PART 1 – GENERAL

1.1 RELATED DOCUMENTS
   A. The drawings and provisions of the General Conditions, and the sections included under Division 1 specification sections, apply to this section

1.2 SUMMARY
   A. This section includes aluminum composite panels that are used as the exterior and interior cladding

1.3 PERFORMANCE REQUIREMENTS
   A. Structural Performance: provide aluminum composite wall panels capable of withstanding the effects of normal stress from thermal movements and load affects from: wind loads, dead loads, and snow loads; without evidence of permanent defects of the assembly. System designed for a mechanically fastened assembly to substructure:
      1. Dead Load as required by applicable building code
      2. Live Load as required by applicable building code
      3. Wind Load: uniform pressure (define velocity pressure) of (insert design criteria) pound/square foot, acting inward and outward.
      4. Thermal Movements: provide panel assemblies that allow for thermal movements to prevent buckling, opening of joints and other thermal effects
B. Pressure Equalized Rain Screen tested in accordance with AAMA 508-07
C. Structural Performance cyclic static air pressure differential tested in accordance with ASTM E 1233-06. Test was conducted for 100 three-second cycles from 240 Pa (5.0 psf) to 1200 V (25.0 psf) to 240 Pa (5.0 psf)
D. Water penetration using Dynamic Pressure tested in accordance with AAMA 501.1-05. Test was conducted with dynamic pressure equivalent to 300 Pa (6.24 psf) for a 15-minute duration. Water was applied to mock-up at a minimum rate of 5 gal/hr./ft²
E. Structural Performance / Uniform Load Deflection Test: Provide panel system that has been tested in accordance with ASTM E330.
F. Air Infiltration: Panel system shall not have air infiltration rate more than 0.06 cfm per square foot of fixed wall area when tested in accordance with ASTM E283 at a static air pressure differential of 1.57 psf.
G. Static Water Penetration: Panel system shall have no water penetrations defined by in test method when tested in accordance with ASTM E331 at inward static pressure differential of 15% of the positive design pressure but not less than 6.24 psf.
I. Design the panel for a mechanically fastened assembly to substructure
J. Design panel tolerances to manufacturer’s standard tolerances
K. Metal panels to have a maximum allowable deflection of L/60

1.4 SUBMITTALS
A. Product Data: Manufacturer’s product literature
B. Finish Samples: submit color samples for final approval
C. Shop Drawings: submit shop drawings showing plans, sections and details

1.5 QUALITY ASSURANCE
A. Manufacturer Qualifications: Minimum of five years’ experience in manufacturing of metal wall panel products
B. Installer Qualifications: Acceptable to manufacturer
C. Engineering Qualifications: Provide engineering calculations for the metal panel assembly to be prepared by an engineer registered in the state the project is located

1.6 DELIVERY, STORAGE AND HANDLING
A. Delivery: deliver metal panels in manufacturer’s crates packed for long haul transit
B. Storage: store materials in a dry and safe area
C. Handling: handle materials to avoid any damage to materials and finishes

1.7 WARRANTY
A. The contractor must warrant the materials to be free of defects in accordance with the general conditions. Finish warranty shall be extended by paint manufacturer’s standard warranty

PART 2 – PRODUCTS

2.1 MANUFACTURER
A. Quality Metalcrafts, LLC/AMERICLAD, 21925 Industrial Boulevard, Rogers, Minnesota 55374, Telephone: (866) 260-4047, www.americlad.com
   1. AC-1200 285 Dry Set Aluminum Composite Panel System (Pressure Equalized Dry Joint)
B. Approved equal submitted for approval 10 days prior to bid

2.2 MATERIALS
A. Panels shall be Larson® 4 mm FR core, Aluminum Composite material
B. Aluminum composite will be composed of a Fire resistant thermoplastic core laminated between two aluminum sheets (.020”) formed in a continuous process with no applied adhesives
C. Composite panels shall have a Class “A” building material rating when tested in accordance with ASTM E84 and performed to a flame spread of 15 and a smoke developed rating of 120
D. Aluminum Extrusions: ASTM B221, alloy 6000 series aluminum
E. Thickness: 4 mm FR core Aluminum Composite material unless otherwise specified
F. Exterior wall insulation: CavityRock® Non-combustible, lightweight, water repellent ridged insulation board with rigid upper surface to ASTM C612 Type IVB. (Insulation not supplied by Americlad)
G. Water and Air Barrier: Henry Blueskin VP160 self-adhered water resistive air barrier

2.3 FABRICATION
A. Tolerances
   1. Brake form edges at right angles to the plane of the wall
   2. Reinforce panels with proper stiffening as required and applicable based on design loads
   3. Panel surfaces shall be free of blemishes, scratches or marks caused during fabrication process

B. Assembly
   1. Extrusions installed in a continuous perimeter application to ensure proper pressure equalization. System must have non-exposed fasteners but be mechanically fastened using a flat pan self-drilling screws.

