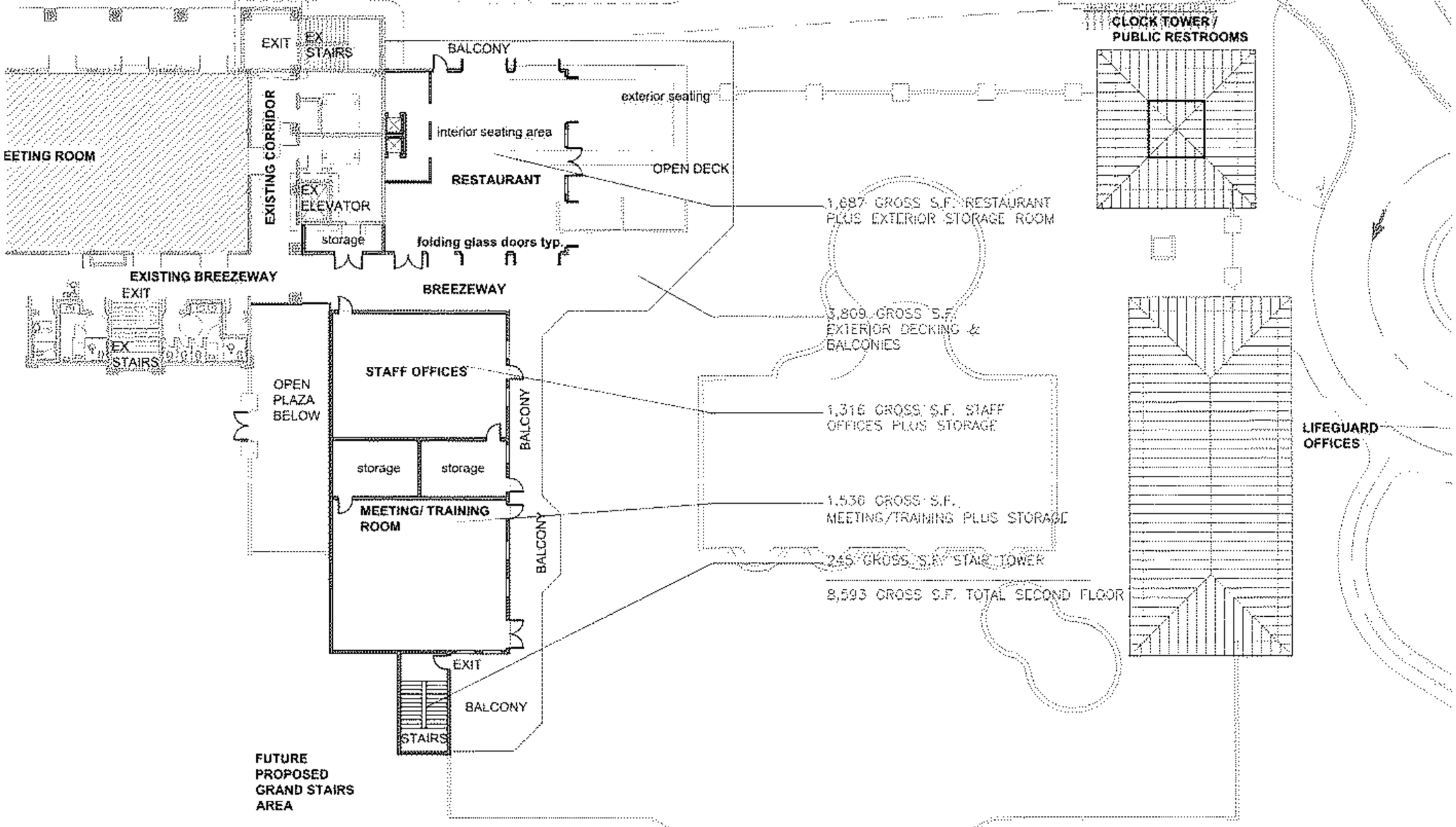


Proposed Pool Complex - Scheme 'B' Site Plan



Proposed Pool Complex - Scheme 'B' Site Plan

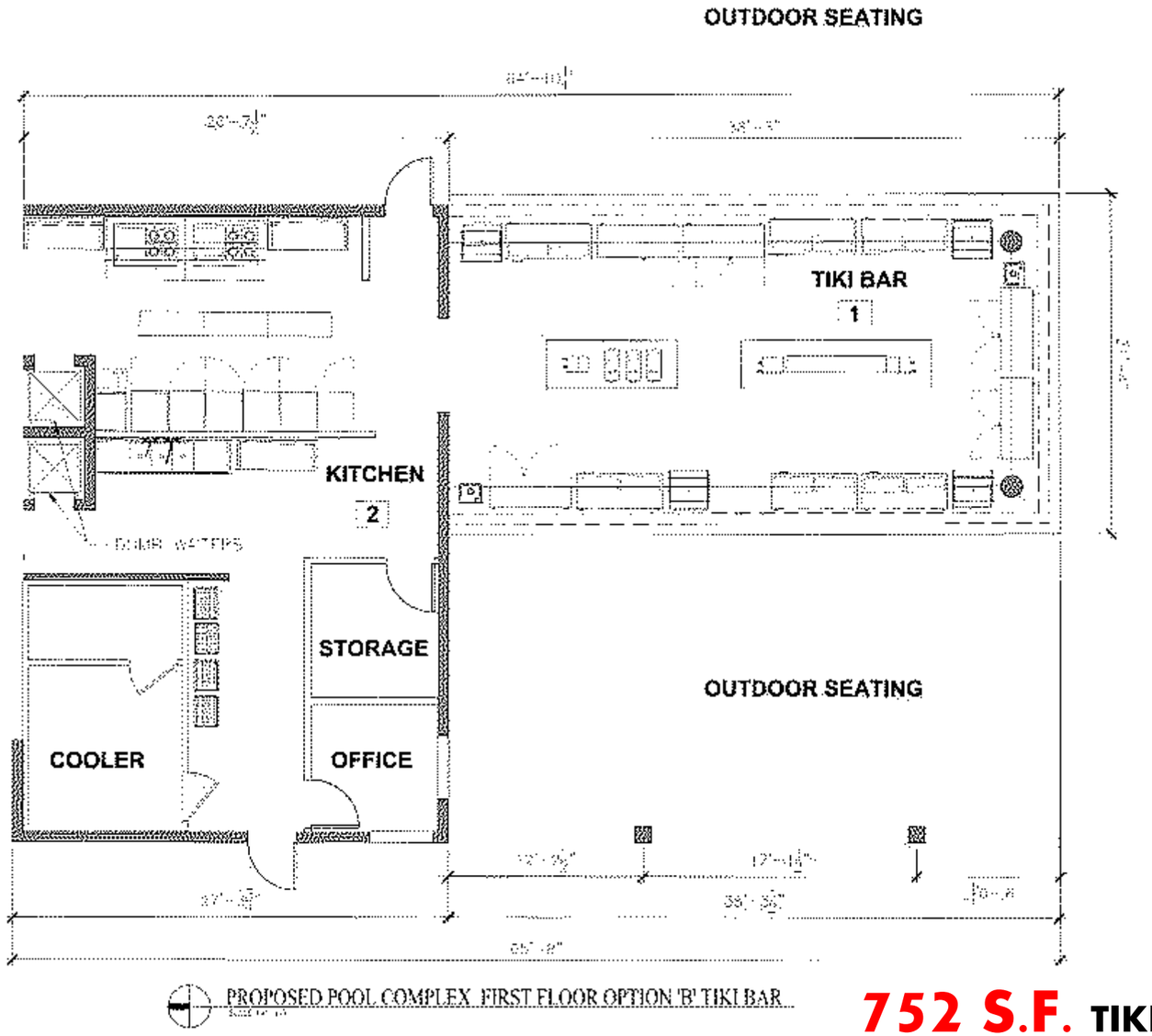
Pool Deck Ground Level



Proposed Pool Complex Scheme ‘B’ Site Plan

Second Floor Level

Proposed Tiki Bar Floor Plan Scheme ‘B’

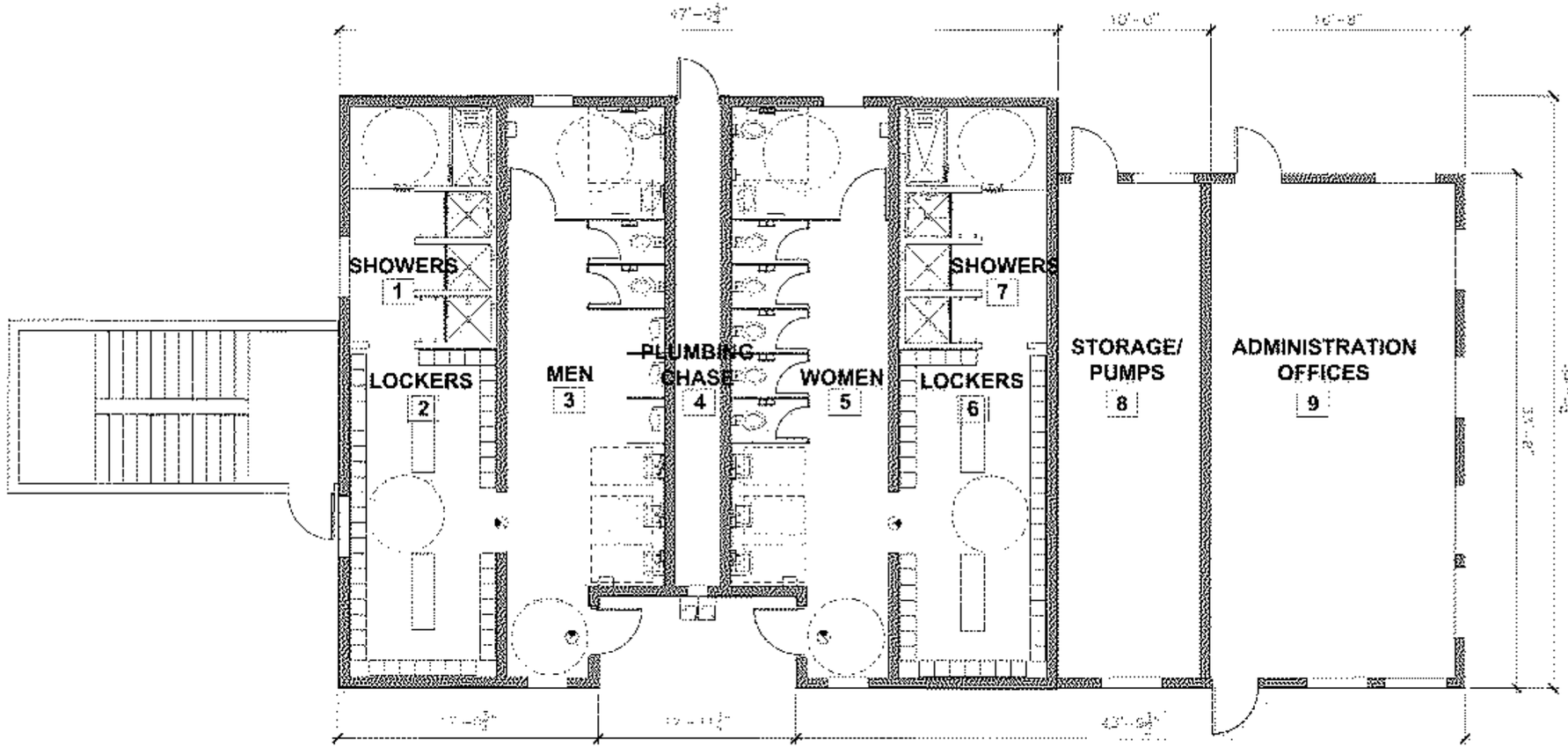


PROPOSED POOL COMPLEX FIRST FLOOR OPTION 'B' TIKI BAR

752 S.F. TIKI BAR

1067 S.F. KITCHEN

Proposed Administration / Restroom Building Floor Plan Scheme 'B'



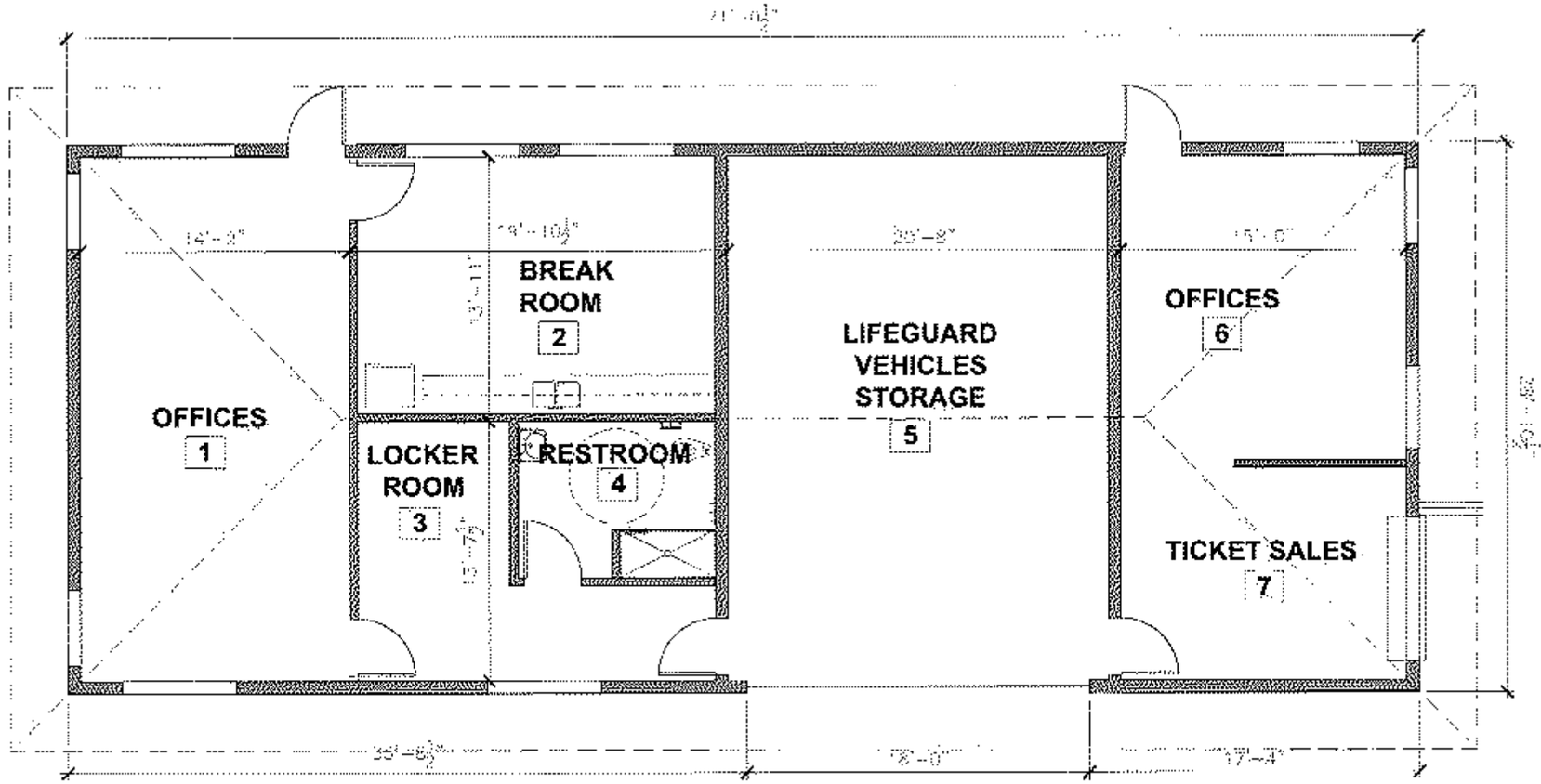
PROPOSED POOL COMPLEX FIRST FLOOR OPTION 'B' SHOWERS/ LOCKER ROOM

584 S.F. ADM. OFFICES

317 S.F. STORAGE PUMPS

245 S.F. STAIR TOWER **1748 S.F.** RESTROOM BUILDING

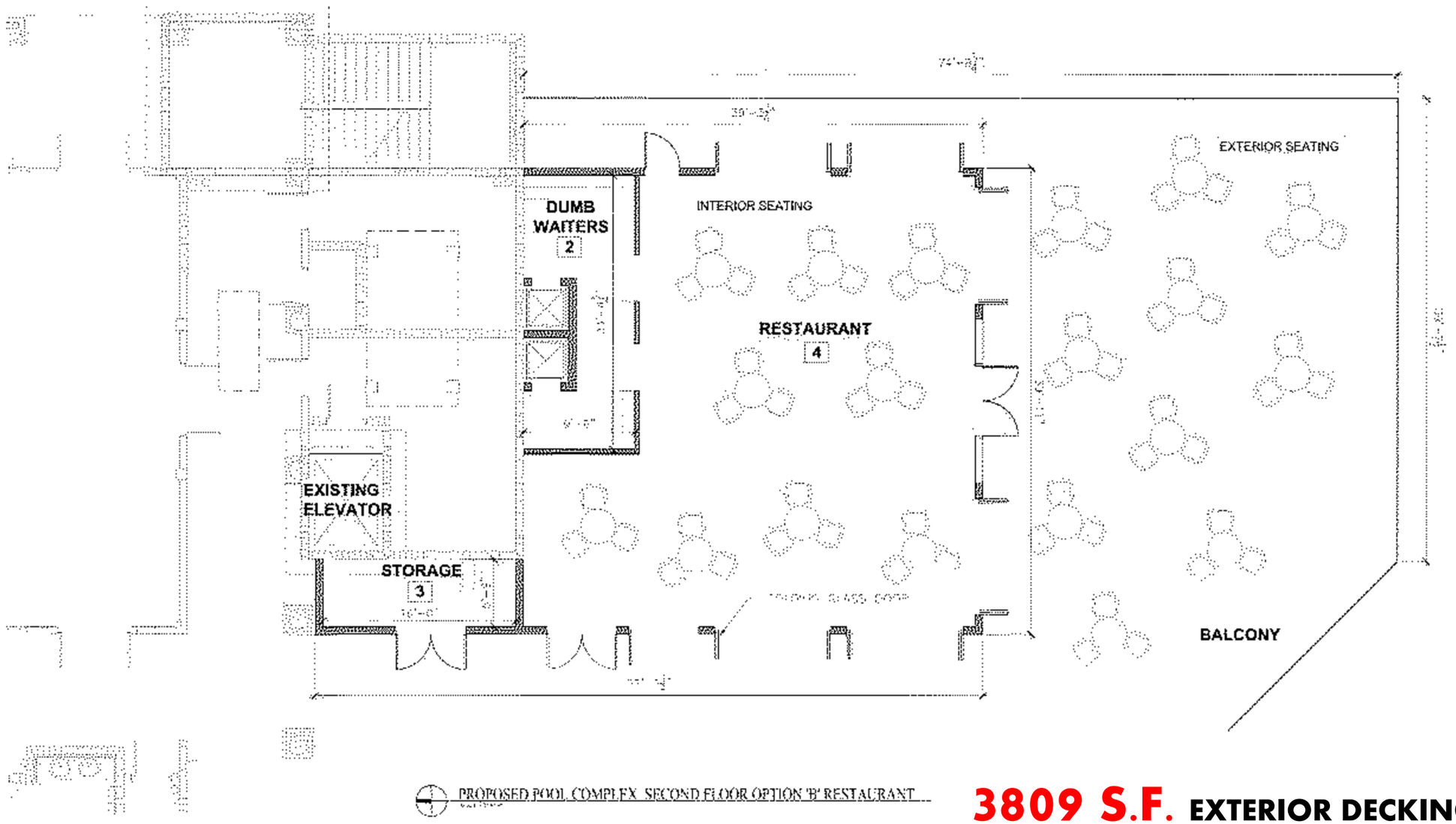
Proposed Ticketing / Lifeguard Building Floor Plan Scheme 'B'



