

ZACK TANNER INDUSTRIES

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## **Change Order 2 – Academic Village Swimming Pool Renovations**

January 9, 2020

City of Pembroke Pines

601 City Center Way

Pembroke Pines, Florida 33025

(954) 392-2130 (office)

csorensen@ppines.com

ATTENTION: Christina Sorensen

**CONCERNING:** Filling the pool floor void in pools middle section.

Change Order #1 was approved to locate and repair all unforeseen leaks in the pool system. Part of this repair included removing all the concrete around the pool fittings in the middle of the pool floor. Upon removal of the concrete, it was evident that a void is present between the bottom of the pool's concrete floor and the top of the pool's ¾" rock base in the pool middle section. Upon inspection of this condition, the engineer of record, Mr. John Wahler owner of Aquadynamics Engineering, recommended filling this void prior to refilling the pool to avoid the pool floor from settling in the future. There are two methods, which can be implemented to accomplish this recommendation. The first is to pour flowable liquid concrete fill under the concrete floor. Flowable fill concrete is a self-compacting cementitious slurry consisting of a mixture of fine aggregate or filler, water, and cementitious material. The second option is to inject polyurethane grout under the concrete floor. The polyurethane grout is injected under low pressure through or adjacent to a slab of foundation. The grout then expands to fill the crack or void. Although flowable concrete fill is drastically less expensive than polyurethane grout injection, Mr. Wahler recommends the polyurethane grout option as this material will penetrate through the 3-foot thick rock base to solid ground providing a solid structure as well as filling the void. Flowable fill will fill the void under the concrete but will not offer as much structural strength.

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**Options to complete filling the void under the pool's middle section:****Option 1. Total pricing with flowable liquid concrete fill: \$38,000.00**

**NOTE:** This is not Aquadynamics recommended methodology to solve this problem. However, if the city prefers to move forward with this option, ZTI, LLC can start immediately upon acceptance and directly after completion of the re-piping project stated in change order number 1. If accepted by end of day Friday January 10, this option will not delay the project completion deadline stated in contract.

**Option 2. Total pricing utilizing polyurethane grout fill: \$136,000.00**

**NOTE:** This is the method recommended by Aquadynamics. However, if accepted ZTI, LLC will have to let the sub-contractor know of our intent to proceed by end of day Friday Jan. 10, 2020, for he, his staff and equipment to mobilize onto the project no later than next Monday Jan. 20, 2020. If approved by January 10, this change order will not affect the project completion deadline stated in contract. If ZTI is not notified of acceptance or denial of this option, we do not know when the polyurethane injection contractor will be available again. In addition, the PVC membrane installer will be forced to reschedule the installation to an unknown time in the future. This delay will force us to keep the dewatering pumps full of fuel and running at our cost of \$1,000.00 per day for an undeterminable period and most certainly will not enable us to finish the project on schedule.

Christina Sorensen, Director of Recreation and Cultural Arts, Greg Groselle, City's Aquatics Coordinator, and City Consultant, Mr. John Wahler, Engineer from Aquadynamics, have been onsite at various points of the investigative work to observe and confirm this information.

Please initial next to option and sign below.

\_\_\_\_\_ **Option 1. Total pricing with flowable liquid concrete fill: \$38,000.00**

\_\_\_\_\_ **Option 2. Total pricing utilizing polyurethane grout fill: \$136,000.00**

The original agreement between the parties is incorporated herein, and all terms and conditions set forth therein are made a part hereof.

City of Pembroke Pines Approval \_\_\_\_\_  
Authorized Signature

Date: \_\_\_\_\_

**ZTI-LLC areas of expertise include:** Unlimited aquatics, any scope construction, renovation, engineering and consultation for pools, spas, fountains, waterfalls. An array of specialty waterproofing membranes (Polyurea), specialty decking materials for both vehicular and pedestrian traffic patterns, as well as specialty industrial coatings for light to heavy traffic usage. Turnkey installations from engineering to completion. Any discipline, any scope. References are available in the U.S and Caribbean upon request. Unlimited Scope Commercial Pool Contractor

**APPROVED AS TO LEGAL FORM**

DATED: \_\_\_\_\_

1-13-20