2.4 ACCESSORIES
A. Sill starter, Edge clips and mid clips are required for final installation to exterior wall assembly.

2.5 FINISHES
A. Paint:
   1. Coating shall be a coil Applied Fluorocarbon Resin Utilizing a 70% Kynar 500/Hylar 5000 resin
   2. Color as selected by owner from paint manufacturer’s standard colors or Custom color as specified
   3. Material to be painted in accordance with either AAMA specification 2605 or 2604

B. Anodized:
   1. Class II, Clear Anodic Finish: AA-M12C22A41, mechanical finish, nonspecular as fabricated. Coating to have an anodic coating of 0.5 mil thickness

PART 3 – EXECUTION

3.1 PREPARATION
A. Coordinate drawings, diagrams, and instructions for installation
B. Verify that underlayment has been installed over sheathing to prevent air and infiltration or water penetration

3.2 INSTALLATION
A. Install panels plumb and level per shop drawing detailing
B. Isolation tape or shim shall be installed where dissimilar materials come in contact

3.3 CLEANING AND PROTECTION
A. Clean exposed surfaces after installation per manufacturer’s recommendation
B. Touch up minor abrasions in finish with touch up paint supplied by finish applicator

END OF SECTION
Blueskin® SA
Self-Adhered Water Resistant Air Barrier

<table>
<thead>
<tr>
<th>Physical Property</th>
<th>Typical Value</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>Thickness, nominal</td>
<td>40 mils (1.0 mm)</td>
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<tr>
<td>Application Temperature, minimum</td>
<td>41°F (5°C)</td>
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</tr>
<tr>
<td>Service Temperature</td>
<td>-40°F to 158°F (-40°C to 70°C)</td>
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<tr>
<td>Water Vapor Permeance</td>
<td>0.03 Perms</td>
<td>ASTM E96, Method A</td>
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<tr>
<td>Water Vapor Permeance</td>
<td>0.08 Perms</td>
<td>ASTM E96, Method B</td>
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<tr>
<td>Elongation, minimum</td>
<td>200%</td>
<td>ASTM D412, modified</td>
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<tr>
<td>Tensile Strength, minimum</td>
<td>500 psi</td>
<td>ASTM D412, modified</td>
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<tr>
<td>Puncture Resistance, minimum</td>
<td>40 lbf (178 N)</td>
<td>ASTM E154</td>
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<tr>
<td>Watertightness</td>
<td>Pass</td>
<td>CAN/CGSB-37.58-M86</td>
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<td>Nail Sealability</td>
<td>Pass</td>
<td>ASTM D1970</td>
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<td>Low Temperature Flexibility @ -22°F (-30°C)</td>
<td>Pass</td>
<td>CGSB 37-GP-56M</td>
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<tr>
<td>Lap Peel Strength @ 39°F (4°C)</td>
<td>25.0 lbf/in (&gt; 4378.4 N/m)</td>
<td>ASTM D903, 180° bend</td>
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<tr>
<td>Water Absorption</td>
<td>0.1%</td>
<td>ASTM D570</td>
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<tr>
<td>Air Leakage @ 75 Pa</td>
<td>0.0002 cfm/ft² (0.0011 L/s.m.²)</td>
<td>ASTM E2178</td>
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<tr>
<td>Air Leakage After 3000 Pa Test</td>
<td>No Change</td>
<td>ASTM E330-90</td>
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<tr>
<td>Assembly Air Leakage @ 75 Pa</td>
<td>0.0039 cfm/ft² (0.0195 L/s.m.²)</td>
<td>Pass   ASTM E2357, CAN/ULC-S741-08</td>
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<tr>
<td>Air Leakage Rate</td>
<td>Classification A1</td>
<td>CAN/ULC-S742-11</td>
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<tr>
<td>Crack Bridging</td>
<td>Pass</td>
<td>ASTM C1305</td>
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<tr>
<td>Fire Testing</td>
<td>Complies in various wall assemblies</td>
<td>NFPA 285</td>
</tr>
</tbody>
</table>

**Description**

Blueskin® SA is a self-adhered water resistive air barrier consisting of an SBS rubberized asphalt compound, which is integrally laminated to a blue engineered thermoplastic film surface. It is specifically designed to be self-adhered to a prepared substrate providing an air, vapor and water resistive barrier in full wall applications or as penetration/flashing membrane with other air barrier systems.