PROPOSED POOL COMPLEX FIRST FLOOR OPTION 'B' LIFEGUARD OFFICES

2052 S.F. LIFEGUARD BUILDING

Proposed Second Floor Restaurant / Exterior Deck Plan Scheme 'B'

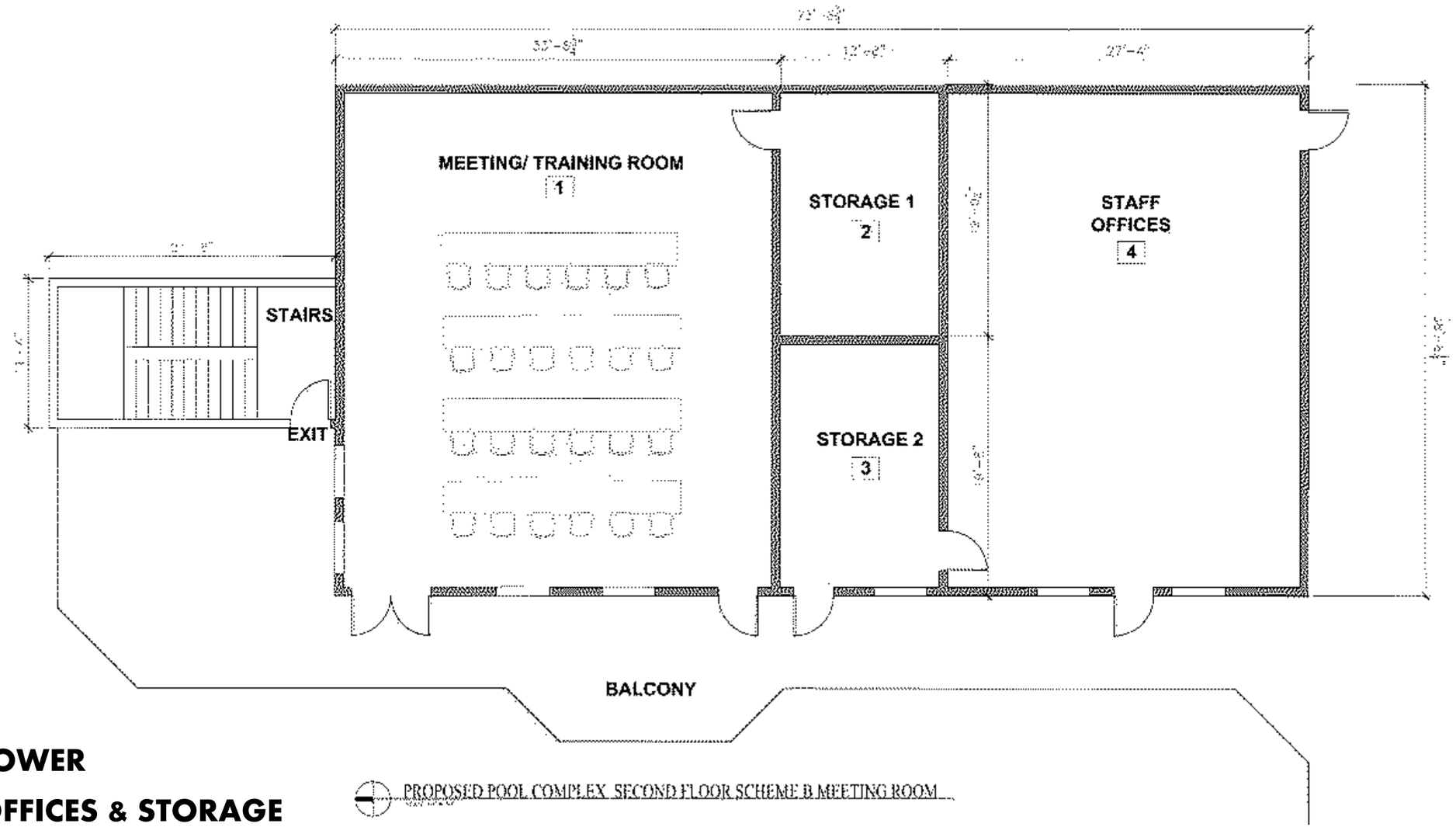


PROPOSED POOL COMPLEX SECOND FLOOR OPTION 'B' RESTAURANT

3809 S.F. EXTERIOR DECKING & BALCONY

1687 S.F. RESTAURANT

Proposed Second Floor Offices / Meeting Room & Balconies Plan Scheme 'B'



PROPOSED POOL COMPLEX SECOND FLOOR SCHEME B MEETING ROOM

245 S.F. STAIR TOWER

1316 S.F. STAFF OFFICES & STORAGE

1536 S.F. MEETING/ TRAINING ROOM & STORAGE

CPZ Architects | KEITH | Aquatic Consulting Engineers

CPZ Architects | KEITH | Aquatic Consulting Engineers

Scheme B

OPINION OF COST

CMS-Construction Management Services, Inc.
10 Fairway Drive, Suite 301
Deerfield Beach, Fl 33441
954-481-1611
CMS FILE # 2264 ORDER OF MAGNITUDE

POOL COMPLEX REMODEL
LAKE WORTH CASINO
10 S OCEAN BLVD
LAKE WORTH, FLORIDA 33460

ORDER OF MAGNITUDE
COST ESTIMATE (rev 2)
August 13, 2019

PREPARED FOR:
CPZ ARCHITECTS

SCHEDULE OF VALUES

DIVISION	DESCRIPTION	SCHEME B - BASE AMOUNT	SCHEME B - TIKI BAR AMOUNT	SCHEME B : 2ND FLOOR RESTAURANT / EXT DECK AMOUNT	SCHEME B - 2ND FLOOR OFFICES / MEETING ROOMS / BALCONIES AMOUNT	SCHEME B - TICKETING / LIFEGUARD BUILDING AMOUNT	SCHEME B - CLOCK TOWER / PUBLIC RESTROOMS AMOUNT
01000	GENERAL CONDITIONS - SEE BREAKOUT BELOW	$ -	$ -	$ -	$ -	$ -	$ -
02000	SITE WORK / DEMOLITION	731,536	0	0	0	0	$ -
03000	CONCRETE	1,353,075	136,435	136,935	213,900	153,900	$ 32,350
04000	MASONRY	127,695	11,643	12,403	21,390	15,390	$ 5,295
05000	METALS	85,130	9,095	8,435	14,260	10,260	$ 3,490
06000	WOOD AND PLASTICS	85,130	4,548	4,218	7,130	5,130	$ 1,745
07000	THERMAL / MOISTURE PROTECTION	425,650	27,285	25,305	42,780	30,780	$ 10,470
08000	DOORS AND WINDOWS	319,238	27,285	25,305	42,780	30,780	$ 10,470
09000	FINISHES	419,525	45,475	42,175	71,300	51,300	$ 17,450
10000	SPECIALTIES / SIGNAGE	45,909	0	0	0	0	$ -
11000	EQUIPMENT	0	0	0	0	0	$ -
12000	FURNISHINGS	0	0	0	0	0	$ -
13000	SPECIAL CONSTRUCTION	1,039,900	0	0	0	0	$ -
14000	CONVEYING SYSTEMS	0	39,200	0	0	0	$ -
21000	FIRE	51,078	5,457	5,061	8,556	6,156	$ 2,094
22000	PLUMBING	280,900	45,500	0	0	15,500	$ 73,000
23000	HVAC	104,800	39,920	16,870	28,520	14,970	$ -
26000	ELECTRICAL	306,360	27,285	25,305	42,780	30,780	$ 10,470
27000	TECHNOLOGY	0	0	0	0	0	$ -
28000	ELECTRONIC SAFETY & SECURITY	0	0	0	0	0	$ -
31000	SITE WORK, EARTHWORK, ASPHALT PAVING, SIDEWALKS	459,564	0	0	0	0	$ -
32000	EXTERIOR IMPROVEMENTS	634,240	0	0	0	0	$ -
33000	SITE UTILITIES	297,600	0	0	0	0	$ -
	SUBTOTAL A: DIRECT HARD COSTS	$ 6,806,281	$ 420,877	$ 291,851	$ 493,396	$ 364,646	$ 166,774
12.50%	GENERAL CONDITIONS	$ 827,554	$ 50,474	$ 35,022	$ 59,208	$ 43,734	$ 22,023
	SUBTOTAL	$ 7,715,837	$ 471,351	$ 326,873	$ 552,604	$ 408,380	$ 211,427
4.00%	O.C. OVERHEAD	$ 308,353	$ 18,844	$ 13,075	$ 22,104	$ 16,327	$ 8,457
	SUBTOTAL	$ 8,023,791	$ 490,195	$ 339,948	$ 574,709	$ 424,707	$ 219,884
6.00%	O.C. PROFIT	$ 481,967	$ 29,396	$ 20,397	$ 34,482	$ 25,470	$ 13,193
	SUBTOTAL	$ 8,314,736	$ 519,591	$ 360,345	$ 609,190	$ 450,177	$ 233,077
1.29%	O.C. P&P BOND	$ 105,840	$ 6,609	$ 4,648	$ 7,859	$ 5,805	$ 3,007
	SUBTOTAL	$ 8,424,599	$ 526,200	$ 364,993	$ 617,049	$ 455,982	$ 236,084
5.00%	ESCALATION (ALLOWANCE)	$ 421,230	$ 26,310	$ 18,250	$ 30,852	$ 22,799	$ 11,804
	SUBTOTAL	8,845,829	552,510	383,243	647,901	478,781	$ 247,888
20.00%	CONTINGENCY	$ 1,844,767	$ 94,218	$ 65,375	$ 110,521	$ 81,656	$ 45,578
	TOTAL PROBABLE CONSTRUCTION COST	$ 10,690,596	$ 646,728	$ 448,618	758,422	560,437	$ 287,465

Scheme B

OPINION OF COST

SCHEDULE OF VALUES							
DIVISION	DESCRIPTION	SCHEME B - BASE	SCHEME B - TIKI BAR	SCHEME B - 2ND FLOOR RESTAURANT / EXT DECK	SCHEME B - 2ND FLOOR OFFICES / MEETING ROOMS / BALCONIES	SCHEME B - TICKETING / LIFEGUARD BUILDING	SCHEME B - CLOCK TOWER / PUBLIC RESTROOMS
		AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
	SUBTOTAL A - DIRECT/HARD COSTS	$ 8,896,085	$ 420,917	$ 291,831	$ 493,396	$ 384,466	$ 188,774
12.00%	GENERAL CONDITIONS	$ 827,554	$ 50,474	$ 35,020	$ 59,208	$ 41,734	$ 22,653
	SUBTOTAL	$ 7,723,837	$ 471,391	$ 326,873	$ 552,604	$ 426,199	$ 211,427
4.00%	G.C. OVERHEAD	$ 308,953	$ 18,844	$ 13,075	$ 22,104	$ 16,327	$ 8,457
	SUBTOTAL	$ 8,032,791	$ 490,235	$ 339,948	$ 574,708	$ 424,527	$ 219,884
4.00%	G.C. PROFIT	$ 481,367	$ 29,386	$ 20,387	$ 34,482	$ 25,472	$ 13,193
	SUBTOTAL	$ 8,514,728	$ 519,621	$ 360,345	$ 609,190	$ 449,977	$ 233,077
1.20%	G.C. P&P BOND	$ 102,840	$ 6,535	$ 4,648	$ 7,859	$ 5,805	$ 3,007
	SUBTOTAL	$ 8,834,569	$ 526,035	$ 364,993	$ 617,049	$ 455,782	$ 236,084
5.00%	ESCALATION (ALLOWANCE)	$ 431,230	$ 26,302	$ 18,250	$ 30,853	$ 22,789	$ 11,804
	SUBTOTAL	$ 9,265,809	$ 552,337	$ 383,243	$ 647,901	$ 478,571	$ 247,888
20.00%	CONTINGENCY	$ 1,544,797	$ 94,218	$ 65,370	$ 110,521	$ 81,636	$ 46,579
	TOTAL PROBABLE CONSTRUCTION COST	$ 10,800,596	$ 646,559	$ 448,618	$ 758,423	$ 560,207	$ 287,465

Scheme B
OPINION OF COST

Scheme "B"			
		Deduct	**Total**
	Total Cost		**$10,600,596**
	Deductions:		
	Second Floor Offices/ Meeting Room/ Balconies	$758,422	$9,842,174
	Second Floor Restaurant/ Exterior Deck	$448,618	$9,393,556
	Ticketing/ Lifeguard Building	$560,207	$8,833,349
	Tiki Bar Building	$646,550	$8,186,799
	Clock Tower/ Public Restrooms Building	$297,465	**$7,889,334**

Summary

Scheme A
$9.1 Million

Scheme "A"			
		Deduct	**Total**
	Total Cost		**$9,090,632**
	Deductions:		
	Second Floor Deck	$478,626	$8,612,006
	Lifeguard Building	$452,156	$8,159,850
	Meeting Room	$168,511	**$7,991,339**
	Tiki Bar Building	$630,677	$7,360,662
	Clock Tower/ Public Restrooms Building	$297,465	$7,063,197

Scheme B
$10.6 Million

Scheme "B"			
		Deduct	**Total**
	Total Cost		**$10,600,596**
	Deductions:		
	Second Floor Offices/ Meeting Room/ Balconies	$758,422	$9,842,174
	Second Floor Restaurant/ Exterior Deck	$448,618	$9,393,556
	Ticketing/ Lifeguard Building	$560,207	$8,833,349
	Tiki Bar Building	$646,550	$8,186,799
	Clock Tower/ Public Restrooms Building	$297,465	**$7,889,334**

CPZ Architects | KEITH | Aquatic Consulting Engineers

THANK YOU

Bob McCallister
Aquatic Consultant

City of Lake Worth Aquatic Facility Survey and Report

Re: Repairs, Upgrades and Improvements
Report Prepared by Bob McCallister, Aquatic Consultant
December 2016

Scope of Service

Aquatic Consultant surveyed and inspected the Outdoor Pool and accompanying facilities. The Aquatic Consultant prepared the following comprehensive report with recommendations for repairs, upgrades and facility improvements. Recommendations have been included in this report for the City of Lake Worth to have the opportunity to choose the level of repairs and improvements based on budget constraints.

The Aquatic Consultant has thoroughly researched cost estimates for all components contained within the report including materials, equipment and labor. The report is divided into 2 categories: 1) Pool/Filtration System and 2) Buildings, Structures and Grounds. The estimated pricing is included in this report for the purposes of development of a project budget and an RFP for the work.

Additionally, the Aquatic Consultant provided an updated business plan and budget including operational cost and revenue projections based on the improvements to the Aquatic Facility.

Finally, there is an Executive Summary provided at the end of this report excluding the technical and financial information within this report for a quick overview.

Pool and Filtration System

Pool and Wading Pool

The pool is a 50-meter by 25-yard competitive swimming pool with a 1-meter diving board and diving well. The pool is 3.5 ft. at each end and tapers down toward the center to a 12 feet depth. The 50-meter pool holds approximately 750,000 gallons of water. The wading pool is 16 ft. by 40 ft. and contains approximately 8,000 gallons of water. Both pools have a marcite (plaster) type finish that was coated over an epoxy paint type finish and as a result is delaminating in several areas. Lane markers and pool trim are ceramic tile.

There are 4 main drains in the 50-meter pool which do not work as marcite material was left in the main drains during the installation and never removed. Federal Law regulates the main drains in public pools. The Virginia Graeme Baker Act (VGB) was passed in 2008 mandating that all public swimming pools have a main drain per the requirements outlined in the VGB Act. Currently, both pool main drains are not compliant nor do they provide for the proper drain flow for pool circulation.

The 50-meter pool has a stress fracture in the perimeter gutter primarily on the east side of the pool. The pool had a major leak on the northeast corner of the pool under the pool deck that was losing several thousand gallons of water daily until it was discovered and repaired this past summer. This water leak continued for several years causing the original concrete deck to be undermined and settle. This scenario may have caused the fractures in the gutter, but mostly caused the original deck to crack. The original deck has been covered with sand based pavers that are covering the settling deck. The pool deck drains on the east side do not function and appear to be clogged by sand or other materials.

The Wading Pool has an underground leak in the main drain line outside the fenced area leading back to the filter room and is showing up as sand and water entering into the filter room on the northeast wall where the main drain line returns into the filter system.

