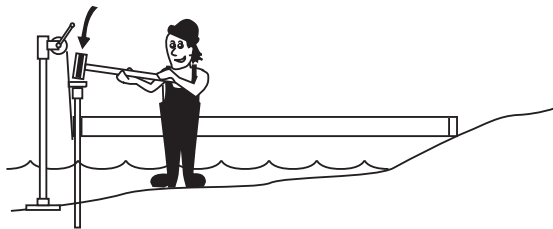
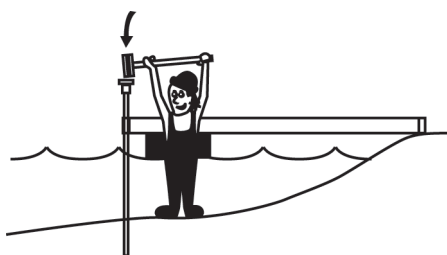


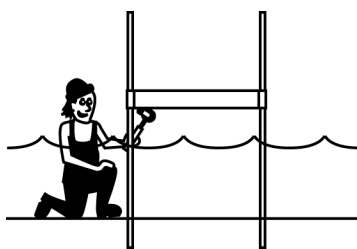
Great Northern Docks  
Duralite Stationary Dock Installation Instructions



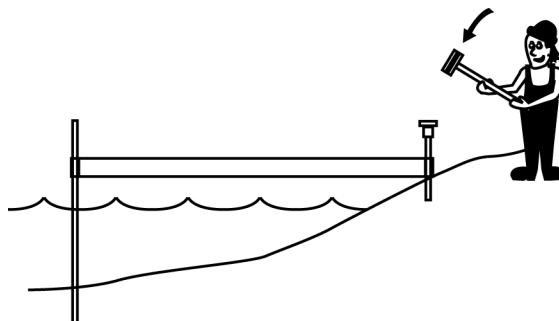
1A.) Position starter section, without decking, near level and set (2) legs in place on the deeper end. Drive legs 12"-24" into ground using a driving cap and a 5 lb sledge hammer. (Keep helpers a safe distance away from hammer.) You may also opt to sink legs with an auger tip or by means of water jetting.



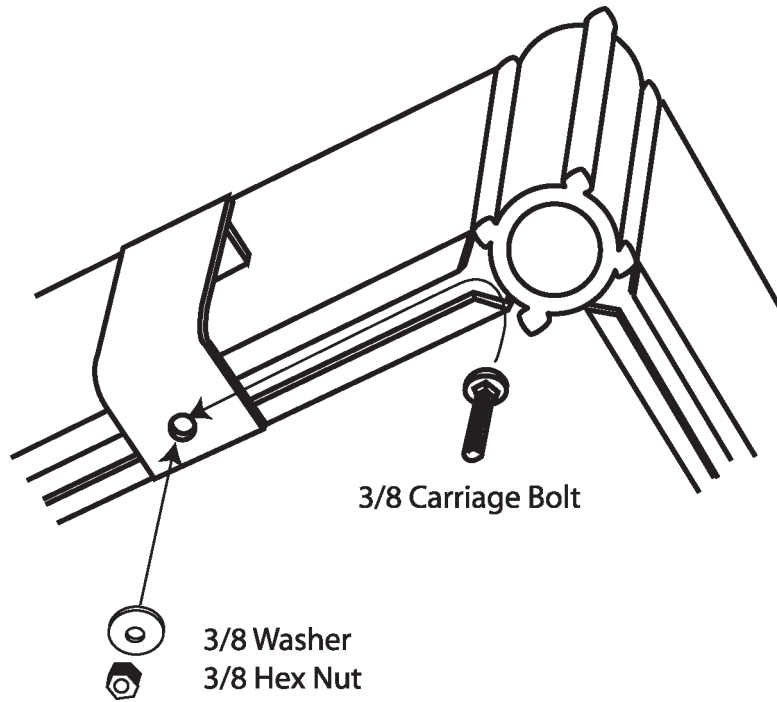
1B.) For alternate positioning support use a floatation device, row boat, or blocks to hold starter section in place while driving legs. If ground is soft mud or too rocky to drive at least 12", pull up leg and place pipe foot loosely on bottom of leg as shown. Drive pipe as far as possible up to 24", then tighten set screw on pipe foot with a 1/2" wrench or adjustable.



