INSTALLATION SPECIFICATIONS

POLYMER COMPOSITE - SCULPTED PANELS AND ARCHITECTURAL GRILLES

PART 1 • GENERAL

1•1 DESCRIPTION:

This section covers all material, labor, accessories and appliances necessary for the complete installation of Sculpted Panels made with Polymer Composite manufactured by Pineapple Grove Designs.

1•2 MANUFACTURER:

All Polymer Composite Panels used in this work shall be manufactured by Pineapple Grove Designs, Palm Beach County, FL 33425, (800) 771-4595, and shall meet the specifications as indicated in the manufacturer's Tech Data sheets.

1•3 SUBMITTALS:

A) Shop Drawings: Submit in accordance with Architect's Section. Indicate materials, construction, dimensions, locations, connections and installation details.

B) Custom Work: Furnish dimensioned camera-ready line art of proposed custom designs to manufacturer.

C) Product Data: Submit manufacturer's descriptive literature and installation instructions.

D) Samples: Submit samples of Polymer Composite Panel material to architect for approval of color, shade, finish and material.

1•4 ORDERING:

All Polymer Composite Panels used in this work will be manufactured specifically for this project. Material order shall be placed with Pineapple Grove Designs immediately to prevent delays.

PART 2 • PRODUCTS

2•1 COMPOSITION:

All Polymer Composite Panels shall be a matrix of proprietary ingredients including ground metal powders, cement binders, polymer binders, fire suppressant materials, ground pigments, and admixtures necessary to achieve required physical properties. Composite is reinforced with Kevlar™, carbon, AR glass fiber and/or non-metallic reinforcement material as required for additional structural properties.

Ingredients Include:

A) Metal powder: non-ferrous metal powders meeting ASTM B923-02.

B) Fiber reinforcement: Encapsulated fiber strand bundles and/or random strand fiber dispersed with other ingredients in matrix composition, meeting ASTM D629, ASTM F988-86, ASTM D578-00.

C) Cement binders meeting ASTM C472.

D) Polymer binder: Acrylic Polymer meeting ASTM C1439.

E) Coloring: Inorganic synthetic iron oxide pigments meeting ASTM C979 dispersed integrally throughout the mix.

F) Admixtures: Proprietary list of ingredients necessary to achieve required low permeability, accelerated cure, increased flexural and compressive strength, freeze-thaw resistance and flame suppression.

2•2 RELATED MATERIALS:

A) "Blind" Attachment Method:

1) Mechanical Fasteners (Lugs): 1/4" x 20 female stainless steel threaded embed anchors shall be cast in the rear of each Polymer Composite Panel by Pineapple Grove Designs. Manufacturer shall also provide 1/4" x 20 stainless steel studs to be threaded into each anchor at job site. Studs shall project from rear of cast stone ornament a minimum of 1" for insertion into hole drilled in the structural substrate of the mounting wall. Number of anchors provided will vary by size of Polymer Composite Panel.

2) Adhesive: Construction adhesive manufactured by and provided by others specifically designed for vertical tile or masonry bonding.

3) Joint Finishing: Caulked joints and perimeter shall be caulking sealant type and color recommended by caulking manufacturer and approved by architect.

B) Mechanical Attachment Method – Direct Mounting:

1) Mechanical Fasteners: 1/4" diameter 410 stainless steel threaded anchor TAPCON® screws ASTM B117 provided by Pineapple Grove Designs are placed in pre-drilled and countersunk holes in Polymer Composite Panel for mechanical attachment to substrate surface. Decorative plugs in matching finish are provided by manufacturer to be inserted, with adhesive by others, into countersunk holes over each Tapcon™ screw head. Number of anchors provided will vary by size of Polymer Composite Panel.

2) Adhesive: Construction adhesive manufactured by and provided by others specifically designed for vertical tile or masonry bonding may be used in conjunction with mechanical attachments for full panels (not recommended for Architectural Grilles).

3) Joint Finishing: Caulked joints and perimeter shall be caulking sealant type and color recommended by caulking manufacturer and approved by architect (not recommended for Architectural Grilles).

C) Mechanical Attachment Method – Offset Mounting:

1) Offset spacer blocks provided by manufacturer are fixed to the backside of the Polymer Composite Panel (or Architectural Grille) at each anchor location and Mechanical Fasteners: 1/4" diameter 410 stainless steel threaded anchor TAPCON® screws ASTM B117 provided by Pineapple Grove Designs are placed in pre-drilled and countersunk holes in Polymer Composite Panel for mechanical attachment to substrate surface through each attached offset spacer block. Decorative plugs in matching finish are provided by manufacturer to be inserted, with adhesive by others, into countersunk holes over each Tapcon™ screw head. Number of anchors provided will vary by size of Polymer Composite Panel.

