

## **METAL BUILDING SYSTEM SPECIFICATIONS**

### **1. GENERAL**

#### **1.1. SCOPE**

- 1.1.1. These specifications apply to metal buildings systems as engineered, designed, and fabricated by Tyler Building Systems, L.P. (“Tyler”).
  - 1.1.2. These specifications describe Tyler’s “standard” metal building system. In the absence of contract requirements or restrictions to the contrary, these specifications accurately describe the product provided by Tyler. However, these specifications are in no way intended to limit the available options associated with Tyler’s metal building system.
  - 1.1.3. These specifications are intended for use by Tyler’s employees, customers, and vendors.
- 1.2. Research & Development: Because of a continuing program of research and development these specifications are subject to change without notice.

### **2. DRAWINGS**

- 2.1. Drawings: Tyler shall furnish the following drawings with all metal building systems for the proper identification and assembly of building components.
  - 2.1.1. Anchor Rod Plan: Shows the diameter, location and projection of all anchor rods for the components of the metal building system. Column reactions and base plate size will also be shown.
  - 2.1.2. Erection Drawings: Roof and wall erection (framing) drawings that identify individual components and accessories furnished by Tyler in sufficient detail to permit proper erection of the metal building system.

### **3. STRUCTURAL STEEL DESIGN**

#### **3.1. GENERAL**

- 3.1.1. Tyler shall use standards, specifications, recommendations, findings and/or interpretations of professionally recognized groups such as American Institute of Steel Construction (AISC), American Iron and Steel Institute (AISI), American Welding Society (AWS), ASTM International (formerly the American Society for Testing and Materials, ASTM), Metal Building Manufacturer’s Association (MBMA), and the Society for Protective Coatings (SSPC) as the basis for establishing engineering, design, fabrication, and quality criteria, practices, and tolerances. For convenience, one or more sources may be referenced in a particular portion of these specifications. In all instances, however, Tyler’s engineering, design, fabrication and quality criteria, practices, and tolerances shall govern, unless specifically stated otherwise in the contract documents.
- 3.1.2. Structural mill, or welded up plate components shall be designed in accordance with AISC’s “Specification for Structural Steel for Buildings,” Allowable Stress Design and Plastic Design, June 1, 1989.
- 3.1.3. Cold-formed steel structural members will be designed in accordance with AISI’s “Specification for the Design of Cold-formed Steel Structural Members,” latest edition.

### 3.2. DESIGN LOADS

3.2.1.1. Design loads shall be as specified and set forth in the contract documents.

### 3.3. DESIGN POLICY

3.3.1. Tyler's standard design practices incorporate Serviceability Limits from the International Building Code, indicated in the "Metal Roof & Walls Panels" table below. Owner requirements that exceed Tyler's standards must be included in the building order documents. The applicable building code may also provide deflection limitations. "Flexible Ceiling" schedule will be used for buildings that have suspended or sheet rock ceilings. "Flexible Wall" schedule will be used for buildings that have sheet rock interior walls, or some type of flexible exterior wall material (e.g., wood). "Brittle Ceiling" schedule will be used for buildings that have plaster ceilings. "Brittle Wall" schedule will be used for buildings that have masonry, glass, stucco, EIFS, etc. walls.

#### **Metal Roof & Wall Panels**

Endwall Column	L/120
Endwall Rafter (live)	L/180
Endwall Rafter (wind)	L/180
Wall Girt	L/90
Roof Purlin (live)	L/150
Roof Purlin (wind)	L/150
Wall Panel	L/60
Roof Panel (live)	L/60
Roof Panel (wind)	L/60
Rigid Frame (horizontal)	H/90
Rigid Frame (vertical)	L/180
Wind Framing	H/90

#### **Flexible Ceiling**

Endwall Column	L/120
Endwall Rafter (live)	L/240
Endwall Rafter (wind)	L/240
Wall Girt	L/90
Roof Purlin (live)	L/240
Roof Purlin (wind)	L/240
Wall Panel	L/60
Roof Panel (live)	L/60
Roof Panel (wind)	L/60
Rigid Frame (horizontal)	H/90
Rigid Frame (vertical)	L/240
Wind Framing	H/90

