

Table 1

Expansion Potential	Min. Depth of Cut-off "D"	Min. Thickness of Sand Back-fill "T"	Min. Depth of Presaturation	Min. Presaturation Moisture Content
Low	12"	4"	6"	120% of Optimum
Medium	18"	6*	12™	130% of Optimum
High	24°	12"	18"	140% of Optimum
Very High	30"	18 "	24"	140% of Optimum

Notes:

- 1) To reduce the potential for excessive cracking due to expansive soil forces, pool deck concrete slabs should be a minimum of 4 inches thick and provided with construction or weakened plane joints at frequent intervals (e.g., every 6 feet or less). Slabs should be underlain by a layer of crushed rock, gravel, or clean sand having a minimum thickness as indicated in Table 1. This layer is not required for very low expansion potential subgrades. For very low expansion potential subgrade, water spraying the subgrade prior to pouring concrete is considered adequate otherwise, the subgrade should be presaturated to the minimum depth and minimum moisture content (as a percentage of optimum moisture content) indicated in Table 1. Presoaking should be observed, tested, and accepted by a geotechnical consultant prior to placement of concrete.
- 2) The Subgrade below pool decks should have a drain line consisting of 4-inch diameter perforated pipe (PVC Schedule 40, SDR 35, Armco A2000 PVC, or approved equivalent), surrounded by approved gravel which is wrapped with filter fabric (Mirafi 140N, or approved equivalent) provided below the sand layer. One line of subdrain around the swimming pool area is generally sufficient. The drain pipe should have a gradient of 1 percent minimum.
- 3) All concrete has a tendency to crack and cracks in concrete can be caused by many different factors. When constructing concrete decks, it is important that the ground on which these improvements are to rest be properly prepared, including moisture conditioning. Slab thickness, location of Joints, reinforcement, and concrete mixture must also be appropriate for the intended use. Proper placement, finishing, and curing of concrete are also very important factors in minimizing cracking. Reinforcement of slabs may also be considered to further reduce unsightly cracking especially for high or very high expansion potential areas. Adjacent landscaping should provide appropriate surface and subdrainage to minimize overwetting the soils.

POOL DECK DETAIL

NMG Geotechnical, Inc.

1/04 POOL DECK.al

FIGURE 5