

SECTION 04245
THIN MASONRY VENEER PANEL SYSTEM

PART 1 - PRODUCT & DESCRIPTION

- A. Structural Support Panel System for Thin Masonry Veneer shall be Tabs II, manufactured by Tabs Wall System, LLC, Grand Rapids, MI 49512. Support panel must include integrated tab & mortar locking system, be G90 hot dipped galvanized and manufactured with .018" (26GA) structural grade steel with thermo set coating.
- B. Adhesive (Thin Brick or Decorative Block) or Structural Silicone (Natural Stone, Cast Stone or Marble), manufactured by Tabs Wall System, LLC, Grand Rapids, MI 49512.
- C. Mortar Additive, manufactured by Tabs Wall System, LLC, Grand Rapids, MI 49512.
- D. Rain Screen (when applicable), manufactured by Tabs Wall System, LLC, Grand Rapids, MI 49512.
- E. Related Products; Fasteners, Insulation, Veneer, Tapes, and Flashing materials to meet appropriate ASTM standards, supplied by Tabs Wall System, LLC, Grand Rapids, MI 49512.

PART 2 - GENERAL

2.1 RELATED DOCUMENTS

Drawing and general provisions of the Contract, including General and Supplementary conditions and Division 1 general requirements apply to this section.

2.2 SUMMARY

This specification document is designed to provide Contractors, Architects and Engineers with information concerning the Tabs Wall Systems thin masonry veneer panel system.

This section contains details that may be required during the bid process.
Information can also be useful as a continuing reference to owners.

2.3 RELATED WORK

A. Cast-In Place Concrete	Section 03300
B. Architectural Pre-Cast Concrete	Section 03450
C. Mortar and Masonry Grout	Section 04100
D. Masonry Reinforcement and Accessories	Section 04150
E. Unit Masonry	Section 04200
F. Cast Stone	Section 04720
G. Structural Steel	Section 05120
H. Steel Joists	Section 05210
I. Cold Formed Metal Framing	Section 05400
J. Architectural Joint Systems	Section 05810
K. Rough Carpentry	Section 06100
L. Carpentry, Millwork, and Miscellaneous	Section 06220
M. Bentonite Waterproofing	Section 07130
N. Damp Proofing	Section 07150
O. Water Repellent Materials	Section 07180
P. Vapor Retarders	Section 07190
Q. Building Insulation	Section 07210
R. Sprayed Fire-Resistive Materials	Section 07812
S. Through Penetration Firestop Systems	Section 07841
T. Flashing and Sheet Metal	Section 07610
U. Sealants, Caulking, and Seals	Section 07920
V. Gypsum Wall Board Systems	Section 09250
W. Ceramic Tile	Section 09310

2.4 SCOPE OF WORK

Include all labor, materials and equipment, and perform all operations in connection with the installation of the panel system and all the related work, in strict accordance with drawings, and as specified herein.

Products to be considered equal to those specified must be approved in writing by the architect or engineer ten days prior to project bid date.

2.5 SUBMITTALS

Samples shall be provided in small-scale form for initial selection purposes to show range of colors, textures, and patterns, for the project for each type of thin veneer. Shop drawings are to be submitted, for clarification if needed, detailing dimensioned plans and elevations that show installation details of connections, joint conditions, and flashings of the project.

2.6 QUALITY ASSURANCE

Appoint at least one supervisory journeyman who shall be present at all times during execution of work, who shall be thoroughly familiar with design requirements, type of materials being installed, reference standards and other requirements, and who shall direct all work performed at jobsite.

Applicator / Contractor shall be Tabs Wall Systems certified and/or have at least five years experience in the installation of panel systems.

Comply with all applicable codes, regulations, and standards. Where provisions of applicable local codes, regulations and standards conflict with requirements of this section, then the higher specification shall govern.

Panel components shall be made using prime materials and meet National Building codes.

Panel manufacturer will provide all component and prime material certifications.

1. Metal panel material shall have minimum G90 corrosion protection.
2. Metal panel material shall be of structural grade 33 steel or greater.
3. System manufacturer will provide material certifications to meet appropriate ASTM standards.

