SECTION 1 – GENERAL

1.1 THIS SPECIFICATION designates the quality, design criteria and workmanship used in metal building systems designed, manufactured and furnished by Rigid Global Buildings, hereinafter referred to as RIGID.

1.2 SPECIFICATIONS herein are to be used as a guide of the performance requirements for the materials used in the design and manufacture of RIGID's product line. They are intended to insure that the architect, engineer, builder and/or owner understand the basis for the design and manufacture of RIGID's pre-engineered building systems.

1.3 RIGID utilizes the standard specifications of industry recognized organizations, such as: AISC, AWS, ASTM, AISI, MBMA etc., as the basis for establishing it's own design, fabrication and quality criteria, standards, practices, methods and tolerances. For convenience, one or more provisions of a particular group or agency may be referenced in RIGID documents where appropriate. In all events, however, unless stipulated otherwise in the Final Quotation and Contract Form, RIGID's design, fabrication and quality criteria, standards, practices, methods and tolerances will govern the work; any other interpretations to the contrary notwithstanding.

1.4 MECHANICAL PROPERTIES of materials utilized by RIGID in the manufacture of its product line are referenced within these specifications. Applications of these materials are covered under their pertinent sections. Industry specification standards have been referenced where applicable within these specifications.

1.5 BUILDING NOMENCLATURE

1.5.1 THE BUILDING "WIDTH" AND "LENGTH" shall be measured from the inside face to the inside face of the wall covering.

1.5.2 THE BUILDING "EAVE HEIGHT" shall be measured from the bottom of the base plate of the frame columns to the intersection of lines representing the inside of the wall covering and the inside of the roof covering.

1.5.3 THE "BAY SPACING" shall be measured center line to center line of the main frames, except at end bays where "Bay Spacing" is measured from the inside of the wall covering to the center line of the first interior frame.

SECTION 2 - STRUCTURAL FRAMING

2.1 PRIMARY FRAMING shall be the main load carrying structural members. These members shall support secondary structural members.

2.1.1 RIGID FRAME "RF" shall normally be manufactured of solid web members having tapered or uniform depth rafters, rigidly connected to tapered or uniform depth columns. This system provides a clear span, single gable, or single sloped rigid frame designed to support the specified loads.

2.1.2 STRAIGHT COLUMN "SC" shall normally be manufactured of solid web members having tapered or uniform depth rafters, rigidly connected to uniform depth columns. This system provides clear span, single gable or single sloped rigid frame, straight column designed to support the specified loads.

2.1.3 BEAM and COLUMN "BC" shall normally be manufactured of solid web members having tapered and/or uniform depth rafters, rigidly connected to tapered or uniform depth exterior columns, and uniform depth or round section interior columns. This system provides a single gable, or single slope rigid frame having interior columns designed to support the specified loads.

2.1.4 MATERIALS used in the fabrication of primary framing systems shall be designed utilizing RIGID's standard practices, generally in compliance with the A.I.S.C. code.

2.1.4.1 STRUCTURAL FLAT PLATE, STRIP and/or BAR STOCK generally shall conform to the physical requirements of ASTM A529 or ASTM A572 as applicable, and shall have minimum yield strength of 50,000 psi for web plates and 55,000 psi for flange bars.

2.1.4.2 W, M and S SHAPES, ANGLE RODS, CHANNELS and OTHER HOT ROLLED SHAPES shall be of material conforming to the physical requirements of ASTM A572 or ASTM A992, and shall have a minimum yield strength of 50,000 psi.

2.1.4.3 ROUND PIPE SECTIONS shall be of material conforming to the physical requirements of ASTM A500 Grade B and shall have minimum yield strength of 42,000 psi.

2.1.4.4 STRUCTURAL TUBING shall be of material conforming to the physical requirements of ASTM500 Grade B and shall have a minimum yield strength of 46,000 psi.

2.1.4.5 OTHER YIELD STRENGTH MATERIALS may be used based on the particular building design requirements.

2.1.4.6 MEMBERS fabricated from plate or bar stock materials shall have flanges and webs joined on one side of the web by a submerged arc continuous weld process.

2.2 PRIMARY ENDWALL FRAMING shall be the main load carrying members of the building endwall. They shall include the corner columns, endwall columns and endwall rafters, and shall be manufactured of cold-formed light gage sections and/or structural sections.

2.2.1 BEARING FRAME "BF" shall be a system having a continuous rafter beam supported by corner columns and endwall columns, and shall be designed to support the specified loads. This is a non-expandable endwall.

