

How to Build a Sand Volleyball Court

Considering the exponential growth of the game of sand volleyball in recent years, and the 29 colleges across the country suiting up for the second official sand season, one of the most valuable media resources is undoubtedly a “how to” article on building a quality sand court. If you’re looking to build your own personal court, a lot of the regulations this article discusses may not apply. If you’re looking to build a legitimate court for a legitimate sport—read on.

As the NCAA authorizes new programs across the country, colleges, high schools, and recreation centers are building official sand volleyball courts that offer a low-maintenance, potentially multi-use facility that brings the beach to any region.

“Sand courts are relatively affordable facilities that have campus-wide uses,” Kathy Deboer, executive director of the AVCA said. “If you invest in proper drainage, good sand, and a safe and reliable net system, your courts require minimal maintenance and could be used virtually 24 hours a day.”

**The process and materials for building a sand court are guided by the NCAA sand volleyball rules modifications to the domestic Competition Regulations as Presented by USA Volleyball Beach Volleyball Rules.*

Locate your Courts

- To be eligible to conduct an NCAA team match, two courts are required and three recommended, so make sure the space you select can accommodate two to three courts with enough free space in between. NCAA recommends that Sand volleyball courts for doubles play measure 52’6” by 26’3” and the space between side-by-side courts be roughly 20 feet and the space between end-to-end courts be roughly 30 feet.
- After selecting a location that supports this size, it is typically suggested that the court orientation be set so that the net runs east to west. That will help avoid morning and evening sun directly in the eyes of one team. You may also consider how nearby buildings and shadows impact play.

“We had to consider wind, sand erosion, the sun, shadows, and if those things create an advantage for one side,” Head Sand Coach Tami Audia said about her recently built sand facility at Georgia State. “To avoid all potential advantages, we went with three tiered courts all facing the same direction.”

Dig, Frame, Drain your Courts

- The next step is to choose a material to frame the court area. Consider investing in concrete to surround your courts. Some facilities have stacked rows of 2” by 6” treated lumber to create a perimeter to contain the court foundation and sand layers. Wood is less expensive, but it must be replaced on a more frequent basis.
- The NCAA doesn’t specifically address regulations on digging and framing courts or facilities, but the AVCA offers several resources that can help fill in the gaps. Sports Imports, the official net system of the AVCA, offers guidelines and other resources on sand court design and

construction. Due to the layers of substrate required to achieve proper drainage and a safe court, Sports Imports recommends digging roughly 3.5 feet to install a drainage system under the court.

- Once you've dug your hole and framed your courts, lay out your drainage pipe (8" perforated pipe recommended by our experts) so it leads away from the court. Be sure to wrap all pipe with 2 layers of landscaping fabric to avoid clogging by sand.

Anchor your nets

- The NCAA recommends that in permanent court setups, the poles anchoring the nets are free from guy wires and that the poles be padded. To achieve upright supports that can withstand net tension, Sports Imports also suggests installing permanent sand anchors, which bolt directly into cement piers set safely below the sand. Anchors provide a solid base to eliminate upright deflection and reduce movement caused by seasonal temperature changes. Piers and anchors should be set so that uprights are at least 28" outside each sideline to provide an appropriate safety barrier.
- For easy adjustment and multi-use, consider a net system that has a solid anchoring system and multiple net heights to adapt — not only for men's and women's heights, but also for gradual sand loss.

Layer Substrate

- When the upright supports have been constructed, it is recommended that a layer of gravel be installed as a base material. Gravel helps with drainage and maintains a solid stable foundation for the sand. Explain to your gravel supplier that it will be used for drainage, and he can recommend the size for your needs.
- Next, add a layer of landscaping fabric, installed over the gravel. This allows drainage and prevents stones from mixing with the volleyball sand to maintain a soft, playable surface.

Get THE Sand

- Once your court is framed, drained, and your net supports anchored, it's time to add the sand. Sand is the defining aspect of the sand volleyball court; and not all sand is alike. Contractor sand may be less expensive, but you may find that the decreased cost does not compensate for a compacted playing surface. Reputable volleyball sand providers will explain the best sand options for your location and climate. Light-colored sands are suggested because they absorb minimal heat. The NCAA recommends the sand be washed, screened and clean, round, sub-round, or angular in shape, and intermediate in sizing. The sand should be at least 18 inches deep on the court and at least 12 inches deep in the free space.

Attach your Net and Place your Boundary Markers

- The final step of building a sand volleyball court is installing the equipment. Boundary markers should contrast with the color of the sand and be placed inside of the court dimensions. Boundary anchors should be buried to prevent injury.
- Uprights and nets should be installed and adjusted to the same height settings as indoor volleyball. The NCAA calls for a net 27' 10.5" long and 39" wide when hung taut, placed vertically over the axis of the center of the court. The net should be made of 4" square mesh with two 2-4" wide horizontal bands made of two-fold canvas in bright colors, sewn along its full length on the top and bottom.

Despite the depth and detail of this how-to, it is best to hire a contractor or architect if you are unfamiliar with the excavating and construction required for this project. Other costs include your materials like sand, gravel, and net systems.

Depending on your distance from the nearest coast, quality sand can cost anywhere from \$35 to \$79 a ton, including delivery. You can calculate how much sand you'll need using the following formula: (Length x Width x Depth in feet divided by 27) x 1.6 gives you tonnage; (L x W x D) divided by 27 gives you yardage.

Similar to sand, gravel cost can vary based on your location, ranging from slightly cheaper than sand to slightly more expensive. The formula for calculating tonnage is the same as for sand, and since you will likely not need 18 inch deep gravel, this cost should hopefully be less than your sand cost.

If your intention is to follow NCAA regulations, its best to get a safe net system without guy wires that offers easy height adjustment in case of sand loss or variation between men's and women's play. It is important to invest in quality uprights, net, and boundary markers since this equipment has to withstand the elements and potentially the use of other campus organizations.

"We do share our courts with intramurals, club, and occasionally others," said Tim Loesch, head sand volleyball coach at Stetson University. "I like that they're accessible to other groups. It helps our marketability and gets people to come out and support us because we share it. It's a win-win for everybody."

Sharing your sand facility may also be a viable option when looking for funding. Since sand workouts are known to improve strength and quickness without stressing joints, almost any team or group can benefit from utilizing sand courts.

With such widespread benefits and minimal facility upkeep, it's easy to see why the number of collegiate sand volleyball programs has nearly doubled in the last year. At this rate, we can look forward to an NCAA Championship in 2015-16.