



Keeping TABS on the Thin Veneer Industry

TABS WALL SYSTEMS, LLC

Detailing with Adhered Thin Veneers- The TABS Wall System

3rd & 4th Quarter 2015

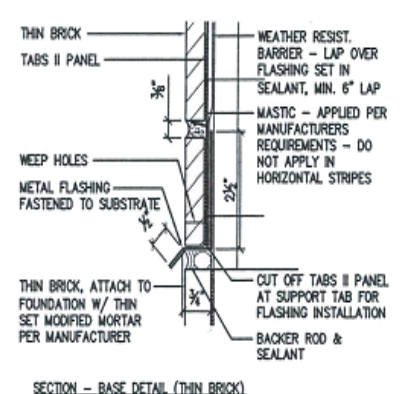
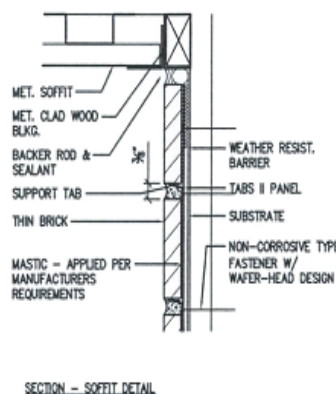
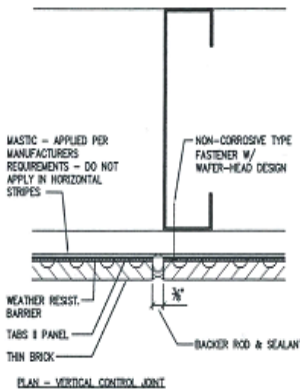
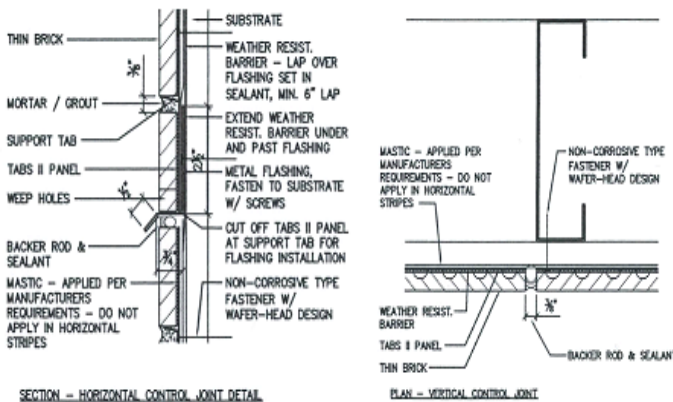
Architects and designers most typically have questions regarding detailing of building facades incorporating adhered thin masonry veneers. The detailing at fenestrations, control joints and junctures at dissimilar materials are in many cases similar to the detailing with full depth masonry. However, there are distinct differences. The basic advantages of using thin adhered veneers that impact detailing are:

- no foundation brick ledge required
- design load for framing $L/360$ versus $L/600$
- no lintels required
- more design freedom (cantilevers, etc) due to lighter weight
- easily mixed with other light-weight facade materials (i.e. EIFS, sidings, etc)

However, the concerns for incorporating thin adhered veneers must also address the following.