2.2.2 HALF LOAD MAIN FRAMES shall be a system similar to the 'RF', 'SC' and 'BC' mainframes described in section 2.1, except that these main-frames are designed as non - expandable endwalls.

2.2.3 MATERIALS used in the fabrication of primary endwall framing systems shall be designed utilizing RIGID's standard practices, generally in compliance with the applicable sections of A.I.S.C. and A.I.S.I.

2.2.3.1 COLD-FORMED MEMBERS shall be fabricated from material conforming to the physical requirements of ASTM A653, structural steel Grade 50 or ASTM A1011 structural steel or high strength low alloy steel Grade 55. Either material shall be required to have a minimum yield strength of 57,000 psi.

2.2.3.2 STRUCTURAL SHAPES shall be of material conforming to the physical requirements of ASTM A572 or ASTM A992, and shall have a minimum yield strength of 50,000 psi.

2.2.3.3 OTHER YIELD STRENGTH MATERIALS may be used based on the particular building design requirements.

2.2.3.4 MEMBERS fabricated from plate or bar stock materials shall have flanges and web joined by a submerged are continuous weld process on one side only.

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2.3 SECONDARY FRAMING shall be the structural members which distribute the loads to the primary framing systems, and shall include the eave struts, purlins, girts, wind bracing and other miscellaneous structural members. They shall be manufactured of cold-formed light gage sections, welded plate sections and/or structural sections.

2.3.1 EAVE STRUTS shall be nominal 4", 6", 8", 9", 10" or 12" deep "cee" shape members of unequal flange manufactured of cold-formed light gage steel and shall be designed as simple span for the specified loads.

2.3.2 PURLINS AND GIRTS shall be nominal 4", 6", 8", 9", 10" or 12" deep "zee" shaped or "cee" shaped members, and shall be manufactured of cold-formed light gage steel designed as simple span, partially continuous or continuous for the specific loads.

2.3.3 WIND BRACING shall be a system of bracing designed for the specified loads in accordance with RIGID's design practices. They normally utilize rods, cables, diaphragm action, angles and/or welded plate or structural members.

2.3.4 MISCELLANEOUS FRAMING shall normally be those members which work in conjunction with primary, primary endwall and secondary framing systems. They shall include members such as: base angles, flange braces, jambs, headers, bridging, or sag members, and shall be designed to be supportive of the framing systems.

2.3.5 MATERIALS using in the fabrication of secondary framing systems shall be designed utilizing RIGID's standard practices, generally in compliance with the applicable sections of A.I.S.C. and A.I.S.I.

2.3.5.1 COLD-FORMED MEMBERS shall be fabricated from material conforming to the physical requirements of ASTM A653, structural steel Grade 50 or ASTM A1011 structural steel or high strength low alloy steel Grade 55. Either material shall be required to have a minimum yield strength of 57,000 psi.

2.3.5.2 CABLE BRACING shall be fabricated of material conforming to the physical requirements of ASTM A475, 7-Strands, Extra High Strength grade.

2.3.5.3 ROD BRACING shall be fabricated of material conforming to the physical requirements of ASTM A36 and shall have a minimum yield strength of 36,000 psi.

2.3.5.4 OTHER YIELD STRENGTH MATERIALS shall be used based on the particular building design requirements.

2.3.5.5 MEMBERS fabricated from plate or bar stock materials shall have flanges and webs joined on one side of the web by submerged arc continuous weld process.

SECTION 3- ROOF AND WALL COVERINGS

3.1 ROOF COVERING shall consist of the roof panels, their attachments, trim and sealant for use on the exterior of the roof. They shall be either RIGID's "PBR", "R", "PBM", "M", "CHOICE RIB", "HI-TECH" or "PLATINUM" roof panels.

3.1.1 RIGID's commercial "PBR" shall be a system of roof panels providing a 36" wide net coverage having 1 1/4" high major ribs at 12" centers and two minor ribs between the major ribs. Side laps shall be one full major rib and shall utilize the bearing edge of the underlying major rib for support. RIGID's "PBR" Panels shall be continuous from ridge to eave until panel length exceeds 40' and/or the panel becomes prohibitive of handling in which case endlaps are provided. Endlaps shall be 6" and occur over a supporting member. For materials and properties, see section 3.1.7.

3.1.2 RIGID's commercial "R" shall be a system of roof panels providing a 36" wide net coverage having 1 1/4" high major ribs at 12" centers and two minor ribs between the major ribs. Sidelaps shall be one full major rib. RIGID's "R" Panels shall be continuous from ridge to eave until panel length exceeds 40' and/or the panel becomes prohibitive of handling, in which case endlaps are provided. Endlaps shall be 6" and occur over a supporting member. For materials and properties, see section 3.1.8.