Pool and Wading Pool Needs		Cost Estimate
• Main drain sump boxes and 4" drain lines clearing and compliance to VGB		$ 10,000
• Remove failing marcite coating and epoxy paint from both pools and re-marcite		$ 150,000
• Discover and repair leak in main drain line in the wading pool and repair.		$ 5,000
• Replace all lane line and trim ceramic tiles in both pools		$ 12,000
• Cut channels in stress fractures fill with hydraulic cement and finish with marcite		$ 3,000
• Pull up deck pavers every 5' along the perimeter of the northeast sides of the 50-meter pool for the length of both 25-yard and 50-meter and sound check on original deck for voids from pool leak erosion. Discover voids and back fill voids and replace pavers as needed to finish.	Allowance	$ 20,000
	Sub-Total	$ 200,000

Pool and Wading Pool Optional Improvements

Convert the 50-meter pool to a zero depth entry on south end; convert 12' deep main drains to a 4.5' depth; convert pool return lines to assure pool water circulation per national swimming pool standards; includes refinish of marcite and tile work. Remove starting blocks on south end and diving board standards. Budget $ 500,000

Install water interactive spray features (8 above pool water surface and 12 floor geyser type) in shallow end down to 1.5' depth. Install 4-sets of 8 deck sprays along east and west sides of the shallow end of pool from 1.5'depth to 4' depth. Install 4 – 8' in-pool benches on east and west sides of shallow end from 2.5' to 4' depths. Includes spray feature supply drains and spray feature pump, manifold and transport water lines.	Budget	$ 350,000
Install 2 – 150' waterslides off of 1 – 25' tower to exit into shallow end of pool in 4' to 4.5' water. Includes slides supply drains and slide pumps and transport water lines.	Budget	$ 350,000
Demolish Wading Pool, bench and shade structure. Build "Tiki Hut" type bar, shade structures with tables and Chairs; design and structures to be within the 44' x 60' footprint of the wading pool area.	Budget	$ 75,000
Remove existing 10' x 50' shade structure on the south end of the pool and replace with "Sail" shade type structures.	Budget	$ 35,000
	Improvements Sub-Total	$1,310,000

Buildings, Structures and Grounds

Bathhouse and Offices

The existing bathhouse and offices were built in 1971. There have been several renovations to the building over the years including restrooms added to the south end of the building for public beach patrons. The footprint of the building is approximately 185' x 24'. There are many current issues including: roof structure failing; rusting of metal fixtures, toilet wooden partitions; poor lighting, exposed electrical conduits; inadequate showers and no handicapped showers; inadequate staff space for offices; and un-inviting and inconvenient front entrance.

The facility's footprint is a total of approximately 35,000 sq. ft. The pool is 13,800 sq. ft.; pool/pool deck and wading pool footprint is 29,226 sq. ft. The current bathhouse is 4,810 sq. ft.

Staff reports that the bathhouse was condemned due to the roof issues a couple years ago.

It is the recommendation of the Aquatic Consultant that this building be demolished and a new structure be rebuilt outside of the south side pool and deck footprint. In addition, the new building would be a two-story structure with the bathhouse entrance, bathrooms/showers, lifeguard room, pool storage and pool manager office located on the first floor level. The second floor would house staff offices, a patio pavilion for public use and/or private rentals and a concession stand. On the east end of the first level, a separate public restroom apart from the pool operations would be built to service the beach patrons as the original building provides. A half basement on the west side of the bathhouse

would house a garage for beach lifeguard equipment, a beach lifeguard room, bathroom and exercise room. The basement would also house the new filter room as described in sections below.

The building would be approximately 140' x 30', with 10,500 sq. ft. of total usable space.

In addition, the footprint of the existing building would become additional pool deck space with shade structures, deck furniture, and a 155' – 2' wall with a plexi-glass type windshield. This area would provide beach and ocean views as well as a public view of the new aquatic facility from the beach and drive.

Calculation:	Building 10,500 sq. ft. x $185/sq. ft.	$ 1,942,500
	Piling type foundation allowance (required)	$ 200,000
	Elevator at Park Lot level to 3rd floor	$ 25,000
	Demolition allowance for bathhouse and filter room	$ 100,000
	Additional pool decking 2,880 sq. ft. allowance	$ 40,000
	185' - 2' Wall and 6' plexi-glass wind shield allowance	$ 20,000
	Budget	$ 2,322,500

Filter Room

The existing filter room is in worse condition than the bathhouse. The roof structure is failing and currently being supported with 2' x 4's and plywood. The pumps, piping, valves, gauges are in poor condition and are in questionable condition as to meeting proper filtration standards. The pool heaters are scheduled to be replaced for the coming winter season. The electrical components, including VFDs and electrical panels providing pump motors and control, are corroding and in poor condition and/or not working.

It is the recommendation of the Aquatic Consultant that this building and equipment be demolished and rebuilt and equipped.

Equipment Budget	$250,000
Filter Building Budget	$ 50,000*
Total	$300,000

*Note: Building Budget to be subtracted if new bathhouse plan is selected.

Summary Review of Options and Resulting Projected Attendance and Revenue

Option 1.	Pool and Wading Pool Needs -	Budget	$ 200,000
	Bathhouse and Offices	Budget	$2,322,500
	Filter Room	Equipment Budget	$ 250,000
		Total	$2,772,500

Option 2. Conversion of 50-meter pool to zero depth entry on south end.

Option 1 Budget	$2,772,500
Conversion Budget	$ 500,000
Total	$3,272,500**

**Note: If Option 2 is chosen, then Options 3 & 4 should be strongly considered as pool piping for these options should be installed below the deck and pool shell before the conversion of the 50-meter pool to

a zero depth pool. Also, the new filter room will need to be designed to receive the spray features and waterslide pumps, piping and controller equipment.

Option 3. Install water interactive spray features

Option 2 Budget	$ 3,272,500
Spray Features Budget	$ 350,000
Total	$ 3,622,500

Option 4. Install 2 – 150' waterslides off of 1 – 25' tower

Option 3 Budget	$3,622,500
Waterslides Budget	$ 350,000
Total	$3,972,500

Option 5. "Tiki Hut" type bar and patio

Option 4 Budget	$3,972,500
Tiki Hut Budget	$ 75,000
Total	$4,047,500

Option 6. "Sail" shade type structures

Option 5 Budget	$4,047,500
Sail Shade Budget	$ 35,000
Total	$4,082,500***

***Note: If the City decides to proceed with this project, there should be a budget line item for FF&E of $100,000. This will allow for purchasing of deck furniture, office furniture and computers for POS and management tracking of revenue, concession stand equipment and possibly a security camera system. In addition to the FF&E, it is recommended to add a contingency of 5% or $215,000; and another 5% or $215,000 for architectural services.

Total All Inclusive Construction Budget **$4,612,500**

Projected Revenue and Operational Cost

Option 1.

The Pool operations currently cost approximately $300,000 annually. The total annual revenue is $66,000 from approximately 10,000 annual users, plus $33,000 from swim team rentals. The pool is currently open 29 hours a week with lifeguard supervision. The pool rentals for swim teams are not staffed with City staff lifeguards.

With the repairs to the pools and replacement of the bathhouse and filter room, the only difference is would be providing a much better view of the pool from the beach and from the pool to the beach. This alone would give a good potential for increased usage of the facilities for rental functions and drawing swim patrons to the pool.

Option 1's minimal and necessary improvements could potentially increase individual and family patronage by 25%. The average revenue per current patron calculates to $6.60 per user. The 25% increase in patronage to 12,500 could bring the revenue to $82,500.

The operational cost could remain at the current $300,000 annual cost. However, if the demand for increased operation hours comes about by the simple marketing of the facilities being visible, new and attractive, the City may consider increasing operational hours. This would cause a need for additional staff and operational cost. Therefore, this option has the minimum potential of recovering $116,500 of a $300,000 cost of operations or 38% over the now 33%.

Option 2.
Conversion of the 50-meter pool to a zero depth entry and shallow water pool throughout will be more family friendly and attendance would increase substantially. However, this conversion would not reach the maximum potential for revenue and attendance without the water slides and spray features.

The Aquatic Consultant does not recommend that Option 2 stand-alone as the national and international trend in aquatic facilities is for water parks and spray features. These water park type facilities are mostly self-supporting facilities and would prove to be the case with the City of Lake Worth's new aquatic facility.

Options 2, 3 & 4
Combining these three options would give the City an attractive and exciting family oriented aquatic facility that would become a destination venue for the community and visitors. With this type of aquatic facility, the public demand for more operational hours is highly likely and therefore an increase in the operations budget would be necessary.

The family water park type facility would require additional staffing including: lifeguards, attendant staff for cashier operations and concession operations. In addition, the new high technical filters, controllers and water feature pump motors would need to be maintained 7 days a week. The facility would need thorough cleaning daily and continually during operational hours.

Financially, choosing Options 2-4 would require an annual operational budget of $476,651 with revenue is projected at $453,000, leaving an annual City subsidy of $23,651. (See pages 7 & 8)

Options 5 & 6
Adding Options 5 & 6 to Options 2, 3 & 4 would enhance the attendance and revenue potential. It would most likely allow the new aquatic facility to break even and/or become 100% self-supporting.

Financially, the revenue potential is projected over the $476,651 operational cost, thus self-supporting.

(Continue to next page)

City of Lake Worth Aquatic Facility
Estimated Operations Budget
Options 2-4

Operations Outline

Facility open Tuesday – Sunday year round Average 8 hours per day; Average 6 lifeguards; 1-2 attendants; 1 – PT Supervisor. ; 1- PT Asst. Supervisor; 1 – Admin. Asst. (40hrs.); 1 – Facility Mgr. (40hrs,); 1 – Pool Operator (40hrs.)

Expenditures:

Staffing – Full Time		
1 Facility Program Mgr. (currently on staff)	35,000	
1 Admin. Asst. (Cashier/Receptionist)	26,250	
1 Pool Operator/ Mt. Worker	32,500	
Benefits & FICA (27%)	34,675	
Subtotal full time staff		128,425
Part Time Staff		
2 PT Supv. @ 1400 hrs. ea, ($12/hr.)	33,600	
2 PT Asst. Supv. @ 1400 hrs. ea. ($11/hr.)	30,800	
24 PT Lifeguards @ 5-29 hr./wk. (9.50/hr.)	150,000	
4 Attendants @ 5-29 hr./wk. $8.50/hr.	12,000	
Conc. Workers (Contract Concession)	na	
FICA (6%)	14,451	
Subtotal part time staff		240,851
Operation Supplies		
Office Supplies	500	
Computer Supplies	375	
Janitorial Supplies	2500	
Recreational Supplies	6,000	
Program Materials and Supplies	1,500	
Uniforms	4,000	
Safety Supplies	1,000	
Chemicals (corrected over budgeted 1st draft)	25,000	
Accountable Equipment	3,000	
General Printing	750	
Repairs/Maintenance (Outside Warranty)	11,250	
Subtotal operation supplies		55,875

Utilities		
Communications (phone, Internet, security)	3,000	
Electric	30,000	
Gas	12,500	
Water/Sewer	6,000	
Subtotal Utilities		51,500
Total Expenditure Budget		**$476,651**

City of Lake Worth Aquatic Facility
Estimated Operations Budget
Options 2-4 Revenue Projections
Revenue increase is based upon an average150 patrons for 300 good weather days @ average of $6.60 Note: During Private Rentals and Swim Team Rentals require off-duty City lifeguards that are to be paid by the rental group at $15/hr./lifeguard

Admission Fees	(45,000 patrons)	297,000
Facility Rental Fees	(50 rental @ $500)	25,000
Swim Team Rental	(25 yard lanes only)	66,000
Instructional Classes	(Swim/Exercise Classes)	50,000
Concessions/Resale	(15% of Gross Sales)	15,000
	Total Revenue	**453,000**

Revenue:	Fee Levels
General Admission	Adult $7.50 & Youth/Sr. $5
Swim Team Lane Rental	$10.00/25 yard lane/hr.
Recreational Pool Rental	$500/2 hrs.

Expenditure Budget	$476,651
Revenue Budget	$453,000
City Annual Subsidy	$ 23,651****

****Note: The addition to the facilities with Options 5 & 6 may increase rentals and concession revenue to exceed the City Subsidy to become a break-even budget or generate revenues above expenditures.

Budget and Marketing Note
Currently, Lake Worth City Beach has an annual attendance of 700,000. The Budget revenue projections are very conservative in this report. With the opening up of the beach view from the Water Park and view of the Water Park from the beach, the attendance to the Water Park will increase substantially and revenues will exceed accordingly. It is the projection of the Aquatic Consultant that the proposed improvements will in fact result in revenues exceeding the expenditures during the first year of operations.

Executive Summary

Based upon this completed study, it is the recommendation of the Aquatic Consultant that renovations and improvements to the existing Aquatic Facility at Lake Worth Beach would not be cost effective nor serve the Lake Worth community and visitors to the best interest of the City of Lake Worth.

It is the professional opinion of the Aquatic Consultant that this Aquatic Facility be closed until the bathhouse and filter room are totally rebuilt due to exposing the public and staff to the present hazardous conditions.

This report clearly identifies the need to demolish and rebuild the bathhouse and filter room. In addition, there are major repairs and modifications needed to the pool structure and filter system. These items alone will cost approximately $2.8 million and will not substantially increase the aquatic facility's current use nor will the annual revenue increase.

Converting the 50-meter pool into a shallow water entry pool with interactive water features and amenities may increase the pool's attendance at a cost of additional $1.2 million. With the addition of architect/engineering and pool designer fees, a contingency fund of 5% and FF&E budget of $100,000 **the total project approaches $4.6 million.**

Further, the Aquatic Consultant recognizes that during any renovation project there may be some unforeseen problems during the renovation and/or future problems with what remains regarding the old 50-meter pool.

It is the Aquatic Consultant's professional opinion that it would be a better decision for the City to totally rebuild a new family water park with lap lanes on the same footprint location. Use the same footprint with all the water features in this report and possibly add more features, such as a lazy river. This could be done for $4.5 - $5 million and would be a better use of the funding, than to try to save one end of the existing 50-meter pool. This new aquatic facility will have the potential to be self-supporting, as the revenue generated would cover the annual operational expenses.

Finally, it should be noted that a water park facility of this nature and at this location would require at least 300 additional parking spaces. This may require a new parking deck adjacent to the water park. This is an additional component to this report and would require additional funding above the $4.5 - $5.0 to the new water park concept for parking deck design and construction cost.

-End of Report-

Bob McCallister
Aquatic Consultant

City of Lake Worth
New Aquatic Facility Report & Request for Proposal (RFP)

Report Prepared by Bob McCallister, Aquatic Consultant
January 2017

Scope of Service

The following plan and report for a completely new aquatic facility is based upon the prior study and report completed by the Aquatic Consultant.

The components from the previous report for aquatic features, buildings and equipment are contained within this report. The water feature layout fits within the current footprint of the 50-meter pool and deck area, but has its own unique and attractive design. There are additional water features included, as the opportunities are greater to build a completely new aquatic facility with the flexibility of designing on a site footprint that is completely cleared.

The report describes all components of the new aquatic facility with a line item budget for design and construction. The description of the new aquatic facility was used to develop a Request For Proposal (RFP) for architect/engineer and pool designer services, also contained in this report.

The business plan from the prior study and report was slightly modified to reflect the new aquatic facility's operational expenses and revenue potential.

The RFP document for architect/engineer and pool designer services are included in this report and may be configured to the City's standard RFP template. A conceptual rendering of the water feature layout is also provided.

Family Water Park, Wave Rider and Lap Pool

The main pool would contain all the water features and a lap pool. The Wave Rider would be a separate pool with its own filtration operation.

The pool would have a Zero Depth Entry (beach like) with at least 12 floor geyser type sprays in the shallowest area and 8 or more interactive above water stations in the 1 to 2 foot depths. Shaded benches in the shallow water area would allow parents to closely supervise their children playing as they enjoy relaxing with their feet in the water. Parents, toddlers, preschoolers and pre-teens would use this area.

The Zero Depth pool area would slope to transition to other pool areas at 3.5-foot depths. Adjacent to would be the 6-lane lap pool with access via the Zero Depth pool and steps. Another transition channel would enter the 300 linear foot Lazy River that also, accesses the Splash Pool for the 2 – 150-foot Water Slides.

There would be banks of deck sprays spritzing into the Lap Pool and Lazy River and water jets to create rapids in the Lazy River generating an exciting ride while floating around the river.

There is a separate "Wave Rider" feature, which would attract patrons of all ages, especially teens.

Pool Deck Features

A "Tiki Hut" type bar with shade structures, tables and chairs would be located on the north side of the site adjacent to the Casino serving as a snack bar with refreshments for the pool deck level patrons.

The pool deck would feature many deck lounges, umbrellas and pavilion shade structures that would serve for family gatherings, birthday parties as well as for daily patronage enjoyment.

A large plexiglas wall on the east side of the deck would provide a view of the Beach and a view from the beach to the Family water park, a great feature for the water park patrons, serving as a tremendous marketing tool. The Wave Rider, Water Slides and Spray Features could be viewed by the beach and water park patrons as they drive into the Parking Lot, as well as from the Beach accesses.

Water Park Entrance, Bathhouse, Offices, Patio Bar/Restaurant

The water park entrance would be at pool deck level in a new a two-story structure multi-purpose building with a half basement on the south side of the site. The building would be approximately 140' x 30' with a total of 10,500 sq. ft. of usable space.

The bathhouse entrance, bathrooms/showers, lifeguard room, pool storage and pool manager office would be located on the first floor level. On the east end of the first level public restrooms separate from the pool operations would serve the beach patrons as the original building did.

The second floor would house a patio bar/restaurant pavilion that would overlook the beach and water park for public use and/or private rentals. Staff offices would also be located on the second (top) level. There would be a staircase access from the pool deck level that would have restricted public use. An elevator at the front entrance would serve the general public wanting to visit the patio/bar. Another gated staircase would give access to the second level for the public.

A half basement on the west side of the bathhouse would house a garage for beach lifeguard equipment, a beach lifeguard room, bathroom and exercise room. The basement would also house the filter room for all of the water park water plant operations.

