



July 8, 2021

Peters Township  
Rolling Hills Park Aquatic Center  
Value Engineering Options

### **Aquatics Value Engineering Options**

1. Delete Runout Slide
  - a. Delete the runout slide in its entirety, including any foundations and stair connections to the adjacent tower.
  - b. Value: DEDUCT (\$144,000)
2. Leisure Pool Underwater Lighting
  - a. Delete the entire system required to provide underwater lighting in the Leisure Pool.
  - b. VALUE: DEDUCT (\$35,000)
3. Plaster in lieu of Paint
  - a. Use Marcite Plaster in lieu of painting the interior of the pools. This will last longer between refinishing but will impact offseason winterizing as water will need to be left in the pools so the plaster doesn't dry out. This approach is not uncommon with outdoor pools
  - b. Value: DEDUCT (\$75,000)
4. Delete Play Structure in Wading Pool
  - a. Eliminate the wading pool play structure
  - b. Value: DEDUCT (\$140,000)
  - c. Add: \$40,000 if additional vertical sprays are desired to replace play structure

5. Delete Floating Features
  - a. Eliminate the two floatable features in the leisure pool
  - b. VALUE: DEDUCT (\$16,000)
6. Delete Leisure Pool Heaters
  - a. Delete all equipment required to heat the Leisure Pool.
  - b. VALUE: DEDUCT (\$38,000)
7. Pool Coping
  - a. Use standard pre-cast coping stone around the pool perimeter in lieu of formed and poured coping
  - b. VALUE: DEDUCT (\$30,000)
8. Delete ADA Ramp
  - a. Eliminate ADA ramp in the leisure pool and replace it with battery-powered lift and narrow handrails at the stair entry.
  - b. VALUE: DEDUCT (\$25,000)
9. Delete Flocrete Finish
  - a. Eliminate the Flocrete finish to the sprayground slab and finish concrete with basic broom finish
  - b. VALUE: DEDUCT (\$45,000)
10. Delete 3m Diving Board
  - a. Eliminate the 3m diving board, reducing the deep end 1'-0", reducing the length of the deep end area by 10 ft, and relocating the climbing wall in the corner where the 3m board was formerly located.
  - b. VALUE: DEDUCT (\$80,000)
11. Spray Pad Thickness
  - a. Reduce the concrete thickness at the spray pad from 12" to 8"
  - b. VALUE: (\$16,000)
12. Pool Structural Design
  - a. Designing with ACI 318+ as the basis of structural design wouldn't allow for the same amount of crack control and leak control, but it would drop about 20 tons of rebar.
  - b. VALUE: DEDUCT (\$66,000) Matt, Rebar is currently around \$1,350/tn, so this might be a little heavy.
13. Overall Pool Area

- a. We are not currently showing any reduction to overall surface area of water with the exception of shortening the deep end 10' to coincide with the 3m diving board removal. If additional savings are desired the pool areas can be reduced at an approximate cost of \$150/SF.
- b. VALUE: DEDUCT \$150/SF per 1 / SF of pool area removed

**14. AQUATICS TOTAL POTENTIAL SAVINGS: DEDUCT (\$654,000 - \$694,000)**

- a. Additional savings for pool reduction at \$150/SF per 1 / SF of pool area removed.

**Site Value Engineering Options**

1. Eliminate S / SE Redi-Rock Retaining Wall

- a. The front retaining wall could be eliminated by offsetting the southern pool edge about 18' to the north. This would allow a 3:1 slope to continue up to meet the lower level of the pool deck. However, a new wall integrated into the southern portion of the building would need to extend along the maintenance access drive for approximately 60 linear feet to accommodate the slope rising up to meet the pool deck. That wall could start at 10' high around the maintenance area and drop down to zero over 60'.
  - i. Delete: ~ 325' LF of Redi-Rock Retaining Wall
  - ii. Delete: ~ 5,900 SF of Concrete Deck around southern edge of complex
  - iii. Add: 60' LF of Redi-Rock retaining wall as described above
- b. VALUE: (\$115,000)