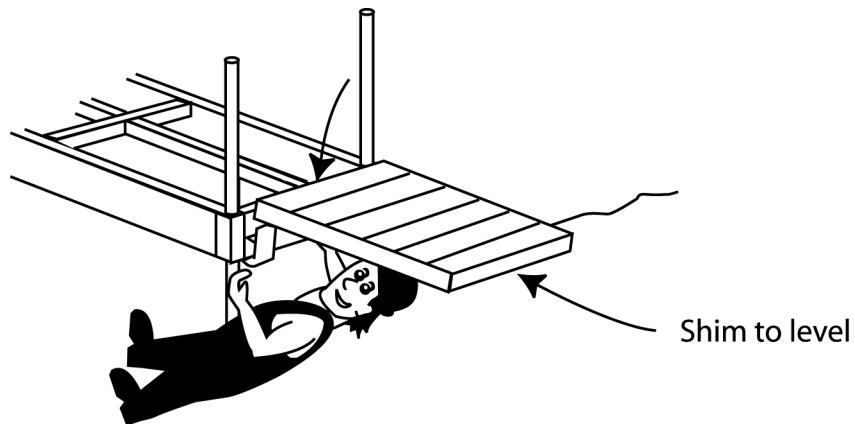
2.) Level and tighten set screws on these two legs with a 1/2" wrench or adjustable. Reach from above or below with the decking still out.



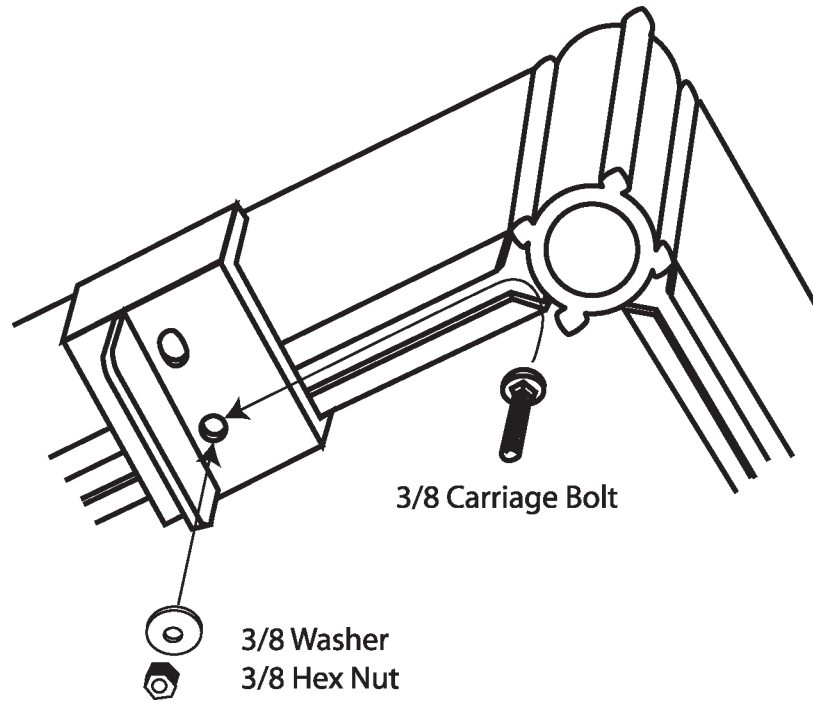
3.) Drive shore legs 12-24" into ground as in step 1. Level section across length and width and tighten the set screws.



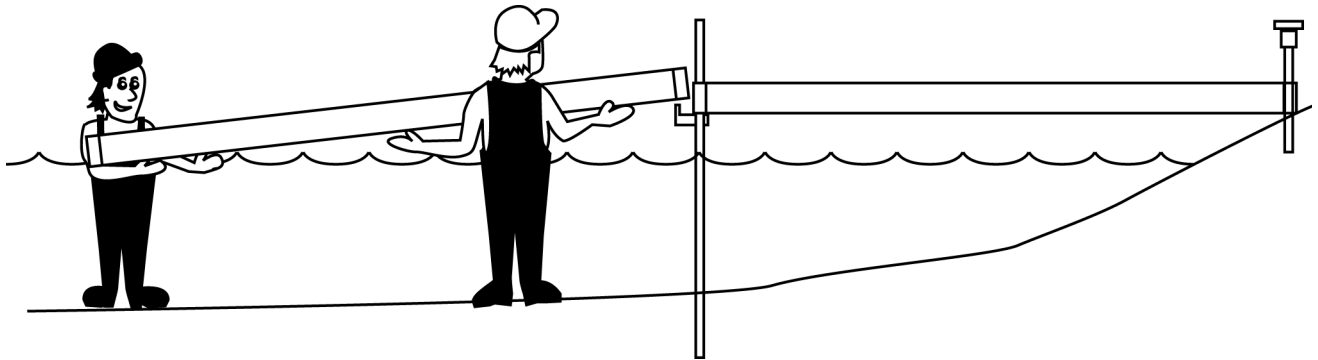
4.) If a gangplank is present in your design, install it at this time. Attach gangplank hangers as shown above. Place hangers 8-12" in from each side of the dock.