Control Joints

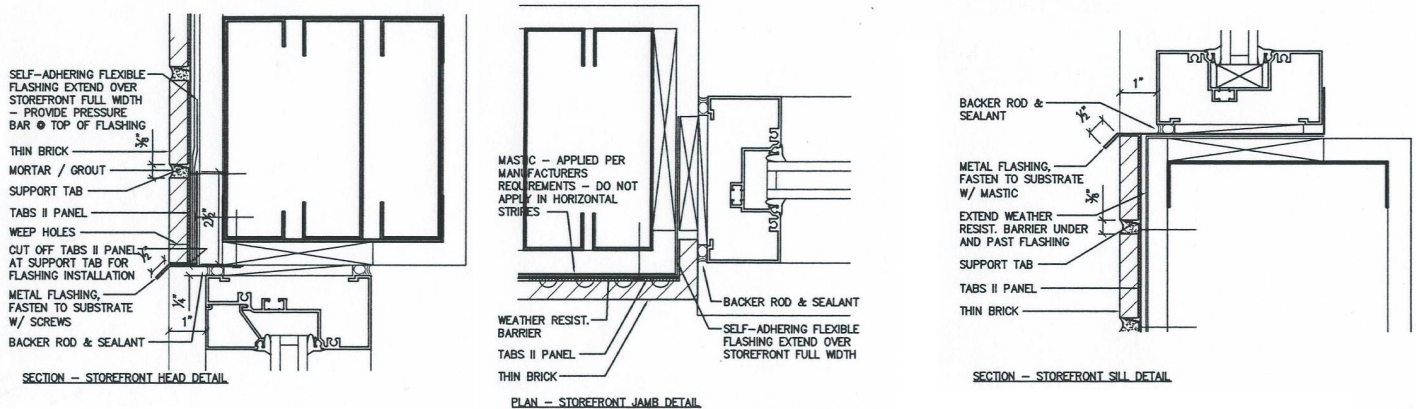
Control joints (as well as expansion joints) are required in adhered thin veneer designs. As with full depth masonry, control joints are typically spaced vertically every 16-20'. These locations can be adjusted to align with window and door jambs as desired. Adhered thin veneer systems also require control joints horizontally at floor lines. In steel stud framing designs, these horizontal joints should be placed every two stories; wood framing should have horizontal control joints at every floor line due to the tendencies of wood to shrink/expand and twist. Failure to incorporate control joints can result in buckling walls, cracking and falling veneer. Also notable is the need for control joints at all inside corners whether at pylons or any other locations. Control joints are also needed within 2-4 feet of all outside corners to accommodate differential movement. Failure to provide these joints can result in cracking of corner thin veneer units.





Window Details

The architect should have the integrity of all window designs provided from the manufacturer. This should include all flashings, weeps and fasteners. The thin veneer should be independent of the window systems waterproofing, leak-proofing and weather-proofing. There are far to many window designs in the market for adhered veneer systems manufactures to address with anything other than “typical details” as shown below. The thin adhered veneer system should be treated like a curtain wall draped over the structural framing and interfacing with fenestrations.



Façade Changes in Plane

Architects frequently desire some variations in the wall plane such as reveals, corbelling, columns, pilasters, soldier coursing, headers, etc. In most cases, adhered thin veneer systems can duplicate the same appearances as full depth masonry. Concerns typically arise when detailing requires overly thick units to create multiple lines of corbelling, for example. In most cases, the specifier is limited to a maximum 1-1/4” thickness for thin veneers. Beyond, 1-1/4” thicknesses, support brackets are required to carry the load of the veneer. Weight limitations are 15 lbs. per square foot; the TABS Wall System also has a limitation of 15 lbs. per lineal foot





