

Did You Know? The Asphalt Paving Train

1. Asphalt is manufactured in a plant, discharged into the dump truck, and transported to the project location. The mixture is typically heated to a temperature between 275 and 350 degrees Fahrenheit.

3. The truck gate is released, and the asphalt is discharged from the truck into the paver hopper. To avoid segregation of the mixture, the material should be allowed to "flood" the hopper and not "dribble" out of the truck.

5. The dump man uses hand signals to direct the truck driver's location and when and how much to raise and lower the truck bed.

8. The first roller is called the "breakdown roller" and provides the primary compaction (95 percent or more of specified density) of the mixture by applying weight – and sometimes vibration – to the mat.

10. Behind the rolling operation, quality control technicians from the contractor will typically perform density testing or obtain core samples from the roadway. Asphalt pavements are typically ready for traffic once the mixture has cooled below 150 degrees - usually in a few short hours.



2. The truck driver backs up just short of the paver – the driver should be careful not to bump the paver. Once the paver makes contact with the truck, the driver raises the bed. The truck driver applies the brakes gently, and the tractor unit on the paver pushes the truck forward.

4. The asphalt material flows from the hopper along the slat conveyors to the augers and eventually to the screed at the rear of the paver. A continuous, non-stop paving process ensures a quality product.

6. The free-floating (self-leveling) screed unit strikes off the material to create a smooth mat and provides initial compaction of the mixture. The screed also sets thickness, width and creates a smooth, uniform mat.

7. Paving crew members monitor the mixture for temperature and thickness and perform raking when necessary. Thin resurfacing may be accomplished in one pass, but thicker sections (for rehabilitation or new construction) may require multiple passes of the paver.

9. Most contractors will have two or three rollers on a project. The second roller is called the "intermediate roller" and provides the balance of the required density to the mixture. The final roller is called the "finish roller," and its purpose is to remove any remaining roller marks and provide smoothness to the pavement.