



# JM TPO SYSTEM PROTECTS HIGH-VOLUME, FAST-TURN BUSINESS OF PERISHABLES

McLane Western Grocery Service Distribution Center



**Description:** This grocery-store pioneer from 1894 has today evolved into one of the nation's leading food distribution and logistics companies, serving convenience stores, mass merchandisers, quick-service restaurants, drug stores and movie theaters. Inventory is received each night and ships out every day. WeatherSure, a fourth-generation roofing contractor specializing in restoration and waterproofing, had been servicing the roof for a decade when they were approached to provide a condition assessment along with a bid to repair and renovate the 337,100-square-foot roof.

**Challenge:** The roofing solution needed to meet the needs of four distinct environments: a cold-storage section required to maintain a consistent 34°F; dry goods storage, where a weathertight environment was critical; occupied offices needing higher, controlled thermal values; and the transportation department housing a maintenance shop, wash bays and the dispatch department. "There is no margin for downtime where foodstuffs are involved," according to Darryl Lyon at McLane Western. "Expiration dates don't roll back just because a problem surfaces, and we'd had a long history of leaks with our existing roof. We wanted to trade that situation for long-term protection and durability."

**Solution:** WeatherSure recommended a cost-effective, durable single ply membrane – JM TPO 60. Its long-term weathering, UV resistance and heat-aging properties provided the ideal roofing system for this multiuse building and the Rocky Mountain environment of fierce sun, snow and hail.\*

Officials at McLane Western agreed. After a thorough review of all bids, they awarded the project to WeatherSure, who completed the repair, maintenance and renovation of the facility's entire roof in three years instead of five and well within budget. The insulation package and thermal values were retained; damaged insulation over the chiller was changed out; in other areas, R-values were brought up; metal counterflashings and edges were pulled back for re-use; and JM's Invinsa Roof Board provided a new substrate for the entire project. "WeatherSure really watched our costs," added Lyon. "The project turned out to be a whole lot more than a business transaction... a real relationship developed."

**Location:**  
Longmont, CO

**Building Representative:**  
McLane Western  
Darryl Lyon,  
Vice President, Distribution

**Contractor:**  
WeatherSure Systems, Inc.  
Craig Garey, President  
JM Peak Advantage® Summit Club® Contractor

**JM Roofing System Solution: (ST6RM)**  
**15-Year Peak Advantage® Guarantee**

ENRGY 3® Roof Insulation  
Invinsa® Roof Board  
High Load Fasteners and Plates  
JM TPO 60 mil Membrane,  
Mechanically Fastened

*\* See four- and seven-year outdoor performance results on page 2. (These are not simulated lab tests but actual real-world field samples tested to ASTM standards, demonstrating the aging attributes of a JM TPO roof.)*





# JM TPO PERFORMANCE PROVEN IN REAL-LIFE, HIGH-ALTITUDE CONDITIONS

**McLane Western**

Seven-year-old test cuts from the field underscore weatherability and resilience of roof

The 60 mil TPO membrane that was used was manufactured at JM's Scottsboro, Alabama, plant and installed at McLane Western's Longmont, Colorado, location in August 2008.

In the fall of 2012 and the fall of 2018, after four, seven and 10 years in the field, respectively, samples were taken from the McLane roof and tested to ASTM standards by an accredited third-party lab (PRI Construction Materials Technologies). The objective was to gather aging data from a real roof, not a lab-weathered test sample.

**Test results exceeded ASTM testing requirements, underscoring JM TPO aging advantages in:**

- Total thickness
- Seam strength of welded material
- Thickness over scrim
- Breaking strength and elongation

Following 10 years of high-altitude weathering with extreme temperature fluctuations and intense UV exposure, the McLane Western TPO roof continues to be a consistent performer. Seam strength was in no way impacted by aging or the environment. Rather, in the test cuts, seam strength exceeded ASTM minimums — a strong indicator of solid welds. This was the case right off the line, at four years aged, seven years aged, and 10 years aged.

Breaking strength and elongation also far exceeded ASTM minimums, helping the membrane's ability to withstand building and roof dynamics.

Once again, JM field tests verify the performance of the JM TPO formulation, ensuring continued trust in the JM brand.

Physical Properties*		ASTM Test Method*	ASTM Minimum Requirement	Four-Year Aged-Roof Test Cut / Fall 2012 JM 60 mil TPO	Seven-Year Aged-Roof Test Cut / Fall 2015 JM 60 mil TPO	Ten-Year Aged-Roof Test Cut / Fall 2018 JM 60 mil TPO
Strength	Breaking Strength	D751	220 lbf	401 lbf	391 lbf	382 lbf
	Tearing Strength	D751	55 lbf/in	88 lbf/in	113 lbf/in	88 lbf/in
	Linear Dimensional Change	D1204	Less than 1%	Pass	Pass	Pass
Longevity	Thickness	D751	60 mil ± 10%	59 mil	59 mil	59 mil
	Thickness Over Scrim	D7635	18 mils	32 mil	32 mil	27 mil
	Elongation	D751	15%	33%	28%	30%
	Ozone Resistance	D1149	Pass/Fail	Pass	Pass	Pass
Installation	Seam Strength	D751	66 lbf	224 lbf	168 lbf	138 lbf
	Brittleness Point (min. -40°F)	D2137	Pass/Fail	Pass	Pass	Pass

\* As governed by TPO ASTM D6878.