2. Eliminate Internal Pool Deck Retaining Walls

- a. The deck retaining wall (30" max height block wall) could be eliminated and replaced with an 8' wide strip of artificial turf area sloped at about 3:1. The internal fence may still be desirable, but it may be possible to eliminate it from a code standpoint.
  - i. Delete: ~240' LF of segmental retaining wall between upper and lower pool deck.
  - ii. Delete: Reduce (2) sets of 12' wide stairs to 8' wide stairs
  - iii. Delete: Reduce 12' wide ramp to 8' wide ramp
  - iv. Add: 8' wide turf strip at 3:1 slope between deck levels
  - v. Maintain all internal fencing and gates

- b. VALUE: (\$33,000)
- 3. Parking Lot Pavement 1
  - a. The parking lot pavement could be revised to provide heavy duty pavement only in the drive aisles and a new light duty pavement section in the parking stalls. The heavy-duty section calls for 6.5" of asphalt and 10" of aggregate subbase. A light duty section, subject to geotechnical engineer concurrence, would call for about 4" of asphalt and 6" of aggregate subbase.
  - b. VALUE: (\$60,000)
- 4. Parking Lot Pavement 2
  - a. The lower lot or overflow lot could be redesigned with a light duty gravel section in lieu of asphalt pavement. The driveway aprons in and out would remain asphalt. The gravel surface would require frequent raking.
  - b. VALUE: (\$65,000)
- 5. Bollard Lights
  - a. Every other bollard light could be removed or replaced with a standard concrete filled pipe bollard.
  - b. VALUE: (\$7,000)
- 6. Pedestrian Bridges
  - a. Pedestrian bridges (6) in the main parking lot could be replaced with standard sidewalk and pipe culverts.
  - b. VALUE: (\$5,000)
- 7. Concrete Sidewalks
  - a. Replace the ~300' LF of concrete sidewalk that connects the Lower parking lot with an ADA compliant aggregate trail mix.
  - b. VALUE: (\$6,000)
- 8. Seat Wall & Synthetic Turf
  - a. Delete the seat wall & synthetic turf, located outside the main entry, from the scope of the project. Replace these items by continuing the concrete sawcut pattern, 6' x 6' broom finish.
  - b. VALUE: DEDUCT (\$23,000)
- 9. Synthetic Turf Lawn
  - a. Delete the Synthetic Turf from the N / NE perimeter of the site and replace it with standard seeding mix.
  - b. VALUE: DEDUCT (\$81,000)
- 10. Ornamental Steel Fencing (Perimeter)

- a. Delete the ORNAMENTAL STEEL FENCING starting at the NE corner of the Splash Park Shade Structure and end where the fencing transitions at the retaining wall on the SE corner of the pool (as indicated on A0.2). Replace the ORNAMENTAL STEEL FENCING with 6' BLACK VINYL CHAINLINK FENCING. All gate widths and locations shall remain the same and must include the panic hardware described in specification section 08 71 00.
  - b. VALUE: DEDUCT (\$19,000)
11. Ornamental Steel Fencing (Perimeter)
- a. Delete the ORNAMENTAL STEEL FENCING that divides the Upper and Lower Decks and replace the ORNAMENTAL STEEL FENCING with 6' BLACK VINYL CHAINLINK.
  - b. VALUE: (\$8,000)
12. Replace Paver's w/ Concrete (Typ. 6' x 6' Sawcut)
- a. Delete 4,100 SF of brick pavers in wave pattern as shown on the Landscape drawings and replace it with standard broom finish concrete sawcut 6' x 6' sections.
  - b. VALUE: (\$60,000)
- 13. SITE TOTAL POTENTIAL SAVINGS: DEDUCT (\$482,000)**

### **Architectural / Structural Value Engineering Options**

- 1. Delete Shade Structure (20' x 30')
  - a. Delete (1) 20' x 30' Shade Structure and its foundations from the project. (2) 20' x 30' Pavilions will remain.
  - b. VALUE: DEDUCT (\$55,000)
- 2. Modify Remaining Shade Structures (20' x 30')
  - a. Previous Pavilions had custom components; redesigned units will be manufacturer standards. Changes include the following: change roofing to multi-ribbed metal roof with wood decking, standard .25:12 slope, standard leg position and 7'-6" minimum clearance at low roof end.
  - b. VALUE: DEDUCT (\$24,000)
- 3. Delete Shade Structures (10' x 10')
  - a. Delete (2) 10' x 10' Shade Structure and their respective foundations from the project. (7) 10' x 10' Pavilions will remain.
  - b. VALUE: DEDUCT (\$32,000)

