

## Client

**Manufacturing/Warehouse Complex**  
Upstate, NY



## Reroofing an existing Mechanically Attached Single Ply Roof

### Existing Roof

180,000 SF Hypalon Single-Ply Roof System

### Problem

The existing 45-mil hypalon single-ply membrane, originally installed by Carruthers, was showing signs of deterioration and mechanical damage after 19 years of service. With an asbestos-containing built-up roof underneath, the owner decided to replace the hypalon membrane before more extensive removals were needed.



### Solution

Mechanically Attached TPO Single-Ply Roof System

### Application

After investigating various options, including coating of the membrane, the owner decided to replace it with a new 60-mil, mechanically attached, TPO single-ply membrane. An infrared moisture scan was conducted, pinpointing areas where the roof insulation had become saturated. Fortunately, the wet areas represented only a small percentage of the overall roof, with moisture migration limited to the layer of insulation directly under the old membrane.

After obtaining input from various sources, project specifications were developed and bids solicited. After a thorough evaluation of all proposals, including contractor's safety records, insurances, experience installing the specified system, and price, S. D. Carruthers was awarded the project.

The old membrane was first removed, exposing the underlying insulation. Areas of wet insulation were removed and replaced. New drain inserts were installed, along with tapered insulation crickets between drains for improved drainage. Rolls of 60-mil, white, reinforced TPO membrane were then mechanically fastened to the underlying steel deck, and all seams hot-air welded. All curbs, pipes and expansion joints were covered with new TPO membrane flashing. Also, being in a high wind area, the owner opted for a new metal edge/fascia system, supplied and warranted by the roof system manufacturer.

## Results

The owner was well satisfied with the outcome of the project. By acting at the right time, they realized they had saved tens of thousands of dollars by replacing the membrane, versus total removal and replacement of all materials. Management was also pleased that the project progressed in total compliance with their strict safety requirements, and in a timely and efficient manner. With the new thicker TPO membrane in place, backed by S. D. Carruthers, they can fully expect many years of added service and protection.



Installation of Tapered Insulation Crickets  
Between Drains



New Heat-Welded TPO Reinforced  
Roof Membrane



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