



State of Louisiana
Department of Health and Hospitals
OFFICE OF PUBLIC HEALTH

May 18, 2015

Brian Mistich
Engineer
554 Old Spanish Trail
Slidell, LA 70458

RE: Lake Villa Apartment Pool Renovation
Jefferson Parish

Dear Mr. Mistich,

Plans and specifications for the above named project have been reviewed. The plans are **DISAPPROVED** pending resolution of the following items which appear to be in conflict with applicable provisions of the State Sanitary Code, or upon which further information is needed.

1. Plans swimming pool data indicates that the pool finish will be plaster. Please clarify the color of the pools finish and the Munsell scale rating of the finish. LAC.51:XXIV.301.B, "The floor of all pools shall be white, light colored, or light colored patterns in order to facilitate the identification of any objects within the pool. The color, patterns, or finishes of the pool interior shall not be such as to obscure the existence or presence of objects or surfaces within the pool."
2. Plans page PL-1.1, indicate that the pools deck will be sloped away from the pool. Please clarify what slope will the pools deck be sloped to. LAC.51:XXIV.323.G, "The minimum slope of the deck(s) shall be 1/8 inch per 1 foot for textured, hand-finished concrete decks; 1/4 inch per 1 foot for exposed aggregate concrete decks; and 1/2 inch per 1 foot for indoor/outdoor carpeting decks, unless an alternate drainage method is provided."
3. Please clarify the testing procedures that will be performed on the pools circulation system. LAC.51:XXIV.323.Q, "Circulation system piping, other than that integrally included in the manufacture of the pool, shall be subject to an induced static hydraulic pressure test (sealed system) at 25 pounds per square inch (psi) for 30 minutes. This test shall be performed before the deck is poured, and the pressure shall be maintained through the deck pour."
4. Please show where the hose bib with vacuum breaker will be placed on plans. LAC.51:XXIV.323.S, "A hose bib and a vacuum breaker shall be provided for washing down the entire deck area."

5. Please clarify the location of the handrail that will serve the pools stairs. Please clarify the distance that the leading edge of the handrail will extend from the vertical plane from the bottom riser. LAC.51:XXIV.327.A.1, "Step treads shall have a minimum unobstructed horizontal depth of 10 inches and a minimum unobstructed surface area of 240 square inches." LAC.51:XXIV.327.A.3.b, "The leading edge of handrails facilitating stairs and pool entry/exit shall be no more than 18 inches plus or minus 3 inches, horizontally from the vertical plane of the bottom riser (where applicable)."
6. Plans page PL-1.0 shows a new pool ladder is to be installed at the end of the pool. Please provide typical details on plans which demonstrate code compliance. LAC.51:XXIV.329, "The design and construction of pool ladder(s) shall conform to the following.
 1. Pool ladders shall be made entirely of corrosion resisting materials.
 2. Ladders shall provide two handholds or two handrails.
 3. Below the water level, there shall be a clearance of not more than 6 inches nor less than 3 inches between any ladder tread edge and the pool wall.
 4. The clear distance between ladder handrails shall be a minimum of 17 inches and a maximum of 24 inches.
 5. There shall be a uniform height between ladder treads, with a 7-inch minimum distance and a 12-inch maximum distance.
 6. Ladder treads shall have a minimum horizontal depth of 1 1/2 inches."
7. Please provide clarification that all of the pool equipment, pool materials, disinfection equipment, and chemical feeders are compliant with NSF50. LAC.51:XXIV.501.D and 901.A, "Where equipment sizing falls within the scope of National Sanitation Foundation (NSF) testing, materials and equipment used in the circulation system shall comply with the appropriate requirements of NSF Standard 50." And, "Disinfectant equipment and chemical feeders, hereinafter referred to jointly as "equipment," shall comply with the requirements of NSF Standard 50. The disinfection equipment shall be capable of precisely introducing a sufficient quantity of an approved disinfecting agent to maintain the appropriate recommended guidelines required concentrations as per §§903 and 905."
8. Provide calculations showing the inlet and suction velocity into and from the pool at all points of entry and exit. LAC.51:XXIV.503.A. In part, "The water velocity in the pool piping shall not exceed 10 feet per second for discharge piping, (except for copper pipe where the velocity should not exceed 8 feet per second), and 6 feet per second for suction piping, unless summary calculations are provided to show that the greater flow is possible with the pump and piping provided. Pool piping shall be sized to permit the rated flows for filtering and cleaning without exceeding the maximum head of the pump."