**Flexible Wall**

Endwall Column	L/120
Endwall Rafter (live)	L/180
Endwall Rafter (wind)	L/180
Wall Girt	L/120
Roof Purlin (live)	L/150
Roof Purlin (wind)	L/150
Wall Panel	L/60
Roof Panel (live)	L/60
Roof Panel (wind)	L/60
Rigid Frame (horizontal)	H/90
Rigid Frame (vertical)	L/180
Wind Framing	H/90

**Brittle Ceiling**

Endwall Column	L/120
Endwall Rafter (live)	L/360
Endwall Rafter (wind)	L/360
Wall Girt	L/90
Roof Purlin (live)	L/360
Roof Purlin (wind)	L/360
Wall Panel	L/60
Roof Panel (live)	L/60
Roof Panel (wind)	L/60
Rigid Frame (horizontal)	H/90
Rigid Frame (vertical)	L/360
Wind Framing	H/90

**Brittle Wall**

Endwall Column	L/240
Endwall Rafter (live)	L/180
Endwall Rafter (wind)	L/180
Wall Girt	L/240
Roof Purlin (live)	L/150
Roof Purlin (wind)	L/150
Wall Panel	L/60*
Roof Panel (live)	L/60
Roof Panel (wind)	L/60
Rigid Frame (horizontal)	H/120
Rigid Frame (vertical)	L/180
Wind Framing	H/120

\* - If EIFS is attaching to metal panels, use L/240.

## 4. BASIC MATERIAL SPECIFICATIONS

### 4.1. PRIMARY FRAMING STEEL

- 4.1.1. Steel for Wide-Flange Beams shall conform to the requirements of ASTM Specification A-992 Grade 50, with a minimum yield of 50 ksi. All other hot-rolled shapes, including Channels and S-Beams, shall conform to ASTM A-36 or A-572, with a minimum yield of 36 ksi.
- 4.1.2. Steel for the web portions of built-up sections shall conform to ASTM A-1011 Grade 50 or ASTM A-36 as applicable, with minimum yield of 50 ksi as indicated by the design requirements. The flange portions of built-up sections shall conform to ASTM A-529, with minimum yield of 50 ksi.
- 4.1.3. Steel for all endwall "C" sections shall conform to the requirements of A-1011 Grade 55. Minimum yield shall be 55 ksi or ASTM A-653 Grade 55, as required by the design specifications.

### 4.2. SECONDARY FRAMING STEEL

- 4.2.1. Steel for purlins, girts, eave struts, and "C" sections shall conform to the requirements of ASTM A-1011 Grade 55. Minimum yield shall be 55 ksi.
- 4.2.2. Steel used to form galvanized purlins, girts, eave struts, and "C" sections shall conform to the requirements of ASTM A-653 G90 Grade 55. Minimum yield shall be 55 ksi.

### 4.3. ROOF AND WALL PANEL MATERIAL

- 4.3.1. Panel material specified as 26 gauge (.0185 min.) shall be Galvalume<sup>®</sup> or Galvalume<sup>®</sup> Plus material conforming to the requirements of ASTM A792 Grade 80 AZ50 or AZ55. Minimum yield stress shall be 80 ksi (industry standards Grade E.)
- 4.3.2. Panel material specified as 24 gauge (.023 min.) shall be Galvalume<sup>®</sup> or Galvalume<sup>®</sup> Plus material conforming to the requirements of ASTM A792 Grade 50 AZ50 or AZ55. Minimum yield stress shall be 50 ksi (industry standards Grade D.).
- 4.3.3. Panel material specified as 22 gauge (.029 min.) shall be Galvalume<sup>®</sup> or Galvalume<sup>®</sup> Plus material conforming to the requirements of ASTM A792 Grade 50 AZ50 or AZ55. Minimum yield stress shall be 50 ksi (industry standards Grade D.).

