CRS, Inc.

FABRIC SAIL MODEL

56”-6’X119’-6”

SPECIFICATIONS

Dimensions:

Frame Dimensions	56’-6” X 119’-6”
Minimum Clearance	14’-0”
Height @ Peak	23’-5’
Square Feet Under Fabric Roof	±3162

Columns shall be 10”x10” steel tube, minimum .188 wall thickness.
All beams shall be structural steel tube sized according to engineering.
All bolts shall be A-307 or A-325 and hidden at all connections.
All turnbuckles shall be ASTM Specification F1145-92 Type 1, Grade 1.
Sails shall be Knitted Shade Cloth.
Open or welded “C” channel, “I” beams, “S” or “Z” purlins or angle iron shall not be allowed.

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STANDARD FABRIC SPECIFICATIONS
w/ ZINC RICH PRIMER & TGIC POWDER COAT PAINT

GENERAL:

1. All structures shall be designed and fabricated to the IBC (Latest Edition) or current local building code with standard load designs of the greater value of 1# per S.F. minimum live load and 100 mph sustained wind load or site specific conditions and the applicable zone for seismic loads.

2. All members shall be designed according to the "American Institute of Steel Construction (AISC) specifications and the American Iron and Steel Institute (AISI) specifications for cold-formed members.

3. All fabrication welds shall be in strict accordance with the structural welding code of the American Welding Society (AWS) specifications. All structural welds shall be in compliance with the requirements of "Pre-qualified" welded joints. All welding shall conform to ASTM A-233 series E-70XX electrodes - low hydrogen.
Field welding shall not be required.

4. When required, after award of bid, the shade structure manufacturer shall submit structural calculations, sealed by a registered engineer in the state in which the structure is to be erected for review and approval by the approving agency.

5. Manufacturer qualifications: All manufacturers shall have a minimum of (20) twenty years experience in the fabrication of tubular steel shade structures. Shade structure and kiosk fabrication shall be the manufacturer's primary business. Manufacturer shall have fabricated similar structures to that which is specified. *All non-specified manufacturers shall submit complete shop drawings indicating type, size & gauge of material used, with detailed connections to the specifying agency or design firm at least 10 days prior to bid opening for review and written pre-approval. All bids submitted without prior approval will be rejected.*

FOOTINGS & COLUMNS:

1. Footings shall be structurally engineered by the structure manufacturer to meet local codes and site conditions. (Sample footing drawings shall be made available to the contractor or owner from the manufacturer). When required for structure installation, anchor bolts shall be supplied by the owner / contractor. Columns shall be ASTM 500 grade B. Concrete footing rebar (if required) shall be ASTM A-615 grade 40 #4 bars & smaller, grade 60 #5 bars & larger. Concrete shall be 5 sack mix "Portland" cement. Maximum slump shall not exceed 4". Concrete compressive strength shall be a minimum of 3000 psi @ 28 days.

FRAME MEMBERS AND COMPRESSION RING:

1. Only American (domestic) made steel shall be used in the construction of this shelter. Mill certification shall be made available upon request. All frame members shall be one

piece hollow steel shape (HSS) tube with a minimum 11 gauge (.120) wall thickness, sized according to engineering. All frame members shall be bolted together with bolts totally concealed. Compression rings shall be fabricated from hollow steel shape tube, or flat plate steel and shall have all connections concealed from view. All tubing for frame members shall be ASTM 500 grade B. Schedule 40 steel pipe shall conform to ASTM A53 grade B. (Fy=35ksi) Beam end plates shall be ASTM A36 fy=36,000 psi UNO. Bolts shall be A 325's unless noted otherwise in the structural engineering calculations. *"I" beams, Angle iron, "C", "Z" or "S" purlins or beams, open or closed, shall not be allowed.*

FABRIC ROOFING:

1. The fabric is backed by a 10 year limited manufacturers UV warranty from the date of installation, against failure from significant fading, deterioration, breakdown, mildew, outdoor heat, cold, or discoloration with the exception of red. Base material shall be high density polyethylene (HDPE), UV stabilized. Construction shall be monofilament and tape knitted lock stitch construction producing a fabric that will not fray or tear if cut. All edges shall be double hemmed and double stitched with UV stabilized thread. Fabric is not warranted where it is installed on a structure that is not engineered and built by Classic Recreation Systems, Inc. All fabric tops are warranted for winds and gusts up to 90 mph prior to snow or ice accumulation. Fabric meets the following fire standards: NFPA 701-1999, ASTM E-84 Class A and California State Fire Marshal, Section 13115.
   Tear resistance: AS 2001.2.10-1998 lbf Warp 39, Weft 63
   Breaking force: AS 2001.2.3.1-2001 lbf Warp 179, Weft 562
   Bursting force: AS 2001.2.19-1998 lbf Warp 1.02, Weft 475
   Breaking Extension: AS 2001.2.3.1-2001 % Warp 92.2%, Weft 49.2%
   Average weight: 10 oz./ 1 sq. yd.

