

# Pavilion Options

## Minimum Design Criteria:

Standard: Wind Load: 90 mph Class C – other wind loads available: 100, 120, 130, 140, 150.  
Project specific loads are also available

Snow Load: 30# psf – other snow loads available up to 300# psf.

Seismic Load: Varies, meets local code requirements

Soil Bearing: 1500 psf

Concrete Bearing: 2500 psi

## Preparation & Finishes:

**Steel Preparation:** After material is fabricated, Natural Structures abrasive blast cleans the steel surface to NACE No.2/SSPC-SP10 or near white with a 1.5 mil surface profile.

The material then advances to the phosphate wash system. This is designed for the removal of any grease, dust, flash rust, or any other light foreign substance that prevents the polyester powder from adhering to the surface being coated. Natural Structures ecologically friendly process utilizes a five step system into 3 steps: #1 rinse; #2 cleaning & phosphate; #3 final rinse hereby saving precious water & energy resources.

**Polyester Powder Coat:** Natural Structures uses weather resistant TGIC polyester powder coating for interior & exterior applications. Polyester powder coating is designed for its excellent weather resistance, superior chalk resistance, smooth flow, superior gloss & color retention. (The gloss level is in accordance to Garner 60deg., ASTM D 523. Minimum thickness: 4-6 mils.

**Hot Dip Galvanizing:** Available after fabrication & in accordance to specification section ASTM A-123. Powder coating is available for hot dip galvanized surfaces.

**Lumber Pressure Treatment:** Lumber is Wolmanized® Natural Select® Copper Boron Azul (CBA) Cedar Tone color, vacuum pressure treated to refusal. Pressure treatment is used for wood members against fungal decay and termites in accordance to the American Wood Preservers Association (AWPA) Commodity Standards C1-00 and in the processing & treatment standard of the Use Category System (USE) after fabrication.

**Clear Sealer:** Wolman® RainCoat® 100% clear oil base water repellent designed to protect wood against water damage & resist mildew. It is colorless and imparts a clear oiled look allowing the woods original color & character to show through and gray naturally from ultra-violet exposure. RainCoat® is fortified with mildewcide that resists

mildew growth. It prevents water penetration, thereby minimizing wood cracking, checking, and preventing major damage such as splitting & warpage. It is recommended for immediate applications of untreated or pressure treated lumber.

**Colored Stain:** Olympic® wood preservative. It provides a water guard and water repellent. It is also rot, decay & mildew resistant while providing ultra-violet sun block protection against sun damage.

**Natur-Kote Primer:** is a single part fusion bonded epoxy undercoating (primer). It is ideal for its resistance to wastewater, corrosive soils, hydrocarbons & seawater. It will not sag, cold flow or become soft. It is an excellent option for areas needing an extra protection layer. Minimum thickness: 3-4 mils.

**Anti-Graffiti Powder Coat:** The anti-graffiti powder coat is an exterior graffiti resistant aliphatic urethane polyester clear coat. It is applied over the standard color. To remove graffiti use 100% Isopropyl Alcohol (IPA), this will remove most black permanent marker. This is an excellent option for high vandalism areas. Minimum thickness: 2-4 mils

## **Roofing:**

**Asphalt:** Asphalt shingles are Class “A” fire rated fiberglass. The shingles are laid over 30# felt. They have a 30-year warranty. Note: Asphalt shingles require tongue & groove roof decking. Optional architectural shingles are available.

**Cedar:** Cedar shake are #1 medium. Size: 24” long x 1/2” split with a sawn back. Note: Cedar shakes require tongue & groove roof decking.

**Hi Rib Steel Roof:** Panels are 26 gauge steel x 36” wide x 12” on center trapezoidal rib. The rib height is 1 3/16”. All substrate materials meet ASTM A 653 SS grade 80 steel with a minimum of 80,000 psi. The finish is a silicone-modified polyester paint utilizing proprietary resin technology with ceramic and organic pigmentation for high performance.

**Standing Seam Steel Roof:** Panels are 24 gauge steel x 1 1/2” high x 14” wide concealed fastener. The finish is Kynar 500 with ULTRA-Cool™ pigmentations for outstanding color, durability, chalk, abrasion & chemical resistance, while providing outstanding heat deflection & energy efficiency. The standing seam roof panels meets or exceeds the American Architectural Manufacturing Association (AAMA) 620 and 621 standards. Note: Wider profiles are available.

**Concrete & Clay Tile Roof:** Designed for local conditions & needs

**S Channel Steel Roof:** is a through-fastener steel panel, providing bold aesthetics and shadow effects. The panels measure 36” wide with 7/8” deep corrugations. It is available in 22 & 24 gauge steel.