2.7 PERFORMANCE CHARACTERISTICS

Assembled wall system shall meet or exceed the following performance standards when tested by certified independent testing laboratory in accordance with the following methods:

- IBC requirement per paragraph 1405.9.1 for veneer surface shear value.
- ASTM E 297 Shear Bond Strength of Test of Mastic
- ASTM D 3498 Mastic
- ASTM C 1135 Freeze-Thaw Tensile Adhesion Properties
- ASTM E 72 Wind load Test of Building Panels
- ASTM E 119 Fire Resistance Test
- ASTM E 84 Surface Burn Spread & Smoke Development
- ASTM B 117 1000 Hour Salt Spray Test
- ASTM D 1037 Fastener-Head Pull Through
- ASTM E 2273 PER EG356-2006 Water Drainage
- ASTM E 96-05 ICC-ES EG356 Section 3.1.3 Water Vapor Transmission
- ASTM C 1338 ICC-ES EG356 Section 3.1.1 Fungi Resistance Steel Sheet
- ICC-ES EG 356 Accelerated Weathering Section 3.1.6

- ASTM A 395 Steel Panel
- ASTM A 653 Requirements for Hot-Dip, Zinc-Coated Steel Sheet
- ASTM C 1088 Thin Brick Veneer
- ASTM C 1364 Cast Stone
- ASTM C90 Decorative Block

2.8 WARRANTY

Warranty shall be a Full Twenty-Five (25) Year System Warranty, which cover all components: Panel, Adhesive, Silicone, Membrane, Rain Screen, Fasteners, Insulation, Veneer, and Flashing; manufactured or distributed by Tabs Wall Systems. Product warranty will be backed by appropriate insurance certificate & furnished upon request.

2.9 DELIVERY, STORAGE AND HANDLING

Deliver materials to project sites in their original factory wrappings and containers, clearly labeled with identification of manufacturer, brand name, fire hazard classification, and lot number. Store materials in original undamaged packages and containers, inside a well-ventilated area protected from weather, moisture, soiling, extreme temperatures and humidity, laid flat and blocked off-ground to prevent sagging and warping. Mastic and mortar additive are to be stored above 32° Fahrenheit and below 86° Fahrenheit temperatures.

2.10 SEQUENCING AND SCHEDULING

Sequence thin veneer system installation in proper order to minimize the possibility of damage during the construction period.

PART 3 - PRODUCTS

3.0 MANUFACTURED PRODUCTS

- A. Support panel shall be manufactured by Tabs Wall Systems, LLC.
 - a. Various sizes shall be available to facilitate installation.
 - b. Various spacings shall be available to accommodate any standard brick or stone size.
 - c. Panel shall have support ledges to support and space veneer.
 - d. Panel shall have mortar locking feature to prevent mortar fallout.
- B. Veneer shall meet appropriate code requirements; Thin Brick ASTM C-1088, Decorative Block ASTM C-90, or Dimensional Cast Stone ASTM C-1364.
 - a. Veneer size and bond pattern shall be as specified.
 - b. Color shall meet project specified code level.
- C. Adhesive (Brick or Decorative Block) &/or Structural Silicone (Natural Stone, Cast Stone or Marble) shall be supplied by Tabs Wall Systems, LLC. Primer, supplied by Tabs Wall Systems LLC, shall be used to prepare unclean cut brick or stone veneers for installation.
- D. Mortar material shall comply with code requirements of an S-Grade mortar. The mortar must be mixed using a solution of 5 parts water and one part Tabs latex acrylic additive. The additive shall be supplied by Tabs Wall Systems, LLC.
- E. Fasteners to mount the panel shall be TabGard for use on wood or steel stud installations; or TabCon for use on masonry installations, supplied by Tabs Wall Systems, LLC, or equal.
- F. Flashings and trims will be supplied by Tabs Wall Systems, LLC. Material to be; G90 Hot Dip Galvanized, 26 gauge (.018 thick), with Kynar 500 finish or equal.

- G. Water infiltration barrier shall be Green Guard RainDrop Wrap, supplied by Tabs Wall Systems, LLC, or equal.
- H. Rain screen, if required for additional moisture drainage and ventilation shall be Sure Cavity, 3mm, 5mm or 10mm, supplied by Tabs Wall Systems, LLC or equal.
- I. Insulation, if required, shall be Green Guard extruded polystyrene insulation board, 1", 1-1/2", or 2" maximum, supplied by Tabs Wall Systems, LLC, or equal.