Construction Budget			
Demolition & Site Work Allowance			$ 200,000
Building Entrance, Bathhouse, Offices & Patio/Bar 10,500 sq. ft. x $185/sq. ft.			$ 1,942,500
Piling type foundation allowance (required)			$ 300,000
Elevator & Staircases to 2nd floor			$ 40,000
Leisure Pool and Lap lanes 12,000 sq. ft. x $170/sq. ft.			$ 2,040,000
2 – 150' Water Slides			$ 350,000
Pool Deck 12,000 sq. ft. x $5/sq. ft.			$ 60,000
185' - 2' Wall and 6' Plexiglas wind shield allowance			$ 30,000
	Base Sub-Total		$ 4,962,500
Non-Construction Cost			
Architect/Engineering and Pool Designer @ 10% of Base Cost		$ 496,250	
FF&E (Furnishings, Fixtures & Equipment) @ 5% of Base Cost		$ 255,921	
Contingency for unforeseen items @ 10% of Base Cost		$ 496,250	
	Sub-Total	$ 767,763	$ 1,248,421
Alternate Option #1 - Double Wave Rider 4,000 sq. ft.			$ 1,100,000
		Total All Inclusive Construction Budget	**$ 7,310,921**

Projected Revenue and Operational Cost

The pool operations currently cost approximately $300,000 annually with total annual revenue of $66,000 from approximately 10,000 annual users, plus $33,000 from swim team rentals. The pool is currently open 29 hours a week with lifeguard supervision. The pool rentals for swim teams are not staffed with City staff lifeguards.

The all-new constructed family water park facility would provide a much better view of the pool from the beach and from the pool to the beach. This alone would give a good potential for increased usage of the facilities for rental functions and drawing swim patrons to the pool.

The family water park would give the City an attractive and exciting family orientated aquatic facility that would become a destination venue for the community and visitors. With this type of aquatic facility the public demand for more operational hours is highly likely and therefore an increase in the operations budget is necessary.

The family water park facility would require additional staffing including: lifeguards and attendants for cashier and concession operations. In addition, the new high technical filters, controllers and water feature pump motors would need to be maintained 7 days a week. The facility would need thorough cleaning daily, continually during operational hours.

City of Lake Worth Aquatic Facility
Estimated Operations Budget

Operations Outline
Facility open Tuesday – Sunday year round Average 8 hours per day; Average 12 lifeguards; 4 attendants; 1 – PT Supervisor. ; 1- PT Asst. Supervisor; 1 – Admin. Asst. (40hrs.); 1 – Facility Mgr. (40hrs,); 1 – Pool Operator (40hrs.)

Expenditures:

Staffing – Full Time		
1 Facility Program Mgr. (currently on staff)	35,000	
1 Admin. Asst. (Cashier/Receptionist)	26,250	
1 Pool Operator/ Mt. Worker	32,500	
Benefits & FICA (27%)	34,675	
Subtotal full time staff		128,425
Part Time Staff		
2 PT Supv. @ 1400 hrs. ea. ($12/hr.)	33,600	
2 PT Asst. Supv. @ 1400 hrs. ea. ($11/hr.)	30,800	
35 PT Lifeguards @ 5-29 hr./wk. (9.50/hr.)	250,000	
8 Attendants @ 5-29 hr./wk. $8.50/hr.	24,000	
Conc. Workers (Contract Concession)	na	
FICA (6%)	21,600	
Subtotal part time staff		360,000
Operation Supplies		
Office Supplies	500	
Computer Supplies	375	
Janitorial Supplies	2500	
Recreational Supplies	6,000	
Program Materials and Supplies	1,500	
Uniforms	4,000	
Safety Supplies	1,000	
Chemicals (corrected over budgeted 1st draft)	25,000	
Accountable Equipment	3,000	
General Printing	750	
Repairs/Maintenance (Outside Warranty)	11,250	
Subtotal operation supplies		55,875

Utilities		
Communications (phone, Internet, security)	3,000	
Electric	30,000	
Gas	12,500	
Water/Sewer	6,000	
Subtotal Utilities		51,500
Total Expenditure Budget		**$595,800**

City of Lake Worth Aquatic Facility
Estimated Operations Budget
Revenue Projections

Revenue increase is based upon an average 150 patrons for 300 good weather days @ an average of $6.60. However, with the additional water features, it is reasonable to project 100 days of daily attendance at an average of 300. Note: During Private Rentals and Swim Team Rentals require off-duty City lifeguards that are to be paid by the rental group at $15/hr./lifeguard.

It should be noted that the admissions fees for the full water park operational hours (afternoons) could be higher than the morning operations. Morning operations of swim lessons, exercise classes and lap swimming would require minimum staffing since the water features would be turned off and the lap pool would be the primary swimming area. Charging more for the prime time afternoon session would substantially raise the annual revenue potential.

Admission Fees	(30,000 patrons 200 days)	198,000
Admission Fees	(30,000 patrons 100 days)	198,000
Facility Rental Fees	(100 rental @ $500)	50,000
Swim Team Rental	(25 yard lanes only)	66,000
Instructional Classes	(Swim/Exercise Classes)	50,000
Concessions/Resale	(15% of Gross Sales)	30,000
	Total Revenue	**$592,000**

Revenue:	Fee Levels
General Admission	Adult $7.50 & Youth/Sr. $5
Swim Team Lane Rental	$10.00/25 yard lane/hr.
Recreational Pool Rental	$500/2 hrs.

Expenditure Budget	$595,800
Revenue Budget	$592,000
City Annual Subsidy	$ 3,800

Budget Overview

The operational budget is basically a "break even operation". This model budget is based on similar family water park facilities with similar population support. The additional features in this facility would increase potential in rentals, concession revenue and attendance, which in turn would allow the City's Aquatics Operations to be self-supporting.

Management of these operations would need to be adjusted, such as hours of operation. It is the Aquatic Consultant's recommendation to have programs such as swim lessons, exercise classes and lap swimming scheduled during morning hours through the noon hour. In the afternoons, the facility opens for public open swim hours with all the water park features in operation. Staffing for this type of facility requires approximately 20 lifeguards and attendants for each afternoon shift during the peak attendance months.

Budget and Marketing Note

Currently, the City of Lake Worth's beach has an annual attendance of 700,000. The budget revenue projections are very conservative in this report. With the opening up of the beach view from the water park and view of the water park from the beach, the attendance at the water park would increase substantially with revenues would increasing accordingly. It is the projection of the Aquatic Consultant that the proposed improvements would in fact result in revenues exceeding the expenditures during the first year of operations.

Executive Summary

It is the recommendation of the Aquatic Consultant to close the facility due to the number of extensive repairs needed and the potential for the public and/or staff being exposed to hazardous conditions throughout the facility. The cost of repairs and improvements to the existing pool, bathhouse and filter room are estimated to be $2.8 million. Furthermore, the repairs and improvements may not resolve all the issues with what would remain of the original pool.

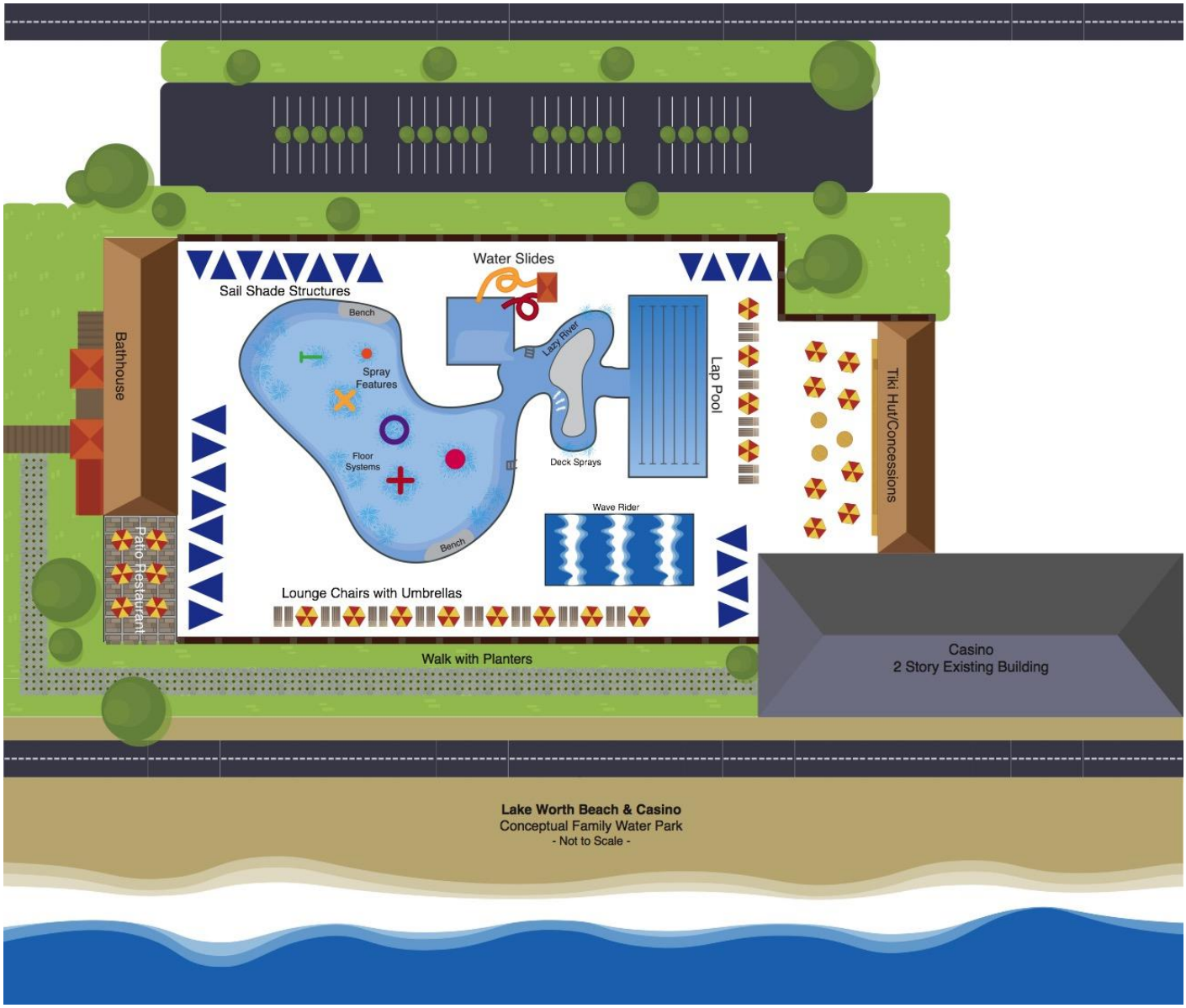
Therefore, it is recommended that the current facility be demolished and an all-new family water park be built in its place. The estimated cost of the new facility is approximately $7.3 million. This facility would able to generate enough revenue to offset all annual operational costs. The new family water park would attract tens of thousands of patrons annually which in turn would provide for a positive economic impact to the City through its local businesses.

In continuation of the Master Plan for the Casino and Beach Facilities Improvements and with the increased patronage resulting from this proposed project, the City should consider additional parking of 200 to 300 spaces. These additional parking spaces would also generate revenue for the City.

-Continue to Exhibits-

“Exhibit A”

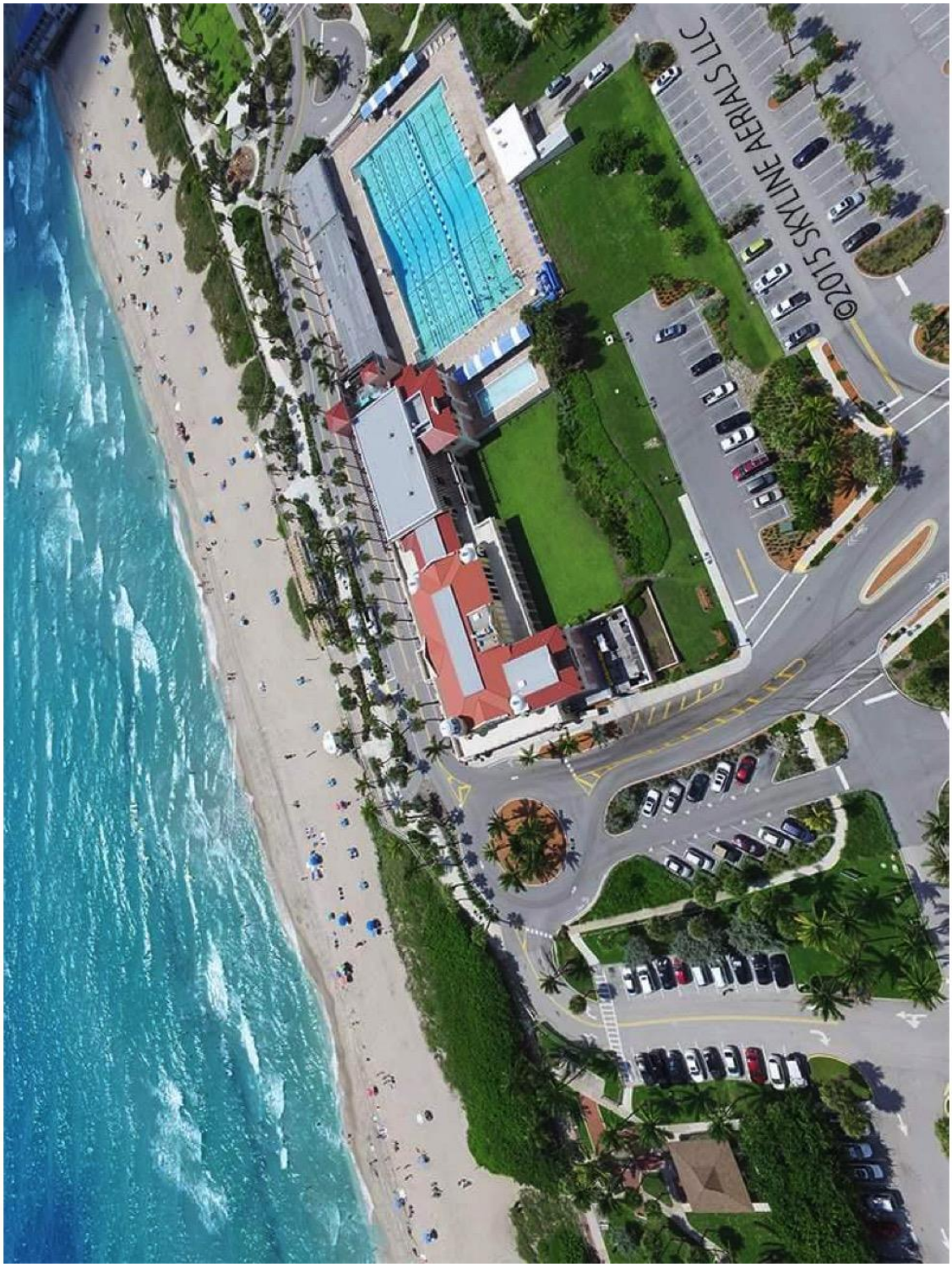
Lake Worth Beach & Casino family water park
Conceptual Rendering
-Not to Scale-



“Exhibit B”

Existing Site 50-Meter Pool Facility Footprint

Ariel Photo of Existing Site
Lake Worth Beach Casino and Pool



"Exhibit C"
Photos of Similar Projects

Seven Springs Water park - Powder Springs GA

Duncan Park Pool and Splash Pad – Fairburn GA

Cumming Aquatic Center – Cumming GA

CITY OF LAKE WORTH,
AQUATICS AND BEACH COMPLEX

Property Condition Assessment

May 9, 2017

Kimley»Horn

Kimley»Horn

May 9, 2017

Mr. Michael Bornstein
Office of the City Manager
City of Lake Worth
7 North Dixie Highway
Lake Worth, FL 33411

RE: ***Aquatics and Beach Complex Baseline Property Condition Assessment***
KH Job #140335001

Dear Mr. Bornstein,

In accordance with our agreement dated July 1, 2014 and Task Order dated April 10, 2017, Kimley-Horn and Associates, Inc. ("Kimley-Horn") has performed a baseline property condition assessment of the Lake Worth Casino Pool and the adjacent facilities. The attached report and exhibits are submitted for you use.

The opinions and conclusions expressed in this report are based on a review of the noted material, as well as my education, training, and experience as a licensed professional engineer. These opinions and conclusions are based on the information currently available to me and may be amended or supplemented should new information become available. This report has been prepared in accordance with the applicable professional standard of care. No other warranties or guarantees, expressed or implied, are made or intended. This report has been prepared solely for the City of Lake Worth for the purposes stated herein and should not be relied upon by any other party or for any other purpose.

Please contact me at (561) 840-0854 or david.stewart@kimley-horn.com should you have any questions.

Sincerely,

Kimley-Horn and Associates, Inc.
CA00000696

David W. Stewart, P.E.
Florida 31180

DAVID WILLIAM STEWART LICENSE No. 31180 STATE OF FLORIDA PROFESSIONAL ENGINEER
Stewart, David
May 10 2017 1:34 AM

Angelina Fairchild, P.E.
Florida 43958

ATTACHMENTS

Property Condition Report
Photographs 1 to 30
Figure 1-3

Kimley»Horn

1.0 EXECUTIVE SUMMARY

The purpose of this Property Condition Assessment is to observe the physical condition of the Aquatics and Beach Complex. The facilities listed in Table 1 were reviewed for conspicuous deficiencies, deferred maintenance, and compliance with the 2014 Florida Building Code. Emphasis was placed on structural stability. For each deficiency, a remedy is recommended which may include further research or testing. An opinion of probable cost to correct the reported deficiencies and an estimated remaining service life for major building systems are also included.

The Main Lap Pool is a 50-meter, competition style pool constructed in 1971. The pool finish was replaced in 2008. The Pool is generally in good shape structurally with no indication of differential settlement or structural deterioration. Recommended repairs include resurfacing the pool finish, locating and repairing piping leaks and replacing the underwater lighting.

The Wading Pool is a shallow 16 foot by 40 foot pool located north of the Main Lap Pool. It was also constructed in 1971 and shares the pool filtration and heating systems of the Main Pool. The Wading Pool is generally in good shape structurally. It is recommended that temperatures be monitored while the pool heaters are in use to prevent an unsafe condition.