3.1.3 RIGID's commercial "PBM" shall be a system roof panels providing a 36" wide net coverage having 3/4" high major ribs at 6" centers. Sidelaps shall be one full major rib and shall utilize the bearing edge of the underlying major rib for support. RIGID's "PBM" Panels shall be continuous from ridge to eave until panel length exceeds 40' and/or the panel becomes prohibitive of handling, in which case endlaps are provided. Endlaps shall be 6" and occur over a supporting member. For materials and properties, see section 3.1.7.

3.1.4 RIGID's commercial "M" shall be a system of roof panels providing a 36" wide net coverage having 3/4" high major ribs at 6" centers. Sidelaps shall be one full major rib. RIGID's "M" Panels shall be continuous from ridge to eave until panel length exceeds 40' and/or the panel becomes prohibitive of handling, in which case endlaps are provided. Endlaps shall be 6" and occur over a supporting member. For materials and properties, see section 3.1.8.

3.1.5 RIGID's agricultural "CHOICE RIB" shall be a system of roof panels providing a 36" wide net coverage having ¾" high major ribs at 9" centers and two minor ribs between the major ribs. Sidelaps shall be one full major rib. RIGID's "CHOICE RIB" shall be continuous from ridge to eave until panel length exceeds 40' and/or the panel becomes prohibitive of handling, in which case endlaps are provided. Endlaps shall be 6" and occur over a supporting member. For material and properties, see section 3.1.9.

3.1.6 RIGID's commercial roof covering systems are designed for 4" maximum blanket insulation thickness over the purlins. RIGID acknowledges that there are proprietary methods of insulating where insulation of greater than 4" between the purlins may be utilized.

3.1.7 MATERIALS used in the fabrication of RIGID's "PBR" and "PBM" commercial roof panels shall normally be unfinished Aluminum-Zinc alloy-coated (Galvalume) steel substrate or a pre-finished Silicon Polyester Polar White finish over Aluminum-Zinc alloy-coated or G90 zinc-coated galvanized steel substrate in accordance with ASTM A792, Grade 80 (26 gage) or Grade 50 (24 gage) or ASTM A653, Grade 80 (26 gage).

3.1.8 MATERIALS used in the fabrication of RIGID's "R" and "M" commercial roof panels shall normally be a pre-finished Modified Silicon Polyester finish over Aluminum-Zinc alloy-coated or G90 galvanized steel substrate in accordance with ASTM A792, Grade 80 (26 gage) and Grade 50 (24 gage) or ASTM A653, Grade 80 (26 gage). Reference RIGID's Spectralite 2000 color chart for color availability.

3.1.9 MATERIALS used in the fabrication of RIGID's "CHOICE RIB" agricultural roof panels shall normally be a pre-finished Modified Silicon Polyester finish over G90 galvanized steel substrate in accordance with ASTM A653, Grade 80 (29 gage). Reference RIGID's "CHOICE RIB" Spectralite 2000 color chart for color availability.

3.1.10 RIGID's architectural "HI-TECH" shall be a system of standing seam roof panels with floating clip system to provide for thermal movement of the panel. The 24" wide net coverage has 3" high major ribs at 24" centers, and either 2 minor ribs between the major ribs or a striated pan with no minor ribs. RIGID's "HI-TECH" roof system shall be installed utilizing concealed galvanized 16 gage steel panel clips. RIGID's "HI-TECH" roof system has a factory applied sealant. "HI-TECH" panels shall be continuous from ridge to eave until the panel length exceeds 40' and/or the panels become prohibitive for handling, in which case endlaps are provided. Endlaps shall be 2" and occur 5" above a supporting member, utilizing galvanized 16 gage back-up plates and 18 gage stainless steel cinch straps for roof slopes less than 1:12. The minimum recommended roof slope for RIGID's "HI-TECH" roof system is 1/2 on 12. Roof slopes ¼ on 12 and less could cause severe ponding and will void material warranties. The maximum recommended roof slope is 4 on 12. For materials and properties, see section 3.1.11.

RIGID's "HI-TECH" standing seam roof system shall be available for 2 different insulation conditions. The "LOW CLIP" system shall be for buildings without insulation up to 3" of blanket insulation, requiring 3/8" thermal blocks only for the non-insulated condition, and will provide 3/8" of clearance over the purlins. The "HIGH CLIP" system shall be for buildings with 4" and 6" of blanket insulation. For 4" of blanket insulation a 5/8" thermal block is required, and for 6" of blanket insulation a 3/8" thermal block is required. The "HIGH CLIP" system provides 1 3/8" clearance over the purlins.