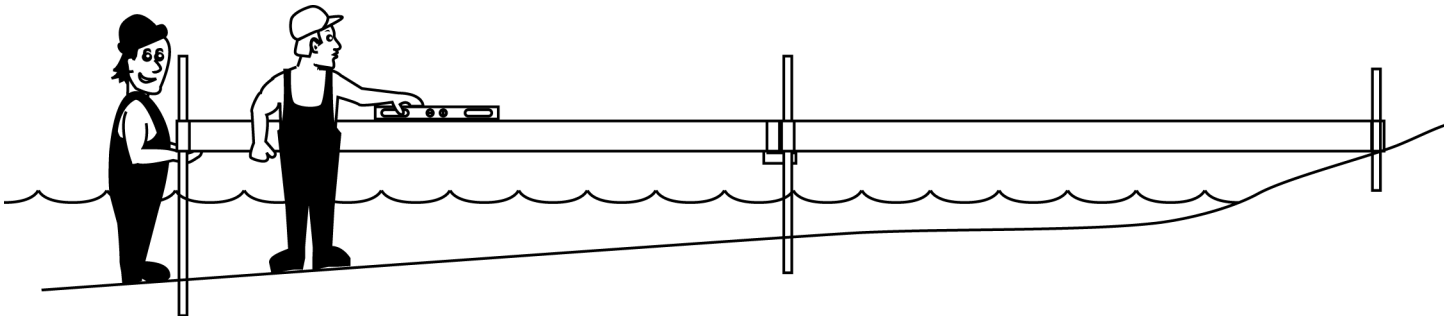
Place gangplank over gangplank hangers and shim the shore end with gravel, wood or other substantial material to a position level across the width so the gangplank does not rock. The weight of the gangplank is enough to hold it in place for normal use if shimmed properly.



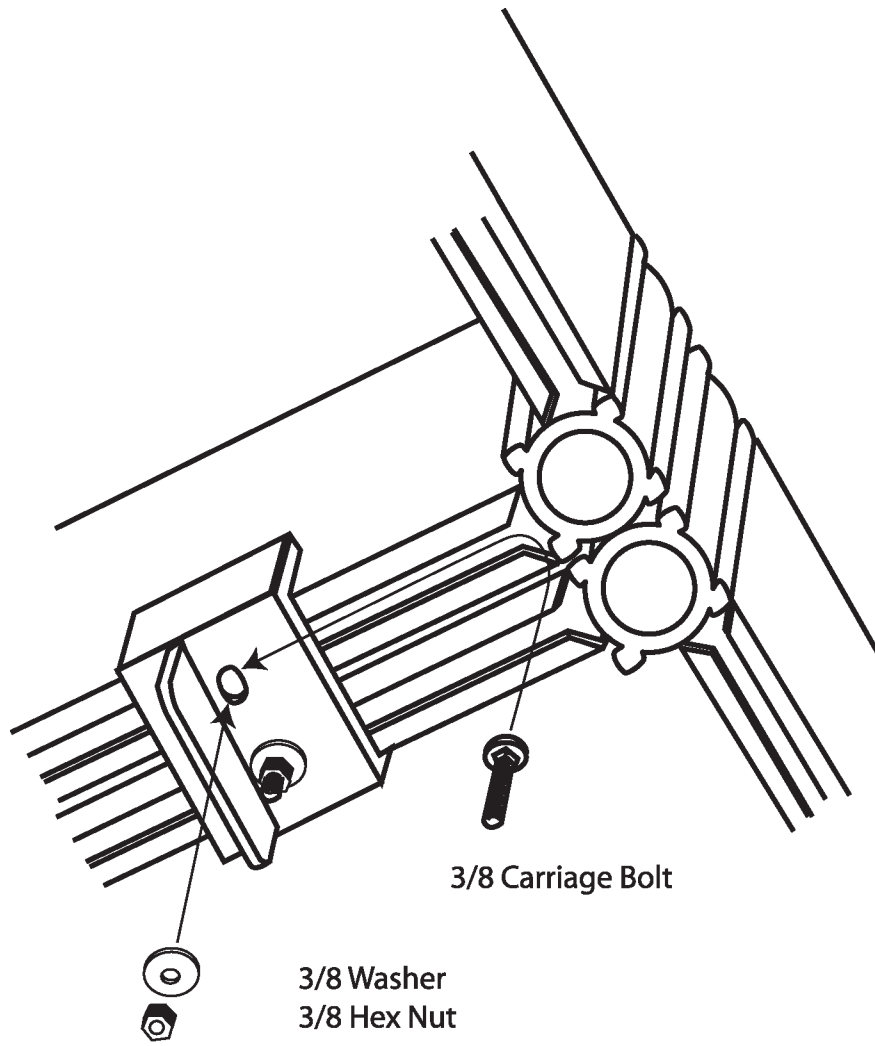
5A.) Locate and attach J Brackets in the appropriate location for your design. This may be off the side or end of the starter section. Attach with bolts as shown.