4. Modify Remaining Shade Structures (10' x 10')
  - a. Previous Pavilions had custom components; redesigned units will be manufacturer standards. Changes include the following: change roofing to multi-ribbed metal roof with wood decking.
  - b. VALUE: DEDUCT (\$18,000)
5. General Changes to Building A to Reduce Costs
  - a. Simplify Shape to a rectangle and eliminate the 'L' configuration. Eliminate all step in /outs along the building perimeter.
  - b. Make a total reduction of 425 SF in footprint.
    - i. New = 3,150 SF vs Previous – 3,575 SF
  - c. Simplify the shape of the basement and eliminate the 'L' configuration. Make the basement run end to end eliminating slab on grade portions above on the Upper Level.
    - i. Results in a net add of 160 SF to this level of the building.
  - d. Change all exterior walls to CMU type construction.
  - e. Internalize all steel columns and beams that are outside of the building envelope and locate them inboard of the exterior walls. Foundations can be pier type integrated in the basement wall.
  - f. Change exterior façade from Nichiha panels to Allura Panels (or equal), over 2" rigid insulation w/ 'Z' furring.
  - g. Change exterior soffit from CertainTeed Box (metal soffit system) to Allura Soffit (or equal).
  - h. Change roof from low slope standing seam metal type to TPO membrane system.
  - i. Reduce the Family Restroom from (2) sinks and (2) toilets to a single user configuration with a shower, similar to the layout in Building B.
  - j. Change all interior walls from metal stud with GWB to 3 5/8" or 6" painted CMU as required.
  - k. Delete all ceramic wall tile from the project.
  - l. Except at main entry roof, mono-slope roof overhang to be 30". Rake side face to be 12" overhang.
  - m. Delete canopy at Party Room. Provide stem mounted signage to building face.
  - n. Party Room Relocated, but assume same amenities and finishes.
  - o. Assume a 25% reduction of overhead ceiling related soffits and bulkheads.

- p. Assume a 20 % reduction in total exterior storefront and glazing.
6. General Changes to Building B to Reduce Costs
- a. Eliminate all minor step in /outs along the building perimeter.
  - b. Make a total reduction of 400 SF in footprint.
    - i. New = 2,600 SF vs Previous – 3,000 SF
  - c. Change all exterior walls to CMU type construction.
  - d. Internalize all steel columns and beams that are outside of the building envelope and locate them inboard of the exterior walls.
  - e. Change exterior façade from Nichiha panels to Allura Panels (or equal), over 2” rigid insulation w/ ‘Z’ furring.
  - f. Change exterior soffit from CertainTeed Box (metal soffit system) to Allura Soffit (or equal).
  - g. Change roof from low slope standing seam metal type to TPO membrane system.
  - h. Delete the Family Restroom. This space will be repurposed as a Utility / Storage Room
  - i. Change all interior walls from metal stud with GWB to 3 5/8” or 6” painted CMU as required.
  - j. Delete all ceramic wall tile from the project.
  - k. Convert Roof to a single mono-slope south (low) – north (high)
  - l. Except at main entry roof, mono-slope roof overhang to be 30”. Rake side face to be 12” overhang.
  - m. Delete canopy at Party Room and at Concessions. Provide stem mounted signage to building face.
  - n. Party Room deleted.
  - o. Assume a 25% reduction of overhead ceiling related soffits and bulkheads.
  - p. Assume a 20 % reduction in total exterior storefront and glazing.

**7. VALUE OF CHANGES TO BUILDINGS A & B: DEDUCT: ~ \$800,000 - \$1,200,000**

**Redesign Fees**

- 1. Architectural: \$60,000 - \$75,000
- 2. Civil: \$35,000 - \$45,000
- 3. Structural: \$22,000 - \$27,000
- 4. MEP: \$22,000 - \$26,000

5. Aquatics: \$16,000 - \$22,000
6. TOTAL\*: \$155,000 - \$195,000
  - a. \*Final value to be determined by the number and complexity of the selected VE Options
  - b. Total Savings Offered \$1,936,000 - \$2,376,000 ~ Fees are roughly 8% of offered scope deductions.

**Schedule**

1. Estimated time to complete the work: 45 - 60 days from notice to proceed. Final schedule to be determined by the number and complexity of the selected VE Options
2. Unknown: Will WCCD require a formal permit amendment?