

Pervious Concrete Construction

Chapter 5



The Goal

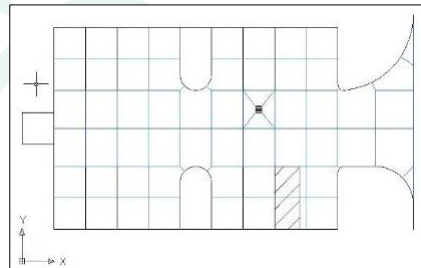


Pre-Construction Planning

- Plans and Specifications
- Crew Size
- Ready Mix Supplier
- Tools & Equipment
- Weather

Plans and Specs

- Subgrade requirements
- Pavement layout
- Cross-section
- Does it all make sense?



NOTE: Avoid Percolation or Permeability rate specifications when possible

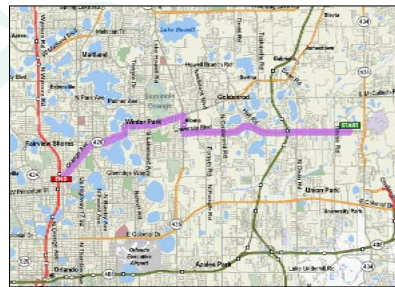
There is no current test method within ASTM to actually test this. If you cannot test it, why specify it?

Crew Size



Ready Mix Supplier

- Experience with Pervious
- Within Haul Time/Distance
- Make sure they understand pervious



**Estimating quantity for 10 ft x 20 ft x 6 in slab =
[10 ft x 20 ft x (6 in/12 in/ft)] / 27 ft³/yd³ =
3.7 cubic yards (about 4 cubic yards)**

What Will the Weather Be?

- Sunny
- Cloudy
- Rainy
- Snowy
- Hot
- Cold



Tools and Equipment

- Equipment matched to size of the job
- Sufficient tools to do the work
- Curing materials delivered before concrete placement

Site Preparation – Survey and Grades

- Plans and Specifications
 - Material Type
 - Elevation and Slope
 - Moisture Content
 - Compaction
- Typically grade to 1/10th of one foot (approx. 1-1/8th inches)
- Typically finish pavement to 1/4 inch of spec.

Site Preparation – Moisture Content



MOISTEN SUBGRADE

Site Preparation – Cut and Fill



Site Preparation - Compaction



COMPACT TO 92 - 95% OF MODIFIED PROCTOR
Don't over compact
Subgrade must remain permeable

Filter Fabric if Specified



Non-woven geotextile fabric is often specified

Setting Forms



Use string lines to set form elevation

Wood or steel forms can be used



Forming at Beginning of Pour



Placing Riser Strips



Riser Strip Result



Thinking Ahead

- Crew size / duties
- Construction sequence
- Lane lengths / widths
- Equipment moves
- Delivery scheduling



Crew Duties – 7 Man Crew

- 1 handles chute
- 2 rake and level
- 2 strike-off
- 2 compact, finish and cure



Construction Sequence



Planning Equipment Moves

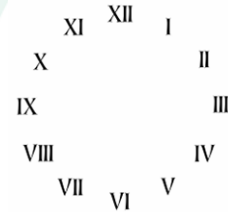


Equipment Moves



Concrete Delivery Scheduling

- Unloading time per truck
 - Usually longer than conventional concrete
- Paving lanes
- Local Traffic
- Weather



Finishing: The Typical Process

- Spreading
- Strike-off
- Compacting
- Jointing/Edging
- Curing