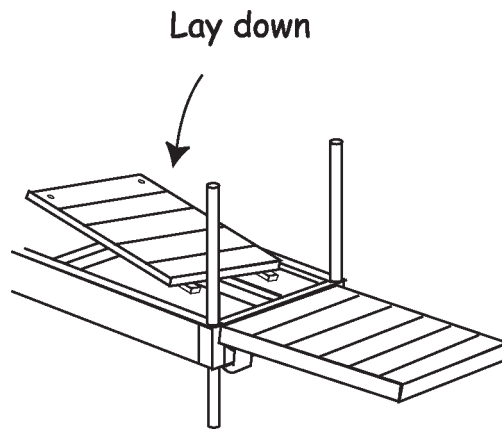
5B.) Rest adder section on J Brackets and install outer legs as in step 1.



6.) Level in both directions and tighten the set screws.

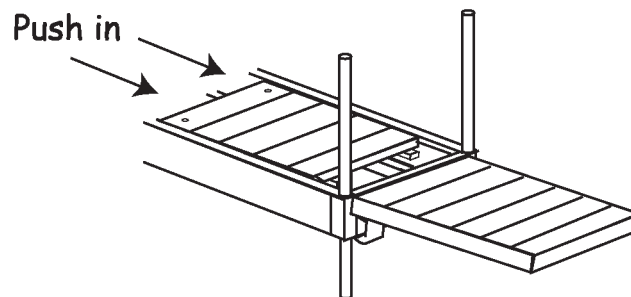


- 7.) Secure J Bracket end tightly with bolts.
- 8.) Repeat steps 6-8 for each additional section.

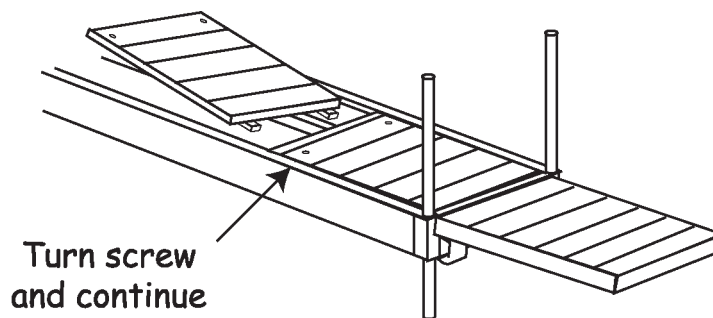


9A-D.) Install decking starting from shore.

9A.) Place extensions on panel under frame lip on shore end.



9B.) Slide up tight.



9C.) Use Phillips screwdriver to lock tabs down by turning 1/2 turn until it stops. Do not turn past the stop.

9D.) Place extensions on next panel under first panel and slide up tight. Lock tabs.

9E.) Repeat step 9D until section is complete. Repeat step 9 for each section.

10.) Fill all empty leg sockets with black caps and cover all pipe ends with vinyl safety caps.

11B.) Slide the first brace down the leg under water as low as you can comfortably reach while swinging the high end of this brace around to the left side of the dock.

12A.) Pull the high end of the brace up and attach a loose hook with the open face away from shore. Attach the hook with (1) 1" hex bolt and hex nut on the outer hole of the long side of the hook with the nut on the underside of the dock.

