



Thermoplastic Single Ply and Multi-Ply Roofing Systems

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BALLASTED, PAVER PMRA (PROTECTED MEMBRANE ROOF ASSEMBLY)

A conventional ballasted roof system consists of Flex Thermoplastic Roofing Membrane and substrate material loose laid over a deck using the weight of the ballast to hold the system in place. In a paver roof system concrete paver blocks replace loose round river stones as the ballast holding the roof system to the structure. The roof assembly generally consists of an insulation board, slip sheet for non fleece back membranes, the waterproofing membrane, a protection layer, and the ballast.

The ballasted system is an economical roof installation. The components are loose laid on the deck. The membrane is mechanically fastened around the perimeter of the roof area and at all roof penetrations. The ballast is applied at a rate of 1000 lbs., to 1,200 lbs. per 100 square foot over the protected Flex Water Proofing Membrane to hold the roof system to the building. The ballasted or paver roof system has an added benefit of providing a layer of protection from potential damage to the membrane. The ballast covering the roof system has a natural appearance that is aesthetically appealing and blends into the surroundings. The installation of paver blocks also gives the option of converting the roof area into an outdoor patio, providing the structure is designed to accommodate the additional physical load.

The PMRA (Protected Membrane Roof Assembly) differs from the conventional ballasted roof system in that insulation is installed above the water proofing membrane. A Flex Thermoplastic Single Ply Roof Membrane is first installed on the deck performing a dual function of vapor barrier and waterproofing membrane. A protection or separation layer is placed on top of the Flex Membrane followed by Extruded Polystyrene Insulation Boards. The Insulation is covered with a protection fabric and the entire system is held in place with either Ballast or Paver Blocks.

In addition to the benefits provided by a conventional ballasted type roof assembly a PMRA Flex Roof Assembly protects the roof membrane from rapid temperature changes sometimes referred to as "thermal shock". The insulation on top of the membrane keeps the temperature of the roof membrane stable year round, rarely varying more than 15°F from the buildings interior. The insulation provides additional protection to the membrane from UV exposure which extends the useful life expectancy of the roof system.

Another benefit of the ballasted type system is that many of the components are reusable and recyclable. Should it become necessary to replace the waterproofing membrane the ballast stone or concrete pavers may be moved to one side and then reinstalled. The extruded polystyrene insulation board is unaffected by moisture and may also reused. This type of system is the ideal choice for use as a roof covering for a building that may undergo extensive renovations or additions.