The Pool Deck, constructed in 1971 was reconstructed in 2008, with brick pavers. The Pool Deck finish is generally in good condition. It is recommended that blocked area drains be cleared to avoid creating a potential slipping hazard.

The Bathhouse and Offices located east of the Main Lap Pool were constructed in two phases. In 1971 the Pool Restrooms were constructed including a Pool Office and Lifeguard Room. The Beach Restrooms were added later. Recommended repairs include roof replacement, lighting, plumbing, ventilation, ADA accessibility; and window and door hurricane protection.

The Pool Filtration Equipment Building was constructed in 1971 and later modified by the addition of a Chlorine Storage Building. In 2008, new pool heaters and water filters were installed. The concrete roof is structurally damaged and replacement is recommended. The original piping is at the end of its expected service life. It is recommended that the pool drain and filtered water return lines within the building be replaced.

Table 1 – Opinion of Probable Cost to Correct Observed Deficiencies

Facility	OPC
Main Lap Pool	$93,100
Wading Pool	$2,800
Pool Deck	$46,600
Pool Restrooms	$113,900
Beach Restrooms	$5,500
Pool Filter Equipment Building	$138,500
Chlorine Storage Building	$1,600
Total	$402,000

2.0 PURPOSE AND SCOPE

The City of Lake Worth has directed Kimley-Horn and Associates, Inc. ("Kimley-Horn") to perform a baseline property condition assessment (PCA) for facilities at the Aquatics and Beach Complex in general conformance with ASTM E2018-15. The purpose of the PCA is to observe and report, to the extent feasible, on the physical condition of the pools, building and improvements listed below.

1. Main Lap Pool: 50-meter pool, drain and return piping
2. Wading Pool: Pool, drain and return piping
3. Pool Deck: Flat work, surface drains
4. Bathhouse and Offices: Pool Restrooms, Beach Restrooms, Pool Office, Lifeguard Room, Utility Spaces
5. Pool Filter Equipment Building: Pump Filter Room, Electrical Room, Chlorine Storage

The purpose of the PCA is to observe and report, to the extent feasible, on the physical condition of the subject building and improvements. As a part of this assessment, David Stewart, P.E, and Hanniah Rodríguez, E.I., made a site visit on April 17, 2017, interviewed City staff and reviewed available construction documents.

The systems and building elements listed below were reviewed for conspicuous deficiencies, material deferred maintenance, and compliance with the 2014 Florida Building Code. Emphasis was placed on the structural stability of the facilities. Site work and other detached structures beyond the limits of the facilities listed above were specifically excluded from the scope of this PCA.

1. Structural Frame and Building Envelope
2. Roofing
3. Life Safety/Fire Protection
4. Interior Elements
5. ADA Requirements
6. Special Exterior Architectural Finishes
7. Mechanical, Electrical, Plumbing and Pool Filtration Systems: Apparent condition only; systems were not operated or performance tested at this time

This report includes descriptions of systems and components and their general physical condition. For each material physical deficiency, Kimley-Horn has suggested a remedy which may include further research or testing, if appropriate. Kimley-Horn prepared an engineer's opinion of probable cost to correct the reported deficiencies. Estimates of useful life remaining for major building systems (i.e. roofing, foundation, etc.) are also included in this PCA report.

3.0 DOCUMENT REVIEW AND INTERVIEWS

The following documents were provided to Kimley-Horn for review prior to our site inspection:

- Pool Facilities Building for City of Lake Worth drawings prepared by Adair & Brady, Inc.
- Aquatics and Beach Complex improvements by Aquatic Consultant, Bob McCallister, LLC
- Construction photographs from 1971

The following documents were provided to Kimley-Horn after our site inspection:

- Lake Worth pool renovation as-builts; 2008 by Sinclair Engineering Company
- Technical Specifications, dated March 2008 by Stanley Consultants, Inc.
- Before and after photographs of 2008 renovations for Lake Worth Municipal Pool

Interview with Aquatics Manager, Leisure Services (Doug Yoakum), April 17, 2017:

- The Main Pool was resurfaced in 2008.
- The water line in the Main Pool is not uniform relative to the perimeter gutter. The east gutter is several inches below the west gutter.
- The Main Pool is losing approximately 2 inches of water per day when the water line is at normal levels. If not replaced, the water level drops to approximately the top of the lane marker tiles and then slows to a rate similar to pan evaporation. Make-up water is costing approximately $3,500 per month.
- Water chemistry in the Main Pool is difficult to balance due to the large volume of fresh water added each day.
- Piping repairs in the Pool Equipment Building included relining some piping that affected the accuracy of the flow meters.
- Soil accumulates on the floor in the northeast corner of the Pool Equipment Building.
- The variable frequency drives on the pool filtration pumps do not work; they have been bypassed.
- The main pool heaters were replaced in 2016. The Wading Pool is heated by the same equipment as the Main Pool. In the winter, the Wading Pool becomes too hot and must be closed.
- Ceiling spalls have occurred in the Filtration Room and the Electrical Room, causing the pool to be closed in February 2017.
- Water leaks from within electrical conduits entering the east wall of the Pool Equipment Room.
- Bottom sediments in the Main Pool do not collect uniformly around the four main drains. The two east drains may have a flow restriction.
- The east deck area drains are plugged with hard debris and are not functional. Efforts to free the drains and associated piping were not successful.
- The northeast corner of the pool deck was undermined by an opening in the gutter drain piping. Repairs were made in 2016.
- The northwest corner of the pool deck was undermined approximately 5 years ago and caused a break in the piping serving the Wading Pool.

Interview with Casino Beach Complex Facility Manager (Phil Johnson), April 17, 2017:

- The cause of the northwest pool deck undermining was the incomplete installation of an area deck drain.
- The 1-inch domestic water line serving the Beach Restrooms was replaced with a 2-inch diameter line to correct water pressure problems.
- The roof edge (fascia and soffit) of the pool bathrooms was repaired on three occasions. The sheet metal fascia was installed for the sake of appearance.

4.0 SYSTEM DESCRIPTIONS AND OBSERVATIONS

4.1 General

The existing pool facilities located at the City of Lake Worth were designed in 1971 and consist of a 50-meter Olympic swimming pool, a wading pool, and three buildings: the Bathhouse and Offices Building, The Pool Filter Equipment Building, and the Chlorine Storage Building (See Figure 1). Both pools are currently empty and are not open to the public. Renovations to the 50-meter Olympic Swimming Pool were designed in 2008 by Sinclair Engineering Company. The Bathhouse and Offices Building has an addition on the South side of the building that was not part of the original construction in 1971. The South addition includes both men's and women's beachside bathrooms.

Access to the site was provided and facilitated by City staff. Readily accessible areas were visually reviewed and compared with the latest construction documents available. The interior of all rooms and representative portions of the building exterior were reviewed for conspicuous deficiencies, material differed maintenance and compliance with the 2014 Florida Building Code. Our noted observations are presented in this section.

4.2 Main Lap Pool

The Main Lap Pool is a 50-meter, competition style pool constructed in 1971 (Photo 1). It replaced a similar pool that was part of the original Lake Worth Casino built in 1920. The current pool was constructed with a reinforced concrete shell on compacted sand subgrade. The depth varies from approximately 3.5 ft at the north and south ends, to approximately 12 feet at the center. Lane striping facilitates lap swimming in either the 50-meter or the 23 -meter direction.

The pool finish below the waterline is Portland cement plaster, similar to Marcite, that was replaced in 2008. The perimeter gutter and the stairs are covered with a resin bonded aggregate finish. The reinforced concrete shell cannot be directly viewed since it is concealed by finishes and the surrounding pool deck. The rigid pool finish will generally reflect cracks in the underlying shell.

The Main Lap Pool is generally in good shape structurally with no indication of differential settlement or structural deterioration.

The pool filtration system drains by gravity to the equipment building. Clean water is pumped back to the pool and distributed around the perimeter (See Figure 2).

Observations and Recommendations:

- The pool finish is debonded over approximately 30% of the floor and wall area. This was determined by sounding the finish and noting acoustical anomalies. Most of the defects were observed in patches and not large strips, and no cracks were observed in the finish below the gutter (Photo 2). Cracks were observed on the tiles at the water line and near the joints on the pool curb. Cracks with mineral stains were present in the gutter finish and on the top tread of the pool stairs (Photo 3). These areas were also sounded and acoustical anomalies indicate much of the gutter finish has debonded. **Recommendation: Refinish the pool, including the gutters, up to the precast concrete coping.**
- It was reported that, when the pool is full, water is lost at a rate of approximately 2 inches per day. When the water level reaches 16 inches below the gutter line, losses reduce to approximately evaporative losses. The water loss indicates a break or breaks in the return water piping (See Figure 3). **Recommendation: Remove the pool deck at the four corners of the pool and at the main lines to the Filter Building to expose the return water distribution piping. Isolate and pressure test each piping leg to determine the approximate location of the leak. Inspect the pipe interior for joint separation, breaks or other defects.**
- Water leaks into the housing of the underwater lights (Photo 4). Mounting screws are missing. It is reported that water leaks through the electrical conduit into the Pool Filter Building. **Recommendation: Replace the underwater lights.**

4.3 Wading Pool

The Wading Pool is a shallow 16 foot by 40 foot pool located north of the Main Lap Pool. It was also constructed in 1971 and shares the pool filtration system of the Main Pool. The Wading Pool is generally in good shape structurally with no indication of differential settlement or structural deterioration.

Observations and Recommendations:

- The Wading Pool is heated by the same equipment as the Main Pool. It was reported, that in the winter, the Wading Pool becomes too hot and must be closed. **Recommendation: Monitor Wading Pool temperatures to prevent unsafe conditions. Consider options to regulate heated water flow or provide an independent heater.**

4.4 Pool Deck

The Pool Deck surrounding the Main and Wading Pools was originally constructed in 1971. In 2008, it was reconstructed with new brick pavers and deck area drains. The Pool Deck finish is generally in good condition (Photo 5).

Observations and Recommendations:

- Reportedly, the area drains on the east side of the pool are filled with hard debris and cannot be cleared (Photo 6). Lack of drainage creates a potential slipping hazard. **Recommendation: Remove the pool deck to expose the deck drainage piping. Replace the piping and verify clear flow to the storm drain. Inspect with a plumber's camera all deck drain lines for blockage, separated joints or other defects.**

4.5 Bathhouse and Offices

The bathhouse and offices located east of the Main Lap Pool were constructed in two phases. In 1971 the northern portion was constructed coincident with the pools. The pool restrooms include separate women's and men's toilets, shower and changing areas. A concessions office and Lifeguard Room are also in this original building. The southern portion was constructed before 1995 to serve beach goers. The Beach Restrooms include women's and men's toilets, shower and changing areas.

Both buildings have similar structural frames. The roof is constructed with precast, prestressed hollow core concrete slabs. The roof covering is a modified bitumen built-up roof of undetermined age. The bearing walls are concrete masonry supported by a reinforced concrete monolithic floor slab. Walls are reinforced with tie-columns and tie-beams.

Observations and Recommendations for the Pool Restrooms:

- The roof covering is near the end of its service life. Evidence of old leaks were observed on both bathrooms' roofs. Mineral deposits hang from the roof joints in both men's and women's bathrooms (Photo 7). No active leaks were observed. The roof covering is worn, and has been damaged by UV exposure. Protective mineral granules have been lost due to wear and foot traffic (Photo 8). The roof is patched at several locations one area is approximately 9 feet. by 12 feet (Photo 9). The building expansion joint does not continue to the roofs perimeter. Attachment of exterior light fixtures was done with through-bolts penetrating the roof without sealant. **Recommendation: Replace the roof covering with a modified bitumen built-up roof. Seal through bolt penetrations.**
- The restrooms are ventilated, but lack air conditioning. The exterior walls are not insulated. The roof is minimally insulated, but does not meet current FBC requirements. **Recommendation: Install board insulation on the roof to meet current FBC requirements.**
- Handicapped stalls do not comply with dimension standards of the Florida Accessibility Code, Section 604.3.1. The stall is not a minimum of 60 inches measured perpendicular from the side wall and 56 inches minimum measured perpendicular from the rear wall. The handicapped stall dimensions on both men's and women's bathroom on the Bathhouse and Offices Building that serve the pool were observed to be less than the required minimum dimensions. Lavatory drains lack insulation (Photo 10). **Recommendation: Reconstruct ADA stalls to meet FAC requirements.**
- The number of bathroom stalls did not match the existing plans from 1971 for both men's and women's bathrooms. **Recommendation: Verify the number of fixtures based on the projected occupancy of the pool.**
- The lighting in both men's and women's bathrooms was poor with maximun lighting levels below 10 foot-candles using both natural and artificial lighting. Minimum levels below 0.2 foot-candles were measured in some toilet stalls. **Recommendation: Redesign and replace the interior lighting to meet current FBC requirements of 10 foot-candles (average).**
- A 3-1/2 inch high raised curb separates the shower area from the dressing room in the men's bathroom. This creates a tripping hazard and prevents ADA access to the shower room (Photo 11). **Recommendation: Remove the concrete curb at the men's shower room. Slope the floor to drains.**

- In the women's restroom, a concrete masonry partition was modified to create a space for a towel dispenser. Steel reinforcement was cut (Photo12). **Recommendation: Repair damaged concrete masonry.**
- The Lifeguard Room bathroom lacks a mechanical ventilator as required by FBC. The light fixture lacks a diffuser (Photo 13). **Recommendation: Replace missing or damaged mechanical, electrical and plumbing equipment.**
- The Pool Office air conditioner is positioned to discharge waste heat into the corridor, which is the public entry to the pool facility (Photo 14). **Recommendation: Replace the air conditioner with a roof-mounted split system.**
- The Pool Office, Lifeguard Room and Manager' Office have exterior windows and door lights that are not impact rated (Photo 15). **Recommendation: Replace windows with impact rated windows with a Florida Product Approval or provide protective covers.**
- The Pool Office floor drain is not flush with the tile surface and creates a tripping hazard (Photo 16). **Recommendation: Raise the drain.**

Observations and Recommendations for the Beach Restrooms:

- The mechanical space between the men's and women's toilets is poorly ventilated. **Recommendation: Install mechanical ventilation (Photo 17).**
- The mechanical space floor drain has been plugged. It was reported that sanitary waste backflows out of the floor drain (Photo18). **Recommendation: Inspect sanitary drain lines and building sewer. Clear any blockage.**
- Drain, waste, land vent piping is poorly supported. Threaded rod hangers are loaded in bending instead of tension. Brackets are severely corroded (Photo 19). **Recommendation: Replace pipe supports.**
- The lavatory drain in the ADA stalls is not insulated. **Recommendation: Replace missing insulation.**
- The floor drain in the women's restroom is too high, causing water to puddle on the floor (Photo 20)**. Recommendation: Lower the floor drain.**

4.6 Pool Filter Equipment Building

The Pool Filtration Equipment Building was constructed in 1971 coincident with the pools. It was modified by the addition of a Chlorine Storage Building. The Pool Equipment Building is located west of the Main Lap Pool and has a finish floor that is approximately 7 feet lower than the pool deck. The roof is a cast-in-place reinforced concrete slab supported on concrete masonry bearing walls. The roof covering is a fluid, applied membrane. The walls are reinforced with tie-beams and tie-columns. The lower portion of the east, south and north walls is below grade.

The pool filtration equipment consists of a circulating pump, two transfer pumps, diatomaceous earth filters, chemical injection pumps and controls. In 2008, new pool heaters and water filters were installed.

Observations and Recommendations:

- The concrete ceiling of the pump room (underside of the roof) has spalled at many locations. A few locations are still exposed, but most have been covered with half inch-thick plywood to protect personnel from falling debris (Photo 21). Approximately 30% of the area of the ceiling was observed to be covered, which meets the Florida Building Code definition of substantial significant structural damage. Exposed reinforcing steel was observed on the roof from the outside, and throughout the building from in the inside (Photo 22). **Recommendation: Remove the cast-in-place concrete roof structure and replace with precast, prestressed hollow core slabs.**
- Exhaust stacks on the roof are corroded at the base flange, allowing water intrusion into the building (Photo 23). The roof slab has multiple cracks in the upper surface that have penetrated the roof covering (Photo 24). **Recommendation: Replace the roof covering with a modified bitumen built-up roof over 1-inch insulation board. Replace all sheet metal stacks and flashings.**
- The interior face of one tie-column in the east wall of the pump room has spalled, exposing reinforcing steel (Photo 25). **Recommendation: Clean the corroded steel and apply a patching mortar.**
- Much of the piping is from the original 1971 construction and is at the end of its expected service life of 25 to 45 years. It was reported that numerous repairs have been made to stop leaks, including slip lining some pipe interiors (Photo 26, 27). **Recommendation: Remove the pool deck adjacent to the building and expose the piping serving the Main Pool and the Wading Pool. Replace the pool drain and return lines inside the pump room and a minimum of 5 feet outside the building.**

4.7 Chlorine Storage Building

The Chlorine Storage Building is a one-story, concrete masonry building constructed in 1989. The roof is framed with wood joists supporting plywood sheathing and an asphalt roof covering topped with aluminized paint. The bearing walls are concrete masonry, reinforced with tie-columns and tie-beams.

Observations and Recommendations:

- The roof covering does not meet current building code requirements for built-up roofs. A long-term leak is present near the east edge. Small blisters are present near the south edge (Photo 28). **Recommendation: Replace the roof covering.**
- The roof sheathing near the east edge (adjacent to the Filter Building) is soft and yields under foot pressure. The plywood sheathing is damaged from decay (Photo 29). **Recommendation: Replace damaged roof sheathing. Inspect roof framing and repair if required**.
- Hurricane straps connecting the roof joists to the masonry walls are missing fasteners at many locations (Photo 30). **Recommendation: Install missing fasteners into tie-beam.**

5.0 ADDITIONAL CONSIDERATIONS

5.1 Nominal Capacity of Restroom Roof

An analysis was performed on the capacity of the cantilevered roof section on the east side of the Bathhouse and Offices Building. The nominal capacity of the hollow core concrete roof slab was compared with the worst case expected uplift pressure. The hollow core slab appears to have adequate strength to resist current design wind pressures. Only 93% of its nominal capacity is used.

