In 1951, when these Perpetual Pavement runways were built, Friendship Airport had approximately 70,000 takeoffs and landings. In 2000, the airport, now renamed Baltimore Washington International Airport, recorded 317,000 takeoffs and landings. Despite the increasing demands and the much heavier planes they are required to handle, BWI’s HMA runways have continued to function well.

The award-winning pavements include the two main 10,000-foot runways at the airport, a 7,000-foot runway, and supporting taxiways and ramps. Constructed in 1949, the runways consisted of a 12-inch gravel subbase, topped by 10 inches of bank gravel hot-mix asphalt (HMA) and 1.5 inches of stone surface HMA. Contractors followed a painstaking process to construct an enduring base, rolling a 100-ton proof roller over the prepared subgrade, looking for signs of yielding and then back-filling any problem areas until the subsurface did not yield.

The runways required no overlays until 1964, 15 years after the original construction. At that time all runways received a 1-inch leveling course and a 1.5-inch surface course. In 1973, the runways had a major overlay of 4 inches of HMA, 2 inches of a leveling course, and 2 inches of a surfacing course. In 1987, the two main runways were milled and overlaid 3 inches. In 1993, the airport replaced less than 5 percent of the runway base material in the plane touchdown areas.

BWI has never experienced a failure of the HMA runways or taxi areas. In 2002, 51 years after the original construction, over 95 percent of the base HMA was still in service. Core samples of the base taken in 1998 showed the HMA was still “as good as new.”