RIGID's "HI-TECH" system provides three types of sidelap conditions as follows:

3.1.10.1 RIGID's "EZ-Lok" sidelap condition is suitable on roof conditions with normal uplift resistance. No mechanical seaming is required.

3.1.10.2 RIGID's "Triple-Lok" sidelap condition is mechanically seamed on roof areas that call for increased wind uplift resistance.

3.1.10.3 RIGID's "Quad-Lok" sidelap condition is mechanically seamed on roof areas that call for the highest wind uplift conditions such as building corners and building ends.

3.1.11 MATERIALS used in the fabrication of RIGID's "HI-TECH" roof panels shall normally be non-painted zinc-aluminum alloy-coated steel substrate, a pre-finished Silicon Polyester Polar White finish or a pre-finished Fluoropon 70% Kynar 500 / Hylar 5000 Snow White over 24 gage, Grade 50 Aluminum-Zinc alloy-coated steel substrate, ASTM A792, coating designation AZ50 or AZ55.

3.1.12 RIGID's architectural "PLATINUM" shall be a system of standing seam roof panels with either a fixed clip system for rigid construction, or a floating clip system to provide for thermal movement of the panel. The 16" or 18" wide net coverage has 2" high major ribs at 16" or 18" centers, and a striated pan. RIGID's "PLATINUM" roof system shall be installed utilizing concealed galvanized 16 gage steel panel clips. RIGID's "PLATINUM" roof system has a factory applied sealant. "PLATINUM" panels shall be continuous from ridge to eave until the panel length exceeds 40' and/or the panels become prohibitive for handling, in which case endlaps are provided. Endlaps shall be 2" and occur 7" above a supporting member, utilizing galvanized 16 gage back-up channels and 18 gage stainless steel cinch straps for roof slopes less than 1:12. The minimum recommended roof slope for RIGID's "PLATINUM" roof system is 1/2 on 12. Roof slopes less that ½ on 12 and less could cause severe ponding and will void material warranties. The maximum recommended roof slope is 6 on 12. For materials and properties, see section 3.1.13.

RIGID's "PLATINUM" standing seam roof system shall be available for 3 different conditions. The "UTILITY" system shall be for buildings without insulation, rigid board insulation or plywood decking. The "LOW CLIP" system shall be for buildings without insulation up to 3" of blanket insulation, requiring 3/8" thermal blocks only for the non-insulated condition, and will provide 3/8" of clearance over the purlins. The "HIGH CLIP" system shall be for buildings with 4" and 6" of blanket insulation. For 4" of blanket insulation a 5/8" thermal block is required, and for 6" of blanket insulation a 3/8" thermal block is required. The "HIGH CLIP" system provides 1 3/8" clearance over the purlins.

RIGID's "PLATINUM" system provides two types of sidelap conditions as follows:

3.1.12.1 RIGID's "Triple-Lok" sidelap condition is mechanically seamed on roof areas that call for normal and increased wind uplift resistance.

3.1.12.2 RIGID's "Quad-Lok" sidelap condition is mechanically seamed on roof areas that call for the highest wind uplift conditions.

3.1.13 MATERIALS used in the fabrication of RIGID's "PLATINUM" roof panels shall normally be a pre-finished Fluoropon 70% Kynar 500 / Hylar 5000 over 24 gage, Grade 50 zinc-aluminum alloy-coated steel substrate, ASTM A792, coating designation AZ50 or AZ55. Reference RIGID's Spectralite 3000 color chart for color availability.

3.2 WALL COVERING shall consist of the wall panels, their attachments, and trim for use on the exterior of the walls. They shall be either RIGID's "AW", "R", "R-VEE", "M" or "CHOICE RIB" wall panels.

3.2.1 RIGID'S commercial "AW" shall be a system of wall panels providing a 36" wide net coverage having 1 1/4" deep major ribs at 12" centers and a 5" wide sculptured "valley" shape between major ribs. Member and stitch screws are located in the "valley" of the major ribs, therefore screw lines are not as noticeable. Sidelaps shall be one major rib. RIGID's "AW" Panels shall be continuous from eave to sill until the panel length exceeds 35' and/or the panel becomes prohibitive of handling in which case endlaps are provided. Endlaps shall be 4" and occur over a supporting member. For materials and properties, see section 3.2.5.

