

There are many steps in road building. First, road builders choose a route, or path, for the road. They must carefully study how the road will affect the businesses, homes, traffic, plants, and animals of the area. Next, road builders buy the land on which they will build the road. Construction of unpaved roads (roads without pavement) is simple. Builders clear away trees, bushes, and plants from the roadway—the strip of land over which the road will pass. Then they smooth out the roadway and press the surface down with a machine called a roller. This type of road is suitable for areas where few cars travel. Roads that many cars will use must be stronger than roads that have less traffic. These roads are paved. Paving materials include asphalt and concrete. Asphalt is a thick, dark, flexible material made from petroleum, or oil. Concrete is a mixture of cement, water, sand, and gravel. When it dries it becomes as hard as stone. A strong road may start with a layer of asphalt. On top of the asphalt is a layer of sand, gravel, or crushed stone. A final layer of asphalt or concrete finishes the road. The concrete may have steel rods or mesh inside it for extra strength. Most major modern roads are built with a gentle slope downward from the center of the road outward. This slope is called a crown. The crown allows water to run off the road. These roads also have a system for draining water away from the sides.