PART 4 - EXECUTION

4.1 INSPECTION

Installer must examine conditions under which the thin veneer system is to be installed and notify Contractor in writing of any unsatisfactory conditions. Do not proceed with installation of the Thin veneer system until the unsatisfactory conditions have been corrected in a manner acceptable to the installer and general contractor.

Installer shall consult the other trades and contractors involved prior to start of the thin veneer system installation. This is to determine any areas of potential interference. Do not start the installation until interferences have been resolved to the satisfaction of the installer or general contractor.

Coordinate layout with other work to determine that work schedule is satisfactory with other contractors.

4.2 PREPARATION

Wherever possible, take field measurements prior to the preparation of shop drawings and fabrication to insure proper fitting and installation of product.

Verify that materials are those specified before installing.

Insure walls are plumb and corners are braced to specifications.
maximum wall frame spacing for stud walls = 60mm (24") O.C. Girts = 75mm (30") O.C.

Walls must be structurally sound and the substrate system designed with a wall deflection not greater than L/240. Substrate shall have no planer irregularities greater than 7mm in 3.05 m (1/4" in 10').

Water infiltration barrier (if required), must be installed prior to placement of panel.

Trim or flash in place per manufacturer's details and/or BIA Technical Note 7A on flashing of Brick Walls.

4.3 INSTALLATION

PANELS

Exterior walls shall be constructed of structurally sound masonry, wood, or steel studs, with an approved building sheathing and a water infiltration barrier placed over it. This should be done prior to the installation of the panel system.

Panels shall be mechanically secured to a structural wall with a manufacturer's approved fastener in accordance with the manufacturer's recommendation. Panels shall be attached

with a minimum average of one and a half fasteners per 900 cm² (square foot).

Panels applied to an oblique wall shall be installed with the support tabs aligned and level to each other. Panel joints shall be staggered over sheathing joints.

Control joints in the panel system are required to coincide with the building control joints where substrates change, within 2'- 4' of outside corners, then 20' to 25' for wood stud framing (and/or) 25' to 30' for steel stud framing. Horizontal control joints should be every one to two stories for steel stud framing and every one story for wood stud framing. Control joints should be to regional building code standards, but not to exceed 24' in height.

4.4 THIN VENEERS

Thin veneers shall be either field applied, factory installed, or panelized into components or curtain walls (select as required).

Thin veneers shall be dry, clean & free of all debris, than adhered to panel using specially formulated Tabs II Adhesive in "Quarter" sized dabs or vertical strips 10mm (3/8") wide. Note: Cut veneers not clean & free of debris, must be primed using Tabs P-150 primer prior to installation. Adhesive can be installed at zero degrees Fahrenheit or greater.

Thin veneers shall be applied within 5 to 10 minutes after adhesive has been applied and shall be placed in the bond pattern called for.

4.5 MORTAR

When all applied veneers are secured in place, fill joints and seams with Type "S" mortar mix or industry accepted grout for tile or stone, mixed with Tabs II mortar additive.

Mortar vertical joints immediately following each fourth horizontal joint.

Mortar only an area that can be tooled before mortar becomes too stiff. Mortar should have a dull finish and be moist, but not wet.

4.6 WEATHER REQUIREMENTS

In cold weather do not use frozen materials in mortar mix. Do not apply mortar to frozen surfaces containing frost. Do not apply mortar when ambient temperature is less than 2 Degrees Celsius (35 degrees Fahrenheit) without sufficient protection and supplemental heat.

In hot weather, protect mortar from uneven and excessive evaporation. Where conditions are hot, dry and/or windy and evaporation is great, veneer shall be fogged with water to allow the mortar enough time to set. Moist curing is not recommended for latex modified mortar.

4.7 CAULKING

All areas where thin veneer meets non-veneer surfaces must be caulked with the proper approved sealant for conditions. Thoroughly and neatly caulk joints between thin veneer and abutting material.

4.8 CLEANING

Thin veneer shall be cleaned per the appropriate method established by thin veneer manufacturer.

4.9 MAINTENANCE

When applied according to Tabs Wall systems specifications, thin veneer panel system installation should last indefinitely and be maintenance free. However, if for any reason the thin brick panel system should become unattached from its surface, or damaged by severe impact, the affected areas should be cleaned of old mortar and adhesive and a new panel & veneer applied with its approved Tabs adhesive and mortar.

END OF SECTION