IMPORTANT! Please read the entire installation packet and review all drawings before starting installation.

We would like to provide the following suggested guidelines for locating your Shade System:

- Refer to the dimensions shown in the Plan View for your Shade System and make sure there is adequate space to install the structure. Avoid locations which would bring the support posts dangerously close to traffic patterns of motorized equipment or vehicles.

- Refer to the height dimension shown in the Elevation view for your Shade System, and make sure you avoid overhead obstructions such as tree or roof overhangs. Remember that trees which do not conflict with your Shade System’s canopy now will grow and may damage your Shade System if not trimmed continuously in the future.

- If installing your Shade System over playground equipment, please follow the playground equipment manufacturer’s recommendations for safe distances to maintain between the Shade System’s posts and canopy and all parts of the playground equipment in compliance with federal Consumer Product Safety Commission (CPSC) guidelines. If uncertain of safe distances, contact the CPSC in Washington, D.C., for a copy of the latest guidelines which apply to playground equipment.

TOOLS REQUIRED:

Shade Systems, Inc. does not supply the tools required to erect the structure. You will need common wrenches as well as a drill, string line, level, mallet, shovel, post hole digger, pry bar, washable felt tip marker, 3/4” deep socket drive, 3/4” wrench, 1/2” drill bit, and a tape measure. A power post hole digger may facilitate installation if ground conditions do not include large stones or coral rocks.

GENERAL INSTALLATION GUIDELINES:

- Compare all parts received to the Packing List. Notify Shade Systems, Inc. immediately of any missing parts. We are not responsible for parts reported missing more than 10 days after receipt of shipment.

- Site layout should include accurate measurement and marking of all footings prior to any installation. A level and clear site is recommended.
Installation Instructions, continued

- The installation of your Shade System may require compliance with local building codes and permitting. A licensed and insured General Contractor should be used for the installation and to comply with all such codes and local permitting requirements. Shade Systems, Inc. does not guarantee that its Installation Instruction drawings/information and/or product engineering will necessarily meet local ordinances. Please check with your local authorities ahead of time for compliance.

- Excavate holes at locations as shown in the engineering drawing using a string line. An optional string line level is very helpful. If a completely level site is not possible, adjust the depth of footings to maintain the footing depth shown on your drawing as a minimum at the lowest grade. NOTE: If soil conditions are very loose or otherwise unstable, a larger diameter footing may be required. Inquire with local contractors and code for appropriate action.

- When concrete is poured, be sure to keep the top below grade and sloped away from the post to encourage good water drainage. Wash off any concrete which may have splashed onto the post before it dries. Allow all concrete to cure a minimum of 72 hours before fastening the frame and canopy.

- If your Shade Systems installation requires field-drilling any holes, prior to installing fastening hardware, brush away all metal filings and prime all drilled or cut surfaces with “Skyco Ospho” (not supplied by Shade Systems - product of Skybryte Company, 3125 Perkins Avenue, Cleveland, OH 44114 – Tel.: 216-771-1590). Follow Skyco Ospho product directions as shown on its container. After Skyco application has completely dried, use the supplied touch up paint to match the color of your metal components.

- The Shade Systems CoolNet™ fabric has undergone several quality control checks prior to shipping to ensure it is in perfect condition. During installation, care must be taken not to damage the fabric as it can snag on hardware used on the frame and tear. Fabric packaging should not be opened with a knife to avoid cutting the fabric, and fabric should not be dragged on the ground.

- For surface mount installations, posts are supplied with welded surface mount plate at one end with holes for anchoring hardware. Attach with 3/4” Hilti hardware as suggested in drawing (not supplied) with nuts and washers. Shim to achieve post plumbness.

- For northern climates where heavy snow fall is expected, Shade Systems recommends that you remove the CoolNet™ fabric for the snow season.

SAFETY DURING INSTALLATION:

- Before doing any excavation, inquire about any existing underground utilities.

- Do not leave the job site unattended without making sure that fastening hardware on all equipment is tightened and cannot be moved. Especially where Shade System is being installed over playground equipment, recognize that unauthorized use of assembled or partially assembled playground equipment can lead to tampering with the incomplete Shade System and lead to injuries if these precautions have not been taken.

- It is strongly recommended that the installation area is roped off with clearly marked warning signs posted during installation. Any unused footings should be covered with plywood or other suitable material if left unattended.

Finally, if you should have any questions regarding the proper installation of your Shade System, please call us directly at the factory: 1-800-609-6066
INSTALLATION INSTRUCTIONS FOR SQUARE SHADE SYSTEM:

NOTE: Please refer to the drawings included with these instructions.

