

The History of Asphalt

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The story of asphalt begins thousands of years before the founding of the United States. Asphalt occurs naturally in both asphalt lakes and in rock asphalt (a mixture of sand, limestone and asphalt).

The ancient Mesopotamians used it to waterproof temple baths and water tanks. The Phoenicians caulked the seams of their merchant ships with asphalt. In the days of the Pharaohs, Egyptians used the material as mortar for rocks laid along the banks of the Nile to prevent erosion, and the infant Moses' basket was waterproofed with asphalt.



625 B.C.

The first recorded use of asphalt as a road-building material in Babylon. The ancient Greeks were also familiar with asphalt. The word asphalt comes from the Greek "asphaltos," meaning "secure." The Romans used it to seal their baths, reservoirs and aqueducts.

1595

Europeans exploring the New World discovered natural deposits of asphalt. Sir Walter Raleigh described a "plain" (or lake) of asphalt on the island of Trinidad, near Venezuela. He used it for re-caulking his ships.

Early 1800s

Thomas Telford built more than 900 miles of roads in Scotland, perfecting the method of building roads with broken stones. His contemporary, John Loudon McAdam, used broken stone joined to form a hard surface to build a Scottish turnpike. Later, to reduce dust and maintenance, builders used hot tar to bond the broken stones together, producing "tarmacadam" pavements.

1870

Belgian chemist Edmund J. DeSmedt laid the first true asphalt pavement in the U.S. in Newark, N.J. DeSmedt also paved Pennsylvania Avenue in Washington, D.C. – using 54,000 square yards of sheet asphalt from Trinidad Lake. The Cummer Company opened the first central hot mix production facilities in the U.S. The first asphalt patent was filed by Nathan B. Abbott of Brooklyn, N.Y. in 1871.

1900

Frederick J. Warren filed a patent for "Bitulithic" pavement, a mixture of bitumen and aggregate ("bitu" from "bitumen" and "lithic" from "lithos," the Greek word for rock). The first modern asphalt facility was built in 1901 by Warren Brothers in East Cambridge, Mass.

1907

Production of refined petroleum asphalt outstripped the use of natural asphalt. As automobiles grew in popularity, the demand for more and better roads led to innovations in both producing and laying asphalt. Steps toward mechanization included drum mixers and portland cement concrete mechanical spreaders for the first machine-laid asphalt.

1942

During World War II, asphalt technology greatly improved, spurred by the need of military aircraft for surfaces that could stand up to heavier loads.

1955

The National Bituminous Concrete Association (forerunner of the National Asphalt Pavement Association or NAPA) was founded. One of the first activities: a Quality Improvement Program, which sponsored asphalt testing at universities and private testing labs.

1956

Congress passed the Interstate Highways Act, allotting \$51 billion to the states for road construction. Contractors needed bigger and better equipment. Innovations since then include electronic leveling controls, extra-wide finishers for paving two lanes at once and vibratory steel-wheel rollers.

1970s

The national energy crisis underscored the need for conservation of natural resources. Since that time, an increasing amount of recycled asphalt has been incorporated in mixes. Today, asphalt pavement is America's most recycled material with more than 70 million metric tons of asphalt paving material is recycled each year.



Photo Iowa DOT

1986

NAPA established the National Center for Asphalt Technology (NCAT) at Auburn University, Alabama, providing a centralized, systematic approach to asphalt research. NCAT recently opened a new research center and test track and is now the world's leading institution for asphalt pavement research.

2002

The EPA announced that asphalt plants are no longer on its list of industries considered major sources of hazardous air pollutants