Table 2 – Capacity of Cantilevered Wall Section of Bathhouse and Offices Building

Maximum Roof Uplift (psf)	Slab DL (psf)	Slab LL (psf)	Utilization
61.2	46*	20	0.93

*Source: PCI Design Handbook Second Edition – Figure 2.4.1

5.2 Remaining Service Life

Design criteria for new public facilities includes consideration of the service life for the structures and major building systems. Kimley-Horn compared the age of the subject pools and facilities with service life criteria from the Department of Veterans Affairs, the Federal Green Construction Guide for Specifiers and the Public Service Commission rules for water and wastewater utilities. Except for the structural framing and foundations, all the major building systems have already exceeded what is considered a normal design service life. Some systems can continue to be repaired and maintained to keep them in service, but others are recommended for replacement at this time. The remaining service life (RSL) estimated in Table 3 assumes the recommended repairs are completed in a timely fashion. Systems with a RSL of zero cannot be repaired and are recommended for replacement.

Table 3 – Estimated Remaining Useful Service Life in Years

Facility	Structure	Roof	MEP	Interior Elements	Exterior Finishes
Main Lap Pool	20	---	Return Piping 0 Drain, Gutter Piping 10 Under Water Lighting 0-3	---	1-3
Wading Pool	20	---	10	---	5
Pool Deck	10	---	East Drains 0 Other Drains 10	---	10
Pool Restrooms	10	0-3	Electrical 0 Plumbing 0-5 Fixtures 0-5	Partitions 0 Finishes 0	10
Beach Restrooms	20	5	Electrical 10 Plumbing 20 Fixtures 5-10	Partitions 10 Finishes 10	10
Pool Equipment	Roof 0 Walls 10 Foundation 10	0	Piping 0-5 Pumps, Filters, Chemical Feed 3-5	0-5	10
Chlorine Storage	10	0	5	---	10

6.0 OPINION OF PROBABLE COST

Kimley-Horn prepared an engineer's opinion of probable cost ("OPC") to correct the reported deficiencies. The OPC costs shown in Table 1 below should only be construed as preliminary budgets. Actual costs can vary from the consultant's opinions of probable costs depending on such matters as type and design of suggested remedy, quality of materials and installation, manufacturer and type of equipment or system selected, field conditions, whether a physical deficiency is repaired or replaced in whole, phasing of the work, quality of contractor, quality of project management exercised, market conditions, whether competitive pricing is solicited, timeframe between the issuance of the opinion and the actual work being performed, etc.

Table 1 (repeated) – Opinion of Probable Cost to Correct Observed Deficiencies

Facility	OPC*
Main Lap Pool	$93,100
Wading Pool	$2,800
Pool Deck	$46,600
Pool Restrooms	$113,900
Beach Restrooms	$5,500
Pool Filter Equipment Building	$138,500
Chlorine Storage Building	$1,600
Total	$402,000

*Includes: 25% scope contingency for concealed conditions; 5% for bonds, insurance, permits; and 12% for design and construction engineering.

7.0 OUT OF SCOPE CONSIDERATIONS

Assessment of the functional layout of the aquatic center including the size, shape and depth of the main pool is beyond the scope of this assessment. Kimley-Horn's recommendations are intended to maintain or restore existing improvements to a useable condition based on the original design.

The location of the Aquatics and Beach Complex seaward of the Coastal Construction Control Line may affect the scope of repairs or modifications that may be permitted. Permitting through the Florida Department of Environmental Protection will be required.

Review of current FEMA Flood maps and other public source flood hazard information was not performed. The existing building floor elevations have not been compared with flood zones affecting this site.

Kimley»Horn
1920 Wekiva Way, Suite 200
West Palm Beach, Florida 33411

Aquatics and Beach Complex Property Condition Assessment

Photograph Sheet

KHA Job No.: 140335001
KHA Rep.: David Stewart, P.E.
Date: May 9, 2017.

Photo No. 1

Remarks: 50-meter competition style pool constructed in 1971.

Location: Main Lap Pool

Photo No. 2

Remarks: Delaminated pool patches. No cracks observed in the finish below the gutter.

Location: Main Lap Pool

Photo No. 3

Remarks: Cracks with mineral stains on top tread of the pool stairs.

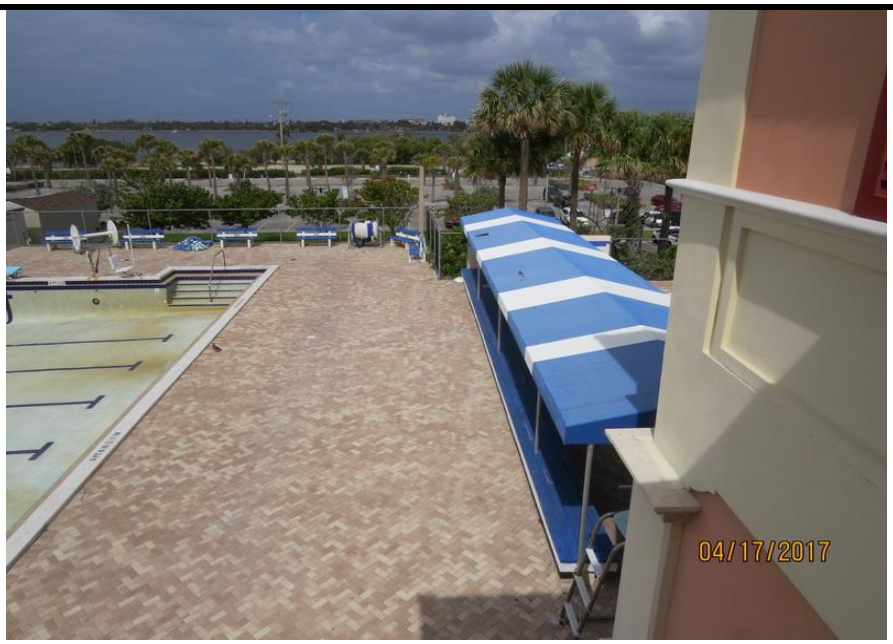
Location: Main Lap Pool

Photo No. 4

Remarks: Water leaks into the housing of the underwater lights.

Location: Main Lap Pool

Photo No. 5



Remarks: Pool deck finish is generally in good condition.

Location: Main Lap Pool

Photo No. 6

Remarks: Area drains on East side of pool are filled with hard debris.

Location: Main Lap Pool

Photo No. 7

Remarks: Mineral Deposits hang from roof joints on men's and women's bathrooms.

Location: Pool Restrooms

Photo No. 8

Remarks: Protective mineral granules on roof have been lost due to wear and foot traffic.

Location: Pool Restrooms

Photo No. 9

Remarks: 9ft x 12ft roof patch.

Location: Pool Restrooms

Photo No. 10

Remarks: Handicapped stall dimension are less than the required. Lavatory drains lack insulation.

Location: Pool Restrooms

Photo No. 11

Remarks: Tripping hazard preventing ADA access to men's shower room.

Location: Pool Restrooms

Photo No. 12

Remarks: Steel reinforcement was cut on masonry partition on women's bathroom.

Location: Pool Restrooms

Photo No. 13

Remarks: Life Guard room bathroom lacks mechanical ventilator per FBC. The light fixture lacks a diffuser.

Location: Pool Restrooms

Photo No. 14

Remarks: Pool Office air conditioner is positioned to discharge waste heat into the public entry corridor.

Location: Pool Restrooms

Kimley»Horn
1920 Wekiva Way, Suite 200
West Palm Beach, Florida 33411

Aquatics and Beach Complex
Property Condition Assessment
Photograph Sheet

KHA Job No.: 140335001
KHA Rep.: David Stewart, P.E.
Date: May 9, 2017.

Photo No. 15

Remarks: Non-impact rated windows and door lites on the Pool Office, Life Guard room and Manager Office.

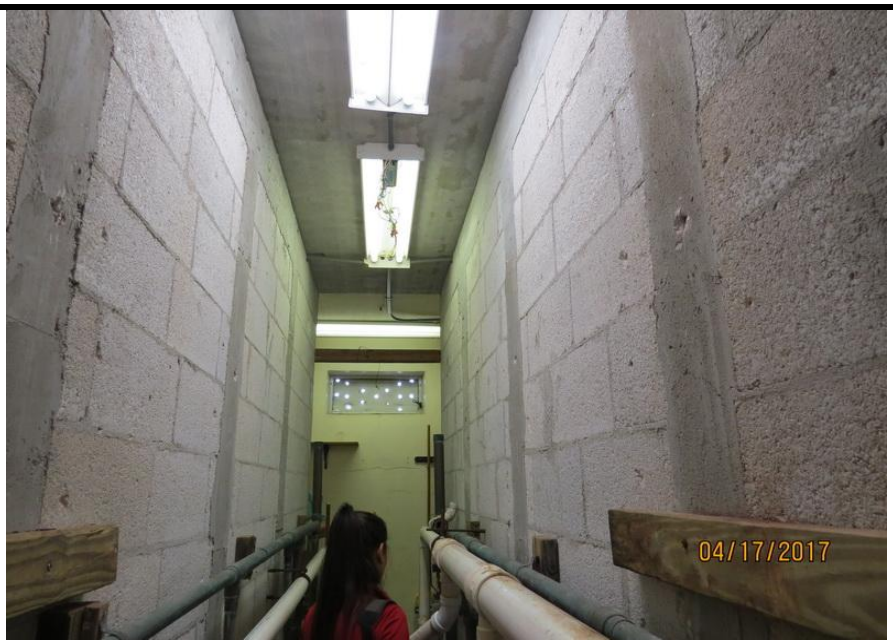
Location: Pool Restrooms

Photo No. 16

Remarks: Pool drain on the Pool Office floor is not flush with the tile surface and creates a tripping hazard.

Location: Pool Restrooms

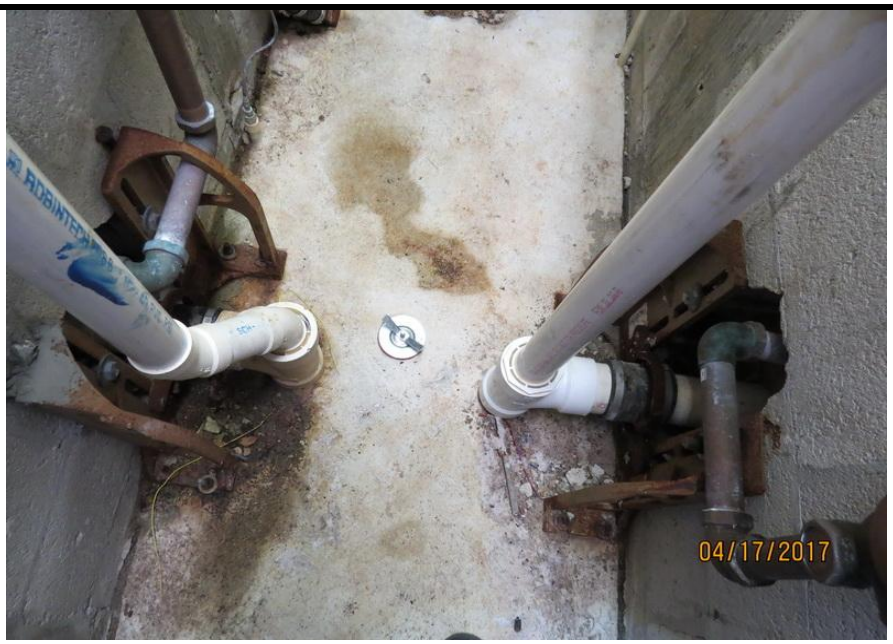
Photo No. 17



Remarks: Mechanical space between men's and women's toilets is poorly ventilated.

Location: Beach Restrooms

Photo No. 18



Remarks: Mechanical space floor drain has been plugged.

Location: Beach Restrooms

Photo No. 19

Remarks: Drain, waste, vent piping is poorly supported. Brackets are severely corroded.

Location: Beach Restrooms

Photo No. 20

Remarks: Floor drain on women's restroom is too high causing water to puddle on the floor.

Location: Beach Restrooms

Photo No. 21

Remarks: Spalling at many roof locations mostly covered by half inch-thick plywood.

Location: Pool Filter Equipment Building

Photo No. 22

Remarks: Exposed reinforcing steel.

Location: Pool Filter Equipment Building

Photo No. 23

Remarks: Exhaust stacks on the roof are corroded at the base flange allowing water intrusion into the building.

Location: Pool Filter Equipment Building

Photo No. 24

Remarks: Roof slab has multiple cracks in the upper surface that have penetrated the roof covering.

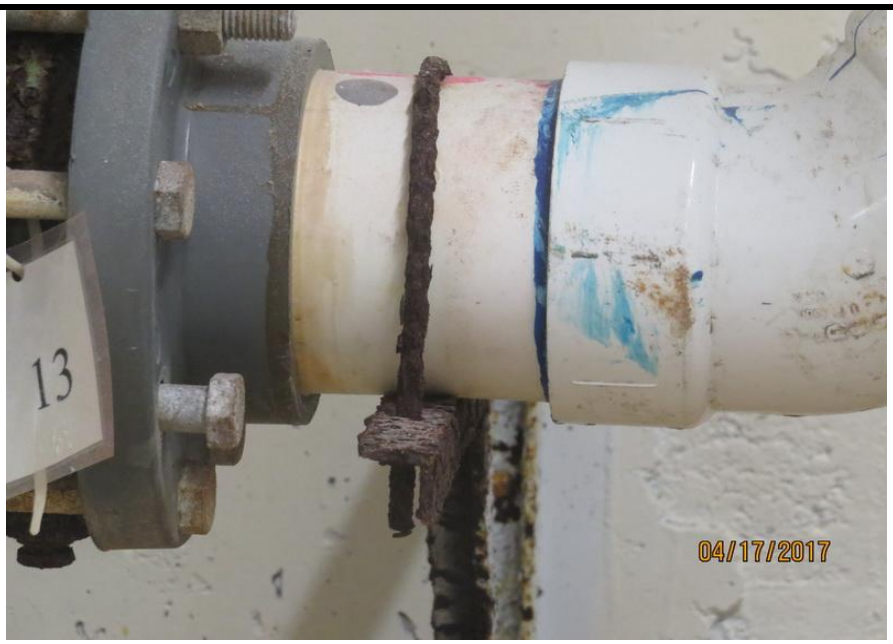
Location: Pool Filter Equipment Building

Photo No. 25

Remarks: Exposed reinforcing steel at interior face of one tie-column in the east wall of the pump room.

Location: Pool Filter Equipment Building

Photo No. 26



Remarks: Numerous repairs have been made to stop leaks including slip lining some pipe interiors.

Location: Pool Filter Equipment Building

Photo No. 27

Remarks: Numerous repairs have been made to stop leaks including slip lining some pipe interiors.

Location: Pool Filter Equipment Building

Photo No. 28

Remarks: Small blisters on waterproofing are present near the south edge of the roof.

Location: Chlorine Storage Building

Photo No. 29

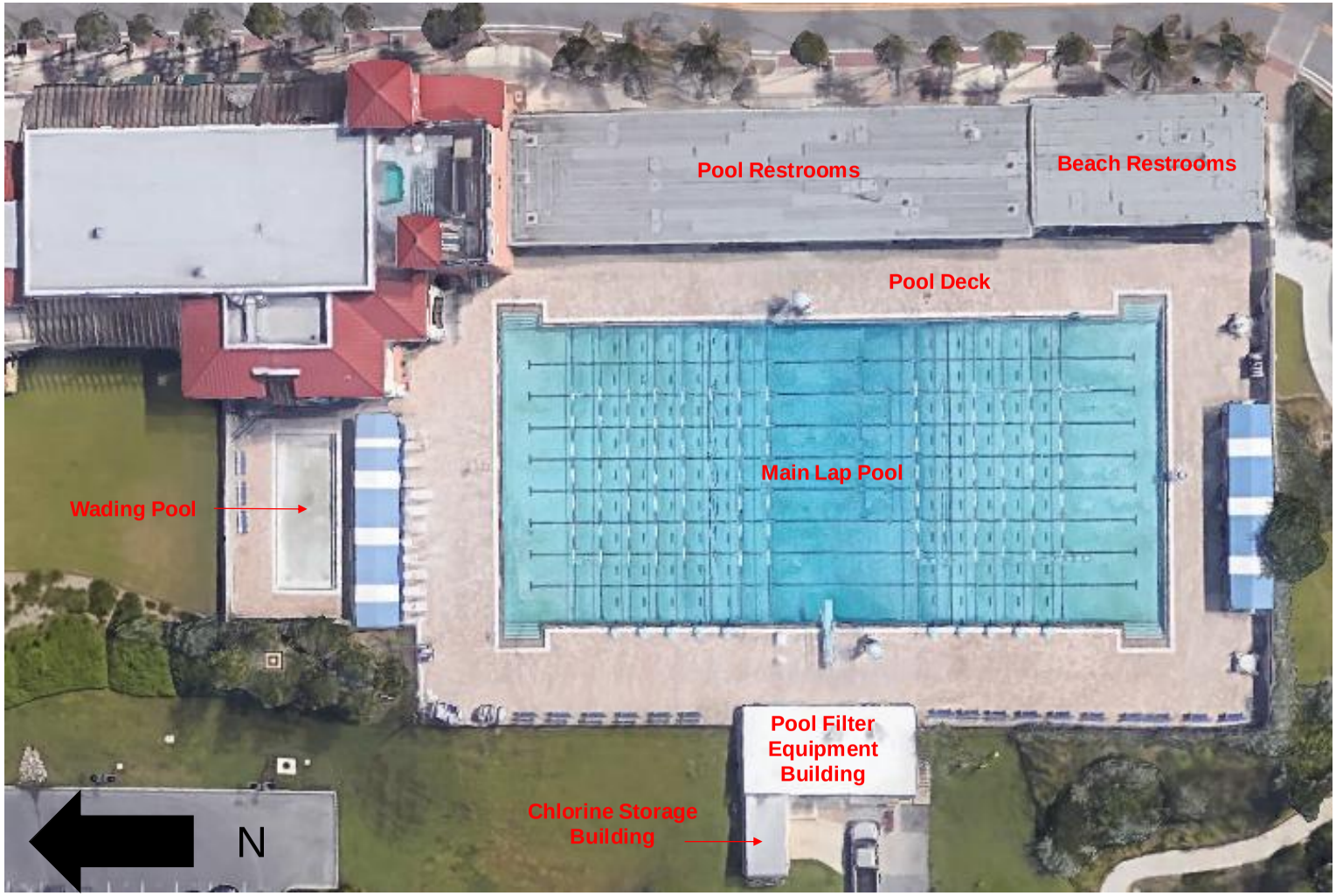
Remarks: The roof sheathing near the east edge is soft and yields under foot pressure.