## 5. STRUCTURAL FRAMING SPECIFICATIONS

### 5.1. GENERAL

- 5.1.1. All framing members shall be shop fabricated for field bolted assembly. The surfaces of the bolted connections shall be smooth and free from burrs or distortions.
- 5.1.2. All shop-welded connections shall be in accordance with the American Welding Society (AWS) Code for Building Construction. Certification of welder qualifications will be furnished when required and specified in advance.
- 5.1.3. All framing members, where necessary, shall have an identifying mark.

- 5.1.4. Visual inspection methods will be used for verification of weld quality as outlined by the AWS Structural Steel Welding Code, *Visual Inspection Acceptance Criteria*, Table 6.1

## 5.2. PRIMARY FRAMING

- 5.2.1. Rigid Frame: All rigid frames shall be welded built-up sections or mill shapes as required by design specifications. The built-up columns and rafters may be either constant or tapered depth. Flanges shall be connected to webs by means of a continuous fillet weld on one side.
- 5.2.2. Endwall Frames: All endwall roof beams and endwall columns shall be cold-formed "C" sections, mill-rolled sections, or built-up "I" sections depending on design requirements.
- 5.2.3. Plates, Stiffeners, etc.: All base plates, splice plates, cap plates, and stiffeners shall be factory welded into place on the structural members.
- 5.2.4. Bolt Holes: All base plates, splices, and flanges shall be shop fabricated to include bolt connection holes. Webs shall be shop fabricated to include bracing holes.
- 5.2.5. Connections for secondary structural (purlins and girts) shall be by means of shop welded clips.

## 5.3. SECONDARY FRAMING

- 5.3.1. Minimum decimal equivalents for gauges are as follows:

16 gauge	.056 inch
14 gauge	.067 inch
12 gauge	.100 inch
10 gauge	.128 inch

- 5.3.2. Purlins and Girts: Purlins and girts shall be cold-formed "Z" sections with stiffened flanges. They shall be prepunched at the factory to provide for field bolting to clips. They shall be flush or by-pass as required by design and the contract documents. Connection bolts will install through the webs.
- 5.3.3. Eave Struts: Eave Struts shall be unequal flange cold-formed "C" sections.
- 5.3.4. Base Angle: A base member will be supplied by which the base of the wall covering may be attached to the perimeter of the slab. Base angle shall be secured to the concrete slab with expansion anchors.

## 5.4. BRACING

- 5.4.1. Diaphragm Bracing: Additional wind bracing in the walls need not be furnished where it can be shown that the diaphragm strength of the wall covering is adequate to resist the applied wind forces.
- 5.4.2. Diagonal Bracing: Diagonal bracing in the roof and sidewalls shall be used to remove longitudinal loads (wind, crane, etc.) from the structure. This bracing will be furnished to length and equipped with a bevel washer, flat washer, and nut at each end. It may consist of rods threaded at each end or galvanized cable with suitable threaded-end eyebolts. If load requirements so dictate, bracing may be of structural angle and/or pipe, bolted in place.

- 5.4.3. Flange Bracing: The compression flange of all primary framing shall be braced laterally with angles connecting to the webs of purlins or girts so that the flange compressive stress is within allowable limits for any combination of loadings.
- 5.4.4. Special Bracing: When load requirements, or Tyler Quality Standards, do not allow panel shear bracing and diagonal bracing is not permitted in the sidewall, a wind bent frame, wind column, or fixed base column(s) will be used.

## 6. ROOF AND WALL COVERING

### 6.1. GENERAL

- 6.1.1. Roof and Wall panels shall be "PBR" profile.
- 6.1.2. "PBR" profile panels shall be 26 gauge (.0185 min.) Galvalume<sup>®</sup> or Galvalume<sup>®</sup> Plus steel conforming to the requirements of ASTM A792 Grade 80 AZ50 or AZ55. Minimum yield stress shall be 80 ksi (industry standards Grade E.)