**Features**

- Flexible at low temperatures
- Impermeable to air, moisture vapor and water
- Compatible with Henry® Air-Bloc® fluid applied air barriers
- Self-gasketing when penetrated and under compression with self-tapping screws

**Usage**

Blueskin® SA is designed for use as a self-adhered air, vapor and water resistive barrier. It can also be used as a transition sheet in conjunction with Henry® Air-Bloc® fluid applied air barriers where greater movement is anticipated due to its high strength. Blueskin® SA is also used for tying into metal on curtain walls, windows and doorframes.

**Application**

Surface Prep: All surfaces to receive Blueskin® SA must be clean of oil, dust and excess mortar. Acceptable substrates are exterior-grade gypsum sheathing, plywood, OSB, precast or cast-in-place concrete, concrete block, primed steel, aluminum mill finish, anodized aluminum and galvanized metal. Strike masonry joints flush. Concrete surfaces must be smooth and without large voids, spalled areas or sharp protrusions. Concrete must be cured a minimum of 14 days and must be dry before Blueskin® SA is applied. Where curing compounds are used, they must be clear resin based, without oil, wax or pigments.

**Revision Date:** 5/5/2017
Blueskin® SA Self-Adhered Water Resistive Air Barrier

All surfaces to receive Blueskin® SA require an application of Blueskin® Adhesive, Blueskin® LVC Adhesive or Aquatac™ Primer allowed to dry to a tacky film before Blueskin® SA is applied. Coated surfaces not covered by membrane during the working day must be recoated. Availability may vary by region.

**Apply:** Position Blueskin® SA for alignment and remove release film and press firmly in place. Roll membrane, including seams, with a countertop roller to ensure full contact once in place. Membrane must be rolled after application to ensure adhesion to substrate and laps. Blueskin® SA must be lapped a minimum of 2” (50 mm) on both sides and end laps. When using with brick ties, position, press in place and cut for ties or projections. Seal around any openings and at leading edge at the end of the workday with 925 BES Sealant, Air-Bloc® 21 or Air-Bloc® 21FR. Detail work must be carefully carried out to ensure continuous air tightness of the membrane. It is recommended that mechanical attachment be made to all window and doorframes, or a properly designed sealant joint be provided.

Membrane applied to the underside of the substrate (i.e. ceilings) and extending more than 6 inches (152 mm) onto inverted surfaces requires requires mechanical fastening through treated wood or galvanized metal strapping, or have insulation mechanically fastened. Fastening must take place immediately after installation of the membrane. Space strapping on 18” (457 mm) centers, running perpendicular to the side laps.

**Insulation Application:** The use of mechanical fasteners through Blueskin® SA along changes in plane, such as inside corners, may be required by some insulation manufacturers. Consult insulation manufacturer prior to installation of insulation.

- **Insulation Clips:** Insulation clips should be mechanically fastened through the membrane into the substrate with a self-tapping screw. Apply number of insulation clips as recommended by the insulation manufacturer.
- **Insulation Adhesive:** Air-Bloc® 21 or Air-Bloc® 21FR should be applied to insulation boards in a serpentine pattern to restrict movement of air behind the insulation. Alternatively, a full coat notched trowel application may be applied to the back of the board. Press insulation firmly in place.

**Limitations:** Blueskin® SA is designed for exposure up to 90 days if necessary to accommodate construction scheduling, but is not designed for permanent exposure to ultraviolet light and should be covered as soon as practical after application. It is not to be used in direct contact with flexible PVC/vinyl membranes or gaskets. Consult the PVC/vinyl window manufacturer for compatibility.

**Packaging**

48” x 75’ (1.22m x 22.86m)
36” x 75’ (914mm x 22.86m)
18” x 75’ (457mm x 22.86m)
12” x 75’ (300mm x 22.86m)
9” x 75’ (225mm x 22.86m)
6” x 75’ (150mm x 22.86m)
4” x 75’ (100mm x 22.86m)

**Storage**

Store rolls on end, on original pallets or elevated platform. Protect from weather or store in an enclosed area not subject to heat over 120°F (49°C). Double stacked pallets are not recommended. If double stacking is necessary, use a plywood sheet to distribute the load.
ROXUL CAVITYROCK®

Product Description & Application

ROXUL CAVITYROCK® is a semi-rigid, mineral wool insulation board designed for exterior cavity wall and rainscreen applications.

