

# ***POOL LAY OUT AND EXCAVATION***

## ***Hawaiian Aloha Pool lay out instructions***

### ***Excavation lay out***

- *The lay out begins by driving a stake at the shallow end waters edge center line point.*
- *Connect a 50' or 100' tape to the shallow end stake and extend it along the center line 2' or 3' past the deep end waters edge and lay it on the ground.*
- *If you are using a factory pool lay out template, position the template to correspond with the center line. Measure out 12 inches from the edge of the template and stake or paint a line around the template. This will be your dig line. ( if you are not using a factory template, continue on to the next step)*
- *Moving down the length of the pool center line from the shallow end, locate the first perpendicular point. Measure out from this point to the dimension noted on the plan and drive a stake. Continue down the line and repeat this process to the dig line at the deep end. Be sure to keep the tape measure square to the center line.*
- *From the shallow end waters edge center line point, measure 18"(unless otherwise indicated) along the center line away from the shallow end, then drive a stake at that point. Measure out from that point the appropriate perpendicular dimensions, and drive marker stake.*
- *Connect the outside stakes or marks with string or contractors paint and you are ready to dig.*
- *Keep the center line stakes in place, or extend the center line out of the way of the excavator so you can use them for future reference. Remove all other stakes to reduce confusion.*

### ***Elevation calculations***

- *Determine the elevation you want for the top of the deck where it meets with a patio. If the deck is free standing, find the elevation at the high point of the ground near the proposed edge of the deck. Subtract at least three inches from that reading for drainage. This point will be the top of the deck and will be referred to as the "finish grade".*
- *Concrete decking should slope down and away from the waters edge approximately 1/4" for every foot of deck width.*

### ***Top of the pool calculation***

*"Finish grade"* A. \_\_\_\_\_

*Width of concrete deck \_\_\_\_\_ multiplied by 1/4"* B. \_\_\_\_\_

*The thickness of the cantilever form, brick, etc.* C. \_\_\_\_\_  
*(Leave blank if deck will be flush with the top of the pool)*

A. \_\_\_\_\_ Minus B. \_\_\_\_\_ Plus C. \_\_\_\_\_ Equals \_\_\_\_\_  
*(top of pool)*

*Once you have determined the top of the pool elevation, mark the story pole accordingly. Attach a piece of masking tape to the story pole at that mark. The tape can then be used as the beginning point for locating all the depth dimensions on the story pole. Refer to the dig plan for depth measurements. From the top of pool mark, measure up the pole and mark each depth measurement with tape. When complete, use a marker pen and number each piece of tape above the top of pool mark from 1 to however many depth measurements there are. Remember, the marks are at finish grade. If an over dig for bedding sand is required, don't forget to allow 4 inches or more for the sand or stone dust.*

## **EXCAVATION**

*Start the excavation from either end. From top to bottom the walls should taper in about a foot to sixteen inches from the shallow to the deep end. This method will reduce the chances for cave ins and will save on back fill material.*

- *Begin digging at either end of the pool. Depth dimensions are from the top lip to the pool floor. Soils other than sand will require a 4" to 6" over dig to allow for a sand or stone dust bed.*
- *Center line dimensions on the excavation view are cumulative in the direction of the arrows from both ends.*
- *As the excavation progresses and the first vertical dimension on the center line is reached, measure from the excavated end wall to the first depth mark on the dig plan, usually 18".*
- *Using a story pole and laser level or transit, check for correct depth of the first vertical dimension and if necessary, adjust the depth accordingly. Include the over dig if required.*
- *Drive a wood or steel stake at the first vertical dimension on the center line. Measure 3' out on either side of this stake and drive a stake at these locations. Be sure to keep the stakes in line with and perpendicular to the center line stake.*
- *Use these last two stakes to measure from for each of the remaining vertical dimensions. **From this point on all horizontal center line measurements are measured at excavated ground level and include slope angles.***
- *As the excavation progresses and each depth dimension point is reached, drive a stake 3' on either side of the center line until the excavation is complete. Mark each stake at the appropriate bottom of pool dimension. Note: If part of the pool floor is mistakenly over dug, do not pack dirt back into the over dig. This may result in the pool shifting when this material gets wet. Use extra sand or stone dust to fill this area. NOTE: before proceeding to the next step, refer to dry well installation*
- *Attach 1"x 4" boards to the stakes so that the top of the boards are flush with the marks.*
- *Place and rake the sand flush with the top of the boards. Screed the sand using a 2"x 4"x 10'(12') board to finish the sand or stone dust to finish grade.*
- *Remove the 1"x 4" boards and stakes being careful not to disturb the grade more than necessary. **Double check to remove all stakes!!***
- *Fill in the foot prints and 1"x 4" tracks and finish rake the sand.*

*While the excavator is on site, it may be a good idea to have him dig a trench to the equipment. If ground water is encountered during the excavation, over dig the floor by about 3 inches and as the excavation continues, fill this area with crushed 3/4" rock. This will allow water to run through the rock without eroding the floor and creating a mud hole. Use a submersible pump to control the water as the excavation continues. When the dry well is installed, the water can be controlled through it until the pool is set and back filled.*

### ELEVATION AND EXCAVATION DETAIL