12B.) Pull the hook tight against the left leg of the dock and secure with a 3 1/2" hex bolt and hex nut through both holes with the nut on the underside of the dock.

12C.) Tighten both bolts and nuts on the high end of the brace.

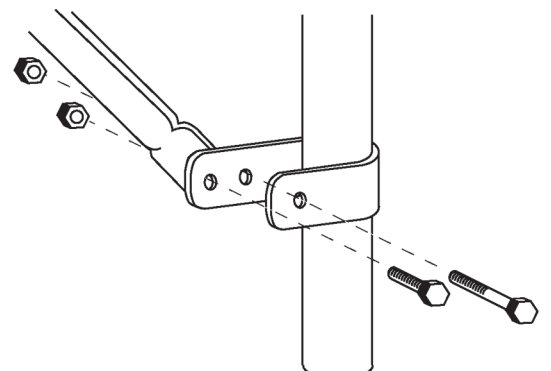
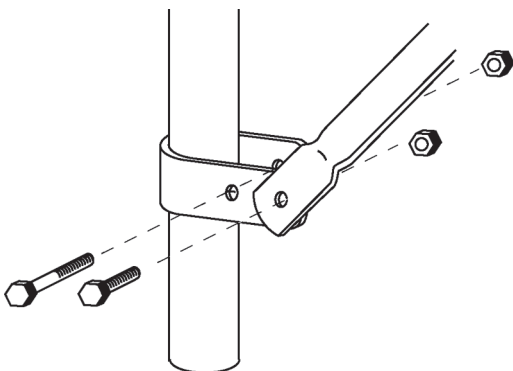
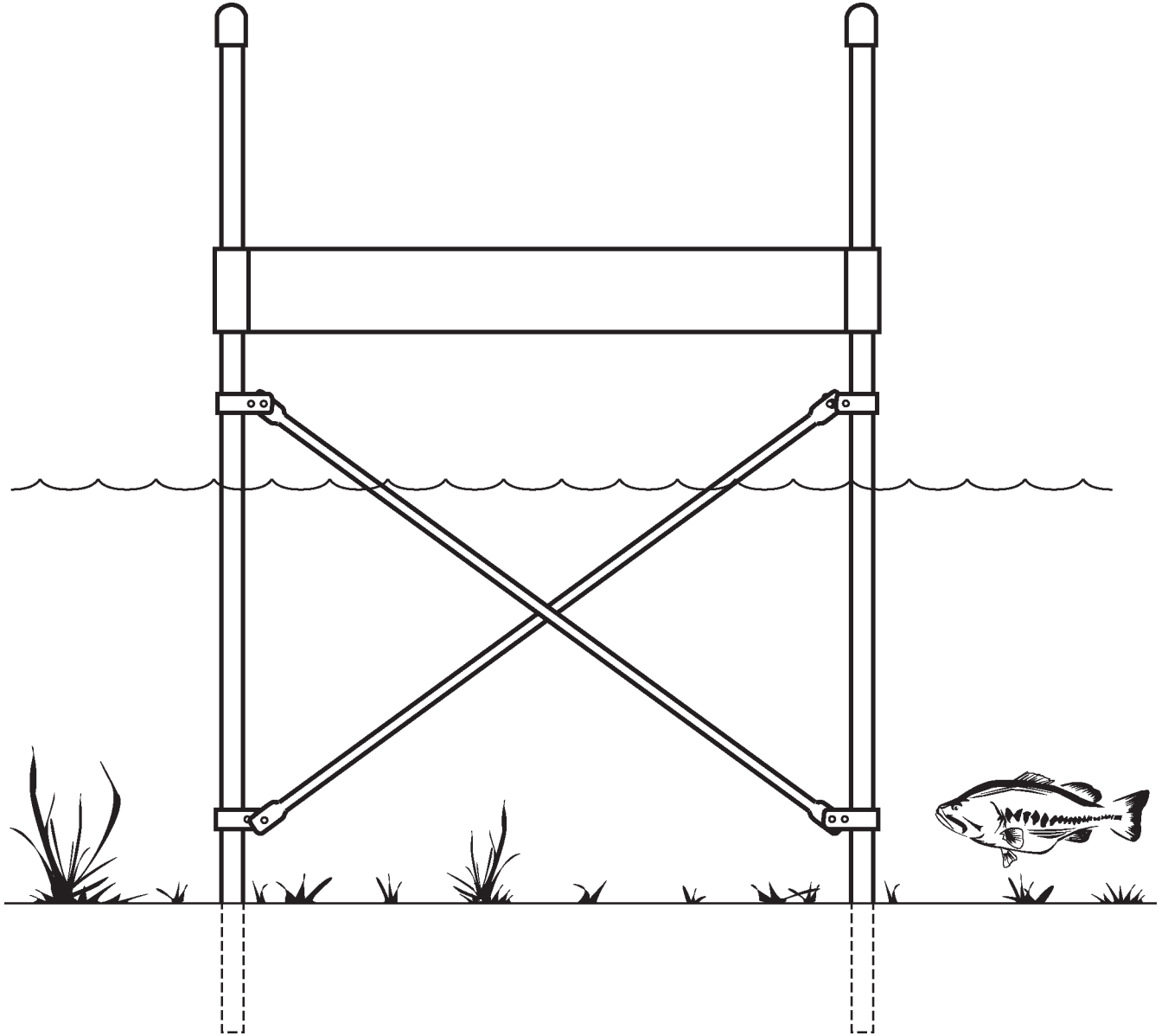
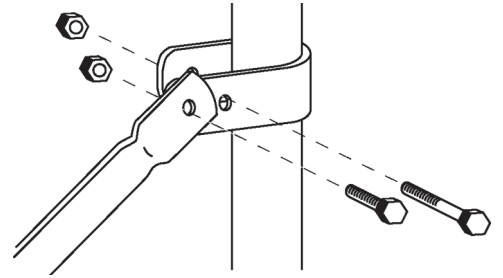
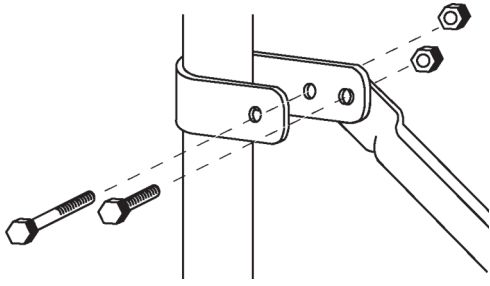
13A.) Attach the rigid hook (welded) end of another brace to the left leg of the dock and secure loosely with (1) 3 1/2" hex bolt and (1) lock nut with the lock nut facing the underside of the dock. Only tighten until the nylon engages tightly past a few threads so that this bolt can be free to spin.