### 6.2. PANEL DESCRIPTION

- 6.2.1. "PBR" profile panels shall have major ribs 1 1/4" high spaced 12" on center, with a purlin-bearing leg. In the flat area between the major ribs are two smaller ribs. Each panel shall provide 36" net coverage in width. All sidelaps shall be at least one major rib.
- 6.2.2. Panel Length: All wall panels shall be continuous from sill to roofline and all roof panels shall be continuous from eave to ridge except where lengths become prohibitive for handling purposes. All end laps shall be at least 6" on roof, 4" on walls, and 3" on wall lights.
- 6.2.3. Endwall Edge Cuts: All endwall panels for buildings with 1:12, or less, roof slope shall be square cut. All endwall panels for buildings with more than a 1:12 roof slope shall be bevel cut in the field by the building erector.

## 7. MISCELLANEOUS MATERIAL SPECIFICATIONS

### 7.1. FASTENERS

- 7.1.1. Structural Bolts:
- 7.1.1.1. All bolts used in frame splices shall be yellow-zinc plated ASTM A325 or A325T. The nuts used shall comply with ASTM 563, and the washers shall comply with ASTM A436.
- 7.1.1.2. All bolts used in connections of secondary framing to primary framing shall be zinc plated ANSI Grade 2, ASTM A307. The nuts used shall comply with ASTM 563, and the washers shall comply with ASTM 844.
- 7.1.2. Fasteners for Roof Panels: All panels shall be attached to the secondary framing members by means of #12-14 x 1-1/4" self-drilling structural carbon steel screws with a long-life zinc-alloy head, with or without paint, assembled with an EPDM washer. These fasteners are applicable for use with fiberglass blanket insulation up to 4" thick. If no roof insulation is present, #12 x 1 self-drilling screws with a long-life zinc alloy head and EPDM washers will be used. All self-drilling lap screws are 1/4"-14 x 7/8" with a long-life zinc alloy head and EPDM washer, regardless of structural screw length.

- 7.1.3. Fasteners for Wall Panels: Wall panels shall be attached to the secondary framing members by means of a self-drilling fastener made of carbon steel, #12 x 1-1/4" hex washer head with EPDM washers for fiberglass insulation up to 3" thick and #12 x 1-1/2" for fiberglass insulation 4" to 6" thick. If no wall insulation is present, #12 x 3/4" hex washer head screws with EPDM washers will be used. Screws for panel laps shall be with self-drilling 1/4"-14 x 7/8" hex washer head with EPDM washers.
- 7.1.4. Fasteners for Standing Seam roof systems shall be as recommended by the roof manufacturer.
- 7.1.5. Blind Fasteners: All blind fasteners shall be stainless steel 1/8" diameter with a grip range of .126-.187.
- 7.1.6. Anchor Rods: All anchor rods shall comply with ASTM F1554.

## **7.2. PANEL CLIPS**

- 7.2.1. Panel clips shall be as supplied and recommended by the roof manufacturer. The panel clip to be provided shall be as specified in the contract documents.

## **7.3. SEALANTS AND CLOSURES**

- 7.3.1. Closure Strips: The corrugations of the roof and wall panels shall be filled with solid or closed-cell, preformed rubber, neoprene or polyethylene closures where required.
- 7.3.2. Metal Closures: Metal closures for standing seam roof systems shall be as recommended and supplied by the roof manufacturer.
- 7.3.3. Sealants: Roof panels shall be sealed as indicated in the Construction Handbook with 1/2" x 3/32" tape sealer. The material shall be a butyl base elastic compound with a minimum solid content of 99%, Schnee-Morehead #5227 or equal. The sealer shall have good adhesion to metal and be non-staining, non-corrosive, non-shrinking, non-oxidizing, non-toxic and non-volatile. The service temperature shall be from -40° F to +180° F.
- 7.3.4. Caulk: Caulk shall be gray or bronze pigmented caulk of polyurethane base, equivalent to Schnee-Morehead SM7100. The caulk shall comply with ASTM C-920 Type S, Grade NS, Class 25, Use-NT, A, M, G & O.