**Cortin-Rusty Corrugated Steel Roof:** is specially designed to create the old rusted look, but uses new manufactured steel. It is environmentally safe & is manufactured from a minimum of 50% recycled materials. It is available in 22 & 24 gauge steel. The panel size is 36" wide. The 22 gauge panel has 7/8" rib and the 24 gauge panel has 1/2" rib.

### **Roof Accessories:**

**Roof Decking:** 2" x 6" Fir select deck "V" tongue & groove. Decking shall be kiln dried to a moisture content of 19% or less. The decking is unfinished and requires on-site cutting. Optional pressure treat or stain is available.

**Clerestory:** The clerestory mounts between 18" to 24" above the main roof structure. It is located approximately half way up the roof slope allowing for aesthetics & ventilation. The clerestory has a unitized step beam that is a fully welded assembly.

**Cupola: Steel:** 1/8" mild steel plate flame cut, folded & fully welded for a one-piece unit. The roof is separate and matches the project roof specifications.

**Wood:** Available

**Dormers:** Vary in size, pitch & applications. Call for specific details on how dormers can enhance your project.

**Gutter & Down Spouts:** Gutters are manufactured of .10" heavy-duty aluminum with a 2" pipe down spout. Gutter & down spouts are powder coated.

**Sky Lights/Solar Panels:** Designed for local conditions & needs

**Louvers: Steel:** Slats are 1/4" x 2 1/2" flat bar encased in a mild steel frame using 3" angle.

**Wood:** Slats are 1" x 3" Fir encased in a 2" x 4" wood frame.

**Weather Vanes:** Various designs and options are available

### **Design Options:**

**Electrical Conduit/Box:** Available steel post & beam only. The conduit is 3/4" flex fed inside the steel post. All electrical boxes come with a cover plate.

**Engineering:** Stamped local engineering is available on all shelter and pavilion models for all 50 states.

**Increased Wind Loads:** Minimum criteria: 90 mph Class C. Standard upgrades include 100, 120, 130, 140, & 150 mph. Other loads are also available.

**Increased Snow Loads:** Minimum criteria: 30# psf. Standard upgrades include up to 300# psf.

**Increased Roof Pitches:** 3/12; 4/12; 5/12; 6/12; 8/12; 9/12

**Minimum Roof Pitch Criteria:**

3/12 Standard: 98-100 & 98-102 Models

4/12 Standard: Wrangell, White, Siskiyou & Rocky Mountain Series

6/12 Standard: Catskill & Appalachian Mountain Series

**Other Roof Pitches Available:** 4/12; 5/12; 6/12; 8/12; 9/12

**Increased Eave Heights:** 8' 9' & 10' other elevations are available by request

**Post Options:**

**Steel Posts:** 4" x 6" Standard (Pending Size) 6" x 6"; 8" x 8"; 10" x 10";  
10 3/4" Diameter; 14" Diameter; 16" Diameter, & Tapered

**Wood Posts:** Log, 6" x 6" & Glue Laminated

**Shelter Sizes:** Catskill: 2' Increments Width & Length

Wrangell: 12', 16', 20', 24', 30', 36', 40', 50', 60' Width; 8' Length

White Mountain: 5' Increments Diameter

Siskiyou: 12', 16', 20', 24', 30', 36', 40', 50', 60' Width; 8' Length

Sentinel: Only Available As Is

Appalachian: As required for specific project requirements

Ruby: Only Available 16' 20' 25' 27' & 30'

Rocky: 12', 16', 20', 24', 30', 36', 40', 50', 60' Width; 16' & 20' Lengths

**Facades:**

**Wood Wraps:** Square Posts, Log Wraps; 16" & 24" Diameter

**Post Bands:** (Steel Post Only) Rolled Bar Stock & Fully Welded to Steel Post.  
Standard designs in stock. Custom Designs available.

Wood Posts available in round log

**Rails:** Steel: 1/4" x 3" Flat Bar End Post with 1.6 – 1.9 OD Pipe Top & Bottom.  
Interior rails 5/8" Solid Bar. Rails are fully welded.

**Upper Trim:** 1/8" – 3/16" plate plasma burned & welded to 1/4" x 3" flat bar end post.  
The top & bottom pipe is 1.6 – 1.9 OD pending span.

**Logos & Fretwork:** Logos are 1/8" Plate A36 mild steel plasma cut. Fretwork is  
1 5/16" – 2 3/8" OD pipe. Other sizes and materials are available.

**Misc.:**

**Benches:** 2" x 4" to 4" x 4" wood or recycled plastic plank attached to a steel frame. Wood planks are available in Cedar or Douglas Fir.

**Floors:** Available: Ruby, White Mountain, & Catskill Mountain Series

**Lightning Rod Package:** ½ x 24" Lightning Rod w/Spike End attached with wire to ground rod for disbursement

**Wind/Insect Screens:** Designed for local conditions & needs

**Factory Technical Advisor/Installation:** Natural Structures offers factory trained technical advisors & crews to assist with installations.