

305 LEAN CONCRETE BASE

Lean concrete base is rarely used on ADOT projects. Lean concrete base (LCB) is made with concrete aggregate and sufficient cement (about three sacks) to achieve a strength of at 500 psi (3.5 MPa) in seven days. Mix design, testing, and inspection are handled the same as with concrete paving. Water reducers, fly ash, and air entrainment agents are allowed, but are not generally required.

On some projects, the use of air entraining agents has caused tearing of the base surface. It is advisable to be alert to this possibility. As it gains strength, the lean base will crack naturally. No attempt should be made to control or seal the cracks.

305-3 Construction Requirements

305-3.08 Placing and Finishing

LCB is placed and finished the same as Portland cement concrete pavement, except surface texturing is not required.

The base is mixed in conventional concrete mixers, hauled to the grade in open bed dump trucks, and placed with a slip form paver. Dump trucks are used primarily because of the speed with which they can be loaded and unloaded.

The Special Provisions or Project Plans will supply the width of base. This is usually the full width of the Portland cement concrete pavement (PCCP) plus an added increment for edge support. A smooth float finish is all that is required.

305-3.09 Curing

White pigmented curing compound is applied as soon as finishing is completed. Another application of curing compound may be specified just before placing the PCCP. The last coat must be protected from damage because it serves as a bond-breaker between the base and the pavement.

305-3.12 Opening to Traffic

Keeping all traffic off the LCB for at least 72 hours, including the Contractor and ADOT, is very important because of the low strength developed by the base. Even after 72 hours have elapsed, traffic should be restricted to the absolute minimum needed to complete the PCCP.