

Project Name: Kozeliski's Law Office, now DePauli Engineering First project of pervious in Gallup, NM

Engineer: Frank A. Kozeliski, P.E.,F.A.C.I.

Contractor: Ray Armendariz's first project, under the direction of Frank and George Kozeliski

Ready Mixed Concrete Supplier: Gallup Sand and Gravel Co. Gallup, New Mexico

Project Location; 102 West Hill Ave. Gallup, New Mexico
N 35 – 31.560 W 108-44.465 elevation 6503 +`

Year Completed: July, 1991



The project is a parking lot for a small company. The lot is about 600 sq. yards and the traffic is pickups, SUVs and cars (all four-wheelers). The material was placed 4" to 6" thick and leveled with a regular garden rake. No drainpipes or curbs and gutters. It was compacted with a walk-behind flat plate compactor. The material was cheaper than concrete but more expensive than gravel base. The location undergoes an average of about 212 cycles/year. The average daily temperature stays below freezing for 62 consecutive days (on average) but there is very little precipitation during this period and only about 10 inches of rain throughout the year. So the climate is considered a hard dry freeze with very high freeze thaw cycling. There is no annual maintenance on this project and, after 13 years, the performance has been good. Over the past 13 years the parking lot has filled with mud that drops off the vehicles when parked. Two years ago, after a 4" rain caused flooding of the town, the parking lot had no ponded water. There are still voids to drain the water. There is some raveling of the coarse aggregate and clogging due to the mud. The parking lot has been through many snows and it has not turned into a pile of loose rock. When it was a new parking lot, the snow was pushed off and the sun came out and there was no ice build up on surface. The snow tends to melt quickly. Mixture design was cement = 300 lbs / cu.yd; coarse aggregate # 57 – 1 " minus size 2570 lbs / cu.yd; water about 20 gals / cu.yd. Plastic unit was about 106 pcf, no entrained air or water reducer or fly ash. % void based on ASTM C-138 20 to 24 %. When filling a 4"x8" cylinder with pervious and then adding water 2" of water can be placed into the cylinder. And it will fill the voids. Compressive strength after 28 days about 1000 psi. No special curing of the pervious. Just placed and opened for traffic.