Location: Chlorine Storage Building

Photo No. 30

Remarks: Hurricane straps connecting the roof joists to the masonry walls are missing fasteners.

Location: Chlorine Storage Building



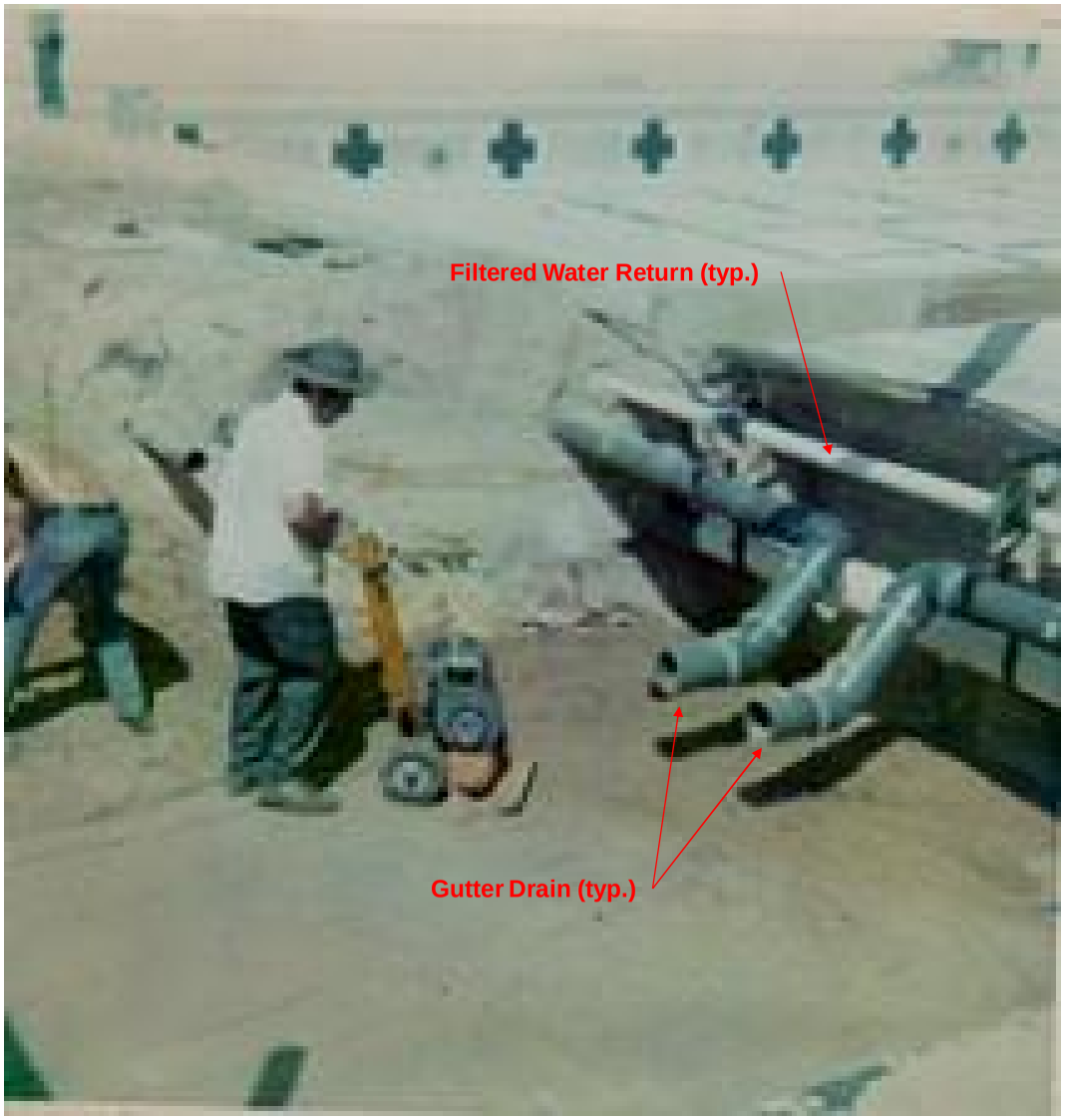
Kimley»Horn

Figure 1 – Aerial View

Source: 1971 Construction Photos

Kimley»Horn

Figure 2 – Gutter Drain and Filtered Water Return at West of Main Lap Pool



Source: 1971 Construction Photos

Kimley»Horn

Figure 3 – Gutter Drain and Filtered Water Return Between Filter Building and Main Lap Pool

CITY OF LAKE WORTH,
AQUATICS AND BEACH COMPLEX

Supplement to Property Condition Assessment

May 16, 2017

Kimley»Horn

Kimley»Horn

May 16, 2017

Mr. Michael Bornstein
Office of the City Manager
City of Lake Worth
7 North Dixie Highway
Lake Worth, FL 33411

RE: ***Supplement to Aquatics and Beach Complex Baseline Property Condition Assessment***
KH Job #140335001

Dear Mr. Bornstein,

The following is a Supplement to the City of Lake Worth, Aquatics and Beach Complex Property Condition Assessment Report by Kimley-Horn dated May 9, 2017.

The Supplement is in response to the following additional information and requests:

1. Request to provide additional backup to Table 1 - Opinion of Probable Cost (OPC) included in the PCA report.
2. Review of Additional information received from the City on May 12, 2017: *Inspection of Lake Worth Casino Pool Report by Sinclair Engineering Company dated July 9, 2012.*
3. Request to expand the discussion on the out of Scope considerations.

The opinions and conclusions expressed in this report are based on a view of the noted material, as well as my education, training, and experience as a licensed professional engineer. These opinions and conclusions are based on the information currently available to me and may be amended or supplemented should new information become available. This report has been prepared in accordance with the applicable professional standard of care. No other warranties or guarantees, expressed or implied, are made or intended. This report has been prepared solely for the City of Lake Worth for the purposes stated herein and should not be relied upon by any other party or for any other purpose.

Please contact me at (561) 840-0854 or david.stewart@kimley-horn.com should you have any questions.

Sincerely,

Kimley-Horn and Associates, Inc.
CA00000696

David W. Stewart, P.E.
Florida 31180

Angelina Fairchild, P.E.
Florida 43958

Kimley»Horn

SUPPLEMENT TO PCA REPORT ISSUED ON MAY 9, 2017

Expanded OPC Table

The Aquatics and Beach Complex Property Condition Assessment Report by Kimley-Horn dated May 9, 2017 (PCA) includes a summary table of the Opinion of Probable Cost to Correct Observed Deficiencies (OPC). An expanded version of this table, including estimated quantities, unit prices, contingencies, and other considerations used to develop the OPC is attached as Appendix A. Adjustment of unit prices to more closely follow RS Means Cost Data for Commercial Reconstruction projects and additional surface preparation when refinishing the Main Lap Pool increased the OPC in several areas. A revised Table 1 is provided below.

Table 1 – Opinion of Probable Cost to Correct Observed Deficiencies

Facility	OPC
Main Lap Pool	$186,400*
Wading Pool	$2,800
Pool Deck	$46,600
Pool Restrooms	$125,000*
Beach Restrooms	$5,500
Pool Filter Equipment Building	$141,100*
Chlorine Storage Building	$1,700*
Total	$509,100*

[*] – Revised May 16, 2017

Additional Information from Client

Appendix B attached to this report is a copy of the Inspection of Lake Worth Casino Pool Report by Sinclair Engineering Company (SECO) dated July 9, 2012 provided to us on May 12, 2017.

The observations noted in the SECO report were reviewed, evaluated, and compared to our field notes and findings summarized in the PCA. Of particular interest were SECO's observation numbers 6 and 7 referring to a "horizontal cracks in the pool beam". After reviewing that photos in exhibit 4 of SECO's report, the mentioned horizontal crack is actually the cold joint between the structural wall of the pool and the precast coping. The coping is adhered to the top of the wall, similar to a tile installation, so a joint occurs at that interface. This joint is located at or near the finished grade elevation of the surrounding pool deck pavers and is located above the waterline This is not a structural joint and it is not meant to be watertight.

The observations noted in the SECO report do not have an impact on our original opinions and conclusions in our PCA report.

Kimley»Horn

Discussion on the Out of Scope Considerations in the PCA

The scope of our project in accordance with our agreement dated July 1, 2014 and Task Order dated April 10, 2017 was to perform a baseline Property Condition Assessment (PCA) of the Lake Worth Casino Pool and the adjacent facilities in accordance with standard ASTM criteria.

Opinions, conclusions, and recommendations provides in the PCA address the structural integrity of the pool and facilities and their potential remaining useful life based on the purpose for which these structures were created. Assessment of the functional layout of the aquatic center and marketing strategies is beyond our current scope.

Based on our original observations and additional information received, we still believe the pool and adjacent facilities can be repaired and re-used from a structural standpoint to satisfy the original needs of the facility in compliance with the Florida Building Code for Existing Buildings,

Re-use of these buildings is constrained by the existing limits of the building footprint because of their location. Changing the footprint of the buildings could require a significant permitting process because the Aquatic Complex is seaward of the Coastal Construction Control Line (CCCL).

To upgrade the pool and adjacent facilities to meet current code criteria, a change in footprint of the buildings is most likely required. An architectural evaluation would need to be performed to determine how much added square footage would be necessary to meet current code in terms of functionality, based on projected occupancy.

Programmatic and functional changes to the pool itself to attract other types of users would also need to be evaluated. Potentially, a new family-oriented complex could be designed to take advantage of the outer shell of these buildings. Desired changes in the overall complex could re-use these buildings for other purposes, such as storage, box office facilities, concessions, lifeguard lockers, etc.

The cost to restore or re-purpose these facilities would need to be weighed against the overall ultimate plan for the pool complex. A separate financial feasibility study would determine if the investment to update and maintain these facilities for the remainder of their useful life provides any benefit based on their proximity to the beach.

-------oOo---------

Kimley»Horn

APPENDIX A – EXPANDED OPC TABLE

OPINION OF PROBABLE CONSTRUCTION COST

Table 1 - expanded

The City of Lake Worth
Aquatics and Beach Complex
Opinion of Probable Cost
KH 140335001

	Material				Labor					
	Q	Unit	Unit Price	Material Cost	Hours	Rate	Labor Cost	Total Cost	OPC	
4.2 Main Lap Pool										
demolition	16801	sf	0.48	8064			0	8064		[a]
sandblast surface prep	16801	sf	2.1	35282			0	35282		[a]
floor	12300	sf	2	24600			0	24600		[a]
wall	1673	sf	2	3346			0	3346		[a]
wall	1394	sf	2	2788			0	2788		[a]
gutter	478	ft	2	956			0	956		[a]
tile	956	ft	5	4780			0	4780		
misc accessories	1	ls	2000	2000			0	2000		
Refinish the pool, including the gutters, up to the precast concrete coping.				81817			0	81817	$ 116,200	[a]
demolition/repair pool deck	500	sf	19	9500	96	45	4320	13820		
excavation	135	cy	20	2700			0	2700		
testing	5	ls	500	2500	120	45	5400	7900		
repairs	200	lf	15	3000	240	45	10800	13800		
Remove the pool deck at the four corners of the pool and at the main lines to the Filter Building to expose the return water distribution piping. Isolate and pressure test each piping leg to determine the approximate location of the leak. Inspect the pipe interior for joint separation, breaks or other defects.				17700			20520	38220	$ 54,300	
Replace the underwater lights.	22	ea	250	5500	88	65	5720	11220	$ 15,900	[a]
4.2 Main Lap Pool									$ **186,400**	[a]
4.3 Wading Pool										
Monitor Wading Pool temperatures to prevent unsafe conditions. Consider options to regulate heated water flow or provide an independent heater.					40	50	2000	2000	$ 2,800	
4.3 Wading Pool									$ **2,800**	
4.4 Pool Deck										
demolition	800	sf	4	3200	160	45	7200	10400		
excavation	59	cy	20	1185			0	1185		
repairs	200	lf	10	2000			0	2000		
restore deck	800	sf	15	12000	160	45	7200	19200		
Remove the pool deck to expose the deck drainage piping. Replace the piping and verify clear flow to the storm drain. Inspect with a plumber's camera all deck drain lines for blockage, separated joints or other defects.				18385			14400	32785	$ 46,600	
4.4 Pool Deck									$ **46,600**	
4.5 Bathhouse and Offices (Pool Restrooms)										
tear off	4392	sf	1	4392			0	4392		
mod bit roof	4392	sf	2.28	10013.76			0	10013.76		[a]
perimeter detail and expansion joint	438	lf	10	4380			0	4380		
stacks, hoods, mechanical vents	1	ls	2000	2000			0	2000		
Replace the roof covering with a modified bitumen built-up roof.				20786			0	20786	$ 29,500	
Install board insulation on the roof to meet FBC requirements.	4392	sf	4	17568			0	17568	$ 24,900	
Reconstruct ADA stalls to meet FAC.	4	ea	2000	8000			0	8000	$ 11,400	
Verify the number of fixtures based on the projected occupancy of the pool.				0	8	200	1600	1600	$ 2,300	
Redesign and replace the interior lighting to meet current FBC requirements.	4392	sf	5	21960			0	21960	$ 31,200	
demolish curb	12	lf	5	60	2	45	90	150		
slope floor topping	225	sf	2	450			0	450		
Remove the concrete curb at the men's shower room. Slope the floor to drains.				510			90	600	$ 900	
Repair damaged concrete masonry.	5.34	sf	30	160	4	45	180	340	$ 500	
The Life Guard room: Replace missing or damaged mechanical, electrical and plumbing equipment.	1	ls	500	500	4	45	180	680	$ 1,000	
The Pool Office: Replace the air conditioner with a roof mounted split system.	1	ea	800	800	8	45	360	1160	$ 1,600	
windows	8	ea	1500	12000			0	12000		
doors	3	ea	1000	3000			0	3000		
The Pool Office, Life Guard room and Manager' Office: Replace windows with impact rated windows with a Florida Product Approval or provide protective covers.				15000			0	15000	$ 21,300	
The Pool Office raise the drain.	1	ls	250	250			0	250	$ 400	
4.5 Bathhouse and Offices (Pool Restrooms)									$ **125,000**	[a]
4.5 Bathhouse and Offices (Ocean Restrooms)										
Install mechanical ventilation in mechanical room.	1	ea	500	500			0	500	$ 700	
Inspect sanitary drain lines and building sewer. Clear any blockage.	1	ls	500	500			0	500	$ 700	
Replace pipe supports.	1	ls	500	500	32	45	1440	1940	$ 2,800	
Replace missing insulation.	4	ea	150	600			0	600	$ 900	
Lower the floor drain.	1	ls	250	250			0	250	$ 400	
4.5 Bathhouse and Offices (Pool Restrooms)									$ **5,500**	

OPINION OF PROBABLE CONSTRUCTION COST

Table 1 - expanded

The City of Lake Worth
Aquatics and Beach Complex
Opinion of Probable Cost
KH 140335001

	Material				Labor					
	Q	Unit	Unit Price	Material Cost	Hours	Rate	Labor Cost	Total Cost	OPC	
4.6 Pool Filter Equipment Building										
temp support equipment	1	ls	500	500	16	45	720	1220		
truck crane	5	days	2400	12000			0	12000		
demolition	1032	sf	3	3096			0	3096		
hollow core slabs	1032	sf	12	12384			0	12384		
Remove the cast-in-place concrete roof and replace with precast, prestressed hollow core slabs.				27980			720	28700	$ 40,800	
tear off	1032	sf	1	1032			0	1032		
insulation board	1032	sf	1	1032			0	1032		
mod bit roof	1032	sf	2.28	2353			0	2353		[a]
roof top ventilators	3	ea	750	2250			0	2250		
Replace the roof covering with a modified bitumen built-up roof over 1 inch insulation board. Replace all sheet metal stacks and flashings.				6667			0	6667	$ 9,500	
Clean the corroded steel and apply a patching mortar.	2	sf	30	60	4	45	180	240	$ 300	
demolish/replace pool deck	615	sf	19	11685	96	45	4320	16005		
excavation/backfill	136.6667	cy	30	4100			0	4100		
wall penetrations	8	ea	500	4000	64	45	2880	6880		
piping	100	lf	15	1500	640	45	28800	30300		
instrumentation and controls	1	ls	5000	5000			0	5000		
start-up				0	32	45	1440	1440		
Remove the pool deck adjacent to the building and expose the piping serving the Main Pool and the Wading Pool. Replace the pool drain and return lines inside the pump room and a minimum of 5 feet outside the building.				26285			37440	63725	$ 90,500	
4.6 Pool Filter Equipment Building - Total									$ **141,100**	[a]
4.7 Chlorine Storage Building										
Replace the roof covering.	220	sf	2.28	502			0	502	$ 700	[a]
Replace damaged roof sheathing. Inspect roof framing and repair if required.	1	sht	500	500			0	500	$ 700	
Install missing fasteners into tie-beam.	1	ls	50	50	4	45	180	230	$ 300	
4.7 Chlorine Storage Building - Total									$ **1,700**	[a]
									$ **509,100**	[a]

Opinions of Cost notes:

[a] - Revised May 16, 2017

1. The costs shown in the OPC column include a construction contingency, plus an allowance for contractor insurance and bonds, and soft costs.

2. Unit prices used in the table are based on a combination of RS Means data and local price information.

3. Because Kimley-Horn (KHA) does not control the cost of labor, materials, equipment or services furnished by others, methods of determining prices, or competitive bidding or market conditions, all opinions rendered as to costs, including but not limited to opinion as to the costs of construction and materials, shall be made on the basis of its experience and represent its judgement as an experienced and qualified professional, familiar with the industry. KHA cannot and does not guarantee that proposals, bids or actual costs will not vary from opinions of cost prepared by it.