3.2.2 RIGID'S commercial "R" shall be a system of wall panels providing a 36" wide net coverage having 1 1/4" high major ribs at 12" centers and two minor ribs between the major ribs. Sidelaps shall be one major rib. RIGID'S "R" Panels shall be continuous from eave to sill until the panel length exceeds 35' and/or the panel becomes prohibitive of handling in which case endlaps are provided. Endlaps shall be 4" and occur over a supporting member. For materials and properties see section 3.2.5.

3.2.1 RIGID'S commercial "R-VEE" shall be a system of wall panels providing a 36" wide net coverage having 1 1/4" deep major ribs at 12" centers and a 5" wide sculptured "reverse valley" shape between major ribs. Member and stitch screws locations shall match that of RIGID's "R" panel. Sidelaps shall be one major rib. RIGID's "R-VEE" Panels shall be continuous from eave to sill until the panel length exceeds 35' and/or the panel becomes prohibitive of handling in which case endlaps are provided. Endlaps shall be 4" and occur over a supporting member. For materials and properties, see section 3.2.5.

3.2.3 RIGID'S commercial "M" shall be a system of wall panels providing a 36" wide net coverage having 3/4" high major ribs at 6" centers. Side laps shall be one major rib. RIGID's "M" Panels shall be continuous from eave to sill until the panel length exceeds 35' and/or the panel becomes prohibitive of handling in which case endlaps are provided. Endlaps shall be 4" and occur over a supporting member. For materials and properties see section 3.2.5.

3.2.4 RIGID's agricultural "CHOICE RIB" shall be a system of wall panels providing a 36" wide net coverage having ¾" high major ribs at 9" centers and two minor ribs between the major ribs. Sidelaps shall be one full major rib. RIGID's "CHOICE RIB" shall be continuous from ridge to eave until panel length exceeds 35' and/or the panel becomes prohibitive of handling, in which case endlaps are provided. Endlaps shall be 4" and occur over a supporting member. For material and properties, see section 3.2.6.

3.2.5 MATERIALS used in the fabrication of RIGID's "AW", "R", "R-VEE" and "M" commercial wall panels shall normally be a pre-finished Modified Silicon Polyester finish over Aluminum-Zinc alloy-coated or G90 galvanized steel substrate in accordance with ASTM A792, Grade 80 (26 gage) and Grade 50 (24 gage) or ASTM A653, Grade 80 (26 gage). Reference RIGID's commercial Spectralite 2000 color chart for color availability.

If the customer requires a Kynar finish on any of RIGID's commercial wall panels, materials used in the fabrication shall normally be a pre-finished Fluoropon 70% Kynar 500 / Hylar 5000 over 26 gage, Grade 50 Aluminum-Zinc alloy-coated steel substrate, ASTM A792, coating designation AZ50 or AZ55. Reference RIGID's Spectralite 3000 color chart for color availability

3.2.6 MATERIALS used in the fabrication of RIGID's "CHOICE RIB" agricultural wall panels shall normally be a pre-finished Modified Silicon Polyester finish over AZ50 or AZ55 Galvalume or G90 galvanized steel substrate in accordance with ASTM A653, Grade 80 (29 gage) and ASTM 792, Grade 80 (26 and 29 gage) Aluminum-Zinc alloy-coatedAluminum-Zinc alloy-coatedAluminum-Zinc alloy-coated. Reference RIGID's "CHOICE RIB" Spectralite 2000 color chart for color availability

3.3 MATERIALS used in the fabrication of RIGID's commercial roof and wall trim and flashing shall normally be a pre-finished Modified Silicon Polyester finish over Aluminum-Zinc alloy-coated or G90 galvanized steel substrate in accordance with ASTM A792, Grade 50 (24 & 26 gage) or ASTM A653, Grade 50 (26 gage). Reference RIGID's commercial Spectralite 2000 color chart for color availability.

3.4 MATERIALS used in the fabrication of RIGID's architectural roof and wall trim and flashing shall normally be a pre-finished Fluoropon 70% Kynar 500 / Hylar 5000 over 26 gage, Grade 50 Aluminum-Zinc alloy-coated steel substrate, ASTM A792, coating designation AZ50 or AZ55. Reference RIGID's Spectralite 3000 color chart for color availability.

3.5 PAINTED FINISHES for roof and wall coverings and their flashing shall unless otherwise specified, consists of 0.2 mil baked on primer coat applied to each side. A 0.8 mil baked-on finish coat will be applied on one side, while a 0.3 mil baked-on straight polyester wash coat will be applied on the other. Total thickness of the finish coat side will be nominal 1.0 mil (including the primer coat). Thickness of the backside will be a nominal 0.5 mil (including the primer coat).

3.6 SYSTEMS COVERING SEALANTS shall normally be roll tape sealant, tube sealant, and closures as required for weather-tightness of the roof.