PAINT:

1. All frame members shall be media blasted to a white finish removing all rust, scale, oil and grease. Powder coating for all frame members shall be provisionally warranted for (5) five years with zinc rich primer (2.5-3 mils) and TGIC polyester (2.5-3 mils) minimum total 5-6 mils finish. Finish shall be a smooth uniform surface with no pits, runs or sags.

ERECTION:

1. Manufacturer shall supply complete layout and detail plans with installation instructions for the structure. The structure shall be erected in a work-man-like manner with framing, roofing and trim installed according to the manufacturer's installation instructions. Care shall be taken to avoid damaging the structure during installation. Touch up powder coat paint with paint provided to prevent rusting. Components of the structure shall be covered and kept dry prior to erection.

WARRANTEE:

1. Manufacturer shall warranty the structure to be free from defects in material and work-man-ship for a period of (10) ten years from date of acceptance by owner. Warranty does not include damage from theft, fire, vandalism or acts of God. Manufacturer shall repair or replace structure components of like kind at his option, to match existing material and workmanship. Powder coat paint shall be warranted for (5) five years after acceptance from owner against peeling, flaking and rusting. Warranty does not cover damage caused from shipping, erection of structure, lack of touchup and maintenance,

overspray from lawn sprinklers or vandalism. Bolt threads are not powder coated and therefore are not covered under the powder coat warranty.

2. Should the fabric need to be replaced under the warranty, Classic Recreation Systems, Inc. will manufacture and ship a new fabric at no charge for the first 5 years, thereafter pro-rated at 20% per annum over the last 5 years. This warranty shall be void if damage to or failure to the shade fabric is caused by contact with chemicals, misuse, vandalism, any act of God, including but not limited to ice, snow or wind in excess of the applicable building code parameters. The structures have been designed to eliminate any friction between the rafters and the fabric. The warranty will, therefore, be voided if any modification (temporary or permanent) or any attachment (temporary or permanent) is made to the rafter, compression ring, cross pieces, or ridge beams. Classic Recreation Systems, Inc. reserves the right, in cases where certain fabric colors have been discontinued, to offer the customer a choice of available colors to replace the warranted fabric of the discontinued color. The company does not warranty that any particular color will be available for any period of time and reserves the right to discontinue any color for any reason it may determine, without recourse by the owner of the discontinued fabric color.

NOTE: Engineering specifications take precedence over drawings if differences occur.

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NOT FOR CONSTRUCTION

PLAN VIEW 56'-6"X119'-6" FABRIC MODEL

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ELEVATION 56'-6"X119'-6" FABRIC MODEL

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END ELEVATION 56'-6"X119'-6" FABRIC MODEL

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LAYOUT PLAN 56'-6"X119'-6" FABRIC MODEL

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NOTE: FOR ILLUSTRATION ONLY!!
FOOTING SIZE MAY CHANGE W/
STRUCTRURAL ENGINEERING

ADJUST FTG. DEPTH FOR
LOCAL FROST CONDITIONS

NOT FOR CONSTRUCTION
NOT FOR CONSTRUCTION

NON-EXPANSIVE,
UNDISTURBED OR 95%
COMPACTED SUBGRADE

SPREAD FOOTING DETAIL
56'-6"X119'-6" FABRIC MODEL

NTS

NOTE: FOR ILLUSTRATION ONLY!!
FOOTING SIZE MAY CHANGE W/
STRUCTRURAL ENGINEERING

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ADJUST FTG. DEPTH FOR
LOCAL FROST CONDITIONS

NON-EXPANSIVE,
UNDISTURBED OR 95%
COMPACTED SUBGRADE

CAISSON FOOTING DETAIL
56'-6"X119'-6" FABRIC MODEL

NTS