2) Adhesive: Construction adhesive manufactured by and provided by others specifically designed for vertical tile or masonry

bonding may be used in conjunction with mechanical attachments between offset spacer block and substrate surface.

2•3 FABRICATION:
Polymer Composite Panels shall be manufactured in accordance with manufacturer's strict guidelines for ingredient ratios, material mixing and consolidation, mold surface integrity, color and finish uniformity and curing methods for maximum strength achievement.

2•4 SHIPPING:
All Polymer Composite Panels shall be carefully loaded and packed for transportation exercising customary and reasonable precautions against damage while in transit. All products shall be released to freight carrier in a sound, unblemished and unbroken condition.

PART 3 • EXECUTION

3•1 INSPECTION:
A) Inspect adjacent construction for conditions that would prevent proper installation of Polymer Composite Panels. Inspect substrate for soundness and surface adhesion quality.
B) Upon delivery, inspect packing crate for any signs of damage in transit and note damage on shipping manifest prior to accepting delivery. Immediately notify shipper of any visible damage to the unpacked crate. Inspect Polymer Composite Panels inside crates for any hidden damage from shipping. Notify manufacturer of any hidden damage within 24 hours of receipt. Inspect product for any variations in color, finish, tolerance or design as shown on manufacturer's shop drawings or architect's plans. Report any discrepancy to manufacturer.

3•2 INSTALLATION:
Install Polymer Composite Panels true, plumb and level in accordance with manufacturer's installation instructions and Tech Data sheet. All pieces shall be set by experienced and qualified construction personnel familiar with construction trade practices and in accordance with the shop drawings and manufacturer's installation instructions. These instructions apply to all Polymer Composite items including solid background panels and open background Architectural Grilles.
A) Installer shall use necessary personal safety equipment to protect against hazard associated with fabrication, assembly and installation.
B) All Polymer Composite Panels shall be installed according to the specifications included herein. Additional specifications shall apply if required. Ultimate connection design is the responsibility of Building Design Engineer, Architect or otherwise responsible person charged with the design connection.
C) All substrate to receive Polymer Composite Panels shall be prepared as indicated in manufacturer's Tech Data sheet. Substrate shall be clean of any oil, dust, debris or other material that may interfere with the successful installation of the item. Surface shall be smooth, level, sound and capable of a successful and permanent adhesion to the setting material and mechanical fasteners.
D) Installation requiring adhesive material shall be prepared as per adhesive manufacturer's instructions. Generally, surface must be scarified to insure optimum bonding of adhesive to the substrate. Polymer Composite Panels back surface to be bonded to adhesive must be treated similarly to substrate.
E) Drill substrate and install TAPCON® fasteners as per TAPCON® manufacturer's instructions. Fasteners shall enter through the predrilled holes of the Polymer Composite Panel and be sufficiently tightened to securely fasten the item to the substrate. Care shall be made not to excessively tighten the fasteners which may result in pull through or breaking of the fastener.
F) Install matching plugs, supplied by manufacturer, into countersunk holes over fasteners. Secure plug by first applying adhesive caulk to the inside surface of the countersunk hole. Gently tap in the plug until the shoulder of the plug is even with the finished surface of the item.
G) After setting, all pieces shall be protected from damage by other trades. Any foreign matter splashed or rubbed on the pieces shall be removed immediately.

3•3 PATCHING:
A) The repair of chipped or damaged Polymer Composite Panels shall be done only by mechanics skilled in this work. Contact the manufacturer for instructions.
B) Polymer Composite Panels shall show no obvious repairs or imperfections other than the minimal color variations when viewed with the unaided eye under good typical lighting.

3•4 CLEANING:
Polymer Composite Panels shall be cleaned where necessary with a pH balanced mild detergent cleaner and a soft cloth and shall be rinsed thoroughly with clean running water. No acid or prepared cleaners shall be used without the approval of the Polymer Composite Panel manufacturer.

3•5 SEALING:
Polymer Composite Panels are sealed at the factory during manufacture. No additional sealing is required.

PART 4 • HANDLING AND STORAGE

4•1 HANDLING:
All Polymer Composite Panels shall be received and unloaded at the project site by competent workmen with the necessary care and handling to avoid damage and soiling.

4•2 STORAGE:
Polymer Composite Panels shall be stored on the job site in the same crating and packaging used for shipment. The packages and/or crates shall be stored on a level area clear of the ground and protected from the weather and other trades. If Polymer Composite Panels are to be stored after uncrating, they should be placed carefully on edge and secured on non-staining supports. Pieces shall be stacked a maximum of one row high and protected from the weather and damage.