



Guideline Specifications for Subgrade and Compaction for Portland Cement Pervious Concrete Pavements

January 2010

FORWARD

This sample specification for Subgrade and Compaction for Portland Cement Pervious Concrete Pavement is provided as a guideline only. Specific projects will have conditions that may require modifications to this document. It is recommended that an accompanying 'Guideline Specification for Portland Cement Pervious Concrete Pavement' also be referenced. An additional resource from PSCA entitled 'Recognized Procedures for Achieving Quality Pervious Concrete' can be a helpful tool for placement and inspection.

Proper preparation of subgrades and compaction is a vital aspect of a successful pervious concrete pavement project to assure proper soils conditions and percolation rates for the given design.

Technical assistance and installation training is available from your local cement and concrete associations. Planning, design, materials and construction information can be provided. The concrete industries of California and Nevada offer you these choices:

- **California Nevada Cement Association**
 - Southern California and Southern Nevada:
David Akers (858) 437-1445 david.akers@cncement.org
 - Northern California and Northern Nevada:
Paulette Salisbury (925) 918-0982 paulette.salisbury@cncement.org
- **Concrete Promotion Council of Northern California**
 - Rob Wallace (888) 633-0393 rob@cpcnc.org
- **Southern California Concrete Producers**
 - Larry Maes (626) 441-3107 lmaes@sccpconcrete.com
- **Sierra Nevada Concrete Association - Reno**
 - Contact Paulette Salisbury (925) 918-0982 paulette.salisbury@cncement.org
- **Southern Nevada Concrete and Aggregate Association – Las Vegas**
 - Contact David Akers (858) 437-1445 david.akers@cncement.org

SECTION 31 00 00

SUBGRADES AND COMPACTION FOR PORTLAND CEMENT PERVIOUS CONCRETE PAVEMENT

PART 1 GENERAL

1.01 Scope of Work:

- A. The Work to be completed under this contract includes the subgrade and compaction requirements for Portland Cement Pervious Concrete Pavement for streets, parking & pedestrian areas in conformance with the plans and specifications.
- B. Work in other sections:
 - Formwork: see "Concrete Formwork" in Division 03
 - Other Paving: see other sections in Division 33
 - Inserts of landscape accessories into concrete pavement: see division 32
 - Drains in concrete pavement: see Division 32
 - Portland Cement Pervious Concrete Pavement: see Division 33 Section 033729

1.02 References:

- A. American Society for Testing and Materials
 - 1. ASTM D 1557 "Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³)"
 - 2. ASTM D 3385 "Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer"

1.03 Subgrade and Compaction:

- A. **Material:** The top 6 inches shall be composed of granular or gravelly soil that is predominantly sandy with no more than a moderate amount of silt or clay. Granular sub-base may be placed over the subgrade.
- B. **Permeability:** Subgrade shall be determined in accordance with ASTM D3385.
- C. **Compaction:** Compact sub-grade to a minimum 90% and a maximum 95%. Compaction shall be in accordance with ASTM D 1557.
- D. **Fill:** If fill material is required to bring the subgrade to final elevation, it shall be clean and free of deleterious materials. It shall be placed in 6-inch maximum layers, and compacted by a mechanical vibratory compactor to a minimum density of 90% and a maximum density of 95% in accordance with ASTM D 1557.
- E. **Moisture:** The subgrade moisture content shall be 1% - 3% above optimum as determined by ASTM D 1557.
- F. Verify subgrade preparation, grade, and conduct permeability and density tests for conformance to project requirements.

END OF SECTION

"This guideline specification is intended solely for use by professional personnel who are competent to evaluate the significance and limitations of the information provided and who will accept responsibility for the application of this information. The Pacific Southwest Concrete Alliance, its members firms and employees disclaim any and all responsibility and liability for the accuracy and the application of the information contained in this publication to the full extent permitted by law."