## **7.4. GUTTER, FLASHING & DOWNSPOUTS**

- 7.4.1. Gutters and Flashing: Gutters and rake shall be 26 (.0185 min.) gauge Galvalume<sup>®</sup> or Galvalume<sup>®</sup> Plus steel conforming to ASTM A792 Grade 50 AZ50 or AZ55 with a minimum yield of 50 ksi (industry standards Grade D).
- 7.4.2. Downspouts: All downspouts shall be rectangular in shape and shall be 26 gauge (.0185 min.) Galvalume<sup>®</sup> or Galvalume<sup>®</sup> Plus steel conforming to ASTM A792 Grade 50 AZ50 or AZ55 with a minimum yield of 50 ksi (industry standards Grade D).

## **8. PAINTING**

### **8.1. STRUCTURAL PAINTING**

- 8.1.1. All uncoated structural steel shall be cleaned and primed as required by the Society for Protective Coatings (SSPC) specifications as follows:

- 8.1.1.1. Steel preparation specification: SSPC-SP 2
- 8.1.1.2. Primer specification: SSPC-Paint 15 with the additional requirements:
  - 8.1.1.2.1. Type of Coating Used: High solids, low VOC Shop coat primer
  - 8.1.1.2.2. Standard Color: Red Oxide
  - 8.1.1.2.3. Maximum VOC: 3.13
  - 8.1.1.2.4. Minimum Thickness
    - 8.1.1.2.4.1. Wet: 4 mils
    - 8.1.1.2.4.2. Dry: 2.5 mils
  - 8.1.1.2.5. Dry to Touch: 25 minutes
- 8.1.2. Pre-coated cold-form members shall be cleaned according to SSPC-SP 8 or SSPC-SP 6, and then chemically pretreated before being coated with a minimum of .5 mils of polyester-based red primer. The primer contains a “wax” type lubricant to facilitate roll-forming and deter marring during these operations. Hairline crazing, which may occur during forming operations, is considered normal. Special preparation is required before a finish coat can be applied over this “wax” finish.

Note: Primer systems are not intended as finish coat paint systems and do not offer the uniformity of appearance, durability or corrosion resistance of a top coat applied over a primer. Primers are designed to promote the wetting action and adhesion of a top coat and offer only short-term corrosion protection from ordinary atmospheric exposure. Primer is compatible only for top coating with solvent-based alkyd and modified alkyd top coat paints. Abrasions caused by handling after painting as well as the flaking of tight mill scale are to be expected. Primer shall be furnished to touch-up or field painting as specified in the contract documents.

## 8.2. PAINTED PANELS

- 8.2.1. The panel finish shall be either Siliconized Polyester, or 70% Fluoropolymer system as specified in the contract documents.
  - 8.2.1.1. Both coatings have the following specifications:
    - 8.2.1.1.1. Specular gloss – ASTM D523 – 25-35° at 60° viewing
    - 8.2.1.1.2. Abrasion resistance – ASTM D968 – 30 liters (70% Fluoropolymer – 50 liters)
    - 8.2.1.1.3. Humidity Resistance – ASTM 2247 (70% Fluoropolymer system is additionally covered by ASTM D714) – 1000 hours with no more than 10% showing #8 size blister (70% Fluoropolymer – no more than 5% showing #8 size blister)
    - 8.2.1.1.4. Salt Spray Resistance – ASTM B117 (70% Fluoropolymer system is additionally covered by ASTM D714) – 1,000 hours in 5% salt fog at 95% humidity with no more than 1/16” (70% Fluoropolymer – no more than 1/8” average) creepage or loss of adhesion from scribed line and few blister no larger than #8
    - 8.2.1.1.5. Weatherometer Test – ASTM D822 & G23 – 2,000 hours exposure
    - 8.2.1.1.6. Post-Formability – D522 – 180° bend around 1/8” mandrel (with siliconized polyester system, slight microfracturing is acceptable)