1. After having excavated your footing holes per the General Installation Guidelines above and the engineering drawing, insert posts in holes and brace plumb and level at the dimensions shown. Pipe stub on each post should be to the top. A small concrete block (not supplied) may be used at each hole to provide a base for the posts to keep off the bottom of the hole per the engineering drawing. It is helpful to make a mark at the lower end of each post representing the finished grade line using a washable felt marker for the appropriate concrete footing depth, and then to use a level string line to make sure each post is at the same height.

2. When posts are correct and braced and have been re-checked for exact on-center locations per the main diagram, pour concrete footings and let cure for at least 72 hours before proceeding.

3. Note that there are four rafter pipes, and all four are equipped with an adjustable hook. Using a ladder or mechanical lift, slide the stub of an adjustable rafter over one of the post stubs (see Fig. 2). Slide the Center Connector over the end of the rafter. Slide the end of the rafter directly across from the first one diagonally into the Center Connector and slide the stub of the adjustable rafter over the post stub of the post diagonally from the first one. Repeat the process for the other two rafters, and make sure all of them are fully seated into the Center Connector as well as over each post stub. Using the 1/2”x 3” hex bolts w/lock washers that are provided; fasten each rafter pipe to the Center Connector. Refer to Fig. 1.
4. Referring to Fig. 2 below, and using the pre-drilled holes as drill guides, use a 1/2” bit to drill through each post stub and fasten using the provided 1/2”x2-3/4” hex bolts with locknuts. Make sure to remove drill shavings from top of post.

5. Remove the Coolnet™ fabric canopy from its packaging and spread out on the ground. The black reinforcing fabric at each corner should be on the bottom. Lay the canopy over the frame so that each fabric corner is oriented with the corners of the frame. Using the special hex pin allen key provided loosen the two tamper resistant bolts for each Adjustable Sleeve. Referring to Fig. 2 above, and making sure 2 cable loops protrude from fabric at each corner, pull cable loops over hooks at corners (2 loops per hook). Next pull the fabric corners over hooks so that hooks pass through the hole in the fabric.

6. Remove the End Caps with tamper-resistant bolt with the allen wrench provided. Use a 3/4” deep socket wrench to turn the concealed bolts in the rafter corner pipes to tension the Coolnet™ fabric canopy. Reinsert an End Cap with tamper-resistant bolt provided at each Adjustable Rafter end to close the access hole. Tighten the two tamper-resistant bolts for each adjustable sleeve.

7. **ATTENTION INSTALLERS:** Please turn over the Allen Wrench and this Installation Booklet to a responsible member of the customer staff for future removable and reattachment of the Coolnet™ fabric.
PLAN VIEW

NOTE: PRELIMINARY AND TENTATIVE

SCALE: N.T.S.

PERIMETER OF STRUCTURE

1/4" STEEL CABLE AROUND CENTER CONNECTOR (SEE DETAIL 4)

SEE SECTIONS FOR MATERIALS FOR COVERING

20'-0"
SCALE: N.T.S.

SECTION A-A

LEVEL

NATURAL GROUND

(Pipe Column)

MIN. Fy = 50 KSI

5" Diameter / 7 Gauge

Steel Tubing (MIN. Fy = 45 KSI)

1-7/8" Diameter / 13 Gauge

Roof Beam

ALL STEEL FRAME
Steel Tubing (MIN Fy = 50 ksi)
5" Diameter / 7 Gauge Steel Column
Below & Above Welded to Columns
1/2" Steel Base Plate

3/8" Taper Resistant Button Socket Screw

1-7/8" Dia. / 13 Gauge Steel Tubing
(MIN Fy = 45 ksi)
1 1/2" x 2" Welded Rod

Tensioning Sleeve

3/2" Nuts & Lock Washers
1/2" Through Bolts with 0.93 OD. To Match Roof Beam 1.0 (Sched. 40)
NOT SUPPLIED BY FACTORY

CONTRACTOR'S OPTION

USED FOR SUPPORT AT

CONCRETE BLOCK MAY BE

APART FROM EACH OTHER

#3 HOOPS @ 12" VERTICALLY

(4) #5'S VERTICALLY

TO STEEL COLUMN

#4 BAR FACTORY - WELDED

3" WIDE & 3" LONG

36" MIN

6" MIN

EXISTING

GRADE

STEEL COLUMN

COVER

3"

6"