Kimley»Horn

APPENDIX B – SINCLAIR REPORT

Design With Integrity
Sinclair Engineering Company

July 9, 2012

Mr. Timothy Ehmke
City of Lake Worth
50 South Ocean Drive
Lake Worth, FL 33460

Re: Inspection of Lake Worth Casino Pool
10 Ocean Avenue, Lake Worth, FL 33460

Dear Mr. Ehmke:

Sinclair Engineering Company performed an inspection of the above-referenced public pool on June 13, 2012 in your presence and in the presence of Mr. Jamie Brown, City of Lake Worth Public Services Director.

INTRODUCTION:

Sinclair Engineering Company received your request on May 30, 2012 to inspect crack damage, an out-of-level gutter condition and related items at the Casino Pool and deck. Specifically, you requested that we determine the nature, extent and cause, if known, of pool and deck damage. You further requested that we make recommendations for repair of observed damages.

PROCEDURES:

1. The pool and deck area was examined to gain a general understanding of the layout, construction materials, overall condition and areas of damage.

2. The pool shell was examined for evidence of crack damage.

3. The pool coping was examined for evidence of damaged or missing coping stones.

4. The pool rollout gutter was examined for evidence of damage.

5. The waterline and gutter tiles were examined for evidence of damaged or missing tiles and for evidence of an out-of-level condition.

6. The pool beam was examined for evidence of damage.

7. The pool deck was examined for evidence of damage from settlement or other causes.

8259 North Military Trail, Suite 2, Palm Beach Gardens, FL 33418
561-630-5488 • Fax 561-630-4570 • sinclairengineeringcompany.com

PROCEDURES (Continued):

8. A Geotechnical Engineering Study by Tierra South Florida dated February 1, 2011, provided by you, was reviewed for content.

9. The Casino Pool file, provided by you, was reviewed for content.

OBSERVATIONS:

1. The pool can generally be described as a 3' to 12' deep, inground, gunite, rectangular-shaped public pool with a rollout gutter and raised precast coping. A sandset paver deck, over a concrete slab substrate, had been installed in association with the pool.

2. Examination of the pool shell revealed no visible evidence of cracks in the pool floor or walls.

3. Continued examination of the pool shell and gutter revealed missing bullnose tile on the inner face of the gutter, primarily adjacent to the steps in the Northeast corner of the pool.

4. Examination of the pool rollout gutter revealed that the water level was slightly higher along the West side of the pool than in the center and East side of the pool, indicating that the West side of the pool shell may have settled unevenly relative to the remainder of the pool shell.

5. Examination of the waterline tiles revealed a horizontal crack at approximately the mid-height of the waterline tiles at the back of the gutter. This condition was noted in several areas.

6. Examination of the pool beam in the Northwest corner of the pool, where a waterline tile was missing, revealed a horizontal crack in the pool beam.

7. Examination of the horizontal crack in the pool beam revealed that it appeared to be a cold joint between the previously existing concrete pool beam and a concrete overpour.

8. Continued examination of the horizontal crack in the pool beam revealed the presence of a caulking material along the crack, presumably installed to prohibit water seepage and/or prevent the crack from telegraphing into the waterline tile. It was noted that the caulking material did not extend along the entire length of the crack.

9. Examination of the precast coping stones revealed a number of cracks in the mortar joints. Further, a number of the coping stones were "hollow" and had disbonded from the pool shell.

10. Examination of the pool deck revealed that the sandset pavers had been removed in the Northeast corner of the pool. Examination of the deck in this area revealed a concrete slab substrate, portions of which had been removed, presumably to facilitate repairs in the pool perimeter gutter plumbing.

OBSERVATIONS (Continued):

11. Continued examination of the pool deck revealed no visible evidence of damage due to uneven settlement.

12. Review of the Geotechnical Engineering Study by Tierra South Florida dated February 1, 2011 revealed, in 1.0 Executive Summary, that (soil) borings B-10, B-11 and B-15 indicated the presence of about 10 feet of peat (organic soils) between a depth of about 7 and 22 feet below the ground surface. It was indicated that the borings where organic soils were encountered were on the West side in areas accessible to a truck mounted drill rig or about 75 feet away from the existing building.

13. Review of the Casino Pool file revealed numerous permits relating to the performance of routine maintenance and other work at the pool facility. Swimming Pool Alteration plans by Edgar S. Wortman, Architect, and Chester F. Wright, Engineer, were reviewed. Specifically, Drawing No. 1 of 2 dated November 1954 and Drawing No. 2 of 2 dated April 1956 were reviewed. Note that Drawing No. 2 of 2 was stamped "Approved, City of Lake Worth, 09/07/56" by Edward H. Gregory, Building Inspector.

14. Review of the Swimming Pool Alteration plans revealed that, among other alterations to be performed at that time, a rollout-type gutter was proposed to be installed on top of the existing pool wall such that it would increase the depth of the water by approximately 1 foot. Note that the pool beam details showed a monolithic pour that included the gutter and a 6" raised coping section. Further note that the horizontal crack discussed in Observation 7. did not correspond to the construction joint between the existing pool shell and the concrete beam overpour. Rather, the horizontal crack discussed in Observation 7. was in the upper area of the pool beam below the coping.

CONCLUSIONS:

Based on field-observed conditions and related experience, the conclusions of this inspection are, to the best of my professional understanding and belief, as follows:

1. There is evidence of uneven settlement of the pool which may be the result of organic soils underlying the pool and deck. Soil testing in locations proximal to the settled section of the pool would be required to confirm this condition.

2. There are horizontal cracks in the pool beam at a cold joint from previous alterations.

3. The proper repair of the pool beam is as follows:

    a. Remove the precast coping stones (reserve for re-use) and waterline tiles from the entire perimeter of the pool.

    b. Remove the portion of the pool beam above the crack from the entire perimeter of the pool.

    c. Acid-etch and neutralize the top of the pool beam.

CONCLUSIONS (Continued):

d. Install a properly-reinforced and attached pool beam.

e. Replace the precast coping stones and install new waterline tiles.

4. There are disbonded / loose precast coping stones which are to be reinstalled with an elastomeric thinset.

5. It is also recommended that the precast coping stone mortar joint be filled with elastomeric grout to allow for expansion and contraction forces between the coping and the pool shell. Note that this expansion joint is to be installed on 10' to 12' centers and at the corners.

6. If future soil testing confirms the presence of organic soils underlying the pool and deck, a piling foundation would be required to properly support the pool and prevent future movement. This office can produce pool and deck repair plans, including a pool piling plan, as requested. Alternately, the pool beam elevation can be monitored periodically (every one to three years) to determine if pool settlement is ongoing.

CLOSURE:

The professional services and independent opinions provided are based on the standards generally accepted within my area of expertise and in accordance with industry professional and ethical guidelines applicable to structural engineering. The opinions stated herein are my own and, if necessary, I will testify in support of the conclusions contained in this report.

Thank you for selecting Sinclair Engineering for your engineering needs. Please feel free to contact this office for further information as the need arises.

Respectfully submitted,

July 9, 2012
Stephen M. Sinclair, P.E.
FL Lic. No. 35631

STEPHEN M. SINCLAIR LICENSE No 35631 STATE OF FLORIDA PROFESSIONAL ENGINEER

Copy: 12-06000

06-13-12 Inspection Report 07-09-12

EXHIBIT 1. OVERALL VIEW OF POOL AND DECK LOOKING NORTHWEST

EXHIBIT 2. OVERALL VIEW OF POOL AND DECK LOOKING SOUTHWEST

EXHIBIT 3. VIEW OF NORTHWEST AREA OF POOL

EXHIBIT 4. VIEW OF CRACKED WATERLINE TILES AND CRACKED POOL BEAM

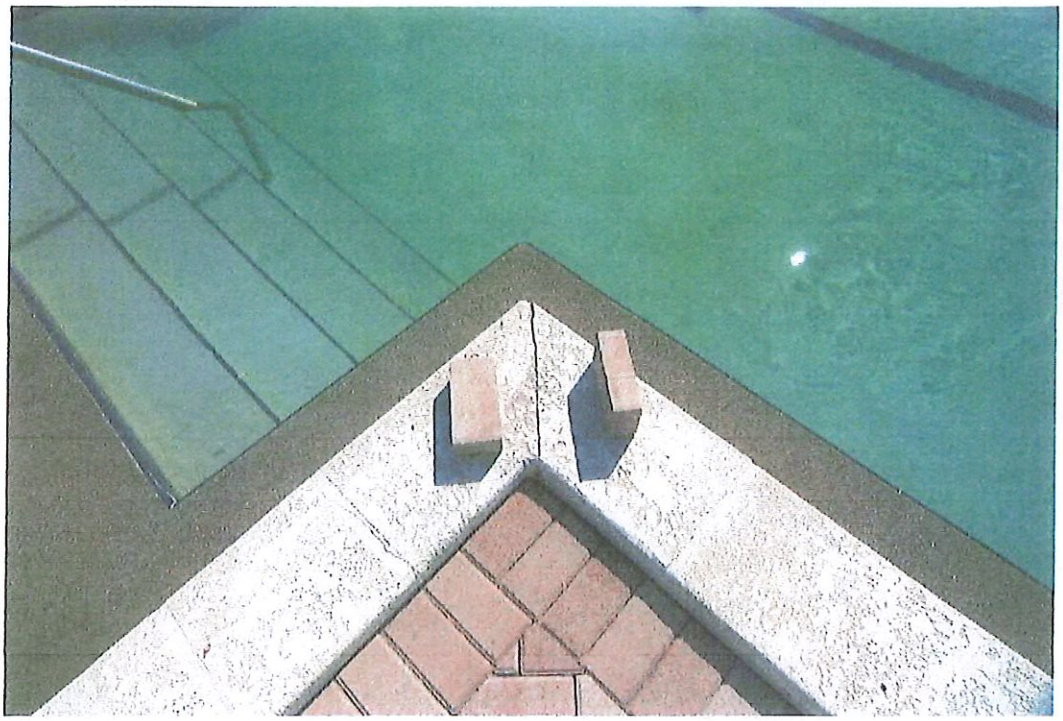


EXHIBIT 5. VIEW OF CRACKED MORTAR JOINT BETWEEN ADJOINING COPING STONES

EXHIBIT 6. VIEW OF STEPS IN NORTHEAST AREA OF POOL

EXHIBIT 7. VIEW OF MISSING BULLNOSE TILE (REFERENCE EXHIBIT 6.)

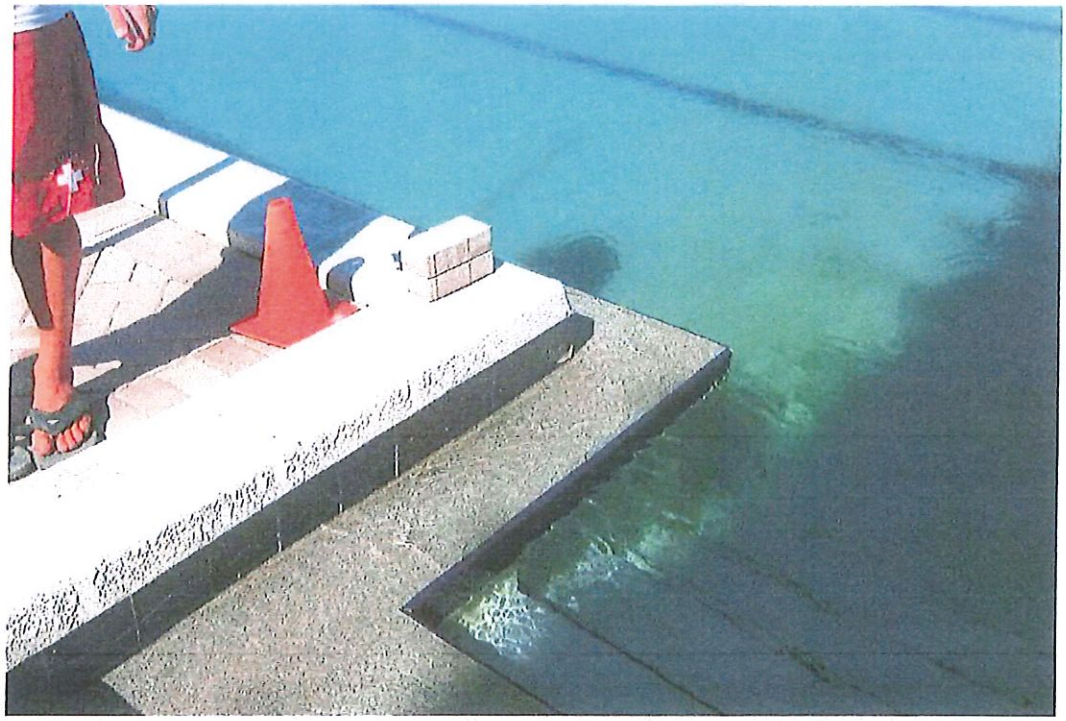


EXHIBIT 8. VIEW OF HORIZONTAL CRACK IN WATERLINE TILES (REFERENCE EXHIBIT 6.)

SINCLAIR ENGINEERING COMPANY
Design With Integrity
Sinclair Engineering Company

October 1, 2012

Mr. Jamie Brown, Public Services Director
City of Lake Worth
1749 3rd Avenue South
Lake Worth, FL 33460

Re: Cost of Pool Repairs
Lake Worth Casino Pool, 10 Ocean Avenue, Lake Worth, FL 33460

Dear Mr. Brown:

Sinclair Engineering Company received your request to provide the cost associated with repairs to the Lake Worth Casino Pool.

The information contained herein is provided as supplemental information to my Inspection Report dated July 9, 2012.

Please note that the Scope of Work in the Estimate provided by Barrow Pools includes:

1. Remove and replace existing pool beam above crack
2. Remove (2) layers of waterline tile and replace with new tile
3. Remove (2) layers of gutter bullnose and replace with new tile
4. Remove existing pool finish as needed in areas of delamination
5. Remove and replace step tile
6. Install cast in place 12" x 24" x 3" coping
7. Remove and replace new lane markers
8. Pressure test plumbing lines as needed (this test is not included in the price, time and material)
9. Prepare pool liner
10. Plaster pool with Petite Pearl, owner to choose color
11. Fill pool with carbon tanks

8259 North Military Trail, Suite 2, Palm Beach Gardens, FL 33418
561-630-5488 • Fax 561-630-4570 • sinclairengineeringcompany.com

The cost for the above Scope of Work, excluding pressure-testing of the plumbing lines, is $198.761.00.

If, during removal of the pool beam, more extensive damage is found, the beam and gutter will be rebuilt as needed to 6" below the existing gutter at an additional cost of $24,600.00, see Option.

Lastly, please note the Upgrade of plastering the pool with Pebble Sheen Finish at an additional cost of $71,520.00 which would allow the pool to remain empty when not in use.

Thank you for selecting Sinclair Engineering for your engineering needs with your pool project. Please feel free to contact this office for further information as the need arises.

Respectfully submitted,

October 1, 2012
Stephen M. Sinclair, P.E.
FL Lic. No. 35631

Attachment: Barrow Pools Estimate
Copy: Job 12-06000, Chief T. Ehmke (by E-mail to Ehmke@LakeWorth.org)

Barrow Pools

720 Kittyhawk Way
North Palm Beach, Florida 33408

Estimate

Name / Address
Lake Worth Casino Attn: Steve Sinclair

Date
9/13/2012

Description	Total
Scope of work to include: Remove and replace existing pool beam above crack Remove two (2) layers of waterline tile and replace with new tile Remove two (2) layers of gutter bullnose and replace with new tile Remove existing pool finish as needed (delimitation) Remove and replace step tile Cast in place 12" x 24" x 3" coping Remove and replace new lane markers Pressure test plumbing lines as needed (Not included in price, time and material) Prep pool liner Plaster swimming pool with Petite Pearl color choice by owner Fill pool with carbon tanks **Option:** **Rebuild beam and gutter as needed to 6" below existing gutter - $24,600.00** Upgrade: Plaster pool with Pebble Sheen Finish - $71,520.00	198,761.00

Phone #	Fax #	E-mail
561-582-5200	561-745-2266	barrowpools@bellsouth.net

	Commissioner Malega WANT	Commissioner McVoy WANT	Mayor Resch WANT	Commissioner Stokes WANT	Commissioner Robinson WANT
Purchasing Notetaking (incl in draft ITN)	like to have drinking filtration water system for public electric charging station for vehicle affordable food option energy efficiency parking improvements security proposal with the good business plan	May be open to P3 small scale food affordable option landscaping improvements	parking improvements accessibility to public splash park for kids, with external access, no charge to access it hot dogs stand/affordable food option resolution for the upper floor	pool kids activities family friendly facility ADA compliant and accessible pool affordable restaurant option for meals under $15 for families second floor improvements	public access with no restrictions affordable improved parking/traffic flow valet for restaurants if possible second floor income commercial venture to include programs for kids and adults landscaping improvements storage, maintenance and life guard facilities he is looking for developer
Additional Notetaking 12/9/2021	shade lockers swimming lessons kid splash night time hours parking pass and seasonal pass for residents sponsoring opportunity for naming rights accessible for all residents	adult and seniors access to swim children swim lessons want the pool open welcoming and accessible wants individuals to be the teachers, not company	P3 swimming lessons and water aerobics	everything on Robinson's list allow extra projects and programs/suggestions in submittal summer camps active experience (pool volleyball, rock climbing, obstacle courses) ensure P3 venture keeps LWB sponsored activities nice deck landscaping shade training opportunities for pool use by athletes	moderate pricing public to know there is a public park/facility
	DOESN'T WANT	**DOESN'T WANT**	**DOESN'T WANT**	**DOESN'T WANT**	**DOESN'T WANT**
Purchasing Notetaking	Does not want to sell the property does not want the hotel no patching of the pool/property, proper facility repairs does not want walls around the pool, visible and accessible options	Doesn't want hotel or theme park Does not want commercial enterprise			
Addtl				no hotel	no hotel