**8.2.1.1.7. Pencil Hardness:**

8.2.1.1.7.1. Siliconized Polyester system – F-3H

8.2.1.1.7.2. 70% Fluoropolymer system – ASTM D3363 – HB-H

**8.2.1.1.8. Adhesion:**

8.2.1.1.8.1. Siliconized Polyester system – ASTM D2794 – No loss of adhesion between coating and substrate after 80"# impact over .019" minimum

8.2.1.1.8.2. 70% Fluoropolymer system – ASTM D3359 – No removal of finish after 1/16" cross-hatching to bare metal, to impact limits or point of metal rupture

8.2.1.2. Painted Panel Warranty available upon request.

8.2.1.3. Topcoat dry film thickness shall be a minimum of .8 mils.

8.2.2. Interior Finish: The interior finish shall have a white or parchment top coat over epoxy primer or an epoxy base coat, white or parchment, with a clear polyester top coat.

**9. ACCESSORIES****9.1. WINDOWS**

9.1.1. Standard Windows shall be horizontal slide units, polished aluminum finish 3'-0" x 3'-0", 4'-0" x 3'-0", and 6'-0" x 3'-0". They shall be furnished complete with hardware and half screen. All windows provided by Tyler shall comply with the following:

9.1.1.1. Solar Heat Gain Coefficient (SHGC) – 0.6 max.

9.1.1.2. U-Factor – 0.7 max.

**9.2. PERSONNEL DOORS**

9.2.1. Personnel door leafs shall be 3'-0" x 7'-0" x 1 3/4" manufactured from 20 gauge galvanized steel.

9.2.2. Door leafs shall have square edges for no-handed installation.

9.2.3. Door leafs shall have an embossed finish with a white prime coat.

9.2.4. Door leafs shall be flush and have vertical mechanical interlocking seams on both hinge and lock edges.

9.2.5. Door leafs shall be provided with top and bottom inverted 16 gauge galvanized steel channels spot-welded within the door.

9.2.6. Door leafs shall be reinforced, stiffened, and sound deadened with impregnated Kraft honeycomb core completely filling the inside faces of the door and laminated to the inside faces of the panels.

9.2.7. Door leafs shall be reinforced for applicable hardware.

- 9.2.8. Door leafs shall be solid, half glass, or side vision (narrow lite).
- 9.2.9. All glazing shall be by other trades in the field. Glazing is not provided by Tyler.
- 9.2.10. Door frames shall be 16 gauge galvanized steel, pre-painted white with 8-1/4" jamb depth to accommodate 8" girts or 10-1/4" jamb depth to accommodate 10" girts, as specified on the erection drawings.
- 9.2.11. Door jambs shall be constructed for non-hand installation.
- 9.2.12. Door frames shall be provided with head and jamb flashing and optional weather strip.
- 9.2.13. Door frames shall be provided with three 4 1/2 x 4 1/2 hinges and reversible strike plate.
- 9.2.14. The standard lockset shall be a deadbolt with a lever passage handle. The deadbolt shall meet ANSI A156.5 – E5152 or equal.
- 9.2.15. Door threshold shall be aluminum, manufactured to a low profile suitable for ADA specifications.

### **9.3. OVERHEAD DOORS**

- 9.3.1. Door: Equivalent to Overhead Door Systems Series 430.
- 9.3.2. Door Framing: Overhead door support framing shall be designed to resist applicable wind loads and shall consist of channel jambs with a channel header at the top of the opening. 26 gauge steel, color coordinated flashing shall be provided to conceal panel edges at the opening unless otherwise specified.

### **9.4. ROLL-UP DOORS**

- 9.4.1. Door: Equivalent to Overhead Door Systems Series 880.
- 9.4.2. Door Framing: Overhead door support framing shall be designed to resist applicable wind loads and shall consist of channel jambs with a channel header at the top of the opening. 26 gauge steel, color coordinated flashing shall be provided to conceal panel edges at the opening unless otherwise specified.