3.6.1 TAPE SEALANTS shall be of performed butyl rubber base, and shall normally be supplied as a 3/32" x 1/2" extruded shape. Wide tape sealant, 3/32" x 1" shall be available if specified.

3.6.2 TUBE SEALANTS shall be of a polyurethane type material for applications where color sealant is required. Clear tube sealants shall be of an acrylic type material.

3.6.3. CLOSURES shall be a closed cell polyethylene material of a gray neutral color, and shall be die cut to panel profiles. Closures shall be supplied as required to provide weather tightness.

3.6 FASTENERS for roof and wall covering systems shall normally be one or more types of self-drilling or self-tapping screws. Blind rivets shall normally be used in trim and accessory attachment and trim splicing.

SECTION 4- MANUFACTURING

4.1 STRUCTURAL MEMBERS shall normally be fabricated by shearing, flame cutting, forming, welding, punching, drilling, reaming, etc., as required in accordance with RIGID's standard practices.

4.1.1 WELDED PLATE MEMBERS fabricated from plate or bar stock materials shall have flanges and webs joined on the one side of the web by a submerged arc continuous weld process.

4.1.2 SHOP CONNECTIONS for built-up and/or hot-rolled members shall normally be welded using either a submerged or gas metal arc weld process. Welding shall be in accordance with RIGID's standard practices in compliance with the applicable sections, relating to design requirements and allowable stresses of the latest edition of the "AWS Structural Welding Code D1.1".

4.1.3 FIELD CONNECTIONS shall normally be the bolting of structural members using high strength bolts and machine bolts in shop drilled, punched or reamed holes, in accordance with RIGID standard practices.

4.1.4 WORKMANSHIP AND TOLERANCES of the manufactured building parts shall be in accordance with RIGID's quality control standards.

4.2 SHOP PAINTING of members with shop primer paint shall be provided for the purpose of protecting the steel member during transportation, job site storage, and during erection. Shop primer does not provide the appearance, durability and/or protection of an appropriate field applied finish. RIGID is not responsible for any deterioration of the shop primer paint as a result of improper handling and/or storage. RIGID shall not be responsible for any field applied paint and/or coatings.

4.2.1 CLEANING of steel members shall normally be the removal of oil, dirt, loose scale and/or foreign matter prior to painting in accordance with SSPC-SP2.

4.2.2 COATING of steel members shall normally be one shop coat of RIGID's standard primer paint in accordance with the standard practices of RIGID, and generally shall equal or exceed the end performance requirements of Federal Specifications SSPC # 15.

4.3 ALL FRAMING MEMBERS shall carry an easily visible identifying painted or stenciled piece mark.

SECTION 5- ACCESSORIES

5.1 TRANSLUCENT ROOF PANELS shall be of nominal 8 oz., fiberglass, white finish, and conform to the configuration of the RIGID "R" roof panel. The packages available are Standard, Fire Retardant, UL 90 and Insulated. The Standard Package includes an 8 oz. general purpose panel conforming to commercial standard CS-214-517. The Fire Retardant Package includes an 8 oz. fire retardant panel with a UL flame spread rating of 25 when tested in accordance with ASTM D635-56T. The UL90 Package includes an 8 oz. panel and the necessary panel straps and side battens required to conform to the UL90 rating. The Insulated Package shall include a sandwich construction whereby a 5 oz. fiberglass panel is bonded to the underside of an 8 oz. translucent roof panel to provide an 1/8 " minimum dead air space. Translucent roof panels are nominally 36" wide and are compatible for use over two 5'-0" purlin spaces. Translucent roof panels SHOULD NOT be used with side to side or end to end installations.

5.2 TRANSLUCENT WALL PANELS shall be nominal 8 oz. fiberglass, white finish, and conform to the configuration of the RIGID "R" wall panels. The panels are general purpose, non-rated and conform to commercial standard CS-214-517. Translucent wall panels are nominally 36" wide and are generally supplied in lengths required. Translucent wall panels may be used with side to side installations.

5.3 ROUND GRAVITY VENTILATORS shall have bird screen, interior baffles and exterior wind bands designed to provide maximum air flow. Round ventilators are furnished with dampers. Damper shall be vertical rising, operated by a standard pull chain. Cable that runs from the operator down the wall to a handle can be supplied as an option. Ventilators may be supplied peak mounted or hillside mounted. Peak mounted vent base configuration is normally flat, while hillside mounted vent base configuration normally matches the roof panel configuration. Ventilators are available in aluminum-zinc or white (Other colors are available with additional cost.)

