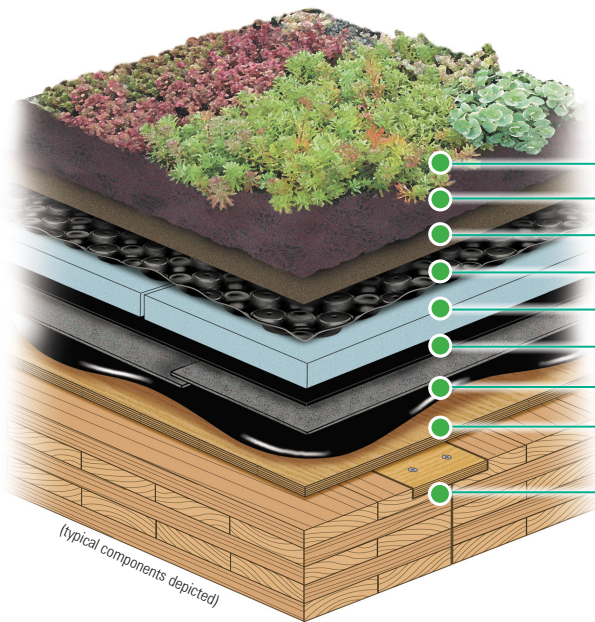


Mass Timber Construction with Monolithic Membrane 6125[®]



(typical components depicted)

Mass Timber Construction - once the bulwark of construction technologies - is making a comeback as architects, designers and owners recognize its ability to permanently store carbon within a building structure and provide a unique aesthetic.

Once a realm limited to smaller building structures, mass timber construction is advancing into larger structures of many stories. Mass timber construction includes the use of laminated panels in several different formats such as cross-laminated timbers (CLT), nail laminated timbers (NLT), dowel laminated timbers (DLT) as well as traditional glue-laminated (Glulam) timber.

From Hydrotech's perspective, mass timber is yet another acceptable structure to which Monolithic Membrane 6125[®] (MM6125) can be used to create a water-tight roof structure. Mass timber construction can be used as a support structure for a wide array of Hydrotech's overlying assemblies including ballasted assemblies and Garden Roof and Ultimate assemblies.

- Instagreen[®] Carpet or other plants
- LiteTop[®] Engineered Growing Media
- Systemfilter[®]
- Gardendrain[®]
- DuPont[™] Styrofoam[™] Brand Insulation
- Root Stop[®]
- Hydrotech MM6125[®]-FR Assembly
- Plywood; minimum 1/2" tongue & groove; screwed to underlying deck
- Mass timber structural deck (CLT illustrated with spline)

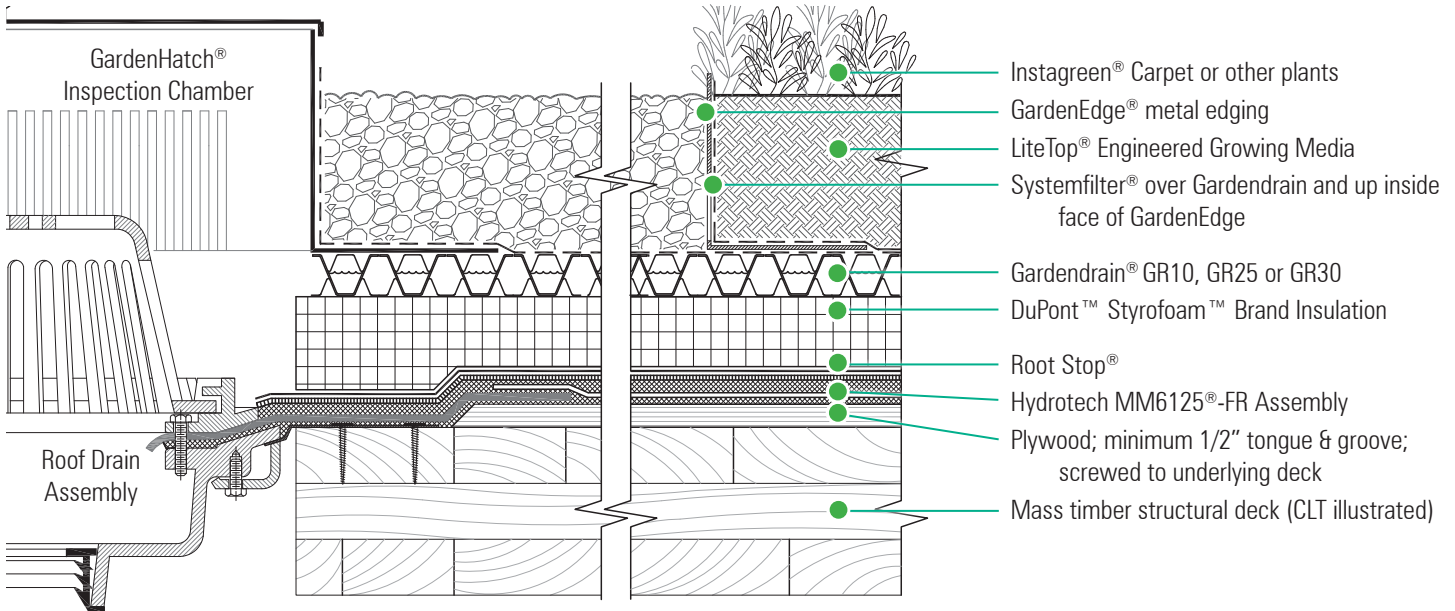
Hydrotech recommends that all mass timber structural deck elements be first completely covered with a minimum 1/2" thick, tongue & groove plywood layer. Per Hydrotech's normal recommendations for plywood, all of the plywood joints are initially detailed with MM6125 reinforced with Flex-Flash F. Upon completion of this detailing, Hydrotech's MM6125-FR assembly is installed, consisting of a first layer of membrane at 90 mils, Flex-Flash F and second layer of membrane at 125 mils - totaling 215 mils thickness - over the entire plywood surface. Hydroflex 30 or Hydroflex RBII is installed as recommended by Hydrotech depending on the subsequent overlying assemblies.



Roof Drains

Installing roof drains in a mass timber roof deck follow the same techniques used in metal deck roofs. The plywood overlay allows for the easy creating of a sump for the drain bowl. The clamping ring allows for sealing the roof with the flashing and MM6125 membrane.

Once the drains are set, the overburden components including Styrofoam-brand insulation and other elements are installed as needed. The diagram below illustrates a Garden Roof assembly at a roof drain installed in a CLT mass timber roof deck.



Mass timber technologies create unique architectural aesthetics and creative opportunities for architects and designers. These building technologies require special considerations to create watertight conditions to protect the building structure.

Contact Hydrotech to discuss how the to protect your mass timber building project with Monolithic Membrane 6125 and Hydrotech's family of Protected Membrane Roof assemblies.