### **9.5. GRAVITY VENTILATORS**

- 9.5.1. Gravity ridge ventilators shall be manufactured from Galvalume<sup>®</sup> A792 Grade 50 pre-painted or bare. The ventilator body shall be 26 gauge (.0185 min.) with flat skirts and shall be pre-formed for a 1:12 pitch. Chain operated damper will be furnished when specified. Ventilators shall be equipped with birdscreens, dampers, and riveted end caps. Ventilators shall be 10' long and have a 9" throat. Twelve inch throat ventilators are available as an option.
- 9.5.2. 20" round ventilators shall be 24 gauge and shall have an adjustable base for ridge mounting or a pitched base for on-slope mounting.

### **9.6. LOUVERS**

- 9.6.1. Louver frames shall be 18 gauge galvanized steel frame with 20 gauge blades, and shall be self-framing and self-flashing. The color shall be as specified by the customer. They shall be equipped with adjustable or fixed blades as specified.

## 9.7. LIGHT TRANSMITTING PANELS

9.7.1. High Strength light transmitting panels (“LTP”) are fiberglass reinforced polyester and shall comply with ASTM D3841, Type CC2, and Grade 2. Standard LTPs match ‘R’ panel profiles, weigh 8 ounces per square foot, and are white in color.

9.7.1.1. Roof Lights - Standard length is 10’-8” with a minimum tensile strength of 19 ksi as tested by ASTM A-638

9.7.1.2. Wall Lights - Standard length is 5’-4” with a minimum tensile strength of 15 ksi as tested by ASTM A-638.

## 9.8. INSULATION

9.8.1. Fiberglass Blanket Insulation shall conform to ASTM specification C991 NAIMA 404. Standard thicknesses available shall be 3”, with 4”, and 6”. For insulation thicknesses from 6” to 12”, Insul-basket systems are available.

9.8.2. The standard facing for fiberglass insulation shall be white vinyl for non-reinforced insulation and PSK (WMP-VR) for reinforced insulation. Other facings are available.

## 9.9. ROOF CURBS

9.9.1. Roof curbs shall be manufactured from minimum .080” 3003H14 aluminum. Curbs shall have an integral cricket type diverter. The minimum curb height shall be 8 inches.

## 9.10. PIPE FLASHING

9.10.1. Pipe flashing shall be of a one piece construction and fabricated from an EPDM membrane and shall have an aluminum base that can be field conformed to any panel configuration. Pipe flashing shall be flexible for mounting on any roof slope. Service temperature ranges shall be from -30°F to +250°F. For temperatures up to +350 °F, silicone pipe flashing is available.

## 10. ERECTION AND INSTALLATION

10.1. Building erection and the installation of accessories shall be performed in accordance with erection drawings by a qualified erector using proper tools and equipment. Erection practices shall conform to MBMA’s Metal Building Systems Manual, 2002 ed., part IV Common Industry Practices, Sections 5-6.

10.2. There shall be no field modifications to primary structural members except as authorized and specified by Tyler Building Systems, L.P.

## 11. BUILDING ANCHORAGE AND FOUNDATION

11.1. The building anchor rods shall be designed to resist the maximum column reactions resulting from the specified combinations of loadings. These designs and sizes shall be specified by Tyler. Anchor rods will be supplied by Tyler.

11.2. Foundations shall be adequately designed by a qualified foundation engineer to support the building reactions and other loads that may be imposed by the building use. The design shall be

based on the specific soil conditions of the building site. The engineering of the foundation is not provided by Tyler. Tyler assumes no responsibility for the integrity of the foundation.

## **12. WARRANTIES**

12.1. Tyler Building Systems, L.P. offers a variety of warranties for panel coatings, roof system weathertightness, purchased products, and manufactured materials. For specific warranty details and costs contact Tyler Building Systems, L.P. at 1.903.561.3000.