



Planning A Custom Aquarium:

Avoid Common Mistakes!

Planning a custom design or built-in aquarium for your new home, addition, business, office or build-out?

Make sure you hire a professional!

Select an aquarium source to provide your aquarium BEFORE you start designing! This is the most common mistake made by people who want to add an aquarium to their new home, house addition or improvement. They hire an architect who is very competent when it comes to home design, but may know little or nothing about aquariums.

This is a common scenario - The architect draws up plans for a beautiful room with a 1000 gallon aquarium incorporated as a design element. The blueprints are submitted to one or more aquarium sources for bidding. One of two things usually happen: If the aquarium business has good experience with custom work, they may find problems with the design and the architect will have to re-work it. More commonly, however, the store will not have experience with large custom aquarium design and will bid the job as planned, leading to major disasters once the project is completed.

The aquarium should be designed around the life it will support, not the other way around. An aquarium is successful when the animals that live in it are in an aquatic environment that duplicates their natural habitat as closely as possible. The lakes, rivers, and oceans of the world contain many different habitats with different physical, chemical, and biological characteristics. A large aquarium may have the same chemical and biological make-up, but may need various physical mini-habitats to support different types of aquatic life that require a certain structure, water current, or light intensity. A fish or invertebrate that lives in one habitat may not survive well in another. Therefore, it is important to first at least have some idea of the livestock an aquarium will hold before designing the aquarium.

Allow for proper access for routine aquarium maintenance. The area above the aquarium should be free of obstruction and should be of a height equal to at least 50-75% of the height of the tank. Sometimes, for instance, aquarium decorations will need to be removed monthly for maintenance. Not allowing good access for maintenance will result in a much higher cost to service the aquarium. Cabinet doors above the aquarium should be designed to allow easy access to the entire aquarium surface.

Good ventilation of the aquarium and all aquarium equipment is very important to prevent heat and moisture damage to millwork and over-heating in the aquarium. Failure to allow for good ventilation will require major work to be done later to your aquarium installation and may require the purchase of an aquarium chiller, which is an expensive investment.

If you are planning a marine invertebrate living-reef aquarium display, you will need powerful lighting and pumps which can increase the heat production in and around the aquarium by as much as 70 percent. This may raise the water temperature by ten degrees

or more, making an aquarium chiller a necessity. Chillers cannot be fully enclosed, so it is important to carefully consider their location.

Make sure there is enough space below the aquarium for good filtration and other aquatic life-support equipment, or if possible, plan to locate the aquarium mechanicals in the basement of your home or on another floor below the aquarium tank. Inexperienced aquarium businesses rarely stress the importance of allowing enough space for aquarium equipment.

Electrical requirements can vary widely depending on the size and type of aquarium desired. Outlets should be ground-fault interruption protected, and proper amperage needs will need to be calculated to prevent power outages to the aquarium.

Don't rush the aquarium installation! This happens a lot. Take whatever lead time the aquarium store told you initially and add two to three weeks to it. That will give you a realistic deadline. Installing a custom aquarium is half science and half art, especially when the aquarium filtration is to be plumbed through the panels of the tank. The installer should be able to work slowly and steadily in order to do a good job. If you're the impatient type and rush the job, the result is always disastrous.

If the aquarium is built into a wall or other structure as part of a new build-out or building, the tank may be placed in position and rough-plumbed prior to millwork installation. However, the actual aquarium work should be completed **ONLY AFTER** all other trades work has been completed, including carpeting and flooring. We have seen many aquariums that failed or were permanently damaged by paint fumes, sheetrock dust, etc., because the client or contractor rushed the job. Greater patience is required after the aquarium is filled, as establishing a stable ecology in an aquarium may take months. The aquarium should be stocked slowly over several months and algae should be allowed to grow for a while before the aquarium is first cleaned.

There are many other factors and issues to be considered when planning a custom built-in aquarium. OC-FISH has more than twenty years of experience in designing custom aquaria and can supply full specifications for your new aquarium installation. We work with you every step of the way, from concept to blueprint to installation to maintenance. Because we take the time to meet with architects and designers frequently during the building process, potential problems are avoided. We care about the success of your aquarium because our excellent reputation is on the line!