5.4 CONTINUOUS OR SECTIONAL GRAVITY RIDGE VENTILATORS shall be supplied with a screen, and will be furnished in 10'-0" lengths. Multi-unit splice drains and end cap skirt assemblies, where required, shall be provided to make up the specified length. Continuous or sectional ventilators are furnished with dampers. The damper shall be a spring loaded vertical rising type, operated by a standard pull chain. Cable that runs from the operator down the wall to a handle can be supplied as an option. Ridge ventilators are provided with die-formed skirt bases. Ventilators are available in aluminum-zinc or white. (Other colors are available with additional cost).

5.5 ROOF FLASHING UNITS shall normally be used for roof mounted mechanical equipment and/or vents. Openings in roof and flashing units shall be field cut to required sizes. Flashing units are not intended to support any type of load. Loads are supported by means of sub frames and/or auxiliary secondary support systems. Flashing base configuration normally matches the panel profile on which it is used.

5.5.1 ROOF CURB UNITS are available for peak or hillside applications. Base configurations match the roof panel on which it is used. Curbs are at least 18 gage galvanized material with welded construction. Top flanges are turned in as standard and can accommodate rigid installation when specified. All sizes are available in galvanized or with baked-on powder coated finish to match the roof color.

5.5.2 ROOF JACKS shall be for the flashing of plumbing vent stacks and/or other pipe-like penetrations. They are available in 1/4" to 26" diameters. Jacks have flat, malleable bases and can be field formed to fit any standard panel configurations. Standard jacks have a heat range of -65 degrees centigrade to +250 degrees centigrade. Heat ranges of -100 degrees centigrade to +450 degrees centigrade are also available with additional cost. Jacks are standard black color.

5.6 PERSONNEL DOORS shall normally be single door 3070 or a double door 6070 available in flush panel (solid) or long vision. Half-glass, vision light and louvered doors are available upon request. Glass and glazing of personnel doors are not supplied by RIGID.

5.6.1 DOOR LEAF shall be non-handed, 1 3/4" thick, full flush, fabricated from 20 gage roller leveled, galvanized mill bonderized face sheets. Door finishes are white embossed (standard), bronzed embossed, or smooth gray finish. Top and bottom channels shall be welded flush to face sheet. The core materials shall be expanded polystyrene bonded to face sheets with a two component epoxy adhesive. Door edges shall be hemmed to eliminate raw edge metal, beveled on lock side and flat on hinge side. Door shall be prepared for 4 1/2" X 4 1/2" template hinges with 9 gage hinge reinforcements. Lock edges shall be prepared for Government Series 160 and 161 Locksets.

5.6.2 DOOR FRAMES shall be fabricated from 16 gage galvanized class G-60 or galvalume steel, mill bonderized. Floor and head clips X 4 1/2' template and universal striker plate. Frames are standard finished white with gray primer or bronzed finishes available.

5.6.3 HARDWARE shall normally consist of: (a) 1 1/2 pair full mortise hinges per leaf (b) one key-in-lever type cylindrical lockset (c) one aluminum threshold (d) one astragal, one filler plug for inactive leaf, one header bolt, one foot bolt, and one pair of surface bolts per double door. Optional weather stripping for jambs, head, and sill may be ordered. Optional Mortise lockset, panic hardware, handicap hardware, and door closers may also be ordered.

5.7 FRAMES OPENINGS IN WALLS shall normally be an opening framed with 16 gage minimum, cold-formed members, designed to meet the specified loads. Openings shall be trimmed in accordance with RIGID's standard practices.

5.8 ALUMINUM HORIZONTAL SLIDE WINDOWS shall be fabricated from 6063 alloy, T5 tempered hardness. Finishes are standard mill with bronzed painted on request. All windows shall be furnished with 1/8" double strength clear glass as standard with bronze tinted, obscured, or insulated glass on request. All horizontal slide windows shall be self flashing type with side fins to match either RIGID's "A", "M"' or "R" panel. Nylon rollers will be attached for smooth sliding action. Half screens shall be furnished with all windows.

5.9 ALUMINUM SINGLE-HUNG WINDOWS shall be fabricated from 6063 alloy, T5 tempered hardness. Standard finish is plain mill with bronzed painted on request. All windows shall be furnished with 1/8" double strength clear glass as standard with bronze tinted, obscured, or insulated glass on request. Single-hung windows require additional trim for a finished appearance. Half screens shall be furnished with all windows.