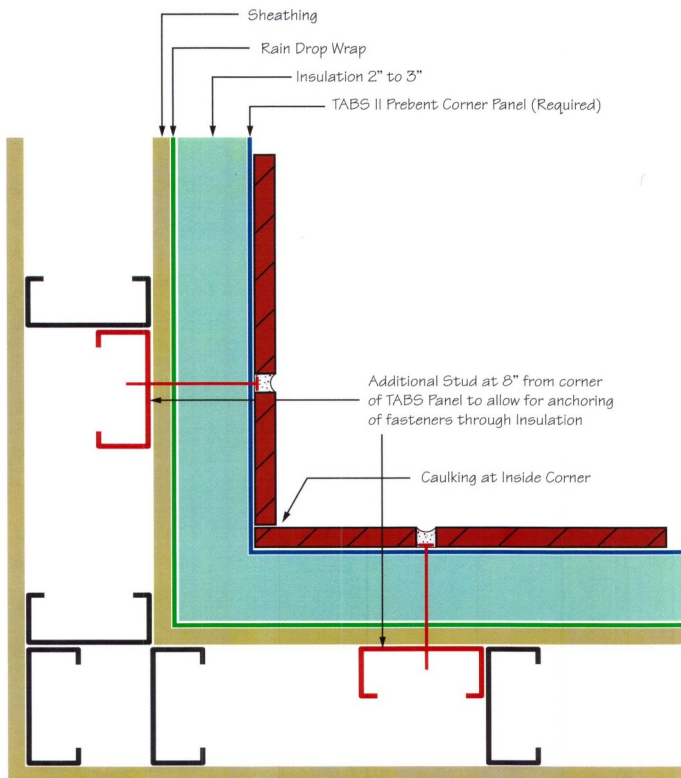
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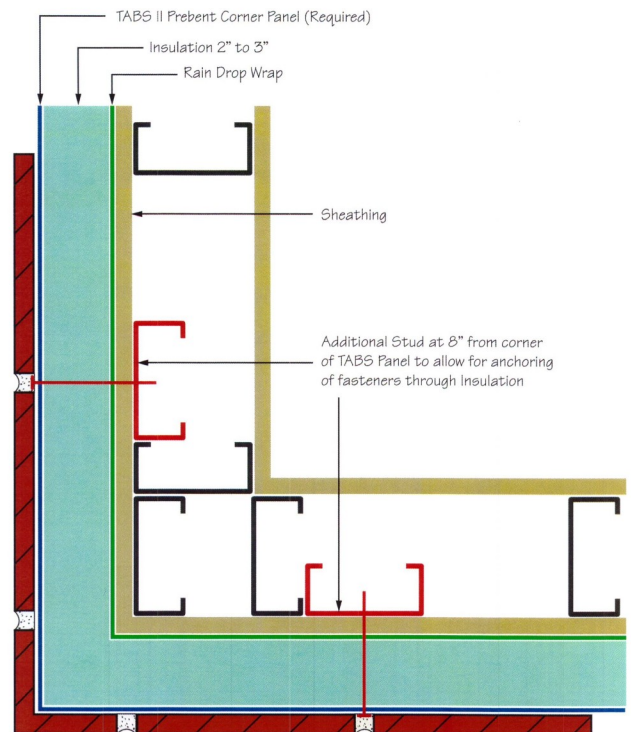
Continuous Insulation

The impact of continuous insulation on thin veneer designs can be significant. Designs of building facades must have the same elements, i.e. sheathing, air/moisture barrier, insulation, fasteners and veneer system. Cantilevered loads have to be structurally accommodated along with fastening requirements. As the thicknesses desired have increased to 2-4", the biggest concern has become supporting of veneer loads. The architect, with assistance from their engineer, must address load issues as well as how changes are required with window framing, parapet designs and other details. There is available today research from the Foam Sheathing Coalition (FSC) that offers assistance in determining fastener requirements based on insulation thicknesses. The FSC report is based on a static condition, i.e. only gravity weighting and no accommodation of wind loads, thermal dynamic movement, etc. Thus, the specifier should build in safety factor.

The impact of continuous insulation may be further augmented by new code requirements for flame spread. The National Fire Prevention Association 285 Flame Spread Test requires that façade systems be evaluated and tested as a full assembly from exterior skin all the way back to the building framing; this, regardless of whether each assembly component has its own fire rating. Specifiers will have to identify manufacturers with thin veneer assembly testing. The TABS Wall System has a NFPA-285 approval with an assembly tested with Carlisle Coatings and Waterproofing's insulated panels.



TABS II
TABS TI Inside Corner Detail
over 2\" to 3\" Insulation



TABS II
TABS TI Outside Corner Detail
over 2\" to 3\" Insulation



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Dissimilar Façade Materials

In most cases, the TABS Wall System can be combined with other exterior façade materials to create desirable appearances. The use of other light weight materials such as EIFS, metal panels, siding and man- made stone are common. Detailing at these junctures will typically require flashings, caulk joints and/or other trim pieces. The TABS Wall System should be flashed/weeped independently of other materials.