13B.) Slide the second brace down the leg under water as low as you can comfortably reach while swinging the high end of this brace around to the right side of the dock.

14A.) Pull the high end of the brace up and attach a loose hook with the open face toward shore. Attach the hook with (1) 1" hex bolt and hex nut on the outer hole of the long side of the hook with the nut on the underside of the dock.

14B.) Pull the hook tight against the right leg of the dock and secure with a 3 1/2" hex bolt and hex nut through both holes with the nut on the underside of the dock.

14C.) Tighten both bolts and nuts on the high end of the brace.



Step 15) Your design may call for longitudinal braces. Consult your dock designer for the appropriate locations for these. If required, follow these steps to install:

15A.) Insert a 3/8" x 1" Carriage Bolt into the bottom track on the side you will be placing the brace at the corner of the dock as shown. Slide the bolt away from the corner approximately 3 feet for a small brace, or 5 feet for a large brace.

15B.) Attach the rigid hook (welded) end of one brace to the leg of the dock and secure loosely with (1) 3/8" hex bolt and (1) lock nut with the lock nut facing the underside of the dock. Only tighten until the nylon engages tightly past a few threads so that this bolt can be free to spin. This will allow you to slide this end of the brace under water. (If there are already cross braces installed on the dock, you will need to fasten this end on beneath the top of the already installed cross braces.)

15C.) Slide the brace down the leg under water as low as you can comfortably reach while swinging the high end of this brace around to the left side of the dock. Again, if cross braces are already installed, you will only be able to slide this until it contacts the lower end of the already installed brace.

15D.) Pull the high end of the brace up and attach an angle connector "L" with (1) 1" hex bolt and hex nut with the nut facing the underside of the dock.

15E.) Slide carriage bolt in track while pulling brace angle connector "L" up to meet it. Pull brace up tight to the track onto the carriage bolt shaft (from 15A) and secure with a 3/8" hex nut.

15F.) Tighten all bolts and nuts on the high end of the brace.

Installing a Bench 16.

16.) Benches are intended to attach to one dock leg, and to add one