5.10 NARROW LITE ACCENT WINDOWS (SLIM LINE) shall be fabricated from 6063 alloy, T5 tempered hardness. Tubular type extruded sections are utilized for strength and rigidity. All accent windows shall be furnished with 1/8" clear tempered glass as standard with bronzed tinted or insulated glass on request. All accent windows shall be sold flashing type with side fins to match either RIGID "A", "R", or "M" panels. Outside trim fins are also provided with all units.

5.11 FIXED LOUVERS shall be shop fabricated out of 18 gage galvanized steel, self framing, self flashing, and self mulling, welded frames with 20 gage galvanized blades. Louvers shall have blades of the overlapping type, providing maximum weather tightness while allowing free air flow. Louvers are available in galvanized, white or any RIGID standard panel color. A removable insect screen is provided with each louver.

5.11.1 ADJUSTABLE LOUVERS shall be the same as fixed louvers except after finish is applied, a 3/8" x 1/4" weather stripping is applied to the edge of each blade which makes the louver virtually air tight with the blades in the closed position. The standard operator is by hand crank. An optional chain operator is available upon request.

5.12 CANOPIES shall normally be an overhang provided with a roof finish and trim finish matching that of the main structure. Soffit panels are optional. Canopies shall be framed of cold-formed light gage shapes, welded built-up section and/or hot rolled sections.

5.12.1 EAVE CANOPIES shall be the extension of the roof line at the eave. Eave canopies are measured from a structural line to structural line and/or face of side wall girt to face of eave member.

5.12.2 PURLIN EXTENSION CANOPIES shall be the extension of the roof line at the gable and / or endwall of the structure. Purlin extension are measured from the structural line to structural line and or face of endwall girt to face of purlin rake angle.

5.12.3 OPEN FASCIA SYSTEMS shall normally be designed to allow water runoff between the fascia and the building and permit use of eave guttering.

5.12.4 DOOR CANOPIES AND BELOW EAVE CANOPIES shall be below eave and/or rake line canopies designed for use over personnel doors,etc.

5.13 FASCIAS shall normally be constructed of secondary framing members. Fascia systems are available as parapet (vertical) and mansard (sloped) face. Fascia systems are measured from a structural line to a structural line and/or face of wall girt to face of fascia girt for overhang. Height is measured vertical from structural line to structural line and/or top of fascia rail to bottom of fascia rail.

5.13.1 FASCIA PANELS shall normally be RIGID "AW", "R" or "M" panels, or other facia material not exceeding a dead load of 2 psf and as specified in the contract documents. Fascia soffit panels are RIGID "M" or "R" panel and are available as an option on closed systems only.

5.13.2 CLOSED FASCIA SYSTEMS shall normally be designed with internal guttering between fascia and building and closed backing for weather tightness with other code bodies, such as sheer angles and embedment plates, are not normally supplied by RIGID.

SECTION 6 – MISCELLANEOUS

6.1 ANCHOR BOLTS are not normally supplied by RIGID. Anchor bolts shall not be less than the size and quantity shown on the RIGID anchor bolt setting drawings. Anchor bolts are unpainted for bonding with concrete, and are of sufficient capacity to properly resist the governing reactions induced by the design loads on the structure. Foundation reactions are furnished by RIGID, however, no responsibility for foundation design will be accepted by RIGID. All anchor bolts are to be set in strict accordance with RIGID drawings. Anchor bolts are designed in accordance with ASTM F1554 and it also meets ASTM A307 Grade C regulations. Additional materials required for compliance.

6.2 ERECTION of the RIGID building system shall be in accordance with the appropriate erection drawings, erection guides and/or other documents furnished by RIGID. It shall be the erector's responsibility to comply with all appropriate legal and safety requirements. It shall be the erectors responsibility to determine and provide any and all temporary bracing, shoring, blocking, bridging, and/or securing of components, etc., as required during erection of the building.

6.3 RIGID's STANDARD WARRANTY of production fabricated by RIGID, excluding paint, carry a warranty against failure due to defective material or workmanship for a period of one (1) year from the date of shipment. RIGID's ability under this warranty shall be limited to furnishing , but not dismantling or installing, necessary replacement material F.O.B. RIGID's plant in Houston. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED AND THERE ARE NO WARRANTIES, REPRESENTATIONS OR CONDITIONS OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE, BEYOND THOSE STATED HEREIN. IN NO EVENT SHALL RIGID BE LIABLE FOR LOSS OF PROFITS, OR OTHER INCIDENTAL CONSEQUENTIAL, OR SPECIAL DAMAGES.

Warranties on color coated panels, roof warranties, or any additional warranties on the building may, at RIGID's sole option, be purchased by builder and if purchased, shall be stated in the warranty certificates so purchased.