

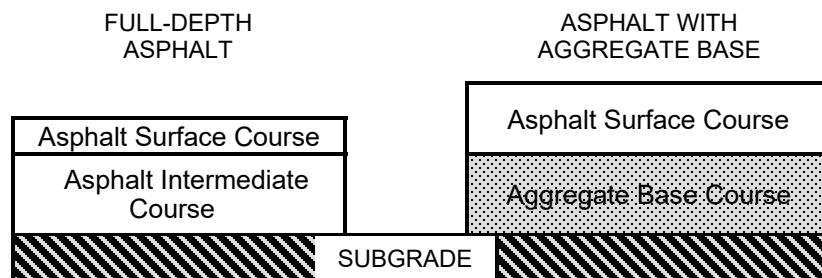
ASPHALT DRIVEWAYS

Technical Brief



Asphalt pavement is a popular choice for residential driveways. Properly designed and constructed, it stays smooth, sound and attractive in appearance for many years. Flexibility allows the pavement to conform to minor settlements and still retain a continuous surface free of abrupt bumps. A well-designed, constructed and maintained driveway will give trouble-free service for up to 20 years and will add appeal and value to the property.

DESIGN - Either a full-depth asphalt or an asphalt over aggregate base design may be used for this purpose. One may be better suited than the other based on several considerations, including traffic and subgrade conditions. The subgrade is the prepared soil foundation for the pavement structure providing load support. The pavement section is designed so that loads are reduced to a level consistent with subgrade support capacity.



The minimum thickness recommendations are suitable for the cars and light trucks plus the occasional heavier service and delivery trucks normal to the single unit residence.

RECOMMENDED MINIMUM THICKNESS DESIGNS (Inches)

SUBGRADE SUPPORT	FULL-DEPTH ASPHALT	ASPHALT	AGGREGATE
POOR	5.5	3	6
FAIR	4.5	3	4
GOOD	4.5	3	4

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DRAINAGE—The pavement surface should slope not less than a quarter inch per foot for good surface water drainage. The direction of the slope should be in keeping with the surrounding area and may be either from side to side, end to end, or for extra wide drives from the centerline to the sides. If a poorly drained area cannot be avoided, the subgrade may need to be built up and pipe underdrains installed.

Good construction practice is critical in providing a satisfactory, durable project. Asphalt pavement should be delivered and placed at the proper temperature, it needs to be hot. There is no such thing as leftover asphalt (door to door scam).

SUBGRADE PREPARATION—Top soil, roots, boulders should be removed before starting subgrade preparation. Suitable subgrade soil then should be compacted and is best achieved when the soil is at its optimum moisture content. Weed killer is sometimes applied to help prevent weeds from propagating through the pavement.

AGGREGATE BASE CONSTRUCTION—During placement, blading or raking should be done with care to avoid separation of particle sizes. Thorough compaction is important and is best accomplished when the aggregate is damp.

ASPHALT PAVEMENT CONSTRUCTION—Asphalt pavement (typical dense graded mix) should be placed by means of an asphalt paver. Hand placing should be limited to small areas. Both placing and compaction by rolling must be completed while the asphalt is hot and workable. Thin layers lose heat rapidly after spreading onto a cool surface and the time available for effective rolling then may be less than 10 or 20 minutes. For that reason, placing and rolling always should be done as a continuous process. Individual layers of asphalt must be bonded together to act as a structural unit. Unless a layer is placed upon a freshly placed layer, the surface of the previously placed layer should be cleaned of all foreign material and a liquid asphalt tack coat should be applied to it.

OVERLAYING AN EXISTING DRIVEWAY—Existing driveways can be overlaid with asphalt to improve condition, strengthen and extend service life. Prior to overlaying, address any distressed areas such as weak spots, holes and large cracks (cut out and patched). An overlay of 1.5 to 2 inches thick of a surface mix is typical. The surface should be clean and dry prior to placing the overlay.

TIPS FOR HOMEOWNERS

- Deal only with reputable paving contractors. **There is no such thing as leftover asphalt, don't deal with "door to door" operators.**
- Get more than one written quote. Get references and check them. Check with the Better Business Bureau. Note that the lowest quote may not be the best one.
- Make sure everything is identified in the contract, including; starting and completion dates, dimensions, material types and thicknesses, drainage provisions, utility provisions, need for permits, extra work if needed, damage to adjacent areas, etc.
- Ask for a written warranty of work in the contract. Reputable contractors will stand behind their work.
- While new asphalt can be driven on soon after placement, it's best to wait a few days before opening. For instance, new homeowners shouldn't let a heavy moving truck drive on a fresh mat.
- An informed homeowner working with a reputable contractor will ensure success.

For more information contact the
Colorado Asphalt Pavement Association (303) 741-6150.

MAINTAINING YOUR DRIVEWAY

A high-grade asphalt liquid sealer applied every two to five years can extend service life of the driveway and will improve appearance. Don't apply sealer until the driveway is at least several months old. Some sealers contain small aggregate filler that can enhance traction if needed. Small holes and cracks can be filled with driveway maintenance products readily available to homeowners in hardware or building supply stores.