<table>
<thead>
<tr>
<th>Performance</th>
<th>Test Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance</td>
<td></td>
</tr>
<tr>
<td>Mineral Fiber Block and Board Thermal Insulation - Type IVB Compliant</td>
<td>ASTM C612</td>
</tr>
<tr>
<td>MEA Approval, New York City Approval</td>
<td>236 - 05 - M</td>
</tr>
<tr>
<td>For information on CAN/ULC S702 compliance, contact ROXUL Technical Support</td>
<td></td>
</tr>
<tr>
<td>Reaction to Fire</td>
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</tr>
<tr>
<td>Flame spread index = 0 ; Smoke developed index = 0</td>
<td>ASTM E84 (UL 723)</td>
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<tr>
<td>Flame spread index = 0 ; Smoke developed index = 0</td>
<td>CAN/ULC S102</td>
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<tr>
<td>Determination of Non Combustibility of Building Materials - Non Combustible</td>
<td>CAN/ULC S114</td>
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<tr>
<td>Behaviour of materials at 750°C - Non Combustible</td>
<td>ASTM E136</td>
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<tr>
<td>Density (thickness:1&quot;, 1.5&quot;) Monolithic Density of 5.3 lbs/ft³ (85 kgs/m³)</td>
<td>ASTM C303</td>
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<tr>
<td>Density (thickness: 2&quot;) Monolithic Density of 4.4 lbs/ft³ (70 kgs/m³)</td>
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<tr>
<td>Density (thickness ≥ 2.5&quot;) Dual Density - 6.2 lbs/ft³ (100 kgs/m³) outer layer and 4.1 lbs/ft³ (65 kgs/m³) inner layer</td>
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<td>Corrosion Resistance</td>
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<td>Stress Corrosion Cracking Tendency of Austenitic Stainless Steel - Passed</td>
<td>ASTM C795</td>
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<td>Corrosion of Steel - Passed</td>
<td>ASTM C665</td>
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<tr>
<td>Thermal Resistance</td>
<td></td>
</tr>
<tr>
<td>R-Value / inch @ 75°F</td>
<td>4.3 hr.ft2.F/2Bu</td>
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<tr>
<td>RSI value / 25.4mm @ 24°C</td>
<td>0.75 m2K/W</td>
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<tr>
<td>Reaction to Moisture</td>
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<tr>
<td>Moisture Sorption - 0.03% by volume</td>
<td>ASTM C1104</td>
</tr>
<tr>
<td>Water Vapor Transmission, Desiccant Method - 1555ng/Pa.s.m2 (27 perm)</td>
<td>ASTM E96</td>
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<tr>
<td>Determination of Fungi Resistance - Passed</td>
<td>ASTM C1338</td>
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<tr>
<td>Thickness 1&quot; (25.4mm) to 4&quot; (101.6mm) in 1/2&quot; increments. 5&quot; (127mm) and 6&quot; (152.4mm)</td>
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<tr>
<td>Dimensions 24&quot;x48&quot; (610mm x 1219mm) and 16&quot;x48&quot; (406mm x 1219mm)</td>
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<tr>
<td>Acoustical Performance</td>
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<td>Thickness 125 Hz 250 Hz 500 Hz 1000 Hz 2000Hz 4000 Hz NRC</td>
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<td>3&quot; 0.72 0.93 0.88 0.84 0.9 0.97 0.97 0.9</td>
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NOTE: *Mast Format 1995 Edition **Master Format 2004 Edition. As ROXUL Inc has no control over installation design and workmanship, accessory materials or application conditions, ROXUL Inc. does not warranty the performance or results of any installation containing ROXUL Inc’s products. ROXUL Inc’s overall liability and the remedies available are limited by the general terms and conditions of sale. This warranty is in lieu of all other warranties and conditions expressed or implied, including the warranties of merchantability and fitness for a particular purpose.
COMPOSITE PANEL (DRY JOINT)

NOTE:
LOAD BEARING WALL COMPONENTS OF EITHER: 16GA STEEL STUDS, STRUCTURAL MEMBERS, MINIMUM 5/8" PLYWOOD OR CONCRETE. GYPSUM BOARD AND CEMENT BOARD ARE NOT A STRUCTURAL COMPONENT.
EVO GASKET

AC-1200 285
PRESSURE EQUALIZED

EVO CONSTRUCTION

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21925 Industrial Boulevard  ·  Rogers, Minnesota  ·  Toll-Free: 1-866-260-4047  ·  americlad.com

Architectural Metal Products
AC-1200 285
BACK VENTILATED
COPING DETAIL (1) DETAIL A

NOTE:
LOAD BEARING WALL COMPONENTS OF EITHER: 16GA STEEL STUDS, STRUCTURAL MEMBERS, MINIMUM 5/8" PLYWOOD OR CONCRETE. GYPSUM BOARD AND CEMENT BOARD ARE NOT A STRUCTURAL COMPONENT.
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END CAP DETAIL

NOTE:
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