9. Pressure or vacuum gauges were not called out on the plans. Please show where these items will be placed on plans. LAC.51:XXIV.503.C, "A pressure or vacuum gauge or other means of indicating system condition shall be provided in the circulation system in an easily readable location."
10. Please include the location of the pools flow meter on plans . LAC.51:XXIV.503.C.1, "Class A, Class B, and Class C public pools shall be provided with an indicator measuring the rate of flow through the filter system with an appropriate range readable in gallons per minute and accurate within 10 percent actual flow."
11. Please provide calculations detailing that the pump is sized correctly. Calculations should include, but not limited to the follow: pipe friction loss, pressure loss across pool equipment, pump capacities (TDH), and limiting factors of pool equipment such as flow rates and max operating pressure. LAC.51:XXIV.507.A, "A pump motor shall be provided for circulation of the pool water. Performance of all pumps shall meet or exceed the conditions of flow required for filtering and cleaning (if applicable) the filters against the total dynamic head developed by the complete system."
12. Please clarify that the main drain cover outlet area will be at least 4 times the area of the discharge pipe. LAC.51:XXIV.511.C.1, "The main drain outlet grating shall have an area of openings four times the area of the discharge pipe to prevent objectionable suction effects."
13. Please clarify if the main drain cover will be provided with a dark colored circle around the grating. LAC.51:XXIV.511.C.3, "The grating of the main drain outlet shall be easily visible. Drains not constructed of shiny metal shall be marked with a dark colored circle."
14. Plans page PL-1.1 details that the pools main drains will have a new cover installed. All pool suction must comply with the Virginia Graeme Baker Pool and Spa Safety Act (P&SS Act) (codified under 15 USC 8001-8008). The Association of Pool and Spa Professionals (APSP) Standard 16-2011 (Standard Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs) may be utilized to ensure compliance.
15. Please clarify if the pool will be operated at night. Also clarify if the pool area has existing lighting, and if that lighting is to be modified. Please reference LAC.51:XXIV.715 for further guidance on required illumination levels.
16. Please verify that the pool chemical area, equipment, and storage rooms have proper mechanical ventilation or is directly open to the outside atmosphere. No description on ventilation was provided.
17. Please clarify what type of test kit will be used by the pools staff. Also disinfectant residual monitoring must be measured using a DPD testing method. LAC.51:XXIV.901.C. In part, "All pools shall be supplied with chemical test kits for the determination of pH, chlorine or bromide residuals, cyanuric acid (if used), total

- alkalinity, and calcium hardness. The test kit shall be capable of at least measuring pH and disinfectant residual ranges, as required.”
18. Please clarify how the pH will be controlled in the pool. LAC.51:XXIV.905.B.1, “Swimming Pools and Wading Pools. The pH shall be maintained in an alkaline condition as indicated by a pH of not less than 7.2 nor greater than 7.8 at any time the facility is in use.” Also, Lac.51:XXIV.901.B.3. In part, “Hand batch feeding of any pH chemical into the pool is expressly prohibited.”
 19. Plans page PL-1.1 shows that the tanning shelf surface is approximately 15 inches from the deck. Please clarify this distance. Letter of Intent from the state health officer Concerning Tanning Shelves. #5, “A deck surface constructed in compliance with Part XXIV of the Louisiana State Sanitary Code (LAC 51:XIV) shall completely surround the sunning or tanning shelf except for the sunning or tanning shelf’s edge where it meets the minimum 3 feet deep shallow end of the pool. The distance from the surface of the deck to any point on the surface of the sunning or tanning shelf shall be a maximum of twelve inches (12”).”
 20. Please provide engineering justification for not having an additional surface skimmer for the new surface areas that are to be added by the tanning shelves. Letter of Intent from the state health officer Concerning Tanning Shelves. #9, “A minimum of one skimmer per 200 square feet or any fraction thereof, of the sunning or tanning shelf surface area, shall be properly located, installed and connected with the pool’s circulation system.”
 21. Please clarify the slope of the tanning shelves. Letter of Intent from the state health officer Concerning Tanning Shelves. #10, “The surface of all sunning or tanning shelves shall be fully self-draining with a maximum slope of one foot vertical per twelve feet horizontal, and shall comply with all other pool surface requirements of LAC Title 51 Part XXIV (Swimming Pools).”
 22. Both of the tanning shelves are halfway into the section of the pool with water depth greater than 4 ft. Please adjust accordingly. Letter of Intent from the state health officer Concerning Tanning Shelves. #11, “All sunning or tanning shelves shall be installed at the most shallow portion of the pool but shall, in no case connect with or be adjacent to water depths greater than 4 feet.”

Sincerely,



Brandon Comeaux, E.I.
Region 1 Engineer Intern
OPH – District I